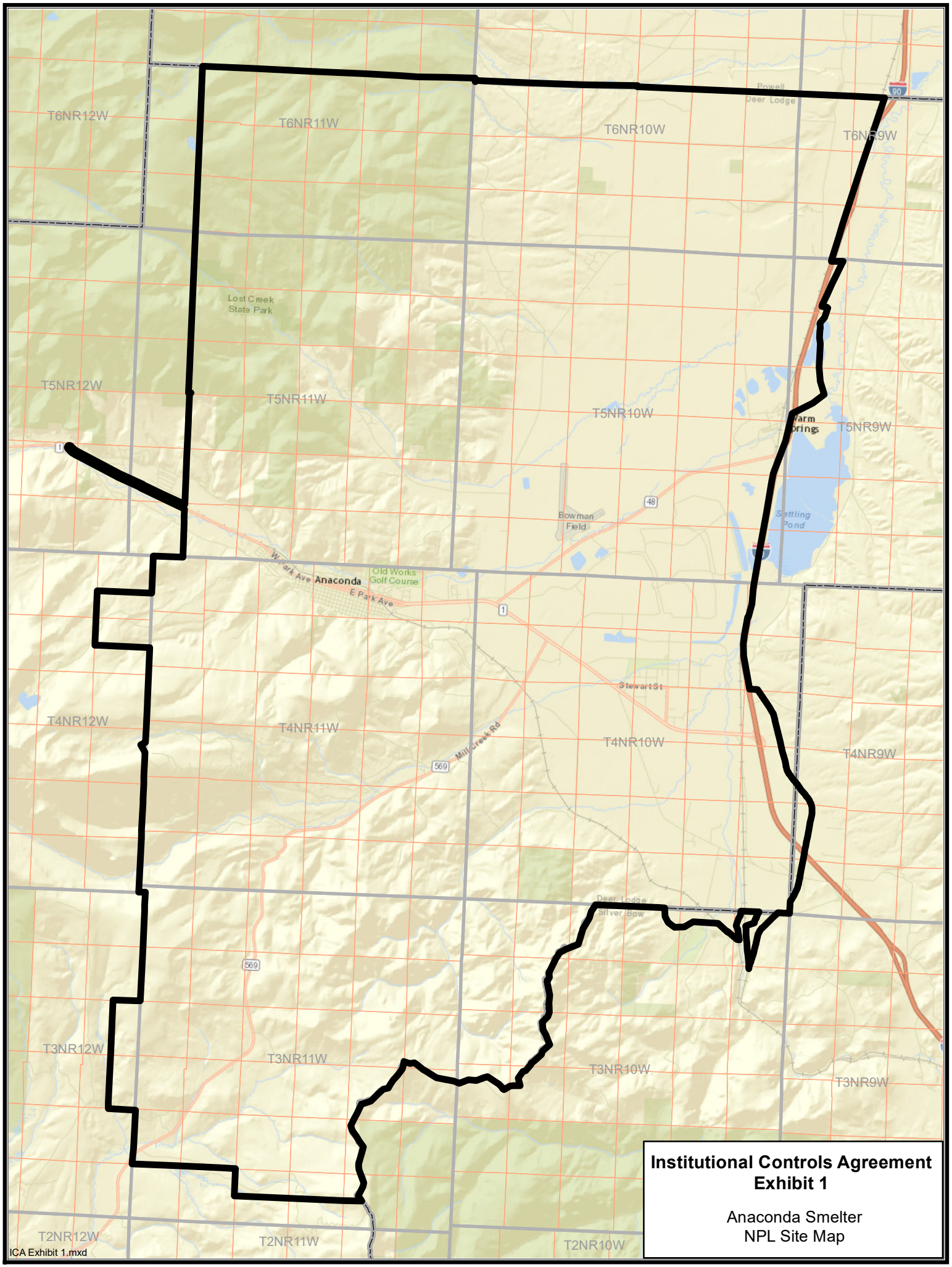
List of IC Agreement Exhibits

ATTACHED EXHIBITS

Exhibit 1:	Map of Anaconda Smelter NPL Site Map
Exhibit 2:	Institutional Controls Implementation and Assurance Plan
Exhibit 3:	Institutional Controls Program Annual Performance Evaluation Report Form
Exhibit 4:	Institutional Controls Program Initial Budget
Exhibit 5:	ADLC Parcels Superfund O&M Plan
Exhibit 6:	ADLC Parcels Superfund O&M Annual Performance Evaluation Report Form
Exhibit 7:	ADLC Parcels Superfund O&M Initial Budget
Exhibit 8:	Golf Course Superfund O&M Plan
Exhibit 9:	Golf Course Business Plan
Exhibit 10:	Golf Course Superfund O&M Annual Performance Evaluation Report Form
Exhibit 11:	Development Repository O&M Plan
Exhibit 12:	Certificate of Survey
Exhibit 13:	Conveyance Agreement Parcels Re-conveyance Quitclaim Deeds
Exhibit 14:	Conveyance Agreement Parcels Access Agreement
Exhibit 15:	Drag Strip Amended Parcel Quitclaim Deed
Exhibit 16:	East Anaconda Yard Amended Parcel Quitclaim Deed
Exhibit 17:	Golf Course Amended Parcel Quitclaim Deed
Exhibit 18:	Hotel Amended Parcel Quitclaim Deed
Exhibit 19:	Mill Creek Amended Parcel Quitclaim Deed
Exhibit 20:	Old Works Historic Trail Amended Parcel Quitclaim Deed
Exhibit 21:	Red Sands/Arbiter Amended Parcel Quitclaim Deed
Exhibit 22:	Stuckey Ridge Amended Parcel Quitclaim Deed
Exhibit 23:	Portion of 1982 Parcel Quitclaim Deed
Exhibit 24:	C-Hill Parcel Conveyance Quitclaim Deed
Exhibit 25:	C-Hill Parcel Re-conveyance Quitclaim Deed
Exhibit 26:	Third Party Quitclaim Deed
Exhibit 27:	Community Enhancement Deferral/Early Disbursement Request Form
Exhibit 28:	ADLC Certificate of Insurance
Exhibit 29:	Golf Course Authority Certificate of Insurance
Exhibit 30:	Community Enhancement Incentive Payment Schedule
Exhibit 31:	Map of Cow and Horse Pastures

Exhibit 1
(Map of Anaconda Smelter NPL Site)



Institutional Controls Agreement
Exhibit 1

Anaconda Smelter
NPL Site Map

Exhibit 2
(Institutional Controls Implementation and Assurance Plan)

Document Attachments Status

Draft Final - Institutional Controls Implementation and Assurance Plan

Appendix A: Development Permit System Amendments

Appendix B: Restrictive Covenants Summary Table

Appendix C: Covenant Instruments

Appendix D: Community Protective Measures Program Plan

Appendix E: AR's Institutional Controls Management System Plan

Appendix F: ADLC's Institutional Controls Management System Plan

Map 1: Map of Anaconda Smelter NPL Site

Map 2: Map of Waste Management Areas and High Arsenic Areas

ANACONDA SMELTER NPL SITE

INSTITUTIONAL CONTROLS IMPLEMENTATION AND ASSURANCE PLAN

_____ , 2016

ANACONDA SMELTER NPL SITE
INSTITUTIONAL CONTROLS IMPLEMENTATION AND ASSURANCE PLAN

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1.0 INTRODUCTION

1.1 <u>ICIAP Overview</u>. This Institutional Control Implementation and Assurance Plan ("ICIAP") is designed to systematically: (a) establish and document the activities associated with implementing and establishing the long-term stewardship of the institutional controls ("ICs") that have been or will be implemented at the Anaconda Smelter National Priorities List Site ("Site"), and (b) specify the entities that will be responsible for conducting those activities. *Institutional Controls: A Guide to Preparing Institutional Control Implementation and Assurance Plans at Contaminated Sites*, Office of Solid Waste and Emergency Response (OSWER) 9200.0-77, EPA-540-R-09-002, December 2012. The ICIAP includes a discussion of the legal basis for the different types of ICs as well as a discussion of when and by whom the effectiveness of the ICs at the Site will be reviewed and how and by whom the ICs will be implemented, monitored and enforced. Generally, the implementation, monitoring and enforcement of the ICs will be a shared responsibility of Atlantic Richfield Company ("AR") and Anaconda-Deer Lodge County ("ADLC") under the Environmental Protection Agency's ("EPA") oversight. It is anticipated that ADLC's performance of its ICs responsibilities as set forth in this ICIAP will be provided for by way of an Institutional Controls Agreement ("ICA") between AR and ADLC and an appropriate amendment to that certain Agreement and Covenant Not to Sue (EPA Docket No. CERCLA 94-12) between ADLC, the United States Environmental Protection Agency ("EPA"), the State of Montana ("State"), and the Old Works Golf Course Authority, Inc. ("Authority") dated April 29, 1994 ("CNSA Amendment"). All references herein to the ICs that will be performed by ADLC presume that both the ICA and CNSA Amendment will be executed by the appropriate parties following the approval of this ICIAP and will contain terms consistent with the requirements of this ICIAP.

1.2 <u>ICIAP Objectives</u>. The ICIAP describes the various institutional and legal controls that have been or will be implemented at the Site. As necessary, the ICIAP includes or makes reference to other plans. Specifically, the ICIAP is intended to function together with the Site Management Plan ("SMP") and the other management plans referenced in the SMP to provide assurance that the remedies ("Remedies") selected for the Site pursuant to the Records of Decision ("RODs") will be maintained and that the Remedies will be implemented, if needed, when property within the Site is developed.

2.0 BACKGROUND

The types of ICs selected and their roles in implementing and effectuating the Remedies are dependent upon the land ownership, media of contamination, land use and location. Thus, an overview of location, drainage, topography and historic use of the Site is included in this Section 2.0.

2.1 <u>Site Location</u>. The Site was placed on the NPL in September 1983. The Site covers approximately 300 square miles in the southern Deer Lodge Valley and the surrounding foothills area and includes the communities of Anaconda, Opportunity, Crackerville and Lost Creek. The area consists of agricultural, pasture, rangeland,

forests, and riparian and wetland areas which contain large volumes of wastes, slag, tailings, debris, and contaminated soil, groundwater, and surface water from copper milling, smelting, and refining operations conducted on site from approximately 1884 to 1980. Waste disposal occurred over approximately 6,000 acres; 30,000 acres of upland terrestrial soils are contaminated by smelter emissions; 4,800 acres of alluvial groundwater contain elevated concentrations of arsenic, cadmium, and copper; and 28,600 acres of bedrock groundwater exceed the State of Montana standard for arsenic (10 micrograms per liter [µg/L]). The boundaries of the Site are depicted on Map 1.

2.2 **Drainages and Topography**. Major drainages within the site include Warm Springs Creek, Mill Creek, Willow Creek and Lost Creek. These creeks drain the Anaconda area and surrounding mountains and eventually flow east and north where they enter the Clark Fork River drainage system. Topography in the Anaconda area varies from floodplain to steeply sloping hills. South of the area, the Pintler Mountains rise to above 10,000 feet. Northwest of the area is the Flint Creek Range and southwest is the steeply rising Anaconda Range.

2.3 **Historic Use**. Copper concentrating and smelting operations at the Site began around 1895 at the area presently known as the Old Works, and in 1888 in the area known as Lower Works.

The Old Works and Lower Works were located on the north side of Warm Springs Creek, east of Anaconda. The Old Works and Lower Works operated until about 1902, when they were shut down and replaced with a larger ore processing and smelting facility originally known as the Washoe Reduction Works (also known as the Washoe Smelter or the New Works) and later known as Anaconda Smelter or the Anaconda Reduction Works, located on Smelter Hill, south of Warm Springs Creek across from the Old Works.

The Washoe Reduction Works was operated until July 1, 1980, soon after which the smelter facilities were dismantled. The only substantial structure remaining from the smelter facility is the large brick smelter stack on Smelter Hill.

These milling and smelting activities resulted in the contamination of various environmental media in the surrounding area, primarily through airborne emissions and disposal practices from smelting operations.

2.4 **Historic Ownership**. The Old Works and New Works were owned and/or operated by the Anaconda Company and its predecessor, the Anaconda Copper Mining Company between 1895 and July 1, 1980. The Anaconda Company became a wholly-owned subsidiary of Atlantic Richfield Company on January 12, 1977, and the Anaconda Company was merged into Atlantic Richfield Company on December 31, 1981. Today Atlantic Richfield Company is the successor by merger to the Anaconda Company and its predecessors.

3.0 SITE ORGANIZATION

Because the Site covers such a wide area and a variety of media, it was divided into several OUs, a number of which cover the same lands but address different media and land uses. The Site currently includes five OUs: the Mill Creek OU ("Mill Creek OU"), the Flue Dust OU ("Flue Dust OU"), the Old Works/East Anaconda Development Area OU ("OW/EADA OU"), the Community Soils OU ("CS OU"), and the Anaconda Regional Water, Waste and Soils OU ("ARWW&S OU"). The locations of the OUs are depicted on Map 1. The OUs and the remedial actions ("RAs") to be undertaken with respect to each OU were prioritized based on their potential risk to human health and the environment. The RAs addressed the principal concern for each OU: the potential risk to human health (Mill Creek OU and the Flue Dust OU), the commercial/industrial and recreational requirements (OW/EADA OU), and the potential exposure of residents to elevated arsenic and lead concentrations in soil (CS OU).

The ARWW&S OU covers an area of approximately 300 square miles and is located in southern Deer Lodge Valley and the surrounding foothills. The ARWW&S OU is intended to be the last OU of the Site and addresses all remaining issues not addressed under other OUs. Such issues include all remaining impacted soils and waste materials, along with potential impacts to surface and groundwater from soils and waste. The ARWW&S OU and related RAs also address both the human and environmental risks associated with site-related contamination that have not been addressed by the other OUs.

Due to the large size of the ARWW&S OU, it has been separated into 17 smaller, remedial design units ('RDUs") to provide a more manageable approach for development of designs and implementation of the RAs. The locations of the RDUs are depicted on Map 1. RDU boundaries were determined using several factors including: areas that contain similar remediation techniques, design approaches, Land Reclamation Evaluation System ("LRES") boundary designations, storm water management boundaries and waste or media to be remediated (i.e., tailings, impacted soils, steep-slopes, etc.). RDUs covered by this ICIAP include: RDU 1—Stucky Ridge; RDU 2—Lost Creek; RDU 3—Smelter Hill Uplands; RDU 4—Anaconda Ponds; RDU 5—Active Railroads/Blue Lagoon; RDU 6—South Opportunity Uplands; RDU 7 - North Opportunity Uplands; RDU 8—Opportunity Ponds; RDU 9—Fluvial Tailings; RDU 10—Warm Springs Creek; RDU 11—Cashman Concentrate; RDU 12—Slag; RDU 13 - Old Works WMA; RDU 14—Smelter Hill Facility; RDU 15—Mt Haggin Uplands. In addition, although not initially designated RDUs, the OU has been further separated to include the West Galen Expansion Area and the Dutchman Creek Expansion Area.

A summary of the RAs undertaken or to be undertaken at the OUs and RDUs is included in Section 5 of the SMP. The ICs applicable to the properties within the OUs and RDUs are described in Section 6.0 of this ICIAP.

4.0 ICs OBJECTIVES

This Section 4.0 includes a description of the ICs objectives that are included in the RODs for the OW/EADA OU, CS OU and ARWW&S OU.

4.1 **OW/EADA OU ROD**. The general OW/EADA OU ROD provisions which address the objectives of required ICs include the following:

- *Assure that future land and water use at the site is consistent with EPA's determination of the health and environmental risks posed by contaminants left on site;*

- *Provide for the preservation and maintenance of Superfund remedial structures on the site, including but not limited to caps, berms, waste repositories, and vegetated areas;*

- *Require that future development at the site employ construction practices that are consistent with the protection of public health and the environment, as determined by Superfund remedial actions;*

- *As development occurs at the site, implement the remediation of soil arsenic contamination to levels appropriate for the intended use, as determined by Superfund remedial actions; and*

- *Provide for implementation of other laws applicable to development such as subdivision and floodplain requirements.*

OW/EADA OU ROD at DS-54.

4.2 **CS OU ROD**. The general CS OU ROD provisions which address the objectives of required ICs include the following:

Develop ICs to restrict and manage future land use.

— Assure that future land use at the site is consistent with EPA's determination of the health and environmental risks posed by contaminants left on site.

— Provide .for the preservation and maintenance of Superfund remedial structures on the site, including but not limited to caps, berms, waste repositories, and vegetated areas.

— Require that future development at the site employ construction practices that are consistent with the

> *protection of public health and the environment, as determined by Superfund remedial actions.*
>
> *— Remedy, as development occurs at the site, soil arsenic contamination to levels appropriate for the intended use, as determined by Superfund remedial actions.*
>
> *— Provide for implementation of other laws applicable to development, such as subdivision and floodplain requirements.*
>
> * * *
>
> *Implement ICs to provide educational information to all residents describing potential risks and recommendations to reduce exposure to remaining contaminated soils.*
>
> • *Develop a CPMP, to be managed by ADLC, to provide educational information to residents within the ADLC Superfund Planning Overlay District describing risks and recommendations to reduce exposure to residual contamination (250 ppm)in soils (i.e., the importance of maintain healthy lawn or other protective cover).*
>
> • *Information on soil arsenic concentrations and locations will be maintained in an ADLC database for public access. All sampling results and pertinent changes in soils and condition of existing covers will be recorded for use by regulators, prospective home buyers, lenders, contractors, and other interested parties.*

CS OU ROD at § 9.5 and DS-42 and 43.[1]

4.3 **<u>ARWW&S OU ROD</u>**. The general ARWW&S OU ROD provisions which address the objectives of required ICs include the following:

> *ICs are a necessary supplement to reclamation and engineering controls when waste is left in place or where*

[1] On September 13, 2013, a Record of Decision Amendment for the CS OU ROD ("CS OU ROD Amendment") was issued. Pursuant to the CS OU ROD Amendment, a lead action level for residential soils and a lead and arsenic action level for interior residential dust were added to the CS OU remedy. The CS OU ROD Amendment also expanded the IC's required for the CS OU in certain respects. The expanded ICs are addressed in Section 6.0 below.

> *groundwater will continue to exceed standards, as it will with this response action. Therefore, EPA and MDEQ expect ICs to play an integral part in the Selected Remedy to assure future protection of human health and the environment. An ICs program will be developed in conjunction with the selected reclamation and engineering controls to include four basic components: land use restrictions, zoning, groundwater controls, and public notices or advisories. The Selected Remedy, through ICs, will:*
>
> - *Assure that future land and water use at the site is consistent with EPA's determination of the health and environmental risks posed by contaminants left on site;*
> - *Provide for the preservation and maintenance of Superfund remedial structures on the site, including but not limited to engineered caps, covers. stormwater conveyances, water repositories and reclaimed areas;*
> - *Require that future development at the site employ construction practices that are consistent with the protection of public health and the environment, as determined by Superfund remedial actions;*
> - *As development occurs at the site, implement the remediation of soil arsenic contamination to levels appropriate for the intended use, as determined by Superfund remedial actions;*
> - *Provide for implementation of other laws applicable to development, such as subdivision and floodplain requirements; and*
> - *Provide information and notice to the public (users or potential users of land or groundwater) of some existing or impending risk associated with their use of the site.*

ARWW&S OU ROD at § 9.7.

5.0 ICs DESIGN CONSIDERATIONS

This Section 5.0 discusses the objectives, assumptions and other considerations related to the design and selection of ICs for the Site.

5.1 **<u>ICs Design Objectives</u>**. The design objectives considered for the Site ICs included the following:

(1) The ICs must remain protective of EPA's selected remedy over time and through transfer of property;

(2) The ICs should permit the existing use of property and must establish the requirements for changes of use or new development, as permittable, while minimizing property restrictions; and

(3) The ICs must ensure that landowners do not permanently disturb or impair RAs once in place.

.

5.2 **<u>ICs Design Assumptions</u>**. In designing the ICs for the Site, the following assumptions were made:

(1) At a minimum, properties will be cleaned up to applicable action levels for the current land uses as part of the RAs. Additional RAs required at the time of development will be addressed by way of referrals by ADLC to AR; and

(2) Properties may be redeveloped consistent with the applicable ICs.

6.0 SELECTED SITE ICs

ICs are non-engineered instruments, such as administrative and legal controls, that help to minimize the potential for exposure to contamination and/or protect the integrity of RAs. *Institutional Controls; A Guide to Planning, Implementing, Maintaining and Enforcing Institutional Controls at Contaminated Sites*, Office of Solid Waste and Emergency Response (OSWER) 9355.0-89, EPA-540-R-09-001, December 2012 ("*A Guide to ICs*"). ICs should be carefully evaluated, selected and narrowly tailored to meet the cleanup objectives for the site in a manner that does not unnecessarily restrict the reasonably anticipated future land use or resources. *Id.* at p. 2.

ICs are generally divided into four categories: governmental controls, proprietary controls, informational devices, and enforcement and permit tools. *Id.* at p. 2. The different categories of ICs are often more effective if they are layered. *A Guide to ICs* at p. 9. Layering entails the use of more than one IC at the same time, all with the same goal. For example, proprietary controls in the form of restrictive covenants, governmental controls in the form of land use regulations, and informational devices all may relate to the same property and address the same residual contamination. The layering of ICs, however, should be commensurate with the amount, concentrations, toxicity and other characteristics of residual contamination. *Id.*

The selected ICs for the Site include three of the four categories of ICs (governmental controls, proprietary controls, and informational devices), appropriately layered to address differing characteristics of residual contamination at different portions

of the Site. This Section 6.0 provides a summary description and analysis of the selected IC's for the Site.

6.1 Governmental Controls (*Development Permit System*). Governmental controls impose restrictions on land or resource use using the authority of a governmental entity. *A Guide to ICs* at p. 4. Typical examples of governmental controls include zoning and local groundwater use regulations. *Id.* Under Montana law, local governments, such as ADLC, have the authority to regulate land use through zoning or other forms of land use regulation (such as subdivision and floodplain ordinances) for the purpose of protecting the health, safety and general welfare of the people.

ADLC's authority was specifically recognized in the OW/EADA OU ROD, the ARWW&S OU ROD and the CS OU ROD and ROD Amendment. In that regard, the OW/EADA OU ROD generally provides:

> *ADL has adopted a land use Master Plan and the DPS to control future actions at the site including the drilling of wells. Any new development activity or land use anywhere on the site, such as drilling wells, excavation, or new construction, will be regulated by the County under the DPS, irrespective of land ownership.*

OW/EADA OU ROD at DS-54.

The ARWW&S OU ROD also specifically contemplates the use of ADLC's Master Plan[1] and Development Permit System ("DPS") as ICs at this Site stating as follows:

> *ADL has adopted a Master Plan and DPS to provide an over-arching land use plan for the county as well as specific land use regulations within the Superfund Site boundary that: 1) assure that land use is consistent with the Superfund remedies implemented within the county and are consistent with current designated land uses; and 2) protect human health and the environment from any remaining unacceptable risks posed by waste-left-in-place. These restrictions apply to all public and private property at the Anaconda Smelter Site. These governmental restrictions have been integrated with clean-up decisions and land use restrictions that have been or will be placed on titles to individual properties through conservation easements, restrictive covenants, or through community programs.*

[1] ADLC's Master Plan is now referred to as the Growth Policy.

> *The Master Plan identifies the NPL sites and the OUs within ADL and establishes a Superfund Study Area. Within the Superfund Study Area, the Master Plan land use policy is supportive of Superfund remediation that is protective of human health and the environment and levels of clean-up that would allow use of soils and water commensurate with proposed land and water uses. The Plan creates a Smelter Overlay District, the principal tool for establishment of ICs, that allows for development within the Superfund sites to occur on lands only after the level of contamination poses no significant health risk for the proposed development and land use. This overlay also controls access to potentially contaminated groundwater and protects the integrity of remedial measures by regulating development.*
>
> *The DPS implements the Master Plan by requiring a permit for any subdivision of land, clearing, grading, excavation, construction, reconstruction, or any development or building activity, with certain exceptions. Development must be consistent with the DPS requirements and approved by the County Administrator. DPS requirements, or performance standards, have been identified by a development district for the permitted or special permitted uses of that district. The DPS generally requires a grading plan, an erosion and runoff control plan, and requires a remediation plan: 1) where remedial structures are in place; or 2) in unremediated areas or areas remediated to a previous land use that would now exceed the following arsenic trigger levels: residential use – 250 ppm; commercial/industrial use – 500 ppm; and recreational use – 1,000 ppm.*

ARWW&S OU ROD at § 9.7.1.

With respect to the DPS, the CS OU ROD also provides as follows:

> *Implement ICs to clean up future residential areas.*
>
> - *Clean Up all future residential soils area within the Focus Area that exceed the residential action level of 250 ppm soil arsenic concentration at the time of development, through the ADLC-DPS. The ADLC-DPS will continue to require soil sampling at all new residential construction within the Superfund Planning Area Overlay District. Soils exceeding the 250 ppm*

soil arsenic concentration will be cleaned up through the DPS with preference given to removal.

- *The current ADLC Planning Area Overlay District will be expanded, where necessary, to include the focus area.*

- *In areas where site-specific conditions dictate that removal is not implementable, other measures (i.e., capping, tilling, ICs, etc.) will be taken to reduce arsenic concentrations to below the 250 ppm action level or prevent exposure.*

* * *

Implement ICS to clean up future commercial industrial areas.

- *Final Remediation of arsenic contamination in commercial/industrial areas to the action level of 500 ppm will be implemented through the ADLC-DPS at the time development occurs, except as otherwise determined by EPA, in consultation with the affected property owner.*

CS OU ROD at §§ 9.1.2 and 9.2.2.

The CS OU ROD Amendment similarly provides as follows:

Clean up future residential use area.

- *Clean Up all future residential soils area within the ADL Superfund Planning District that exceed the soil lead concentrations of 400 ppm, at the time of development, through the ADLC-DPS. The ADLC-DPS will continue to require soil sampling at all new residential construction within the Superfund Planning District (Appendix A). Soils exceeding the 400 ppm soil lead cleanup level from 0 to 12 inches will be cleaned up through the DPS with preference given to removal.*

- *Revise the current ADLC Superfund Planning District, where necessary. The current Superfund Planning District is shown in Appendix A. With EPA approval, ADLC may revise the boundaries of this district as more data becomes available under this action and associated ICs programs.*

- *In areas where removal cannot be implemented due to site conditions, take other measures (i.e., capping, tilling, ICS, etc.) to reduce soil lead concentrations to below 400 ppm or to prevent exposure.*

CS OU ROD Amendment at § 6.1.2.

Consistent with the provisions of Montana enabling legislation (M.C.A. §§ 76-2-101 to 76-2-228), ADLC adopted an updated Growth Policy in 2011 and an updated comprehensive zoning ordinance in 2015. ADLC's comprehensive zoning ordinance is formally referred as the Development Permit System ("DPS"). Pursuant to the terms and conditions of the anticipated ICA and CNSA Amendment, ADLC will : (a) adopt certain amendments to the DPS; and (b) abide by, implement and enforce the DPS as amended. A copy of the DPS amendments are attached as Appendix A. Following adoption by ADLC, the DPS amendments will be codified.[1]

The DPS creates several "development districts," each with its own set of development requirements. The DPS also creates "overlays" for some of the development districts. Overlays set forth additional development requirements for the underlying development district to reflect conditions or issues that do not prevail at all locations in that development district. The overlays include the Superfund Overlay and the Superfund Domestic Well Overlay . The requirements of both of these overlays are discussed below.

6.1.1 ***Superfund Overlay***. The Superfund Overlay is depicted on the map attached as Appendix F to the DPS (Appendix A hereto). Pursuant to Chapter XXX of the DPS, a development permit is required for any excavation within the Superfund Overlay exceeding one cubic yard or any excavation within a Waste Management Area. In order to preserve existing remedial structures (i.e., protective covers and storm water controls) and minimize exposure to residual contamination within the Superfund Overlay, ADLC will prepare a work plan for each proposed development within the Superfund Overlay for which a development permit is required ("ICWP"). The ICWPs prepared by ADLC will, consistent with the applicable requirements of DPS Chapter XXXF.4 and the development guidance set forth in Appendices D and E to the DPS (Appendix A hereto), contain detailed measures for the proper removal, treatment or covering of any contaminated material and the protection and/or replacement of existing remedial structures within a proposed development area. Each developer will, as a condition of the development permit, be required to comply with and implement the ICWP. All ICWPs which involve excavations of five (5) cubic yards or more within Waste Management Areas will be approved by EPA prior to ADLC's issuance of a development permit. All pre-development and/or post-development sampling will be conducted by ADLC in accordance with the EPA-approved Anaconda-Deer Lodge County Institutional Controls Program Quality Assurance Project Plan to ensure that post-development conditions comply with the applicable action levels.

[1] The codification will lead to the change of the Chapter and Section references contained in the DPS amendments.

Upon verification that the applicable DPS requirements have been achieved, a Certificate of Compliance will be issued by ADLC to the developer. ADLC personnel may also prepare an "as-built" drawing of the developed property to show the sample locations as well as the locations of key site features such as remedial structures, paved areas, buildings, etc. The as-built drawing will be incorporated into the Geographic Information System ("GIS") discussed in Section 6.3 below.

Pursuant to DPS Chapter XXX.F.3, ADLC's Superfund Coordinator will consult with AR in connection with any proposed change in land use (i.e., from open space or commercial/industrial to residential), any proposed residential subdivision and any proposed commercial/industrial developments within the Superfund Overlay prior to the development of a work plan for the development to determine whether the performance of RAs by AR is necessary and appropriate within the proposed development area. If it is determined that RAs within the proposed development area are needed, AR will perform the RAs within the proposed development area either prior to, in conjunction with, or following the applicant's performance of the work identified in the applicant's development permit after securing any necessary approvals from EPA.

6.1.2 ***Superfund Domestic Well Overlay***. The Superfund Domestic Well Overlay is depicted on the Map attached as Appendix G to the DPS (Appendix A hereto). In order to prevent the consumption of water containing arsenic at concentrations greater than the human health standard identified in the ARWW&S OU ROD Amendment (EPA, 2011), a development permit is also required pursuant to DPS Chapter XXXI for any digging or drilling of new domestic wells within the Superfund Domestic Well Overlay. Pursuant to DPS Chapter XXXI.G, following the completion of yield and drawdown tests, water from all new domestic wells within the Superfund Domestic Well Overlay will be sampled by AR or its contractor in accordance with the EPA-approved Anaconda Regional Water and Waste – Final Domestic Well Monitoring Quality Assurance Project Plan ("Domestic Well Sampling and Analysis Plan"). If the sample results show that the arsenic concentration is 10.0 µg/L or less, the Superfund Coordinator will issue a Certificate of Compliance. If the sample results show that the arsenic concentration is greater than 10.0 µg/L, a confirmation sample will be collected and analyzed by AR or its contractor in accordance with the Domestic Well Sampling and Analysis Plan to confirm the arsenic exceedance. If the confirmation sample results confirm an arsenic exceedance of greater than 10.0 µg/L, AR or its contractor will be responsible for implementing an EPA approved RA.
All development permits issued pursuant to Chapter XXXI will include a condition which will allow AR or its contractor to conduct additional water quality sampling of all new domestic wells within the Superfund Domestic Well Overlay following the issuance of a Certificate of Compliance. The additional sampling will be conducted in accordance with the Domestic Well Sampling and Analysis Plan. ADLC will abide by, implement and enforce the DPS pursuant to the terms and conditions of the anticipated ICA and the CNSA Amendment.

6.2 **Proprietary Controls (*Restrictive Covenants*)**. Proprietary controls are controls on land use that are considered private in nature because they tend to affect a single parcel of property and are established by private agreement between the property owner and a second party who, in turn, can enforce the controls. *A Guide to ICs* at p. 4.

Common examples of proprietary controls include restrictive covenants and easements that restrict use. *Id.* Proprietary controls can serve to prohibit activities that might compromise the effectiveness of the RAs or restrict activities or future resource use that might result in unacceptable risk to human health or the environment. *Id.*

The ARWW&S OU ROD provides as follows with respect to proprietary controls:

> *Restrictive covenants are written restrictions or requirements placed on the title to real property that bind current and future owners of the property. ARCO has placed restrictive covenants on a number of properties within the Anaconda Smelter Site. Restrictions are used to prohibit or restrict land uses, construction activities, access, and groundwater uses such as potable water well drilling.*

ARWW&S OU ROD at § 9.7.2; see also DS-91and 92.

The OW/EADA OU ROD similarly provides as follows:

> *Institutional controls will also be imposed by means of deed restrictions within the Site. Deed restrictions, covenants, and/or easements will be implemented to limit future uses by any party to those consistent with the Selected Remedy. In addition to imposing requirements similar to those in the DPS deed restrictions shall provide for access for remedial purposes to ARCO, EPA, and MDHES. Subsequent conveyances of the property shall impose the same deed restrictions.*

OW/EADA OU ROD at DS-54

Restrictive covenants are those written restrictions or requirements placed on the title to real property that pass with the property and bind both current and future owners of the property. In order to be effective, restrictive covenants must be made to run with the land so that they are binding upon subsequent owners. Under Montana law, in order to run with the land, the covenant must be made as part of a conveyance of real property. A conveyance is defined very broadly to include every instrument in writing by which an estate or interest in real property is created or encumbered, or by which title to real property may be affected.

Subject to some limited exceptions, certain restrictive covenants have been imposed through various conveyance and other instruments on the portions of the Site which have been designated as Waste Management Areas ("WMAs") and High Arsenic Areas ("HAAs"). Due to the quantity and characteristics of the residual contamination in the WMAs and HAAs, the restrictive covenants will serve as a second layer of ICs (in addition to the DPS) for the parcels of property located within those areas. The locations

of the WMAs and the HAAs within the Site are depicted on Map 2. Also included on Map 2 are parcel identification numbers for each of the separate parcels of real property located within the boundaries of the WMAs and HAAs. The parcel identification numbers correspond to the Restrictive Covenants Summary Table attached as Appendix B. The Restrictive Covenants Summary Table includes a reference to the recorded instrument (book, page and date) through which the restrictive covenants were created ("Covenant Instruments") and a summary of the use and development restrictions that apply to each parcel. Copies of each of the recorded Covenant Instruments are also attached as Appendix C.

Though the restrictive covenants applicable to particular parcels of property within the WMAs and HAAs vary depending upon the anticipated land use, as reflected in the first column of Restrictive Covenants Summary Table, most of the parcels are burdened with a restrictive covenant which prohibits interference with RAs performed on the property. A typical non-interference covenant provides as follows:

> The Property Owner shall not take, authorize, or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates (i) the implementation, effectiveness, purposes, or integrity of any prior, current or future remedial action, response action or monitoring and maintenance activities of the response action required under any applicable laws or by any federal, state or local governmental entity, or (ii) any other actions that the Environmental protection Agency ("EPA"), the State of Montana ("State") or Atlantic Richfield Company ("Atlantic Richfield") deems necessary or advisable to address environmental conditions on or related to the Property.

Also as reflected in the first column of Restrictive Covenants Summary Table, most of the parcels within the WMAs and HAAs are also burdened by a future access covenant. A typical future access covenant provides as follows:

> The Property Owner shall grant access to the Property at all reasonable times to Atlantic Richfield, EPA, the State and their respective agents, employees, representatives and contractors for the purpose of (a) monitoring Property Owner's compliance with the Covenants, (b) conducting any investigation, monitoring, maintenance, sampling or other activities with respect to the Property, or (c) any response activities or remedial action that Atlantic Richfield, EPA or the State deems necessary or advisable with respect to the Property to address environmental conditions thereon.

6.3 Informational Devices (*Community Protective Measures Program*). Informational devices are tools that serve to provide information and educate the community about the presence of residual contamination that remains within the Site and the measures to reduce risk. *A Guide to ICs* at p. 4. Common examples of informational tools are educational advisories, recorded notices in property records and tracking systems. *Id.*

The CS OU ROD, the CS OU ROD Amendment and the ARWW&S OU ROD require the use of certain informational devices as ICs, including a Community Protective Measures Program ("CPMP"). The 1996 CS OU ROD established the requirement for the CPMP as follows:

> *Implement ICS to provide educational information to all residents describing potential risks and recommendations to reduce exposure to remaining contaminated soils.*
>
> - *Develop a CPMP, to be managed by ADLC, to provide educational information to residents within the ADLC Superfund Planning Overlay District describing risks and recommendations to reduce exposure to residential contaminants (.250 ppm) in soils (i.e., the importance of maintain a healthy lawn or other protective cover).*
>
> - *Information on soil arsenic concentrations and locations will be maintained in an ADLC database for public access. All sampling results and pertinent changes in soils and conditions of existing covers will be recorded for use by regulators, prospective home buyers, lenders, contactors, and other interested parties.*

CS OU ROD at § 9.1.3.

The ARWW&S OU ROD in 1998 provided as follows with respect to the CPMP:

> *The Community Protective Measures Program (CPMP) is an element of the selected remedy for the Community Soils OU and is applicable to the ARWW&S OU. The CPMP is intended to provide regulatory and educational support to residents within the Superfund Study area. Educational materials will discuss the potential risks associated with exposure to elevated arsenic levels in the environment and suggest methods for reducing exposure. The administrator in charge of the CPMP will be responsible for responding to residents who are concerned about arsenic exposure on their property. In accordance with defined procedures and*

> *upon request from a property owner or resident, the CPMP administrator will perform sampling and provide assistance, including contracting for remediation as necessary, to reduce unacceptable exposure.*[1] *As part of this program, information regarding the current status of exposure (i.e., arsenic levels, clean-up status, future requirements) will be maintained on a Geographical Informational System, which will display information for specific locations and be made available to the public. The program may' develop other types of informational material, such as maintenance of remedies (e.g., protection of caps) and a developers' package.*

ARWW&S OU ROD at § 9.7.4.

The CS OU ROD Amendment served to expand the requirements of the CPMP as set forth in the original CS OU ROD with respect to residential soils as follows:

> *Expand the CPMP to reduce exposure to remaining (residual) lead contaminants.*
>
> - *Provide for a health education program to inform residents within the Superfund Planning District of the potential risks to lead and recommendations for reducing exposure to lead in their environment.*
>
> - *Track information and data on lead concentrations/locations in ADLC data base/GIS for public access to be used by regulators, prospective home buyers, lenders, contactors and other interested parties.*
>
> - *Prior to soil remediation, coordinate with ADLC and landowners to address deteriorating exterior lead paint from homes/garages/fences that may have the potential to recontaminate remediated soil areas.*
>
> - *Provide a "soil swap" program to provide clean soil to residents for gardens and play areas.*

CS OU ROD Amendment at § 6.1.3.

The CS OU ROD Amendment served to expand the requirements of the CPMP as set forth in the original CS OU ROD with respect to interior dust as follows:

[1] All sampling upon request from a property owner will be addressed by either AR or ADLC pursuant to the CS OU Remedial Action Work Plan.

> *Expand the CPMP to reduce exposure to remaining (residual) interior dust contamination within the Superfund Planning District:*
>
> - *Provide for sampling and/or other assessments of properties to determine if residential arsenic and lead contamination is present and the need for remedial action, where necessary.*
>
> - *Provide dust control and removal services as requested by home owners planning a remodeling effort that could cause dust in the seldom accessed living areas to be released to the regularly used portions of the home.*

CS OU ROD Amendment at § 6.2.2.

A comprehensive Anaconda-Deer Lodge County Community Protective Measures Program Plan ("CPMP Plan") which meets the objectives of the CS OU ROD, the CS OU ROD Amendment and the ARWW&S OU ROD has been developed. A copy of the CPMP Plan is attached as Appendix D. ADLC's responsibilities under the CPMP Plan include the following components:

- Community Outreach
- Community Awareness and Education
- Public Inquiries
- Interior Dust
- Soil Swap
- GIS

Each of the CPMP components as well as ADLC's specific responsibilities and obligations with respect to each are specifically addressed in the CPMP Plan and shown on the organizational chart attached as Figure 3 to the CPMP Plan. The GIS component of the CPMP will be updated and maintained as a shared responsibility of ADLC and AR. ADLC's responsibilities for the updating and maintaining the GIS are set forth and described in Anaconda-Deer Lodge County's Institutional Controls Management System Plan attached as Appendix F. AR's responsibilities for the updating and maintaining the GIS are separately set forth and described in Atlantic Richfield's Institutional Controls Management System Plan attached as Appendix E. ADLC will implement its duties and obligations under the CPMP Plan and Anaconda-Deer Lodge County's Institutional Controls Management System Plan pursuant to the terms and conditions of the anticipated ICA and CNSA Amendment.

As a further CPMP informational device effort, AR, with input from EPA and ADLC, will develop an annual community newsletter that will provide an update on completed and planned RA efforts, and information on voluntary programs, including answers to frequently asked questions, and appropriate contact information. The newsletter will be published as an insert in the Anaconda Leader and will be available on ADLC's official website.[1]

7.0 MONITORING

7.1 Governmental Controls. ADLC will be primarily responsible for monitoring compliance with the governmental controls described in Section 6.1. Monitoring compliance with the governmental controls will occur as part of ADLC's routine government functions and will specifically include regular monitoring by ADLC of "811 call before you dig" calls. Pursuant to M.C.A. § 69-4-503, any person planning to excavate, drill or perform other subsurface activities is required to notify the designated one call notification center. If non-compliant activities are observed or identified by ADLC (i.e., excavations within the Superfund Overlay proceeding without a required development permit), ADLC will agree pursuant to the anticipated ICA and CNSA Amendment to take appropriate steps to compel compliance through informal communications with the developer and, if necessary, through enforcement action.

7.2 Proprietary Controls. AR will be primarily responsible for monitoring compliance with the proprietary controls described in Section 6.2. Monitoring will occur as part of AR's routine inspection and maintenance activities associated with the WMAs and HAAs. Monitoring will also occur through direct coordination between AR and ADLC with respect to DPS permit applications received by ADLC for developments within the WMAs and HAAs. Specifically, pursuant to the anticipated ICA and CNSA Amendment, ADLC will provide AR with written notice within 5 days of receipt of an application for a development permit for any proposed development within the WMAs and HAAs and to include in such notice a complete copy of the application for a development permit and a legal description of the property that will be affected by the proposed development. Upon receipt of such notices, AR will evaluate and determine whether the proposed development complies with the applicable restrictive covenants. If non-compliant activities are observed or identified by AR (i.e., activities or proposed uses that are inconsistent with the applicable restrictive covenants), AR will take appropriate steps to compel compliance through informal communications with the developer and, when necessary, through enforcement action.

7.3 Informational Devices. The informational devices and related components described in Section 6.3 and the CPMP Plan do not require any direct

[1] As separately required by the CPMP portion of the Final Residential Soils Remedial Action Work Plan/Final Design Report (Atlantic Richfield, 2002), a single mass mailing of information was also sent to all residents within the Superfund Overlay in 2003 and a full-page advertisement was published in the Anaconda Leader in 2002, 2003, 2004, and 2005.

monitoring. The informational devices, however, will be implemented by ADLC and AR in accordance with Section 6.3 and the CPMP Plan. ADLC will implement its duties and obligations under Section 6.3 and the CPMP Plan pursuant to the terms and conditions of the anticipated ICA and the CNSA Amendment.

8.0 MODIFICATION/TERMINATION

8.1 Governmental Controls. The governmental controls described in Section 6.1 are subject to modification by ADLC, in consultation with AR and EPA. ADLC will agree pursuant to the anticipated ICA and the CSNA amendment not to adopt any amendments to the governmental controls which are inconsistent with the RODs or the Consent Decree for the Site. Pursuant to the anticipated ICA and the CNSA Amendment, ADLC will also provide AR, EPA and the State with a copy of all proposed amendments to the governmental controls relating to the Superfund Overlay and the Superfund Domestic Well Overlay and an opportunity to review and comment on all such amendments prior to their adoption. ADLC has further agreed to provide AR, EPA and the State with a copy of all adopted amendments relating to the Superfund Overlay and the Superfund Domestic Well Overlay.

8.2 Proprietary Controls. The restrictive covenants described in Section 6.2 are covenants running with the land but are subject to modification and termination in accordance with their terms. The typical modification/termination provision set forth in the Covenant Instruments requires that any modification be in a writing approved by AR or its affiliate, ARCO Environmental Remediation, L.L.C., and the owner of the parcel burdened by the restrictive covenant to be modified and recorded in the Deer Lodge County real property records. Certain of the Covenant Instruments will be modified pursuant to the terms of the anticipated ICA and CNSA Amendment. Following the recording of the modified Covenant Instruments, AR will provide EPA and the State appropriate updates to Appendices B and C and Map 2 by way of the next annual report required pursuant to Section 10.0. Notwithstanding the terms of the Covenant Instruments, AR will secure and will cause AERL to secure the written approval of EPA prior to agreeing to any other modification or termination of the restrictive covenants set forth in the Covenant Instruments.

8.3 Informational Devices. The CPMP components described in Section 6.3 and the CPMP Plan are intended to exist during the terms of the anticipated ICA and CNSA Amendment but components may be modified or terminated based on information obtained through the implementation process. All proposed modifications or terminations of components to the CPMP will be addressed in the annual reports required pursuant to Section 10.0 and shall be subject to prior written approval by EPA prior to implementation. Additionally, the CPMP will be reviewed during each Five-Year Review for the Site. Based on the results of the reviews, components of the CPMP may be modified or terminated.

9.0 ENFORCEMENT

9.1 **Governmental Controls**. Enforcement of the governmental controls will be ADLC's responsibility and obligation pursuant to the anticipated ICA and CNSA Amendment. Enforcement includes, but is not limited to, issuing permits for all developments, ensuring compliance with permit conditions, or issuing non-compliance orders for not obtaining a permit or not complying with permit conditions and/or assessing fines.

9.2 **Proprietary Controls**. The restrictive covenants set forth in the Covenant Instruments may be enforced by AR as the beneficiary of the covenants. AR's Enforcement rights include the possibility of injunctive relief or damages or both. By way of injunctive relief, the owner of the property subject to covenants may be ordered to comply with the terms of the covenants. For instance, injunctive relief may include ordering the owner of the property that is subject to the covenant to cease use of the property for prohibited purposes, to remove structures erected in violation of the covenants, and to take actions (such as maintenance of fences) consistent with the covenants

9.3 **Informational Devices**. The CPMP and related components are informational tools and do not create any rights or obligations directly enforceable against specific persons or properties. However, the CPMP will be implemented in accordance with its terms by ADLC and AR. ADLC will implement its duties and obligations under the CPMP pursuant to the terms and conditions of the anticipated ICA and the CNSA Amendment.

10.0 REPORTING

Consistent with the requirements of the anticipated ICA and CNSA Amendment, AR and ADLC will prepare and provide annual reports to EPA and the State summarizing the activities undertaken during the prior year to implement, monitor and enforce the ICs for the Site. The annual reports shall, at a minimum, include summaries of the following:

1. The activities undertaken by ADLC with respect to implementation and enforcement of the governmental controls during the reporting period;

2. The activities undertaken by ADLC and/or AR with respect to implementation of each component of the CPMP during the reporting period;

3. A description of any recommended modifications to the CPMP that should be implemented in the future based on information obtained during the reporting period;

4. A compilation of the number of DPS applications received, the number and types of DPS permits issued, and the number of certificates of compliance issued during the reporting period and the number of DPS permits which remain open at the end of the reporting period;

5. A description of any IC's non-compliance encountered during the prior year with respect to either the governmental controls or the proprietary controls including a summary of relevant facts related to the event of non-compliance, and the actions undertaken or being undertaken by ADLC and/or AR to secure compliance or enforcement of the ICs; and

6. A description of the activities undertaken by AR and ADLC during the reporting period to maintain and update the GIS.

Additionally, if and to the extent that issues arise with the implementation or enforcement of particular ICs, the issues, and the actions taken or proposed to be undertaken to address the issues, will be set forth in the annual report.

11.0 REVIEWS

In order to ensure that the ICs remain in place and continue to be effective, the ICs records of ADLC and AR will be available for periodic inspection and review by EPA and the State upon request. Additionally, appropriate representatives of ADLC, AR, EPA and the State will meet and confer annually to review and discuss the overall effectiveness of the Site ICs. Following the annual meetings, EPA will issue a written evaluation of ADLC's performance of its ICs obligations under this ICIAP in accordance with the terms of the anticipated ICA and CNSA Amendment. Periodic monitoring of the effectiveness of the ICs will also be accomplished through the five year review process mandated by CERCLA Section 121, 42 U.S.C. § 9621

APPENDIX A
(Development Permit System Amendments)

Chapter XXX – Superfund Overlay

A. Purpose and Intent

The purpose of the ***Superfund Overlay*** is to implement the ***Plan*** by protecting public health and the environment while allowing appropriate ***Development*** activities within the ***Superfund Overlay*** consistent with the requirements of ***Superfund***. The requirements applicable to the ***Superfund Overlay*** will:

1. Assure that future land use in the ***Superfund Overlay*** is protective of human health;

2. Provide for the preservation of ***Protective Covers*** and ***Storm Water Controls*** in the ***Superfund Overlay***;

3. Require that future ***Development*** in the ***Superfund Overlay*** employs construction practices that are consistent with the protection of public health and the environment, as determined by ***Superfund***; and

4. Assure soil containing metal concentrations in excess of the ***Superfund*** arsenic and lead action levels contained in Tables XXX.A.1 and XXX.A.2 is addressed in accordance with these ***DPS Regulations***.

Table XXX.A.1. – Superfund Arsenic Action Levels by Land Use

Use	***Action level (ppm) or mg/kg***
Residential	250
Commercial/Industrial	500
Recreational/Open Space	1,000

Table XXX.A.2. – Superfund Lead Action Levels by Land Use

Use	***Action level (ppm) or mg/kg***
Residential	400

The requirements of this Chapter XXX also serve as institutional controls in the context of ***Superfund***.

Division 1 – Additional Administrative Procedures

B. Requirements

The requirements set forth in this Chapter XXX are in addition to, and not in lieu of, the other applicable requirements of these ***DPS Regulations***.

C. Application Requirements

All applications for ***Development Permits*** within the ***Superfund Overlay*** shall include the following information, as may be applicable to any particular ***Development***:

1. A completed ***Development Permit*** application form.

2. A ***Site Plan*** showing the locations of all existing and proposed ***Developments*** and new construction and all ***Protective Covers*** and ***Storm Water Controls*** associated with the proposed ***Development*** parcel.

3. A detailed ***Grading*** plan showing the depth of all proposed ***Excavation***/fill areas and the volume of soil to be moved on-site and/or relocated off-site.4. An ***Erosion and Surface Runoff Control Plan*** to minimize the negative effects or impacts on the ***Development*** parcel and on water quality. Such plan shall show final storm water drainage, control features and supporting calculations (if available) and the location and type of ***Best Management Practices*** to manage and control surface water runoff, and other measures to avoid collection and movement of ***Contaminated Material*** into the drainage systems. In addition, a maintenance plan for all BMPs identified in the ***Erosion and Surface Runoff Control Plan*** must be submitted. Maintenance must be conducted periodically such that all components of the ***Erosion and Surface Runoff Control Plan*** handle the volumes of storm water for which they were designed and approved. Failure to maintain all components of an approved ***Erosion and Surface Runoff Control Plan*** shall be considered a violation of these ***DPS Regulations.***

4. A re-vegetation plan in areas where a vegetative ***Protective Cover*** is a requirement of the remedy. Such plan shall show the measures which will be undertaken to re-establish disturbed vegetative ***Protective Covers*** including seedbed preparation, seed mix, fertilizer rates, mulching timing, application rates, and weed control.

D. Pre-Construction Meeting

Unless the requirement is waived by the ***Superfund Coordinator***, an applicant shall be required to meet with the ***Superfund Coordinator*** prior to beginning the work identified in the applicant's ***Development Permit*** application.

E. Site Inspections

A permittee's land shall be open to inspection by the ***Superfund Coordinator*** in order to enforce the requirements of any ***Development Permit*** issued for land subject to the provisions of this Chapter XXX.

Division 2 – Performance Standards

F. Development on Sites within the Superfund Overlay

1. If existing ***Protective Covers*** or ***Storm Water Controls*** will be affected by the proposed ***Development***, the ***Superfund Coordinator*** shall develop an ***ICWP*** in accordance with the requirements of this Chapter XXX including, without limitation, the requirements of Sec. XXX.F.4 and the ***Guidance for Developments with Existing Protective Covers*** or ***Storm Water Controls*** (Appendix D of these ***DPS Regulations***). The ***ICWP*** shall be incorporated into the applicant's ***Development Permit*** and shall be subject to enforcement pursuant to Chapter II, Division 4 of these ***DPS Regulations***.

2. If existing ***Protective Covers*** or ***Storm Water Controls*** will not be affected by the proposed ***Development***, the ***Superfund Coordinator*** will provide the applicant with pertinent information relating to the ***Development*** area including existing soil sample results. If soil sample results for the ***Development*** area do not exist, then the ***Superfund Coordinator*** will cause samples to be collected from the area proposed for ***Development*** in accordance with the ***Soils Sampling and Analysis Plan***. Subject to the terms of Sec. XXX.F.3, if ***Contaminated Material*** is present in the ***Development*** area, the ***Superfund Coordinator*** shall develop an ***ICWP*** in accordance with the requirements of this Chapter XXX including, without limitation, the requirements of Sec. XXX.F.4 and the ***Guidance for Developments without Existing Protective Covers or Storm Water Controls*** (Appendix E of these ***DPS Regulations***). The ***ICWP*** shall be incorporated into the applicant's ***Development Permit*** and shall be subject to enforcement pursuant to Chapter II, Division 4 of these ***DPS Regulations***.

3. The ***Superfund Coordinator*** will consult with the Atlantic Richfield Company in connection with any proposed ***Superfund Change in Use***, any proposed residential ***Subdivision*** or any proposed commercial/industrial ***Developments*** within the ***Superfund Overlay*** prior to the development of an ***ICWP*** pursuant to Sec XXX.F.1 or Sec. XXX.F.2 to determine whether the performance of ***Response Actions*** by Atlantic Richfield Company may be required within the proposed ***Development*** area. If the performance of ***Response Actions*** by Atlantic Richfield Company is required within the proposed ***Development*** area pursuant to ***Superfund***, Atlantic Richfield Company will perform the ***Response Actions*** within the proposed ***Development*** area either prior to, in conjunction with, or following the applicant's performance of the work identified in the applicant's ***Development Permit***. Any ***Response Actions*** to be performed by Atlantic Richfield Company will be taken into account in an ***ICWP*** prepared pursuant to Sec XXX.F.1 or Sec. XXX.F.2.

4. The ***ICWP*** and related soils handling requirements will be developed in accordance with the ***Soils Sampling and Analysis Plan*** and the following alternatives as guided by the applicable ***Development Guidance*** (Appendices D and E):

a. Wherever the ***Development*** will cause ***Contaminated Material*** to be ***Excavated***, dust suppression measures and storm water ***Best Management Practices*** may be required by the ***Superfund Coordinator***, and will be included within the ***Development Permit***. Options that may be considered to suppress dust in combination or individually include:

(i). limiting disruption of existing ***Protective Covers***;

(ii). use of water or surfactants on exposed materials, while earth work is occurring or while ***Contaminated Material*** is exposed;

(iii). phasing of work to minimize the area and time of exposure of ***Contaminated Material***; or

(iv). avoiding opening new ground areas during windy periods.

b. Any ***Protective Cover*** that will be ***Excavated*** or disturbed by ***Development*** activity shall be restored in a way that is at least equally protective of the environment and public health as the original ***Protective Cover***. The ***Superfund Coordinator*** shall include in the ***Development Permit*** the steps to be taken to achieve this objective.

c. Only material meeting the applicable criteria set forth in the applicable ***Development Guidance*** shall be imported for use on any site within the ***Superfund Overlay***. The import of more than one cubic yard of fill requires a permit (or explicit approval as part of a ***Development Permit***), and such a permit shall be approved only where the specific source of the fill is identified and approved as meeting the applicable criteria set forth in the applicable ***Development Guidance***. The ***Superfund Coordinator*** shall inspect the imported fill from time to time for compliance with this performance standard. However, an unlimited quantity of material from a ***Certified Source*** may be imported without a ***Development Permit*** provided such material is used for maintenance of a legally existing private road, driveway, or similar facility, and is not placed within stream bank or lakeshore protection areas, or in floodplains.

d. Transportation of ***Excavated Contaminated Material*** on public roadways shall be managed by the applicant to prevent the potential spread of such materials through spillage, blowing dust or tracking on such roadways.

e. The function of ***Storm Water Controls*** within the ***Development*** area, if any, shall be maintained or improved as a condition to all ***Development Permits*** issued pursuant to this Chapter XXX.

f. The ***Superfund Coordinator*** shall provide specifications and guidance for any requirements relating to soil type and re-vegetation.

5. The ***Superfund Coordinator*** may contract for professional assistance needed to ensure the adequacy of application materials and plans and compliance with the performance standards adopted in this Chapter XXX.

G. Development in Public Right-of-Way and Utility Easements.

All ***Development*** in the public streets, alleys or road rights-of-way or in utility easements must be conducted in accordance with the requirements of this Chapter XXX. In addition, ***Developments*** in the public streets, alleys or road rights-of-way or in utility easements belonging to the ***County*** shall be conducted pursuant to a ***GUS Permit*** issued by the ***County***.

Division 3 – Post-Development

H. Post-Development Sampling

Upon completion of all on-site ***Development*** activities and prior to any ***Landscape*** improvements (e.g., sprinkler systems, seeding, sod installation, etc.), the ***Superfund Coordinator*** will cause samples to be taken within the ***Development*** area in accordance with the ***Soils Sampling and Analysis Plan*** to ensure compliance with the ***ICWP***.

I. Compliance with Development Permit Requirements

If inspection or sampling by the ***Superfund Coordinator*** indicates that all ***ICWP*** and ***Development Permit*** requirements have not been met, the ***Superfund Coordinator*** will require the permittee to implement such additional actions as may be necessary to ensure that all ***ICWP*** and ***Development Permit*** requirements are met.

A permittee shall be deemed out of compliance if the terms and conditions of the ***Development Permit*** and ***ICWP*** are violated. Violations will preclude the permittee from using, occupying, or establishing any change in use for the subject ***Development*** or ***Structure***.

J. Certificate of Compliance

If the ***Superfund Coordinator*** determines that the requirements of the ***Development Permit*** and ***ICWP*** have been met, the ***Superfund Coordinator*** shall issue a ***Certificate of Compliance*** to the permittee.

Chapter XXXI – Superfund Domestic Well Overlay

A. Purpose and Intent

The purpose of the ***Superfund Domestic Well Overlay*** is to implement the ***Plan*** by protecting public health consistent with the requirements of ***Superfund*** while allowing appropriate ***Development*** activities within the ***Superfund Domestic Well Overlay***. The requirements applicable to the ***Superfund Domestic Well Overlay*** will assure that the water consumed from domestic wells within the ***Superfund Domestic Well Overlay*** does not exceed the ***Superfund*** arsenic action level of 10.0 micrograms per liter (µg/L).

The requirements of this Chapter XXXI also serve as institutional controls in the context of ***Superfund***.

Division 1 – Additional Administrative Procedures

B. Requirements

The requirements set forth in this Chapter XXXI are in addition to, and not in lieu of, the other applicable requirements of these ***DPS Regulations***.

C. Application Requirements

All applications for ***Development Permits*** for the installation of a new domestic well within the ***Superfund Domestic Well Overlay*** shall include the following information, as may be applicable to any particular ***Development***:

1. A completed ***Development Permit*** application form.

2. A ***Site Plan*** showing the locations of all proposed new domestic wells.

3. A detailed installation plan showing the planned screened interval depth of all proposed new domestic wells.

D. Pre-Installation Meeting

Unless the requirement is waived by the ***Superfund Coordinator***, all applicants shall be required to meet with the ***Superfund Coordinator*** prior to beginning the work identified in the applicant's ***Development Permit*** application.

E. Site Inspections

A permittee's land shall be open to inspection by the ***Superfund Coordinator*** in order to enforce the requirements of any ***Development Permit*** issued for land subject to the provisions of this Chapter XXXI.

Division 2 – Performance Standards

F. Installation of New Domestic Wells within the *Superfund Domestic Well Overlay*

All new domestic wells installed within the ***Superfund Domestic Well Overlay*** will be required to meet the applicable requirements of State law. All completed wells must be tested and monitored as provided in Sec. XXXI.G. and I. to assure that the water from all domestic wells meets the ***Superfund*** arsenic action level of 10.0 µg/L. The above standards shall be incorporated into the applicant's ***Development Permit*** and shall be subject to enforcement pursuant to Chapter II, Division 4 of these ***DPS Regulations***.

G. Initial Testing of New Domestic Wells within the Superfund Domestic Well Overlay

Following the completion of yield and drawdown tests, water from all new domestic wells within the ***Superfund Domestic Well Overlay*** will be sampled by Atlantic Richfield Company or its contractor in accordance with the ***Domestic Well Sampling and Analysis Plan***. If the sample results show that the arsenic concentration is 10.0 µg/L or less, the ***Superfund Coordinator*** will issue a ***Certificate of Compliance*** in accordance with Sec. XXXI.H. If the sample results show that the arsenic concentration is greater than 10.0 µg/L, a confirmation sample will be collected and analyzed by Atlantic Richfield Company or its contractor in accordance with the ***Domestic Well Sampling and Analysis Plan*** to confirm the arsenic exceedance. If the confirmation sample results confirm an arsenic exceedance of greater than 10.0 µg/L, Atlantic Richfield Company or its contractor will be responsible for implementing an EPA approved ***Response Action***.

H. Certificate of Compliance

Subject to the long-term water quality monitoring requirements of Sec. XXXI.I, if sample results obtained pursuant to Sec. XXXI.G indicate compliance with the ***Superfund*** arsenic action level of 10.0 µg/L or an EPA approved ***Response Action*** has been completed, and all other ***Development Permit*** requirements have been met, the ***Superfund Coordinator*** shall issue a ***Certificate of Compliance*** to the permittee. The permittee shall not permit or allow any human consumption of water from a new domestic well within the ***Superfund Domestic Well Overlay*** prior to the issuance of a ***Certificate of Compliance*** pursuant to this section.

I. Monitoring of New Domestic Wells within the Superfund Domestic Well Overlay

All ***Development Permits*** issued pursuant to this Chapter XXXI will include a condition which will allow an Atlantic Richfield Company or its contractor to conduct additional water quality sampling of all new domestic wells within the ***Superfund Domestic Well Overlay*** following the issuance of a ***Certificate of Compliance*** pursuant to Section XXXI.H. The additional sampling will be conducted in accordance with the following criteria:

1. If sample results obtained pursuant to Sec. XXXI.G show that the arsenic concentration is between 5.0 µg/L and 10.0 µg/L, water from the well will be sampled annually by Atlantic Richfield Company or its contractor in accordance with the ***Domestic Well Sampling and Analysis Plan***.

2. If sample results from any sampling conducted pursuant to Paragraph 1, above, show that the arsenic concentration is greater than 10.0 µg/L, Atlantic Richfield Company shall implement an appropriate EPA approved ***Response Action*** and shall provide alternate potable water for use by the resident until the ***Response Action*** is completed.

Chapter XXXIV- Definitions

A. Purpose. This chapter provides definitions for important terms used in these ***DPS Regulations***. Commonly understood definitions are essential for fair and consistent administration of these ***DPS Regulations***, and the ***Administrator*** should be guided by the definitions contained herein. Any interpretation or application of these terms by the ***Administrator*** may be appealed pursuant to Sec. II.L. of these ***DPS Regulations***.

B. Interpretation of Commonly Used Terms and Words.

1. Words used in the present tense include the future tense.

2. Words used in the singular include the plural, and words used in the plural include the singular unless the natural construction of the wording indicates otherwise.

3. The words "used for" shall include the meaning and application of "designed for".

4. The word "shall" is always mandatory.

5. The word "including" shall mean "including but not limited to".

6. The word "encouraged" is directory, and is used to express an intent, although not necessarily a requirement.

7. Where there appears to be a conflict between the content of the text of these ***DPS Regulations*** and any definition provided in this chapter, the text shall take precedent.

8. Should any question of definition arise for a term not listed in this chapter or not defined elsewhere in these ***DPS Regulations***, the ***Administrator*** may at his/her discretion, research the term and provide a definition for general use in administering and interpreting these ***DPS Regulations***.

C. Definitions of Terms and Words. The following definitions of terms and words are to be used in the administration, interpretation, and enforcement of this title:

***Access, Legal*:** The legally established means of approach to provide vehicular and/or pedestrian physical entrance to a property. The most common legally established means of access are public and private rights-of-way and easements.

Accessory: Customarily associated with and incidental and subordinate to.

Accessory Residential Unit*:** An independent and separate ***Dwelling Unit that is subordinate to a primary ***Residential Use*** of a property. Includes the terms "accessory dwelling unit", "accessory apartment", "garage apartment", "granny flat", and "mother-in-law apartment".

Accessory Structure: A ***Building*** or ***Structure*** that is detached from the Principal ***Structure*** on the same ***Lot***, and is customarily incidental and subordinate to the ***Principal Structure*** and/or use of the property. Examples of ***Accessory Structures*** include detached garages, storage/tool sheds, and material, supply, and merchandise storage ***Structures*** on commercial and industrial property.

Accessory Use*:** A use of land, a ***Building or Structure or portion thereof that is customarily incidental and subordinate in area, extent, or purpose to the principal ***Permitted Use***, and is located on the same ***Lot*** as the principal ***Permitted Use***. An ***Accessory Use*** or ***Accessory Structure*** may not exist on a ***Subject Property*** without a principal ***Permitted Use*** having been established**.** (Reference Sec. III. D.)

Administrator*:** Refers to the ***County's Planning Department Director or his/her designee.

ADP*:** Refers to an ***Administrative Development Permit (ADP), as further defined in this chapter (See, ***Development Permit, Administrative***).

***Adult Book Store*:** An establishment having all or a portion of its display area, stock-in-trade, or floor area used for the sale or rental of books, magazines, publications, tapes, film, video discs, or other media that is distinguished or characterized by an emphasis on sexually oriented and/or sexually explicit material, describing, relating to, or depicting sexual activities.

***Adult Entertainment*:** An establishment, either with or without a liquor license, offering sexually oriented live entertainment which may include but is not necessarily limited to entertainers, male or female, performing disrobed, partially disrobed, or in the act of disrobing, and/or touching patrons in a sexually explicit or sexually suggestive manner.

***Adult Retail Establishment*:** A business that offers films, books, manuals, toys, likenesses, marital aids, and other items of a sexually explicit nature for sale to the general public.

Adult Uses: Includes ***Adult Book Stores***, ***Adult Entertainment*** and/or ***Adult Retail Establishments***.

***Agriculture*:** The use of land for farming, dairying, grazing, the growing of crops, or the raising and/or breeding of animals for meat and/or live sale. This definition does not include feedlots or slaughtering and/or packing facilities.

Bed and Breakfast Establishment*:** A private owner or manager occupied residence that rents rooms therein by the night or week to transient guests for compensation, and in which breakfast is provided only to room guests, the cost of which is included in the price of the room. Terms of occupancy in a ***Bed and Breakfast Establishment shall be not more than 30 consecutive days. For purposes of these ***DPS Regulations***, no ***Bed and Breakfast Establishment*** shall have more than six (6) rooms available for rent, and all rooms shall be contained within the ***Principal Structure*** on the ***Lot***.

Best Management Practices (BMPs)*:** This term refers to activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce potential negative impacts during and after ***Excavation in terms of surface water runoff, vegetation loss, erosion, cuts and fills on slopes and dust generation. Best Management Practices are commonly divided into two categories, ***Non-structural BMPs*** and ***Structural BMPs***.

BMPs, Non-structural*:** Measures that primarily rely on natural materials or management practices such as ***Grading, use of natural materials and vegetation to contain, reduce or control surface runoff that may be effective in limiting ·erosion on a site or onto abutting properties or into drainage ways.

BMPs, Structural*:** Engineered and constructed drainage or hillside retention measures, such as paved drainage basins, retention ponds, storm sewers, curbs, gutters or ***Retaining Walls, designed to contain, reduce or control surface water runoff and soil erosion.

BOA: The ***County's*** Board of Adjustment authorized by Sec. 76-2-321, MCA. See Sec. II.Q.

Board*:** The ***County's Planning Board authorized by Sec. 76-1-101, MCA. See Sec. II.P.

Building*:** Any ***Structure having a roof supported by columns, posts, or walls and intended for the shelter, housing, or enclosure of any individual, group of individuals, animal, process, equipment, goods, or material of any kind.

Building Permit*:** A permit issued by the ***County and/or the Montana Department of Labor and Industries verifying that the project described in said permit meets all standards and requirements of the applicable International codes. Includes the terms "electrical permit", "plumbing permit", and "mechanical permit".

Business Park*:** A ***Development that contains a number of separate businesses, offices, light manufacturing facilities, and/or office/warehouse/showroom configurations along with ***Accessory Uses*** and supporting uses; incorporates common open space and shared parking, access, and drive areas, all planned and designed in a coordinated, integrated manner.

***Casino*:** An establishment or any portion of an establishment that offers live and/or machine gambling to patrons. Includes the term "gambling enterprise" as defined in Sec. 23-5-112(15), MCA.

Certificate of Compliance*:** Refers to the certificates of compliance issued by the ***Superfund Coordinator pursuant to Sec. XXX.J. and XXXI.H.

Certified Source: Refers to a source (supplier) of gravel, sand, crushed rock, or other construction and/or fill material that is certified by the ADLC Superfund Coordinator to not exceed the action levels for arsenic (250 ppm) and lead (400 ppm).

Character**:** Special physical features, characteristics, or ***Scale*** of a ***Structure*** or area that set it apart from its surroundings and contribute to its interest and/or individuality.

Children**:** Any persons under 13 years of age or any persons with special needs, as defined by the Montana Department of Health and Human Services, who are under 18 years of age or are 18 years of age and a full-time student expected to complete an educational program by 19 years of age. (Sec. 52-2-703, MCA)

Child Care**:** See ***Day Care***.

Churches**:** See ***Religious Institution***.

Commercial: This term generally describes land uses involved in community and regional commerce, including but not limited to retail sales, personal services, offices, professional services, dining and beverage establishments, lodging, and entertainment. Can also include uses such as auto sales and service, wholesale and distribution, building supply/home improvement, and commercial services such restaurant and medical supply, and janitorial and maintenance.

Commission**:** The elected governing body of the ***County***.

Community Residential Facility**:** This term is defined by Sec. 76-2-411, MCA:
(1) a community group home for developmentally, mentally, or severely disabled persons that does not provide skilled or intermediate nursing care;
(2) a youth foster home, a kinship foster home, a youth shelter care facility, a transitional living program, or youth group home as defined in Sec. 52-2-602, MCA;
(3) a halfway house operated in accordance with regulations of the department of public health and human services for the rehabilitation of alcoholics or drug dependent persons;
(4) a licensed adult foster family care home; or
(5) an assisted living facility licensed under Sec. 50-5-227, MCA.

Concentrated Animal Feeding Operation (CAFO): Establishments engaged in the confined feeding, breeding, raising, or holding of animals primarily in pens or cages. Confinement areas typically accumulate manure and the concentration of animals is of such a nature that vegetative cover cannot be maintained. This term includes the term "feedlot", but does not include horse barns and stalls, zoos, or slaughterhouses.

Contaminated Material**:** Soil or ***Mining Waste*** containing metal concentrations in excess of the ***Superfund*** arsenic or lead action levels contained in Tables XXX.A.1 and XXX.A.2 of Chapter XXX, as verified by sampling in accordance with the ***Soils Sampling and Analysis Plan***.

Cottage Industry*:** For purposes of these ***DPS Regulations, a ***Cottage Industry*** is a category of ***Home-based Business***. (See Appendix A, Division 1.)

Day Care*:** Care for ***Children provided by an adult, other than a parent of the ***Children*** or other person living with the ***Children*** as a parent, on a regular or irregular basis, as applicable, for daily periods of less than 24 hours, whether that care is for daytime or nighttime hours. Also includes the term ***Child Care***. (Sec. 52-2-703, MCA)

Day Care Home*:** A home based ***Child Care facility licensed by the State of Montana Department of Health and Human Services and providing ***Day Care*** for not more than 12 ***Children***. This term includes "family day care home" and "group day care home" as defined in Sec. 52-2-703, MCA. The term excludes what is typically referred to as a "day care center", which is an out of home facility providing ***Day Care*** to 13 or more ***Children*** on a regular or irregular basis.

Development: Development is used as a generic term covering any and all activities for which a ***Development Permit*** is required by these ***DPS Regulations*** or for which a ***Development Permit*** would be required by these ***DPS Regulations*** except for a specific exemption therefrom.

Development District*:** As used in these ***DPS Regulations, this term refers to the individual development districts established by these ***DPS Regulations*** and in effect throughout the ***County***. Each ***Development District*** has its own unique standards for ***Development***. A list of the ***Development Districts*** is provided in Sec. III.B. of these ***DPS Regulations***.

Development Guidance*:** Refers to the ***Guidance for Developments with Existing Protective Covers or Storm Water Controls or the ***Guidance for Developments without Existing Protective Covers or Storm Water Controls***, as applicable.

Development Permit*:** refers to ***ADPs and ***MDPs***.

Development Permit, Administrative (ADP)*:** A type of ***Development Permit that usually applies to ***Permitted Uses*** and ***Accessory Uses*** in each ***Development District***; reviewed by the ***County*** Planning Department staff, often with input from other ***County*** departments, and without a public hearing or notice to nearby property owners. (Sec. II. F. of these ***DPS Regulations***)

Development Permit, Major (MDP)*:** A type of ***Development Permit applied to ***Special Uses*** listed in each ***Development District*** as well as to planned ***Developments*** when that option is available. ***MDPs*** require notice to surrounding and nearby property owners, published notice, and a public hearing by the ***Board***. Final decision making authority over ***MDPs*** rests with the Commission. (Sec. II. G. of these ***DPS Regulations***)

Dining and Drinking Establishment*:** Includes any type of ***Restaurant, café, or coffee shop where patrons are served prepared food and/or beverages (including alcoholic beverages), for consumption on premises, for compensation; may include ***Drive-through Facilities*** if so allowed in the applicable ***Development District***. This term also includes the terms "bar", "tavern", "pub", "public house", "brew pub", and "road house", and also includes "carry out" and "delivery" services for off premise consumption of prepared foods. This term does not include ***Casinos***.

***Domestic Well Sampling and Analysis Plan*:** Refers to the EPA-approved Anaconda Regional Water and Waste – Final Domestic Well Monitoring Quality Assurance Project Plan.

***DPS Regulations*:** Refers to the Anaconda-Deer Lodge County Development Permit System.

***Drive-through Facilities*:** Site facilities and/or features that by design provides access to the site for customers to order, shop, make purchases, and/or generally conduct business while remaining in their motor vehicles. Includes the terms "drive-up facilities" and "drive-in facilities".

Dwelling Unit*:** One or more rooms, designed, occupied, or intended for occupancy as separate living quarters, with cooking, sleeping, and sanitary facilities provided within the unit for the exclusive use of a single ***Family maintaining a household.

Dwelling Unit, Multi-family*:** A ***Dwelling Unit within a ***Structure*** situated on a single ***Lot*** and designed for and containing three (3) or more separate ***Dwelling Units***. This definition is inclusive of the terms "apartment" and "multi-family housing unit".

Dwelling Unit, Single-family Detached*:** A ***Dwelling Unit that is designed and intended for ***Residential Use*** and is not attached or physically connected to any other ***Dwelling Unit*** by any means (except for an ***Accessory Dwelling Unit*** which may be allowed by these ***DPS Regulations***), and is surrounded by open space or yards.

Dwelling Unit, Two-family*:** A ***Dwelling Unit within a ***Structure*** situated on a single ***Lot*** and designed for and containing two separate and distinct ***Dwelling Units***. This term includes the terms "duplex unit", "townhome", "townhouse" and "twin home unit".

East Anaconda Reuse Plan: A neighborhood plan adopted by the Anaconda-Deer Lodge County Commission in 2008 that contains analyses of development opportunities, strategies, and development concepts for the Red Sands, East Yards, Mill Creek, and Opportunity Triangle areas.

Energy Development: This term refers to the production of and facilities for the production of energy from geo-thermal and wind, as well as the generation of electric energy.

Erosion and Surface Runoff Control Plan*:** A plan which contains information identifying how surface water will be transported on and from the ***Development area in a manner that will protect existing ***Protective Covers and Storm Water Controls*** and minimize erosion and storm water pollution. The design contained in such a plan shall meet the minimum drainage criteria standards of the ***County*** or the Department of Environmental Quality as applicable.

Excavation/Excavate*:** Any activity that involves the digging, removal, ***Grading, tilling, blasting, or other displacement or disturbance of soil, dirt, rubble, rock or other earth materials for any reason including but not limited to roads, driveways, individual septic systems, ***Landscaping***, foundations, basements, fences, and wells of any kind, including geotechnical drilling. Within the ***Superfund Overlay***, the term shall also include any displacement of any component of an existing ***Protective Cover*** or ***Storm Water Control***.

Expansion: The modification of an existing Building or Structure to increase its size.

***Family*:** An individual, or two or more persons related by blood, marriage, or adoption, or, five (5) or fewer individuals who need not be so related, living together as a single housekeeping unit.

***Financial Institution*:** An establishment duly licensed by the state and/or federal government to provide banking, saving, brokerage, safe deposit, and other types and combinations of consumer financial services. Does not include offices whose sole function is brokerage and/or financial planning services.

Floor Area Ratio (FAR)*:** Total ***Gross Floor Area divided by gross ***Lot*** area.

General Utility/Street Construction and Repair Permit; GUS Permit: A permit required for any excavation within public streets, alleys and public road rights of way and easements belonging to the ***County*** (See, County Ordinance Chapter 14, Division 2).

GIS*:** The Geographic Information System maintained pursuant to ***Superfund.

Grade*:** Slope of the land, whether natural or man-made. Also, the percentage or ratio of rise or descent of a sloping surface. (Example- The grade of a street, or grade of a site or ***Lot.) Grade is measured as vertical rise (or descent) divided by a given horizontal distance. (Example- A **Lot** on which the elevation rises ten (10) feet from front to rear, and is 100 feet in depth, has a grade, or slope, of 10%; also expressed as a ratio of 1:10.)

Grade, Finished*:** The final elevation of the average ground level adjoining a ***Structure at all exterior walls after ***Development***. Also refers to the state of the land after ***Grading*** and/or filling is complete.

Grading*:** Any stripping, cutting, filling, or stockpiling of earth or land in order to alter natural or preexisting ***Grades for any reason, including ***Development***. Vegetation

removal without any alteration of the terrain is not considered ***Grading*** for purposes of these ***DPS Regulations***.

Grocery Store**:** Permanent business establishment selling prepared or unprepared and packaged food items and miscellaneous household items at ***Retail***. Term includes "food co-op", but does not include temporary uses such as farmers markets, farm stands, produce stands, or mobile food vendors.

Gross Floor Area**:** The total floor area of a ***Structure***, including all hallways, stairs, restrooms, storage, lobbies, and other common areas. In residential situations, ***Gross Floor Area*** does not include basements that are totally below ground level and that do not have egress windows.

Ground Cover**:** Grasses and other low growing plants, intended primarily to stabilize the soil. Also, grass or low growing plants as part of a ***Landscape*** treatment.

Guidance for Developments with Existing Protective Covers or Storm Water Controls: Refers to the ***Guidance for Developments with Existing Protective Covers or Storm Water Controls*** set forth at Appendix D of these ***DPS Regulations***.

Guidance for Developments without Existing Protective Covers or Storm Water Controls: Refers to the ***Guidance for Developments without Existing Protective Covers or Storm Water Controls*** set forth at Appendix E of these ***DPS Regulations***.

Height, Structural**:** The mean lineal distance from the ground level on ***Finished Grade*** at the mid-point and immediately adjacent to each of the walls of a ***Structure*** to the highest point of the ***Structure,*** not including antennae, chimneys, steeples, or roof top mechanical devices.

Home-Based Business**:** A business conducted from a residence, and conducted primarily by the inhabitants thereof. (See Appendix A, Division 1.)

Home Occupation**:** For purposes of these ***DPS Regulations***, a category of ***Home-based Business***. (See Appendix A, Division 1.)

Hospice**:** A facility for the care of terminally ill persons.

Hotel**:** A facility offering transient ***Lodging Use*** to the general public, and which may include additional facilities and services such as ***Restaurants***, meeting rooms, entertainment, ***Personal Services***, and fitness/recreational facilities. Includes the term ***Motel***, but does not include the terms ***"Bed and Breakfast Establishment"*** or ***Tourist Home***.

ICWP**:** A work plan developed in accordance with the requirements of Chapter XXX which contains detailed measures for the proper removal, treatment or covering of any ***Contaminated Material*** and the protection and/or replacement of any ***Protective Cover*** or

Storm Water Control within a proposed ***Development*** area consistent with the requirements of Sec. XXX.F.4 and the applicable ***Development Guidance***.

Industry, Heavy**:** Land uses involved in the processing and manufacturing of materials or products primarily from extracted or raw materials. These include, but are not necessarily limited to manufacture of metal products (smelting and foundries), wood products (sawmill, including utility poles and fencing), paper products, and chemical and petrochemical processing and refinement of all kinds.

Industry, Light**:** Land uses involving research and development, component assembly, processing and fabrication primarily involving finished products or parts (sheet metal, wood, cardboard, machine finished parts or components, etc.), repair of said products and/or components, packaging, wholesaling, warehousing, and distribution.

Junk**:** Any scrap, waste, reclaimable material, or debris, including vehicle parts, whether or not stored, for sale, or in the process of being dismantled, destroyed, processed, salvaged, stored, baled, disposed of, or for other use or disposition.

Kennel, Boarding**:** An establishment in which dogs or other domesticated animals are housed, groomed, boarded, or trained, all for a fee for service.

Kennel, Private Breeding**:** The keeping, breeding, raising, showing, or training of four or more dogs over the age of six (6) months, either for the personal enjoyment of the owner or ***Occupant***, and for which commercial gain is not the primary objective.

Kennel, Commercial Breeding**:** A facility for the breeding, raising, showing, and/or training of more than four (4) dogs, all of which must be registered with a nationally or internationally recognized registration and standardization organization, which are kept or harbored for the purpose breeding purebred or pedigreed dogs primarily for sale.

Landscape Ratio (LSR)**:** The amount of ***Landscaped*** area measured in square feet divided by the gross ***Lot*** area.

Landscaping/Landscape**:** For purposes of these ***DPS Regulations***, trees, ***Shrubs***, grasses and other ***Ground Covers***, and other materials such as rock, wood chips, decorative features (bird baths, sculpture, etc.), patterned walks, fountains, pools, and similar naturalistic features for the primary purpose of highlighting, complementing, or enhancing a ***Structure(s)*** or any other ***Development*** on a site or ***Lot***. (Also see ***Xeriscaping***.)

Landscape Plan**:** A ***Scaled*** drawing of a ***Lot*** or site that depicts areas to be ***Landscaped***, and on which is shown some or all of the following:

1. Proposed tree and plant species
2. Number of each species to be planted and installed size.
3. Methods of protecting existing vegetation during construction
4. Proposed treatments of hard and soft surfaces

5. Proposed decorative features (if applicable)
6. ***Grading*** plan (if applicable)
7. Buffers and screening devices

Land Use: The occupation or use of a given parcel of land for any human activity or any purpose; a description of how land is occupied or utilized most often expressed. Can be expressed as a specific use (example: retail sales) or general use (example: industrial).

Land Use, Commercial: A classification or description that allows the buying and selling of (mainly) consumer goods and services, as well as the buildings and other facilities in which such activities are carried out.

Land Use, Industrial: The manufacture, fabrication, processing, reduction, or destruction of any article, substance, or commodity, or any other treatment thereof in such a manner as to change the form, character, or appearance thereof. May also include trucking and rail facilities, warehousing, storage facilities for goods and/or raw materials used in the manufacturing process, and businesses serving primarily industry and similar enterprises. See ***Industry, Heavy*** and ***Industry, Light.***

Latchkey Facilities and Programs**:** A program, including a facility that houses a program, that provides after school ***Day Care*** for school aged ***Children*** who would otherwise be unsupervised in the home until a parent returns from work.

Lawful Similar Use**:** A use that is not necessarily in the list of ***Permitted Uses*** or ***Special Uses*** for a particular ***Development District***, but which in the judgment of the ***Administrator***, has similar characteristics, traffic generation, intensity of use, and neighborhood and community impacts as uses that are so listed. (See Sec. II. N. 2.h.)

LEED Certification: This term refers to the adherence to standards of energy efficiency and sustainability adopted by the Green Building Certification Institute. ***LEED*** is the acronym for Leadership in Energy and Environmental Design.

Lodging Use**:** The provision of temporary living quarters, with or without meals, for transient guests for a fee, and for a period of less than 30 days.

Lot**:** A unit of land described by letter or number in a legally recorded ***Subdivision***. Also includes a parcel of land described by metes and bounds, the description of which has been so recorded and appears on its deed. Term includes “lot of record”.

Lot Coverage**:** The amount of space on a ***Lot*** or parcel taken up by ***Principal Structures*** and ***Accessory Structures***; usually expressed as a percentage of the gross ***Lot*** area. (Example: Maximum allowable ***Lot Coverage***: 35%.)

Lot Line, Front**:** The boundary segment of a ***Lot*** that lies adjacent to the street from which the ***Lot*** gains access and/or is addressed.

Lot Line, Rear*:** The boundary segment of a ***Lot that lies most opposite the front ***Lot*** line.

Lot Line, Side*:** Any boundary segment or segments connecting the front and rear ***Lot lines.

Manufactured home, Class A*: *Single-family Dwelling Unit built off site on a chassis, or otherwise designed and constructed to be transported to a site for installation and use when connected to required utilities. In addition, ***Class A Manufactured Homes*** meet the following standards:

1. Constructed after January 1, 1990 and certified as meeting the mobile home construction standards of the U.S. Department of Housing and Urban Development.
2. Is at least 20 feet in width at its narrowest point.
3. Has a roof pitch not less than 4:12 and eaves not less than 12 inches, not counting any gutter.
4. Utilizes roofing materials which are generally acceptable for site built housing. Roofing materials must have the appearance of a shake, shingle, or tile roof.
5. Siding material which has the appearance of wood, masonry, or non-reflective metal siding.
6. Is placed on a permanent foundation for which a ***Building Permit*** has been issued, or has perimeter skirting that resembles a conventional of a site built home, and is constructed of brick, concrete, concrete block, or treated lumber.
7. The hitch or tongue has been removed from the unit.

This definition does not include the terms “mobile home” or housetrailer as set forth in Sec. 15-1-101, MCA.

***Manufactured Home, Class B*:** A manufactured home meeting the mobile home construction and safety standards of the U.S. Department of Housing and Urban Development, but not meeting all criteria 1 through 6 for Class A manufactured homes.

***Manufactured Home, Class C*:** A manufactured home which does not meet the mobile home construction and safety standards of the U.S. Department of Housing and Urban Development, but which is at least ten (10) feet in width and 40 feet in length excluding the hitch or tongue.

***Manufactured Home Park*:** An area designed for and occupied by two (2) or more manufactured homes of any class where designated spaces are rented or leased to persons having their own manufactured homes. Also includes similar areas in which the manufactured home and the space are rented or leased to tenants.

Manufactured Home Subdivision*:** A land ***Subdivision in which ***Lots*** are designated and sold specifically for placement of manufactured homes of any class.

***Mining Waste*:** Any solid waste material resulting from mining, milling, smelting or processing operations including, without limitation, tailings and slag.

Motel*:** See ***Hotel.

MDP: Refers to a ***Major Development Permit (MDP)***, which is further defined in this chapter (See, ***Development Permit, Major***).

Non-conforming Lot**:** Any legally created ***Lot*** of record that conformed to prior regulations, but that does not conform to the standards set forth in these ***DPS Regulations*** for ***Lot*** area, dimensions, or configuration. (See Sec. III. E.)

Non-conforming Structure**:** A ***Structure*** of any kind that was legal under prior regulations, but does not conform to these ***DPS Regulations*** in terms of ***Setbacks***, height, ***Floor Area Ratio (FAR)***, or ***Landscape Ratio (LSR)*** on the subject ***Lot***. (See Sec. III. E.)

Non-conforming use**:** A use of land that was allowed under prior regulations, but which does not conform to these ***DPS Regulations***. (See Sec. III. G)

Nuisance**:** A condition or situation that results in an interference with the enjoyment and use of property.

Occupant**:** An individual, individuals, or entity in actual possession of a premise, whether as an owner, renter, or lessee.

Off-street loading: An unobstructed area provided and maintained on private property for the temporary parking of trucks and other motor vehicles for the purpose of loading and unloading goods, wares, materials, and merchandise.

Off-street parking**:** Spaces for automobiles that are provided, or are required to be provided under these ***DPS Regulations***, on private property, usually on the same ***Lot*** or parcel as the business, residence, or other entity served by the parking, and not located on a street or other public way.

Ornamental Tree**:** A deciduous tree planted primarily for its beauty, color, flower, or leaf rather than primarily for screening purposes.

Overlay: As used in these ***DPS Regulations***, this term refers to specific geographic areas, which do not follow ***Development District*** boundaries, for which specific regulations exist that are either in addition to or different from the regulations generally applicable to the underlying ***Development District***. A list of the ***Overlays*** is provided in Sec. III.B. of these ***DPS Regulations***.

Parking, tandem**:** The placement of parking spaces one behind the other such that the only access to the inner space is through the space nearest to the street, alley, or driveway.

Permitted Use**:** Those uses considered to be appropriate and desirable in the applicable ***Development District***. This term includes the term “principal permitted use”. (Reference Sec. III. D.)

***Personal services*:** Establishments primarily engaged in providing services, for compensation, involving the care of a person or his or her personal goods or apparel.

***Plan*:** Refers to the County's currently adopted growth policy.

Principal Structure*:** The primary or predominant ***Building or ***Structure*** of any l***ot*** or parcel.

Protective Cover*:** Any cap,cover or ***Soil Treatment Area, and any component thereof, constructed or installed pursuant to ***Superfund*** or Chapter XXX which serves to prevent or limit exposure to ***Contaminated Material*** including, without limitation, the EPA-approved Protective Covers depicted in Appendix I .

Recreational Vehicle (RV): Refers to a vehicle, whether self-propelled, towed by another vehicle, or an assembly mounted on another vehicle, which is designed and intended as temporary living quarters primarily for recreational use and travel. This term includes motor homes, campers, camp trailers, travel trailers, pop-up campers, truck mounted campers, fifth-wheel camp trailers, camper vans, and similar vehicles and equipment.

Religious Institution*:** A church, synagogue, temple, mosque, or other facility where prayer, worship, fellowship, and education are partaken in by persons of similar beliefs. Also, a special purpose ***Building or complex of ***Buildings*** that is architecturally designed or particularly adapted for the primary use of conducting formal religious services on a regular basis.

Residential use*:** Use of land and/or ***Buildings for sleeping, eating, congregating, and general housekeeping by an individual, group of individuals (See "***Family***"), or ***Family*** for a period of 30 days or more.

Response Action*:** Any remedial or removal action taken pursuant to ***Superfund (including a determination that no action is required) including, without limitation, placement of a ***Protective Cover*** over ***Contaminated Material***, removal of ***Contaminated Material***, and reduction of elevated metals to a known concentration and/or revegetation in ***Soil Treatment Areas***. The term shall also include construction of ***Storm Water Controls*** pursuant to ***Superfund***. The term shall also include any remedial action completed with respect to domestic wells within the ***Domestic Well Overlay***.

Restaurant*:** See ***Dining and Drinking Establishment.

***Retail*:** The business activity through which durable and non-durable goods, including but not limited to food and specialty items and household furnishings, are offered for sale to the general public. This term does not include sales of motor vehicles, heavy equipment, trailers, trucks, and RVs, nor does it include the sale of medical marijuana.

Retaining wall*:** A ***Structure that is constructed between lands of different elevations in order to stabilize the surfaces, prevent erosion and/or collapse, and protect other ***Structures*** such as homes and businesses.

***Rubbish*:** Generic term for solid waste, excluding food waste and ashes, taken from residences, commercial establishments, and institutions.

Scale*:** The proportioned relationship of the size of parts to one another, as the ***Scale of ***Buildings*** or of a neighborhood. Also, the relationship between distances on a map and actual ground distances.

Scale of Development*:** The relationship of a particular project, ***Development, or ***Structure*** in terms of its size, height, bulk, intensity of use, and aesthetics, to its surroundings.

Setback*:** The distance between a ***Structure and any given ***Lot*** line (***Front Lot Line***, ***Side Lot Lines***, or ***Rear Lot Line***).

Setback line*:** The line that delineates the required minimum distance from any ***Lot line (***Front Lot Line***, ***Side Lot Lines***, or ***Rear Lot Line***), and establishes the area within which a ***Principal Structure*** or ***Accessory Structure*** may be erected or placed.

Setback, prevailing: The average setback (front, side, or rear) of all existing structures (principal or accessory) on the same block and same street as the subject property

***Shrub*:** A woody plant, smaller than a tree, consisting of several small branches from the ground or small branches near the ground; may be deciduous or evergreen.

Sign*:** An object, device, display, or ***Structure, or part thereof, situated outdoors or indoors, that is intended and used to advertise, identify, display, direct, or attract attention to an object, person, institution, organization, business, product, service, event, or location by any means, including words, letters, figures, design, symbols, fixtures, colors, illuminated, or projected images.

Site Plan*:** A plan which illustrates all details of a proposed ***Development necessary to demonstrate compliance with these ***DPS Regulations***.

***Soils Sampling and Analysis Plan*:** The EPA-approved Anaconda-Deer Lodge County Institutional Controls Program Quality Assurance Project Plan.

Soil Treatment Area*:** An areas of land on which soil conditions capable of sustaining desirable vegetation growth have been created pursuant to ***Superfund through the tilling or other preparation of the top soil and the application of lime and/or organic material.

Special use*:** A use of land or ***Structures allowed within a ***Development District*** upon issuance of a ***MDP*** by the ***Commission*** following a review process and public hearing. A use of land or ***Structures*** is not a ***Special Use*** and cannot be permitted as a ***Special Use***

unless the use is specifically listed in the applicable ***Development District*** as such. (Reference Sec. III. D.)

Specimen Tree**:** A particularly impressive or outstanding example of a species because of its size, shade, age, or other trait that epitomizes the character of the species; in a ***Landscape Plan***, species of trees that will grow the largest and are usually installed at the largest sizes of any other plant materials in the plan. May be coniferous or deciduous.

Storm Water Controls**:** Any engineered storm water control (channels, sedimentation basins, etc.), and any component thereof, constructed or installed pursuant to ***Superfund*** or Chapter XXX.

Stream, intermittent**:** A stream channel (or channels in the event of a braided stream) that naturally carries water part of the year and are dry part of the year. This definition does not include streams that are intermittent because of irrigation diversion or other man-made diversions of water.

Stream, perennial**:** A stream channel (or channels) that carries water year round.

Structure: A combination of materials, that when combined and assembled in the process of construction, form a substantial object for use, occupancy, or ornamentation whether installed on, above, or below the surface of land or water; a combination of materials assembled and set upon the land for a beneficial use.

Subdivision**:** The division of a ***Lot***, tract, or parcel of land into two or more ***Lots***, or other divisions of land for sale, ***Development***, or lease. A division of land meeting the definition of "subdivision" set forth in Sec. 76-3-103, MCA.

Subject Property**:** This term describes the property for which a particular ***Development*** is proposed. When the ***Subject Property*** is comprised of more than one ***Lot*** or parcel, all such ***Lots*** or parcels for which ***Development*** is proposed shall be considered the ***Subject Property***.

Superfund**:** Refers to the requirements of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) as determined by EPA for the Anaconda Smelter NPL Site and all Records of Decision, and amendments and explanations of significant differences related thereto, issued by the United States Environmental protection Agency with respect to the Anaconda Smelter NPL Site.

Superfund Change of Use: Any ***Development*** activity which changes the land use of a ***Subject Property*** in a manner which reduces the ***Superfund*** arsenic or lead action level applicable to the property, including the following: (i) changes from recreational/open space to commercial/industrial; (ii) changes from recreational/open space to residential; and, (iii) changes from commercial/industrial to residential.

Superfund Coordinator**:** The ***County*** employee responsible for the implementation of the

standards, requirements and procedures set forth in Chapters XXX and XXXI and Appendices D and E of these ***DPS Regulations***. A full list of the ***Superfund Coordinator's*** responsibilities and duties is set forth in Sec. II. O.

Superfund Domestic Well Overlay: The Superfund Domestic Well Overlay depicted in Appendix G and on the ***County***'s ***Official Development District Map***.

Superfund Overlay**:** The Superfund Overlay depicted in Appendix F and on the ***County***'s ***Official Development District Map***. The ***Superfund Overlay*** has been previously referred to in various ***Superfund*** documents and ***County*** documents as the "Superfund Planning Area Overlay District (SPAOD)" or the "Superfund Planning District (SPD)".

Superfund Waste Management Areas**:** The areas depicted as Waste Management Areas on the map set forth at Appendix H of these ***DPS Regulations***. Also includes the term "waste management areas".

Tavern**:** See ***Dining and Drinking Establishment***.

Telecommunications Tower: Any ground-mounted vertical structure, including lattice construction, monopoles, stealth towers, and alternative structures such as light poles, street lights, electric utility poles, water towers, and similar existing structures, erected for the purpose of supporting personal wireless services antenna or antennae. For purposes of these regulations, the term includes support wires, lines, or cables as well as buildings for storage and/or electronic equipment associated with the wireless service.

Theater**:** A ***Building*** or part thereof used to show motion pictures or theatrical productions including drama, dance, musical/concerts, or other live performances.

Tourist Home**:** A ***Lodging Use*** of a residence where the entire residence or rooms therein are rented to transient guests, with or without meals, for compensation and for a term of occupancy of less than 30 days.

Xeriscape/xeriscaping**:** ***Landscaping*** characterized by the use of vegetation, usually indigenous, that is drought-tolerant or otherwise requires low water use to keep it alive and viable for the desired ***Landscape*** application; water conserving ***Landscaping*** that also makes effective use of non-live materials such as natural wood, local stone, and hardscape.

Appendix D

GUIDANCE FOR DEVELOPMENTS WITH EXISTING PROTECTIVE COVERS OR STORM WATER CONTROLS

Any ***Development***[1] within the ***Superfund Overlay*** that will affect an existing ***Protective Cover*** must maintain or improve upon the function of the ***Protective Cover***. In addition, engineered ***Storm Water Controls*** (channels, sedimentation basins, etc.) exist in some locations. The function of existing engineered ***Storm Water Controls*** constructed pursuant to ***Superfund*** must be maintained or improved by any ***Development***. Modifications to the original design of ***Storm Water Controls*** must meet or exceed the original design criteria and be certified by a professional engineer.

If it is necessary to breach an existing ***Protective Cover*** as part of a ***Development***, the ***Superfund Coordinator*** will develop an ***ICWP*** to guide the developer in the proper soils handling required for the ***Development*** which, as applicable, will include the following:

1. Any ***Protective Cover*** material must be segregated from the underlying material and stockpiled in such a way that the ***Protective Cover*** material can be reused to reconstruct the ***Protective Cover*** to its full depth.

2. Any ***Contaminated Material*** removed from an ***Excavation*** for a ***Development*** involving a ***Residential Use*** must be segregated from other soil and material removed from the ***Excavation*** and disposed of at the Anaconda Smelter Development Repository at the Opportunity Ponds or an alternative temporary location designated by the ***Superfund Coordinator***.

3. Any ***Contaminated Material*** removed from an ***Excavation*** for a ***Development*** involving any land use other than ***Residential Use*** (i.e., commercial/industrial or recreational/open space) may, to the extent practical, be used as as backfill within the footprint of the ***Excavation*** from the bottom of the ***Excavation*** up to the depth of the pre-existing ***Protective Cover***. If and to the extent ***Contaminated Material*** removed from the ***Excavation*** is not used for backfill within the ***Excavation,*** the ***Contaminated Material*** will be segregated from other soil removed from the ***Excavation*** and disposed of at the Anaconda Smelter Development Repository at the Opportunity Ponds or an alternative temporary location designated by the ***Superfund Coordinator***.

4. Appropriate measures will be required to ensure that ***Contaminated*** Material is not spilled on roadways during transport.5. Any ***Contaminated Material*** which is used as backfill within the footprint of the ***Excavation*** must be capped with the same ***Protective Cover***

[1] All terms which are capitalized, italicized and bolded are defined in Chapter XXXIV of the ***DPS Regulations***.

that was breached by the ***Development*** or, if approved in the ***ICWP***, with an alternate asphalt cover, concrete cover or ***Structure*** meeting EPA-approved specifications prescribed in Appendix I.

6. Any segregated ***Protective Cover*** material not re-used to reconstruct the ***Protective Cover*** may be used elsewhere on the land as part of a ***Protective Cover*** or other land ***Development***.

As a condition of the ***Development Permit***, the applicant will be required to allow soil samples to be collected and analyzed by the ***County*** in accordance with the ***Soils Sampling and Analysis Plan***. Upon verification that the requirements of the ***Development Permit*** have been met, ***County*** personnel will issue a ***Certificate of Compliance*** and prepare an "as-built" of the developed land to show the sample locations as well as the locations of key site features such as ***Protective Covers, Storm Water Controls***, ***Buildings***, paved areas, etc. The as-built will be incorporated into the ***GIS*** database for future reference.

The ***Superfund Coordinator*** will consult with the Atlantic Richfield Company in connection with any proposed ***Superfund Change in Use,*** any proposed residential ***Subdivision*** or any proposed commercial/industrial ***Developments*** within the ***Superfund Overlay*** to determine if a ***Response Action*** by Atlantic Richfield Company may be required within the proposed ***Development*** area. If a ***Response Action*** by Atlantic Richfield Company is required within the proposed ***Development*** area, Atlantic Richfield Company or its designee will perform the ***Response Actions*** within the proposed ***Development*** area either prior to, in conjunction with, or following the applicant's performance of the work identified in the applicant's ***Development Permit***. Any ***Response Actions*** to be performed by Atlantic Richfield Company will be taken into account in the ***Development Permit***.

Even if a ***Development Permit*** is not required, **it is recommended** that the soil be addressed by one of the methods described above.

Appendix E

GUIDANCE FOR DEVELOPMENTS WITHOUT EXISTING PROTECTIVE COVERS OR STORM WATER CONTROLS

Any ***Development***[1] within the ***Superfund Overlay*** that will not affect an existing ***Protective Cover or Storm Water Controls*** must be conducted in a manner that results in the proper on-site management and/or off-site disposal of ***Excavated Contaminated Material***. If ***Contaminated Material*** is verified to be present in the ***Development*** area, the ***Superfund Coordinator*** will develop an ***ICWP*** to guide the developer in the proper soils handling requirements for the ***Development*** which, as applicable, will include the following:

1. Any ***Contaminated Material*** removed from an ***Excavation*** for a ***Development*** involving a ***Residential Use*** shall be segregated from other soil and material removed from the ***Excavation*** and disposed of at the Anaconda Smelter Development Repository at the Opportunity Ponds or an alternative temporary location designated by the ***Superfund Coordinator***.

2. Any ***Contaminated Material*** removed from an ***Excavation*** for a ***Development*** involving any land use other than ***Residential Use*** (i.e., commercial/industrial or recreational/open space) may, to the extent practical, be used as backfill within the footprint of the ***Excavation*** from the bottom of the ***Excavation*** up to the depth of 12 inches below final surface grade of the ***Excavation***. If and to the extent ***Contaminated Material*** removed from the ***Excavation*** is not used as backfill within the ***Excavation***, the ***Contaminated Material*** will be segregated from other soil removed from the ***Excavation*** and disposed of at the Anaconda Smelter Development Repository at the Opportunity Ponds or an alternative temporary location designated by the ***Superfund Coordinator***.

3. Appropriate measures will be required to ensure that excavated material is not spilled on roadways during transport. 4. If and to the extent that the final surface grade of the ***Development*** is soil and ***Contaminated Material*** has been used as backfill within the footprint of the ***Excavation***, the top 12 inches within the footprint of the ***Excavation*** shall consist of soil which has been verified to meet the applicable ***Superfund*** action level.

5. If and to the extent that the final surface grade of the ***Development*** consists of a ***Structure***, a concrete cover or an asphalt cover within the footprint of the ***Excavation***, backfilling in the ***Excavation*** with ***Contaminated Material*** may occur up to the level of the base material or bedding material for the ***Structure***, concrete cover or asphalt cover, provided that the ***Structure***, concrete cover or asphalt cover is constructed to meet the EPA approved

[1] All terms which are capitalized, italicized and bolded are defined in Chapter XXXIV of the ***DPS Regulations***.

specifications prescribed in Appendix I, which will be incorporated by the ***Superfund Coordinator*** into the ***ICWP***.

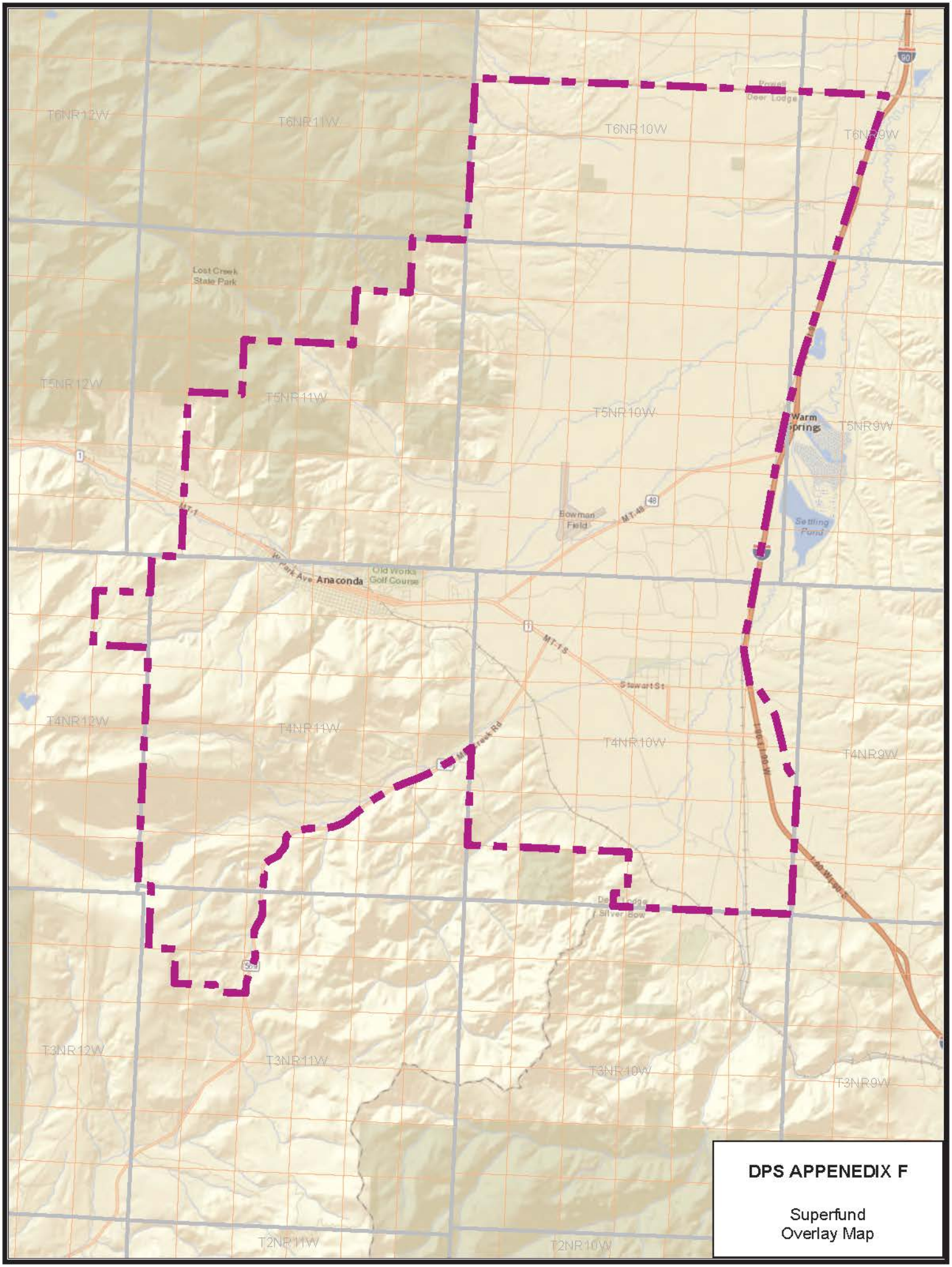
As a condition of the ***Development Permit***, the applicant will be required to allow soil samples to be collected and analyzed by the ***County*** in accordance with the ***Soils Sampling and Analysis Plan***. Upon verification that the requirements of the ***Development Permit*** have been met, ***County*** personnel will issue a ***Certificate of Compliance*** and prepare an "as-built" of the developed land to show the sample locations as well as the locations of key site features such as, ***Buildings***, paved areas, etc. The as-built will be incorporated into the ***GIS*** database for future reference.

The ***Superfund Coordinator*** will consult with the Atlantic Richfield Company in connection with any proposed ***Superfund Change in Use,*** any proposed residential ***Subdivision*** or any proposed commercial/industrial ***Developments*** within the ***Superfund Overlay*** to determine if a ***Response Action*** by Atlantic Richfield Company may be required within the proposed ***Development*** area. If a ***Response Action*** by Atlantic Richfield Company is required within the proposed ***Development*** area, Atlantic Richfield Company or its designee will perform the ***Response Actions*** within the proposed ***Development*** area either prior to, in conjunction with, or following the applicant's performance of the work identified in the applicant's ***Development Permit***. Any ***Response Actions*** to be performed by Atlantic Richfield Company will be taken into account in the ***Development Permit***.

Even if a ***Development Permit*** is not required, **it is recommended** that the soil be addressed by one of the methods described above.

Appendix F

MAP OF SUPERFUND OVERLAY

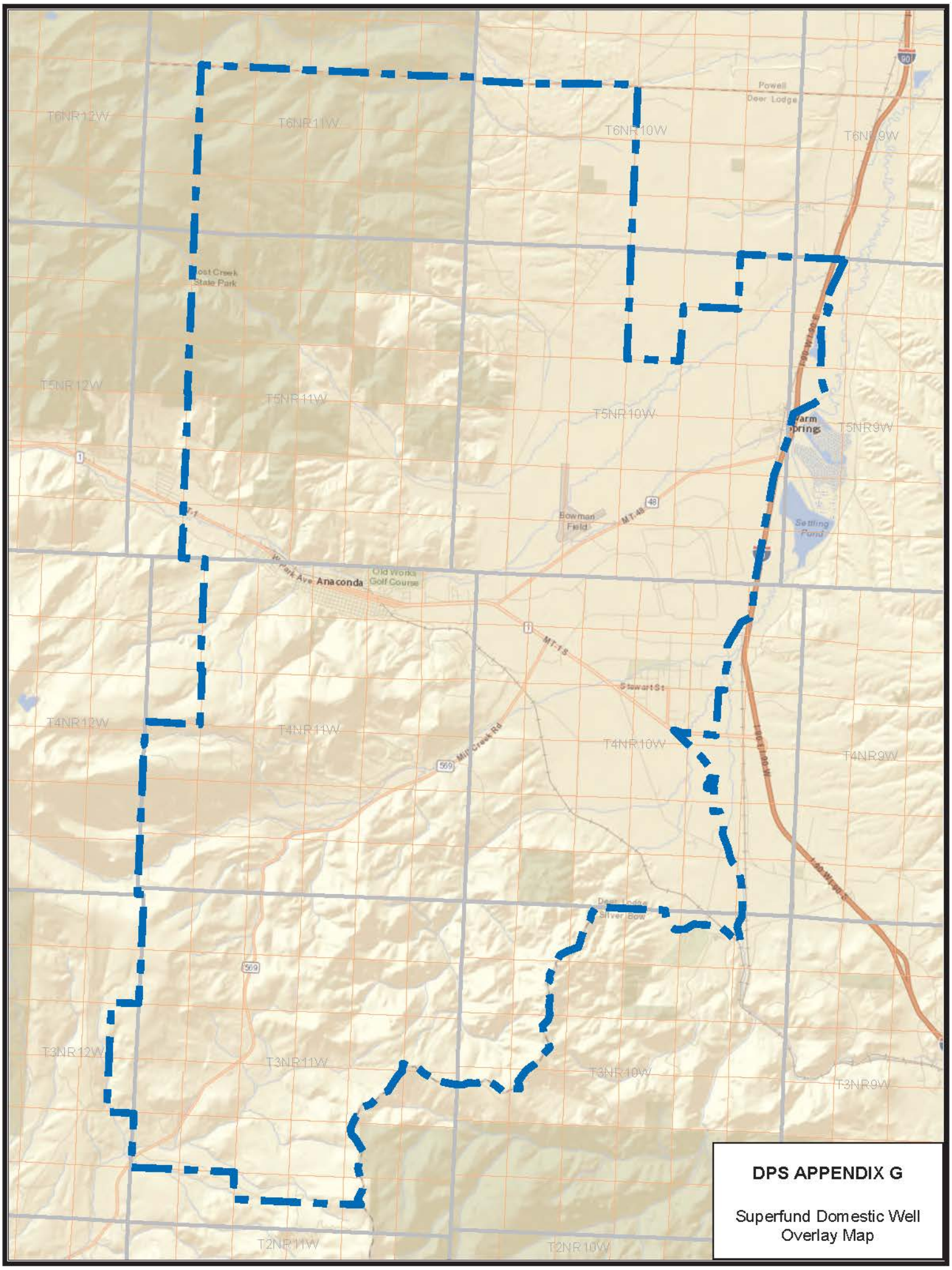


DPS APPENEDIX F

Superfund
Overlay Map

Appendix G

MAP OF DOMESTICE WELL OVERLAY

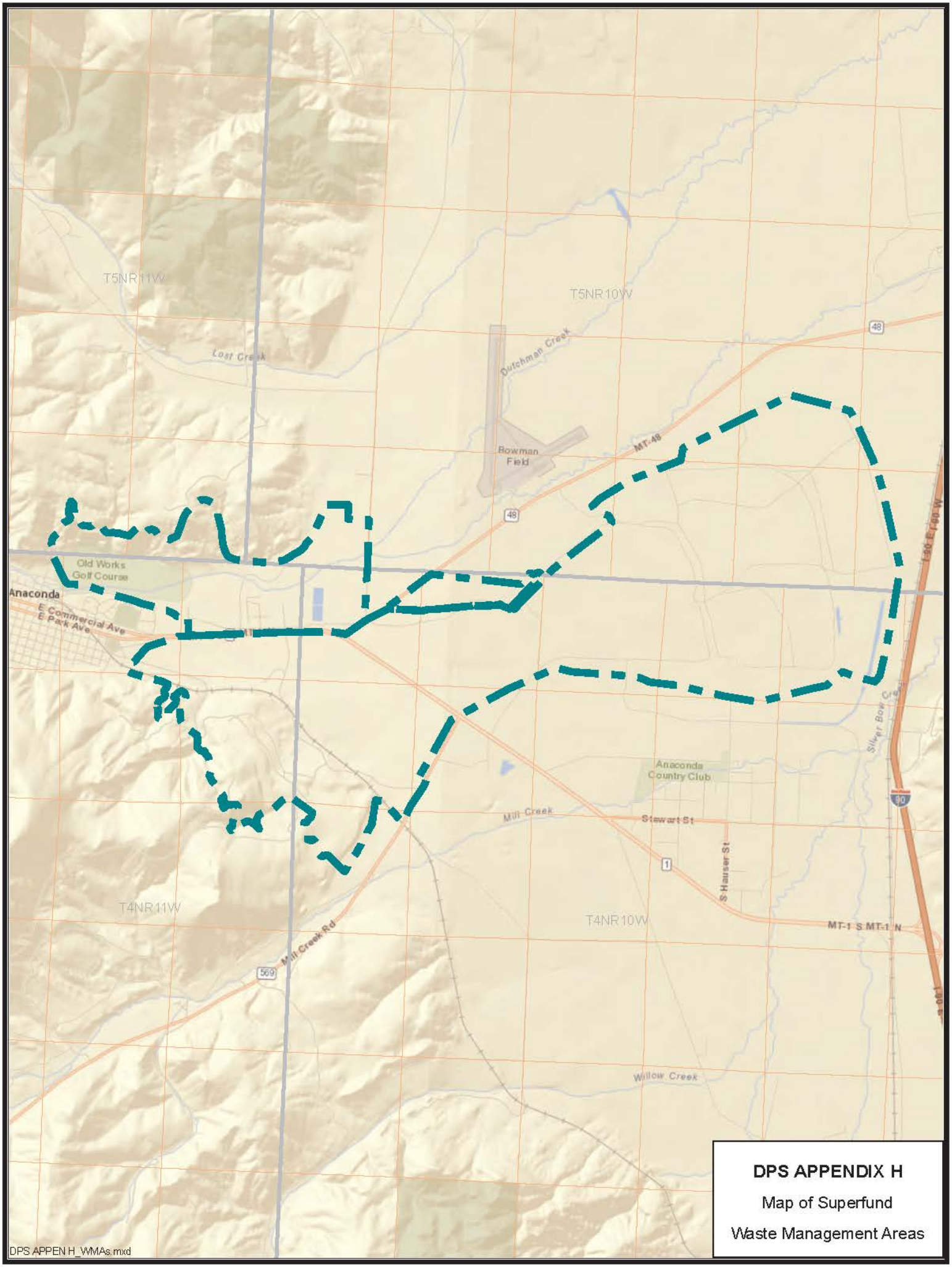


DPS APPENDIX G

Superfund Domestic Well Overlay Map

Appendix H

MAP OF SUPERFUND WASTE MANAGEMENT AREAS



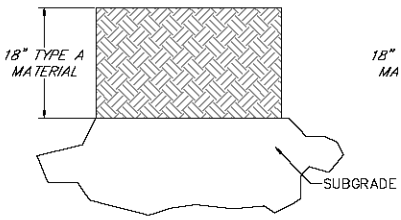
DPS APPENDIX H

Map of Superfund

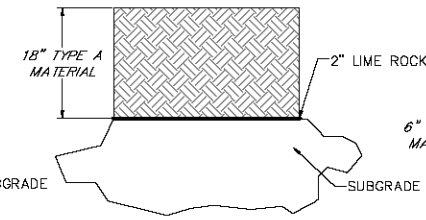
Waste Management Areas

Appendix I

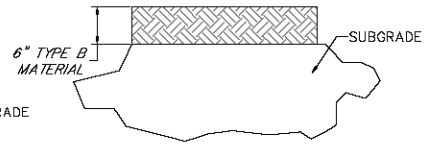
EPA-APPROVED PROTECTIVE COVERS



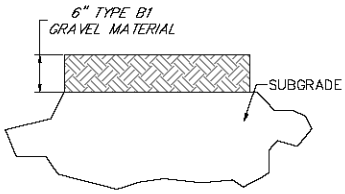
C_A18
(VEGETATIVE COVER)



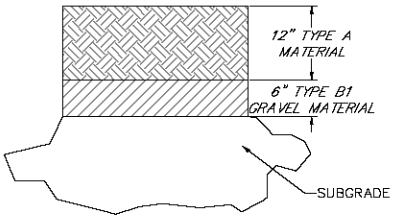
C_A18 WITH LIME
(VEGETATIVE COVER)



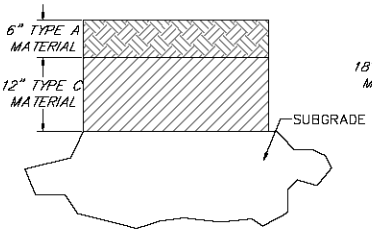
IC_B6 – TEMPORARY COVER
(TEMPORARY VEGETATIVE COVER)



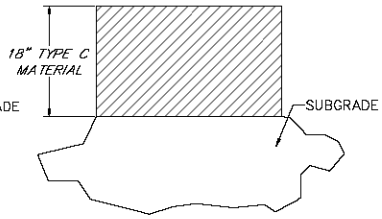
C_A6 – B1 COVER
(INDUSTRIAL COVER)



T_C6/C_A12
(VEGETATIVE COVER)



T_C12/C_A6
(VEGETATIVE COVER)



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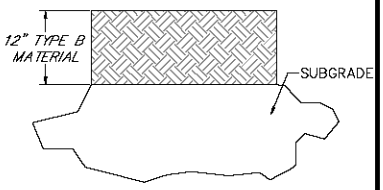
(VEGETATIVE COVER)



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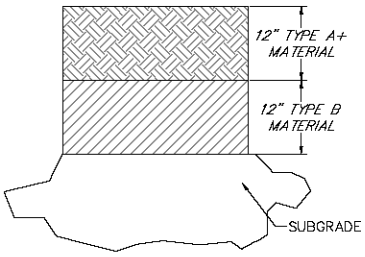
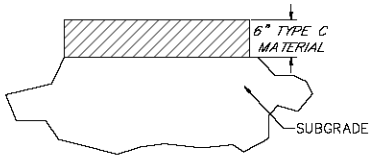
(TEMPORARY COVER)



$C_B12/C_{A+}12$
(VEGETATIVE COVER)



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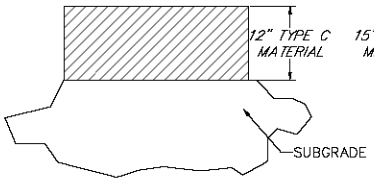
(VEGETATIVE COVER)
(NON WMA's ONLY)



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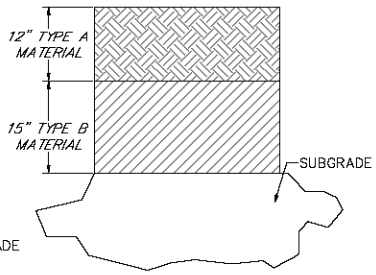

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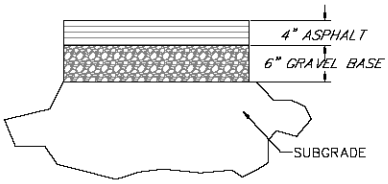
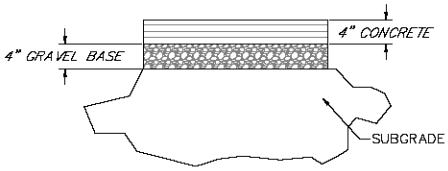
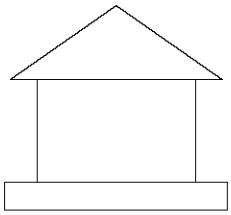


ASPHALT COVER [2]



CONCRETE COVER [2]



STRUCTURE
(PER BUILDING CODES)

MATERIAL TYPE LEGEND
TYPE A+ MATERIAL = SUITABLE COVER SOIL <20% ROCK CONTENT IN THE BANK.
TYPE A MATERIAL = SUITABLE COVER SOIL WITH < 45% ROCK CONTENT IN THE STOCKPILE.
TYPE B MATERIAL = NON–SPEC ALLUVIUM MATERIAL PER TECHNICAL SPECIFICATIONS.
TYPE B1 GRAVEL = ROAD BASE MATERIAL MEETING THE OW B1 GRAVEL SPECIFICATIONS.
TYPE C MATERIAL = IN–SITU LIME AMENDED TAILINGS OR IMPACTED MATERIALS.

NOTES:
1. ALL THICKNESS ARE FINAL. MATERIALS SHALL BE PLACED AND TILLED IN ADEQUATE THICKNESS TO MEET THE FINAL THICKNESS SPECIFIED.
2. TYPICAL DETAILS – ACTUAL MATERIAL THICKNESS VARIES BASED ON APPLICATION AND MUST COMPLY WITH THE PROVISIONS OF ANY LOCAL, STATE, OR FEDERAL REQUIREMENTS

DPS APPENDIX I

EPA-APPROVED PROTECTIVE COVERS

APPENDIX B
(Restrictive Covenants Summary Table)

ICIAP

APPENDIX B1 (TABLE)

GEOCODE	RC_ID	Sub_RC_ID	Book1	Page1	DeedDate 1	Book2	Page2	DeedDate 2	Book3	Page3	DeedDate 3	IRP	FA	IP	CP	RUP	REC	AP	WP	PUB	WIM	HP	IRR	PND	BM	DU	PM	RM	WED	FM	DEV	DRA	LMP	ARC	3PN	COMMENTS
30128501102010000	RC0001	RC0001	116	588	1/14/98	96	146	5/5/94				X	X			X			X			X		X			X	X			X	X				
30128501102020000	RC0002	RC0002	96	167	5/5/94	96	146	5/5/94				X	X			X			X			X		X			X	X			X	X				
30128501103010000	RC0003	RC0003-01	96	230	5/5/94	96	146	5/5/94				X	X			X			X	X		X		X			X	X			X	X				
30128501103050000	RC0003	RC0003-02	96	230	5/5/94	96	146	5/5/94				X	X			X			X	X		X		X			X	X			X	X				
30128501304010000	RC0006	RC0006-04	96	246	5/5/94	96	146	5/5/94				X	X			X			X			X		X			X	X		X	X	X				
30128502402110000	RC0006	RC0006-07	96	246	5/5/94	96	146	5/5/94				X	X			X			X			X		X			X	X		X	X	X				
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30128502402160000	RC0006	RC0006-10	96	246	5/5/94	96	146	5/5/94				X	X			X			X			X		X			X	X		X	X	X				
30128502402050000	RC0006	RC0006-11	96	246	5/5/94	96	146	5/5/94				X	X			X			X			X		X			X	X		X	X	X				
30128502402040000	RC0006	RC0006-12	96	246	5/5/94	96	146	5/5/94				X	X			X			X			X		X			X	X		X	X	X				
30128502402020000	RC0006	RC0006-13	96	246	5/5/94	96	146	5/5/94				X	X			X			X			X		X			X	X		X	X	X				
30128502402030000	RC0006	RC0006-14	96	246	5/5/94	96	146	5/5/94				X	X			X			X			X		X			X	X		X	X	X				
30128502402010000	RC0006	RC0006-15	96	246	5/5/94	96	146	5/5/94				X	X			X			X			X		X			X	X		X	X	X				
30128502401030000	RC0006	RC0006-16	96	246	5/5/94	96	146	5/5/94				X	X			X			X			X		X			X	X		X	X	X				
30128502401050000	RC0007	RC0007-01	96	246	5/5/94	96	146	5/5/94				X	X			X			X				X	X			X	X		X	X	X				
30128502401060000	RC0007	RC0007-02	96	246	5/5/94	96	146	5/5/94				X	X			X			X				X	X			X	X		X	X	X				
30128501304030000	RC0007	RC0007-03	96	246	5/5/94	96	146	5/5/94				X	X			X			X				X	X			X	X		X	X	X				
30128501304020000	RC0007	RC0007-04	96	246	5/5/94	96	146	5/5/94				X	X			X			X				X	X			X	X		X	X	X				
NA	RC0007	RC0007-05																																	X	RARUS
30128502401010000	RC0007	RC0007-06	96	246	5/5/94	96	146	5/5/94				X	X			X			X				X	X			X	X		X	X	X				Stack Viewing Parcel
30128502401040000	RC0007	RC0007-07	96	246	5/5/94	96	146	5/5/94				X	X			X			X				X	X			X	X		X	X	X				Puccinelli Storage
30137834201010000	RC0008	RC0008-02	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30137833101010000	RC0008	RC0008-03	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30137835101010000	RC0008	RC0008-04	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30137836101010000	RC0008	RC0008-05	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30137834101010000	RC0008	RC0008-06	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128606101010000	RC0008	RC0008-08	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128605101020000	RC0008	RC0008-09	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128607301030000	RC0008	RC0008-10	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128607301020000	RC0008	RC0008-11	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128608301010000	RC0008	RC0008-12	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128606301010000	RC0008	RC0008-13	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128607101020000	RC0008	RC0008-14	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128512101010000	RC0008	RC0008-15	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128608101020000	RC0008	RC0008-16	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30137834401010000	RC0008	RC0008-17	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128602101020000	RC0008	RC0008-18	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128604101010000	RC0008	RC0008-19	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128603101010000	RC0008	RC0008-20	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128606401010000	RC0008	RC0008-21	113	112	1/7/97	158	370	5/2/03				X				X				X		X						X	X	X						
30128501401010000	RC0008	RC0008-22	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128608202010000	RC0008	RC0008-25	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128607301010000	RC0008	RC0008-29	113	112	1/7/97							x			X	X	X	X	X	X	X							X	X	X						
30128618101020000	RC0008	RC0008-31	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128610101020000	RC0008	RC0008-34	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128513101020000	RC0008	RC0008-35	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128618201010000	RC0008	RC0008-36	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						

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GEOCODE	RC_ID	Sub_RC_ID	Book1	Page1	DeedDate 1	Book2	Page2	DeedDate 2	Book3	Page3	DeedDate 3	IRP	FA	IP	CP	RUP	REC	AP	WP	PUB	WIM	HP	IRR	PND	BM	DU	PM	RM	WED	FM	DEV	DRA	LMP	ARC	3PN	COMMENTS
30128501401250000	RC0008	RC0008-38	113	112	1/7/97							X		X	X	X			X									X	X	X						
30128606401100000	RC0008	RC0008-42	113	112	1/7/97							X				X				X		X						X	X	X						
30137827401010000	RC0008	RC0008-45	113	112	1/7/97							X		X	X	X			X									X	X	X						
30137826101010000	RC0008	RC0008-46	113	112	1/7/97							X		X	X	X			X									X	X	X						
30137825101010000	RC0008	RC0008-47	113	112	1/7/97							X		X	X	X			X									X	X	X						
30128511101030000	RC0008	RC0008-48	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128514101020000	RC0008	RC0008-49	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128501101060000	RC0008	RC0008-50	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128501101070000	RC0008	RC0008-51	113	112	1/7/97							X			X	X	X	X	X	X	X							X	X	X						
30128502101010000	RC0009	RC0009	96	198	5/5/94	96	146	5/5/94				X	X			X			X	X		X	X	X		X	X	X		X	X	X				
30128502101020000	RC0010	RC0010	96	936	5/5/94	96	146	5/5/94				X	X			X			X			X		X			X	X			X	X				
30128606202010000	RC0033	RC0033	53	181	6/30/84																					X										
30128618101150000	RC0064	RC0064-01	98	232	8/24/94	96	146	5/5/94				X	X			X			X			X		X			X	X			X	X				
3013773530101DLC1	RC0099	RC0099	96	182	5/5/94	96	146	5/5/94				X	X	X	X	X		X	X	X		X		X		X	X	X		X	X	X				
30137736301010000	RC0100	RC0100	96	182	5/5/94	96	146	5/5/94				X	X	X	X	X		X	X	X		X		X		X	X	X		X	X	X				
30137831301020000	RC0122	RC0122	96	182	5/5/94	96	146	5/5/94				X	X	X	X	X			X	X		X		X		X	X	X		X	X	X				
30137831401010000	RC0123	RC0123-01	116	588	1/14/98							X				X			X			X		X			X	X			X	X				
30137831404040000	RC0123	RC0123-02	116	588	1/14/98	96	146	5/5/94				X	X			X			X			X		X			X	X			X	X				
30128515101010000	RC0153	RC0153																																	X	C Hill
30128501101020000	RC0157	RC0157																																	X	RDM
30128501101200000	RC0161	RC0161	96	230	5/5/94	96	146	5/5/94				X	X			X			X	X		X		X			X	X			X	X				
30128501101130000	RC0162	RC0162	178	963	8/8/05							X	X			X			X								X	X	X		X	X	X			
30128501101100000	RC0163	RC0163	197	624	4/20/07							X	X			X			X								X		X		X	X	X			
30128502406110000	RC0164	RC0164	223	794	4/13/10							X	X			X			X								X	X	X		X	X				
30128501101040000	RC0165	RC0165	191	839	10/4/06							X	X			X			X								X	X	X		X	X	X			
30137822101011000	RC0166	RC0166	335	406	12/15/15														X		X										X		X			Dutchman
30128501101050000	RC0167	RC0167																																	X	DiFrancesco
30128502406100000	RC0168	RC0168	223	794	4/13/10							X	X			X			X								X	X	X		X	X				
30128501101080000	RC0169	RC0169	202	180	9/11/07							X	X			X			X								X	X	X		X	X	X			
30128510401010000	RC0170	RC0170																																	X	C Hill
30128502207010000	RC0171	RC0171	96	198	5/5/94	96	146	5/5/94	149	01	4/5/02	X	X			X			X	X		X	X	X		X	X	X		X	X	X				Hotel Parcel
30128501101170000	RC0172	RC0172	197	624	4/20/07							X	X			X			X								X		X		X	X	X			
30128501101110000	RC0173	RC0173	197	624	4/20/07							X	X			X			X								X		X		X	X	X			
30128501101120000	RC0174	RC0174	178	963	8/8/05							X	X			X			X								X	X	X		X	X	X			
30128502406130000	RC0175	RC0175	223	794	4/13/10							X	X			X			X								X	X	X		X	X				
30128501101030000	RC0176	RC0176																																	X	DiFrancesco
30128501101190000	RC0179	RC0179	197	624	4/20/07							X	X			X			X								X		X		X	X	X			
30128501101090000	RC0180	RC0180	197	624	4/20/07							X	X			X			X								X		X		X	X	X			
30128501101150000	RC0181	RC0181	197	624	4/20/07							X	X			X			X								X		X		X	X	X			
30128501101160000	RC0182	RC0182	197	624	4/20/07							X	X			X			X								X		X		X	X	X			
30128501101010000	RC0183	RC0183	317	145	5/11/12							X	X			X											X				X					
30128501101180000	RC0185	RC0185	207	603	4/8/08							X	X			X			X								X	X	X		X	X	X			
30128502406120000	RC0186	RC0186																																	X	ALDC
30137736101010000	RC0189	RC0189																																	X	State of Montana
3013773640101MINE	RC0191	RC0191																																	X	Stuckey Ridge
30137831301010000	RC0192	RC0192																																	X	DiFrancesco
30128502406090000	RC0193	RC0193	223	794	4/13/10							X	X			X			X								X	X	X		X	X				
30128502411040000	RC0194	RC0194																																	X	KANA

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30128501201010000	RC0196	RC0196	178	974	9/2/05							X	X			X			X								X	X	X		X	X	X			
30128501201020000	RC0197	RC0197																																	X	ALDC
30128501303030000	RC0198	RC0198																																	X	McDowell
30128501303020000	RC0199	RC0199	317	153	9/10/03							X	X			X			X								X	X			X	X	X			
30128501303010000	RC0200	RC0200										X	X																		X					
30128615101010000	RC0202	RC0202	98	232	8/24/94	96	146	5/5/94				X	X			X			X			X		X			X	X			X	X				Mill Creek
30128503128010000	RC0203	RC0203																																	X	Shanklin
30128503127050000	RC0204	RC0204																																	X	ADLC Owned
30128502406140000	RC0205	RC0205	96	921	5/5/94							X						X				X		X				X				X				ALDC Owned A-1 parcel

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APPENDIX B2 (DEFINITIONS)

Covenant	Description
IRP	Interference with remedy prohibited
FA	Future access granted to AR and Agencies
IP	Industrial use limited or prohibited
CP	Commercial use limited or prohibited
RUP	Residential use limited or prohibited
REC	Recreational use limited or prohibited
AP	Agricultural use limited or prohibited
WP	Wells limited or prohibited
PUB	Public access limited or prohibited
WIM	Wildlife management limited or prohibited
HP	Hazardous generation prohibited or limited to "small waste generator"
IRR	Irrigation prohibited or restricted (or specific to sprinkler only)
PND	Unlined ponds prohibited
BM	Best management practices required (grazing, etc)
DU	Property restricted to specific use (e.g., sewage treatment lagoons or open space)
PM	Property owner responsible for property maintenance
RM	Property owner reponsible for Operation and Maintenance of remedy
WED	Property owner responsible for controlling weeds
FM	Property owner responsible for maintenance of remedy fencing
DEV	Future development prohibited or allowed only per applicable laws, reg's and covenants
DRA	Remedial action resulting from development, responsibility of property owner
LMP	Owner Responsible for implementation of Land Management Plan
ARC	AERL or AR owned property with no existing covenants
3PN	Property owned by parties other than AR with no existing covenants

APPENDIX C
(Covenant Instruments)

CH Twenty
1-7-97

152316

BOOK 113 PAGE 112

INDEXED

RECORDING REQUESTED BY AND
WHEN RECORDED RETURN TO:
Atlantic Richfield Company
Attention: Land Department, PRC C-5818
2300 West Plano Parkway
Plano, TX 75075

MAIL TAX STATEMENTS TO:
ARCO Environmental Remediation, L.L.C.
Attention: Chief Financial Officer
515 South Flower Street
Los Angeles, CA 90071

ASSIGNMENT, CONVEYANCE AND BILL OF SALE

STATE OF MONTANA §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF ANACONDA/DEER LODGE §

This Assignment, Conveyance and Bill of Sale (hereinafter referred to as this "Assignment"), is by and between CH-Twenty, Inc., a Delaware corporation, with a mailing address at 444 South Flower Street, Los Angeles, California 90071 (hereinafter referred to as "Assignor") and ARCO Environmental Remediation, L.L.C., a Delaware limited liability company, with a mailing address at 515 South Flower Street, Los Angeles, California 90071 (hereinafter referred to as "Assignee").

WITNESSETH:

WHEREAS, Assignor and Assignee heretofore entered into that certain Agreement dated December 27, 1996, titled "ERL Agreement" (hereinafter referred to as the "ERL Agreement"); and

WHEREAS, the ERL Agreement transferred, conveyed and assigned all of the right, title and interest to the property described herein, from Assignor to Assignee, effective as of

January 7, 1997, all in accordance with the further terms and conditions of the ERL Agreement; and

WHEREAS, the ERL Agreement has not been recorded and is not now intended to be recorded in the official records of Anaconda/Deer Lodge County, Montana, being that various Exhibits attached thereto relate to properties located outside of Anaconda/Deer Lodge County, Montana, and all of the Exhibits may not yet have been completed in recordable form; and

WHEREAS, Assignor and Assignee now desire to record and memorialize for record purposes in the official records of Anaconda/Deer Lodge County, Montana, the conveyance and assignment of all of the right, title and interest to the property described herein located in Anaconda/Deer Lodge County, Montana, which were conveyed by Assignor to Assignee pursuant to the ERL Agreement effective as of January 7, 1997.

NOW THEREFORE, KNOW ALL MEN BY THESE PRESENTS THAT, for the purpose of recording in the official records of Anaconda/Deer Lodge County, Montana, the conveyance and assignment from Assignor to Assignee of all of the right, title and interest to the property described herein, which were conveyed by Assignor to Assignee pursuant to the ERL Agreement, Assignor and Assignee hereby execute and acknowledge this Assignment and authorize this Assignment to be recorded in the official records of Anaconda/Deer Lodge County, Montana, it having been mutually determined that the conveyance and assignment of all the right, title and interest to the property described herein, and the assumption of liabilities and other agreements contemplated hereby, are in the best interest of Assignor and Assignee,

Assignor and Assignee state, proclaim, covenant and agree as to each and every grant, assumption or other matter set forth hereinbelow, as follows:

1. Assignor has conveyed and assigned and by these presents does hereby convey and assign for record purposes, unto Assignee, effective as of January 7, 1997, (hereinafter referred to as "the Effective Time"), all of Assignor's rights, titles and interests in and to all of those certain rights, titles and interests (subject to the exceptions, reservations, terms and conditions herein contained) which are described in Exhibits "A" and "B" attached hereto and made a part hereof for all purposes, being hereinafter referred to individually as a "Subject Property" and collectively as the "Subject Properties", all the Subject Properties being located in Anaconda/Deer Lodge County, Montana, such Subject Properties, as more fully and completely described on the attached Exhibits "A" and "B", consisting of all or some of the following described interests:

a. All mineral fee interests; oil, gas and/or mineral interests; royalty interests; oil, gas, and/or mineral leases and leasehold interests; overriding royalty, net profits and production payment interests; and any other rights to produce and/or receive the proceeds of production; in each case including all oil, gas and other liquid and gaseous hydrocarbons and, in addition thereto, carbon dioxide, hydrogen, helium, nitrogen, coalbed methane, sulfur, salt (in each case in either solid, liquid or gaseous form), and any other liquid or gaseous substances, inert or otherwise, or any of them, and any other minerals or other substances produced or which may be produced therefrom or therewith (hereinafter referred to as "Minerals") in, on or under those certain Subject Properties owned by Assignor immediately prior to the Effective Time, it being the intent of Assignor to assign and convey to Assignee all of its right, title and interest in and to the subject properties, of whatever nature and kind, owned by Assignor immediately prior to the Effective Time, together with: (1) all rights in and to, or derived under, the Subject Properties or the lands pooled, communitized or unitized therewith to the extent same relate to the Minerals; (2) the right to prospect for, drill for, produce, extract, remove and market, inject into, dispose of, store on or under and thereafter withdraw and remove Minerals from and through the lands to which the Subject Properties relate, or lands pooled, communitized or unitized therewith (all of the Subject Properties and the above-

described lands or interests in land being hereinafter referred to as the "Real Property"); (3) all reversionary rights relating to Minerals in, on or under the Real Property; (4) the right to construct, maintain, operate, repair, replace and remove gathering lines, flow lines, transportation lines and related improvements for the purpose of transporting Minerals or similar substances to, from and across the Real Property, whether produced from the Real Property, produced from lands pooled, unitized or communitized with the Real Property, or produced from lands in the same geographic area as the Real Property; (5) the right to produce, extract and remove, inject into, dispose of, store on or under and thereafter withdraw from and through the Real Property any oil, gas, minerals, water, waste products and other substances that may be pooled, unitized or communitized or produced in conjunction with any of the Minerals; and (6) the right to drill and operate whatever wells, construct, install, operate, maintain, replace and remove whatever other facilities, and do whatever else may be reasonably necessary on and in the Real Property for the full enjoyment of the rights herein granted, including the right of ingress to and egress from the Real Property for such purposes; all such Subject Properties being more specifically set forth and described on the Exhibits "A" and "B" attached hereto and made a part hereof for all purposes;

b. All unitization, communitization and pooling agreements and orders covering or relating to the Subject Properties or any portion thereof and the units and pooled and communitized areas created thereby;

c. All undeveloped mineral fee and undeveloped oil, gas and other minerals leasehold located in Anaconda/Deer Lodge County, Montana, and listed on the attached Exhibits "A" and "B";

d. All surface fee and/or interest in the surface of land, including without limitation all reversionary rights in and to the surface of land, owned or leased by Assignor immediately prior to the Effective Time included within or associated with the Real Property and as more completely described on Exhibits "A" and "B" attached hereto and made a part hereof for all purposes, together with all ditches, storage structures, or other conveyance facilities and all water and water rights of every kind and character used on or in connection with such surface fees and/or interests in land;

e. All easements, surface rights, rights-of-way, permits, licenses, servitudes or other interests appertaining to the Real Property or the Subject Properties located in Anaconda/Deer Lodge County, Montana, which such Subject Properties are more completely described in Exhibits "A" and "B" attached hereto;

f. All wells, wellhead equipment, casing, tubing and downhole equipment therein, gathering lines, flow lines, compressors, pumps, tanks, production platforms, and all other equipment and all other personal property, fixtures and improvements situated upon the Real Property or other lands pooled, communitized or unitized

therewith, or used or held for use principally in connection with the exploration, development or operation of the Subject Properties or the production, treatment, storage or transportation of Minerals from the Real Property or the Subject Properties, all as the Subject Properties are more particularly described in the attached Exhibits "A" and "B";

g. All farmout or farmin agreements, calls on oil and/or gas reserved in farmout agreements or other instruments covering a Subject Property, operating agreements, unit operating agreements, unit agreements, pooling agreements, pooling orders, pooling designations, division orders, or other similar agreements, gas balancing agreements, exploration agreements, (including, without limitation, reversionary rights) of whatever nature and kind to the extent affecting or relating to the Real Property, or Subject Properties or any part thereof, all gas sales contracts of Assignor committing thereto reserves in the ground located in or under the Real Property or Subject Properties more particularly described in attached Exhibit "A" and "B";

h. All contracts pertaining to the transportation, gathering or processing of gas owned by Assignor immediately prior to the Effective Time which gas is produced from the Real Property and/or Subject Properties more particularly described in the attached Exhibits "A" and "B"; and percentage of proceeds contracts or casinghead gas sales contracts covering gas sold by Assignor to a gas plant operator or owner which is produced from the Real Property or Subject Properties more particularly described in the attached Exhibits "A" and "B";

i. All consents, permits, licenses, orders, registrations, franchises, certificates, approvals or other similar rights from or maintained with any governmental agency to the extent relating to the Real Property or the Subject Properties, as more particularly described in the attached Exhibits "A" and "B", but only to the extent such may be lawfully assigned hereby;

j. All partnership interests, tax partnership interests, undivided interests and other joint venture investments of Assignor to the extent relating to any right to produce or receive the proceeds of Minerals in, on or under the Real Property or the Subject Properties, as more particularly described in the attached Exhibits "A" and "B";

k. All water rights set forth on Exhibit "E" attached hereto, together with all subordinations to the exercise of such rights and all rights to prohibit any historic use by and through any such water rights;

SUBJECT, HOWEVER, to all valid and subsisting restrictions, exceptions, reservations, conditions, burdens on production, liens, mortgages, deeds of trust, interests,

instruments and other encumbrances, recorded or unrecorded, if and to the extent the same cover or affect a Subject Property (the "Encumbrances").

TO HAVE AND TO HOLD the Subject Properties, subject to the Encumbrances, together with all and singular the rights and appurtenances thereto and anywise belonging unto Assignee, its successors, assigns and legal representatives, forever. THIS ASSIGNMENT, CONVEYANCE AND BILL OF SALE IS MADE WITHOUT WARRANTY OF TITLE, EITHER EXPRESS, IMPLIED OR STATUTORY AND WITHOUT RECOURSE, BUT WITH FULL SUBSTITUTION AND SUBROGATION OF ASSIGNEE AND ALL PERSONS CLAIMING BY, THROUGH AND UNDER ASSIGNEE, TO THE EXTENT ASSIGNABLE, IN AND TO ALL COVENANTS AND WARRANTIES OF ASSIGNOR'S PREDECESSORS IN TITLE AND WITH FULL SUBROGATION OF ALL RIGHTS ACCRUING UNDER THE APPLICABLE STATUTES OF LIMITATION OR PRESCRIPTION UNDER THE LAWS OF THE STATE WHERE THE SUBJECT PROPERTIES ARE LOCATED AND ALL RIGHTS OR ACTIONS OF WARRANTY AGAINST ALL FORMER OWNERS OF THE SUBJECT PROPERTIES. ALL PERSONAL PROPERTY, INCLUDING ALL WELLS, LEASEHOLD EQUIPMENT AND ALL OTHER FACILITIES USED IN CONNECTION WITH THE REAL PROPERTY ARE CONVEYED "AS IS" AND "WHERE IS" WITH NO WARRANTY, EXPRESS OR IMPLIED, AS TO CONDITION, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE. ASSIGNOR HEREBY EXPRESSLY DISCLAIMS AND NEGATES ANY REPRESENTATION OR WARRANTY, EXPRESS, IMPLIED, AT COMMON LAW, BY STATUTE OR OTHERWISE, RELATING TO (i) THE SUBJECT PROPERTIES OR THE

CONDITION THEREOF OR ANY FACILITIES LOCATED THEREON (INCLUDING WITHOUT LIMITATION, ANY IMPLIED OR EXPRESS WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR CONFORMITY TO MODELS OR SAMPLES OF MATERIALS, OR ENVIRONMENTAL CONDITION), (ii) ANY INFRINGEMENT BY ASSIGNOR OF ANY PATENT OR PROPRIETARY RIGHT OF ANY THIRD PARTY, AND (iii) ANY INFORMATION, DATA OR OTHER MATERIALS (WRITTEN OR ORAL) FURNISHED TO ASSIGNEE BY OR ON BEHALF OF ASSIGNOR (INCLUDING, WITHOUT LIMITATION, IN RESPECT OF GEOLOGICAL, GEOPHYSICAL, GEOTECHNICAL, OCEANOGRAPHIC AND SEISMIC DATA, IF ANY, THE EXISTENCE OR EXTENT OF OIL, GAS OR OTHER MINERAL RESERVES, THE RECOVERABILITY OF OR THE COST OF RECOVERING ANY SUCH RESERVES, THE VALUE OF ANY SUCH RESERVES, ANY PRODUCT PRICING ASSUMPTIONS, AND THE ABILITY TO SELL OIL OR GAS PRODUCTION AFTER THE EFFECTIVE TIME); AND ASSIGNEE WILL HAVE SOLE RESPONSIBILITY FOR ANY ACTION TAKEN BY ASSIGNEE, OR BY ANY OTHERS RELYING ON ASSIGNEE'S ADVICE, BASED ON THE GEOPHYSICAL, GEOTECHNICAL, OCEANOGRAPHIC, SEISMIC DATA, GEOLOGICAL MAPS, RECORDS, LOGS AND OTHER DATA, IF ANY, TRANSFERRED PURSUANT HERETO OR PURSUANT TO THE ERL AGREEMENT. FURTHERMORE, THE CONVEYANCE OF ANY AND ALL WATER AND WATER RIGHTS IS MADE WITHOUT WARRANTY OR REPRESENTATION OF ANY KIND OR CHARACTER, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OR REPRESENTATION AS

TO TITLE, PRIORITY DATE, FLOW RATE, PURPOSE OF USE, POINT OF DIVERSION, PLACE OF USE, VOLUME, OR LEGAL VALIDITY.

2. IN CONSIDERATION OF THE CONVEYANCE AND ASSIGNMENT FROM ASSIGNOR TO ASSIGNEE, ASSIGNEE, FOR ITSELF, ITS SUCCESSORS AND ASSIGNS, HEREBY ASSUMES FROM ASSIGNOR, AND AGREES TO PAY, PERFORM AND DISCHARGE, AND SHALL TO THE FULL EXTENT PERMITTED BY LAW INDEMNIFY ASSIGNOR AND ITS AFFILIATES AGAINST ANY AND ALL LIABILITIES AND OBLIGATIONS OF ASSIGNOR ASSOCIATED WITH THE OWNERSHIP OR OPERATION OF THE SUBJECT PROPERTIES (INCLUDING COURT COSTS AND REASONABLE ATTORNEYS' FEES), WHETHER OR NOT SUCH LIABILITIES OR OBLIGATIONS ARE KNOWN AS OF JANUARY 7, 1997, INCLUDING WITHOUT LIMITATION THE FOLLOWING:

a. ALL OBLIGATIONS, CLAIMS AND LIABILITIES OF ASSIGNOR PURSUANT TO THE LEASES, EASEMENTS, PERMITS, LICENSES, CONTRACTS AND CONTRACT RIGHTS INCLUDED IN THE SUBJECT PROPERTIES, INCLUSIVE OF ANY CLAIMS FOR ADDITIONAL ROYALTIES OR OTHER PAYMENTS ALLEGEDLY OWED TO INTEREST HOLDERS, WHETHER OR NOT SUCH LIABILITIES, CLAIMS OR OBLIGATIONS ARISE FROM ASSIGNOR'S OWNERSHIP AND OPERATION OF THE SUBJECT PROPERTIES PRIOR TO THE EFFECTIVE TIME OR FROM ASSIGNEE'S OWNERSHIP AND OPERATION OF THE SUBJECT PROPERTIES SUBSEQUENT TO THE EFFECTIVE TIME;

b. ALL LIABILITIES AND OBLIGATIONS OF ASSIGNOR TO PROPERLY PLUG AND ABANDON ALL WELLS AND REMOVE ALL RELATED FACILITIES, INCLUDING, BUT NOT LIMITED TO, OFFSHORE PLATFORMS, EQUIPMENT NOW OR HEREAFTER LOCATED ON THE REAL PROPERTY OR LANDS POOLED, COMMUNITIZED OR UNITIZED THEREWITH, AND CLEAN-UP AND RESTORE THE SUBJECT PROPERTIES OR LANDS POOLED, COMMUNITIZED OR UNITIZED THEREWITH (INCLUDING ALL OBLIGATIONS TO CLEAN, CLOSE AND

ABANDON ALL PITS AND IMPOUNDMENTS) IN ACCORDANCE WITH APPLICABLE LAWS (REGARDLESS OF WHETHER SUCH OBLIGATION TO PLUG, ABANDON, REMOVE, CLEAN-UP AND RESTORE IS ATTRIBUTABLE TO PERIODS OF TIME PRIOR TO OR AFTER THE EFFECTIVE TIME); AND

c. ALL LIABILITIES OF ASSIGNOR INCURRED IN CONNECTION WITH THE SUBJECT PROPERTIES SET FORTH ON THE ACCOUNTING RECORDS MAINTAINED FOR THE SUBJECT PROPERTIES FROM AND AFTER THE EFFECTIVE TIME;

d. ALL LIABILITIES OF ASSIGNOR RESULTING FROM LITIGATION AND CLAIMS ARISING FROM THE OWNERSHIP OR OPERATION OF THE SUBJECT PROPERTIES; AND

e. ANY AND ALL OTHER LIABILITIES OR OBLIGATIONS OF ASSIGNOR, CONTINGENT OR OTHERWISE, RELATING TO THE SUBJECT PROPERTIES, INCLUDING, BUT NOT LIMITED TO, ALL COSTS, CLAIMS, LIABILITIES, CAUSES OF ACTION OR OTHER EXPENDITURES ATTRIBUTABLE TO COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA) RESPONSE COSTS, ENVIRONMENTAL REMEDIATION COSTS, FINES OR PENALTIES (COLLECTIVELY, "CLAIMS") ARISING OUT OF OR ATTRIBUTABLE TO, IN WHOLE OR IN PART, EITHER DIRECTLY OR INDIRECTLY, THE OWNERSHIP, CONDITION OR OPERATION OF THE SUBJECT PROPERTIES AT ANY TIME BEFORE, AT, OR AFTER THE EFFECTIVE TIME (INCLUDING, WITHOUT LIMITATION, ANY CLAIMS RELATING TO ANY CONDITION EXISTING ON, IN, OR UNDER, OR RESULTING FROM OPERATION OF, THE SUBJECT PROPERTIES BEFORE, AT, OR AFTER THE EFFECTIVE TIME), WHICH SUCH CLAIMS SHALL INCLUDE, BUT NOT BE LIMITED TO, LIABILITIES AND OBLIGATIONS PERTAINING TO THE SURFACE, SUBSURFACE, GROUNDWATER OR OTHER CONDITION OF THE SUBJECT PROPERTIES OR OTHER LANDS OR INTERESTS ASSOCIATED THEREWITH WHETHER OR NOT SUCH CLAIMS, LIABILITIES OR OBLIGATIONS ARISE FROM ASSIGNOR'S OWNERSHIP AND OPERATION OF THE SUBJECT PROPERTIES PRIOR TO THE EFFECTIVE TIME OR FROM ASSIGNEE'S OWNERSHIP AND OPERATION OF THE SUBJECT PROPERTIES SUBSEQUENT TO THE EFFECTIVE TIME;

f. ANY AND ALL OBLIGATIONS TO MAKE-UP, DELIVER OR PAY FOR OIL, GAS OR OTHER HYDROCARBONS UNDER ANY GAS BALANCING OR SIMILAR ARRANGEMENTS AFFECTING THE SUBJECT PROPERTIES IN RESPECT OF AMOUNTS OWED THEREUNDER BY ASSIGNOR AS OF THE EFFECTIVE TIME;

ASSIGNOR AND ASSIGNEE ACKNOWLEDGE AND AGREE THAT THE INDEMNITY, DEFENSE, HOLD HARMLESS AND ASSUMPTION OBLIGATIONS SET FORTH HEREIN ARE INTENDED TO AND CONSTITUTE AN AGREEMENT OF EACH PARTY RESPECTIVELY AS TO ITS OBLIGATIONS AND AGREEMENTS TO THE OTHER PARTY TO INDEMNIFY AND PROTECT THE OTHER PARTY FROM THE CONSEQUENCES OF SUCH OTHER PARTY'S OWN NEGLIGENCE, STRICT LIABILITY, OR OTHER FAULT, REGARDLESS OF WHETHER SAME IS THE SOLE, PARTIAL OR CONCURRING CAUSE OF ANY APPLICABLE LOSSES AND, IN THE CASE OF NEGLIGENCE, REGARDLESS OF WHETHER SAME IS ACTIVE OR PASSIVE, ORDINARY OR GROSS, OR THE RESULT OF AN AFFIRMATIVE ACT OR OMISSION.

3. In further consideration of the conveyance and assignment from Assignor to Assignee, Assignee, for itself and its successors and assigns, hereby agrees to the imposition of the covenants set forth on Exhibits "C" and "D" (collectively, the "Covenants") attached hereto. The covenants set forth in Exhibit "C" apply only to the real property interests in the specific parcels of the Subject Properties set forth in Exhibit "A", and the covenants set forth in Exhibit "D" apply only to the real property interests in the specific parcels of the Subject Properties set forth in Exhibit "B". The real property interests to which the Covenants apply are referred to in this paragraph collectively as the "Covenant Properties." Assignee hereby acknowledges that the imposition of the Covenants on the Covenant Properties is an integral part of the conveyance of the Subject Properties from the Assignor to the Assignee and that

this Assignment, Conveyance and Bill of Sale evidences the intent of the Assignor and the Assignee to create the Covenants as obligations of the Assignee and any subsequent transferees of the Covenant Properties. The Covenants shall burden the Covenant Properties and are intended to be and shall be construed as covenants of the Assignee and its successors, assigns and any subsequent transferees of the Covenant Properties, which run with the land.

4. Notwithstanding anything herein to the contrary, this Assignment and the ERL Agreement shall not constitute an assignment to Assignee of any claim, lease, easement, permit, license, contract, contract right or other interest if an attempted assignment of the same without the prior written consent of any party (other than consents of a ministerial nature which are normally granted in the ordinary course of business) would constitute a breach thereof by Assignor or the giving of an outside party the right to terminate such interest or right, unless and until such consent shall have been obtained without adverse conditions or effects on Assignee; whereupon the assignment granted pursuant to the foregoing provisions hereof shall become automatically effective as of the Effective Time as to the affected interest, without further action on the part of the Assignor, provided, however, that if such consent is not obtained within 20 years after January 7, 1997, the assignment to Assignee of the affected interest, if any, shall be null and void. In the case of any Subject Properties that are not assigned by virtue of the immediately preceding sentence, Assignor and Assignee will each use all reasonable efforts to obtain such consents promptly.

5. Assignor and Assignee shall execute any and all assignments of individual mineral fee, private, federal, state or Indian oil and gas leases comprising any part of the Subject

Properties as may be required by Federal, State or Tribal law or regulation, or deemed appropriate by Assignor, and any and all of such individual assignments shall constitute, as to such individual mineral fees or leases, one and the same assignment as is made herein. Furthermore, any and all such assignments shall not constitute any additional conveyance or assignment of the mineral fee, oil, gas, mineral leases, lands or interests therein or herein described or any rights therein, and are not intended to modify, and shall not modify, any of the terms, covenants and warranties herein set forth, and shall be deemed to contain all of the terms and provisions hereof, as fully and to all intents and purposes as though the same were set forth at length in such separate assignments.

6. Nothing herein shall operate to modify or amend any gas sales or gas purchase agreement to which Assignor is a party specifically covering or relating to any Subject Property assigned to Assignee.

7. This Assignment shall inure to the benefit of and be binding upon the Assignor and Assignee and their respective successors, legal representatives and assigns.

8. THE PROVISIONS OF THIS ASSIGNMENT RELATING SPECIFICALLY TO TITLE TO REAL PROPERTY, WHICH MUST BE GOVERNED BY THE LAW OF THE JURISDICTION IN WHICH SUCH REAL PROPERTY IS LOCATED SHALL BE GOVERNED BY THE LAWS OF THE STATE IN WHICH THE SUBJECT PROPERTIES ARE LOCATED. ALL OTHER PROVISIONS OF THIS ASSIGNMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA, EXCLUDING ANY CONFLICT OF LAW OF RULE OR

PRINCIPLE THAT MIGHT REFER SAME TO THE LAWS OF ANOTHER JURISDICTION.

IN WITNESS WHEREOF, Assignor and Assignee have executed and acknowledged this Assignment as of the 24th day of June, 1997, but effective for all purposes as of January 7, 1997.

Witnesses to Signature
of said Attorney-in-Fact

CH-TWENTY, INC.,
a Delaware Corporation

By: Patrick J. Brophy
Patrick J. Brophy
Attorney-in-Fact

ASSIGNOR

Witnesses to Signature
of said Attorney-in-Fact

ARCO ENVIRONMENTAL
REMEDIATION, L.L.C.,
a Delaware Limited Liability Company

By: James E. Mitchell
James E. Mitchell
Attorney-in-Fact

ASSIGNEE

DOCUMENT PREPARED BY:

Duronda Smith
Land Supervisor
Atlantic Richfield Company

STATE OF TEXAS §
§
COUNTY OF COLLIN §

MONTANA

On this 24th day of June, 1997, before me, Reva K. Gibbon, the undersigned notary public, personally appeared Patrick J. Brophy, known to me and who acknowledged himself to be the Attorney-in-Fact of CH-Twenty, Inc., a Delaware corporation, and that he, as such Attorney-in-Fact, being authorized to do so, executed the foregoing instrument as the act of the corporation and for the purposes therein contained, by signing the name of the corporation by himself as Attorney-in-Fact.

On this 24th day of June, 1997, before me, Reva K. Gibbon, the undersigned notary public, personally appeared James E. Mitchell, known to me and who acknowledged himself to be the Attorney-in-Fact of ARCO Environmental Remediation L.L.C., a Delaware corporation, and that he, as such Attorney-in-Fact, being authorized to do so, executed the foregoing instrument as the act of the corporation and for the purposes therein contained, by signing the name of the corporation by himself as Attorney-in-Fact.

NOTARY PUBLIC STATE OF TEXAS
Reva K. Gibbon
Notary Public, State of Texas
My Comm. Expires 07/15/99

Reva K. Gibbon
Notary Public, State of Texas

My Commission Expires:

July 15, 1999

EXHIBIT "A"
COVENANT PROPERTY
ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

STATE: MONTANA

COUNTY: ANACONDA - DEER LODGE

PROPERTY NUMBER	DATED	LESSOR/GRANTOR ASSIGNOR	LESSEE/GRANTEE ASSIGNEE	DESCRIPTION	BOOK/PAGE CERTIFICATION
25-023-090005-S00	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 9-T4N-R10W: All, less tracts sold. (I.D. # 525600)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 10-T4N-R10W: All, North of Opportunity Tracts. (I.D. # 525600)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 16-T4N-R10W: Willow Creek Tract. (I.D. # 525750)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 17-T4N-R10W: All, less tracts sold and Right-of-Way. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 18-T4N-R10W: All of said Section 18 being a portion of Morrill Placer (M.S.1745), a portion of Fe Placer (M.S. 7457) and a portion of Government Lots 1 thru 4, less tracts previously sold, R.R., Highway and Right-of-Way. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 24-T4N-R10W: N/2, E/2 SE/4 west of old C.M.&S.P. R.R., portion of W/2 NW/4 (ref.COS 205-D). (I.D. # 524500)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 2-T4N-R10W: All, less railroad Right-of-Way. (I.D. # 525600)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 3-T4N-R10W: All. (I.D. # 525600)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 4-T4N-R10W: All, less Rights-of-Way. (I.D. # 525600)	42/388

EXHIBIT "A"
COVENANT PROPERTY
ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

STATE: MONTANA

COUNTY: ANACONDA - DEER LODGE

PROPERTY NUMBER	DATED	LESSOR/GRANTOR ASSIGNOR	LESSEE/GRANTEE ASSIGNEE	DESCRIPTION	BOOK/PAGE CERTIFICATION
25-023-090005-S00 (CONTINUED)	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 5-T4N-R10W: All, less Rights-of-Way. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 6-T4N-R10W: Portion of S/2 and NE/4, less Highway and Right-of-Way. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 7-T4N-R10W: All of said Section 7 being a portion of Placer M.S. 4295, Cadwell Placer and Morrill Placer M.S. 1745, less Right-of-Way. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 8-T4N-R10W: W/2, NE/4, Portion of NE/4 SE/4, less Right-of-Way. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 1-T4N-R11W: Tract in S/2, south of Highway. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 2-T4N-R11W: That portion of S/2 S/2, south of city limits. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 11-t4N-R11W: All, less tracts sold and Right-of-Way. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 12-T4N-R11W: All, less Morrill Placer M.S. 1745. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 13-T4N-R11W: All, less Morrill Placer M.S. 1745. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 14-T4N-R11W: All. (I.D. # 525400)	42/388

EXHIBIT "A"
COVENANT PROPERTY
ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

STATE: MONTANA

COUNTY: ANACONDA - DEER LODGE

PROPERTY NUMBER	DATED	LESSOR/GRANTOR ASSIGNOR	LESSEE/GRANTEE ASSIGNEE	DESCRIPTION	BOOK/PAGE CERTIFICATION
25-023-090005-S00 (CONTINUED)	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 32-T5N-R10W: All, less Highway and Right-of-Way. (I.D. # 523500)	42/388
	12/31/96	Ueland Ranches, Inc. and Uepa, Inc.	Atlantic Richfield Company	Section 32-T5N-R10W: All, less Highway and Right-of-Way. (I.D. # 523500)	110/295
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 33-T5N-R10W: That portion of said Section 33 south and east of Highway. (I.D. # 523500)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 34-T5N-R10W: NE/4. (I.D. # 523450)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 34-T5N-R10W: Portion of W/2 south of Highway. (I.D. # 523500)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 34-T5N-R10W: SE/4. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 35-T5N-R10W: All. (I.D. # 525400)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 36-T5N-R10W: All, less I-90. (I.D. # 525400)	42/388

EXHIBIT "B"
COVENANT PROPERTY
ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

STATE: MONTANA

COUNTY: ANACONDA - DEER LODGE

PROPERTY NUMBER	DATED	LESSOR/GRANTOR ASSIGNOR	LESSEE/GRANTEE ASSIGNEE	DESCRIPTION	BOOK/PAGE CERTIFICATION
25-023-090005-S00	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 11-T4N-R10W: N/2, less Tracts Sold, less Right-of-Way. (I.D. # 525600) 30-1286-11-1-01-02-ACM1	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 11-T4N-R10W: S/2, less Opportunity Tracts & Rights-of-Way. (I.D. # 524500) 30-1286-11-4-01-01-ACM1	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 11-T4N-R10W: Opportunity Tracts 1 - 4. (I.D. # 525700). 30-1286-11-3-01-04-ACM1 03-ACM1 02-ACM1 01-ACM1	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 12-T4N-R10W: Portion of NW/4 west of east line of old C.M.&S.P. R.R., less Right-of-Way (ref. COS 205-C). (I.D. # 525600) 30-1286-12-2-02-02-ACM1	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 12-T4N-R10W: Portion of W/2 SW/4 and portion west of Highway. (I.D. # 524500) 30-1286-12-3-01-01-ACM1	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 13-T4N-R10W: All, west of the east line of old C.M.&S.P. R.R., less Highway & Right-of-Way (ref. COS 205-D). (I.D. # 524500) 30-1286-13-2-02-01-ACM1	42/388
	3/16/92	Calvin T. & Marva K. Christian	Atlantic Richfield Company	Section 14-T4N-R10W: All, less Opportunity, Highway and Right-of-Way. (I.D. # 524500) ~~30-1286-14-1-01-01 ACM1~~	84/485
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 14-T4N-R10W: Willow Creek Tract. (I.D. # 525750)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 14-T4N-R10W: Opportunity Tract 11. (I.D. # 525790) 30-1286-14-2-03-01-0000	42/388

EXHIBIT "B"
COVENANT PROPERTY
ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

STATE: MONTANA

COUNTY: ANACONDA - DEER LODGE

PROPERTY NUMBER	DATED	LESSOR/GRANTOR ASSIGNOR	LESSEE/GRANTEE ASSIGNEE	DESCRIPTION	BOOK/PAGE CERTIFICATION
25-023-090005-S00 (CONTINUED)	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 15-T4N-R10W: Portion north of Highway & east of Opportunity. (I.D. # 525600)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 15-T4N-R10W: Willow Creek Tract. (I.D. # 525750)	42/388
	3/16/92	Calvin T. & Marva K. Christian	Atlantic Richfield Company	Section 23-T4N-R10W: NE/4, west of N.P.R.R. Right-of-Way. (I.D. # 524500)	84/485
	10/31/96	Christian Land & Cattle Co.	Atlantic Richfield Company	Section 21-T4N-R10W: Yellow Ditch COS 214-C. (I.D. # 524500)	109/317B
	10/31/96	Christian Land & Cattle Co.	Atlantic Richfield Company	Section 27-T4N-R10W: Yellow Ditch COS 214-C. (I.D. # 524500)	109/317B
	10/31/96	Christian Land & Cattle Co.	Atlantic Richfield Company	Section 28-T4N-R10W: Yellow Ditch COS 214-C. (I.D. # 524500)	109/317B
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 1-T4N-R10W: All, west of east line of old C.M.&S.P. R.R. and Tract west of R.R. and west of N.P.R.R. Right-of-Way. (I.D. # 525600)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 17-T5N-R9W: Portion of W/2 W/2 west of centerline of County Road (ref. COS 206-A), less COS 44B. (I.D. # 522100)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 18-T5N-R9W: All, ref. COS 206-A. (I.D. # 523450)	42/388

EXHIBIT "B"
COVENANT PROPERTY
ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

STATE: MONTANA

COUNTY: ANACONDA - DEER LODGE

PROPERTY NUMBER	DATED	LESSOR/GRANTOR ASSIGNOR	LESSEE/GRANTEE ASSIGNEE	DESCRIPTION	BOOK/PAGE CERTIFICATION
25-023-090005-S00 (CONTINUED)	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 19-T5N-R9W: All, less Highway and Right-of-Way tracts previously sold. (I.D. # 523450)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 20-T5N-R9W: W/2 W/2 west of east line of C.M.&S.P. R.R., ref. COS 206-A. (I.D. # 522100)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 29-T5N-R9W: W/2 W/2 west of east line of C.M.&S.P. R.R., ref. COS 205-B. (I.D. # 522100)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 31-T5N-R9W: All, north & west of east line of C.M.&S.P. R.R., ref. COS 205-B. (I.D. # 525400)	42/388
	5/11/90	Thomas A. and JoAnn Pozega	Atlantic Richfield Company	Section 23-T5N-R10W: M&B Tract in SE/4 139.5' X 156'. (I.D. # 507200)	77/121
	4/26/90	Rodney R. and Viola M. Schulz	Atlantic Richfield Company	Section 23-T5N-R10W: Lots 3 - 5 . (I.D. # 507200)	77/23
	8/23/89	Carol LaTray	Atlantic Richfield Company	Section 23-T5N-R10W: M&B Tract in SE/4 139.6' X 176'. (I.D. # 507200)	74/663
	8/10/89	Walter D. and Mattie L Rangitsch	Atlantic Richfield Company	Section 23-T5N-R10W: M&B Tract in SE/4. (I.D. # 507200)	74/636
	7/22/89	Lewis A. and Alberta Carroll	Atlantic Richfield Company	Section 23-T5N-R10W: M&B Tract in SE/4. (I.D. # 507200)	74/411

EXHIBIT "B"
COVENANT PROPERTY
ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

STATE: MONTANA

COUNTY: ANACONDA - DEER LODGE

PROPERTY NUMBER	DATED	LESSOR/GRANTOR ASSIGNOR	LESSEE/GRANTEE ASSIGNEE	DESCRIPTION	BOOK/PAGE CERTIFICATION
25-023-090005-S00 (CONTINUED)	6/29/89	Harold W. Slye	Atlantic Richfield Company	Section 23-T5N-R10W: Lots 15 & 16. (I.D. # 507200)	74/101
	6/29/89	Donald S. and Maxine A. LaTray	Atlantic Richfield Company	Section 23-T5N-R10W: M&B Tract in SE/4 156' X 114'. (I.D. # 507200)	74/98
	6/1/89	Stanley R. and Pearl Cutler	Atlantic Richfield Company	Section 23-T5N-R10W: Lots 17 & 18. (I.D. # 507200)	73/767
	5/31/89	Debbie Roeber (P.R. for George Still)	Atlantic Richfield Company	Section 23-T5N-R10W: M&B Tract in SE/4. (I.D. # 507200)	73/770
	5/24/89	Wendy Jones a/k/a Wendy Dubois	Atlantic Richfield Company	Section 23-T5N-R10W: M&B Tract in SE/4. (I.D. # 507200)	73/764
	5/30/89	Forrest and Betty Felton	Atlantic Richfield Company	Section 23-T5N-R10W: M&B Tract in SE/4. (I.D. # 507200)	73/760
	5/30/89	Franklin J. and Victor J. Cooney	Atlantic Richfield Company	Section 23-T5N-R10W: Lots 11 & 12. (I.D. # 507200)	73/757
	5/10/89	George E. and Theresa M. Gadaire	Atlantic Richfield Company	Section 23-T5N-R10W: M&B in SE/4 139.5' X 156'. (I.D. # 507200)	73/404
	11/21/88	Carol J. Yother a/k/a Carol J. Sheridan	Atlantic Richfield Company	Section 23-T5N-R10W: M&B Tract in SE/4. (I.D. # 507200)	71/862
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 25-T5N-R10W: All, less I-90 and Right-of-Way. (I.D. # 523450) 30-1378-25-1-01-02-ACMI 30-1378-25-1-01-01-ACMI	42/388

EXHIBIT "B"
COVENANT PROPERTY
ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

STATE: MONTANA

COUNTY: ANACONDA - DEER LODGE

PROPERTY NUMBER	DATED	LESSOR/GRANTOR ASSIGNOR	LESSEE/GRANTEE ASSIGNEE	DESCRIPTION	BOOK/PAGE CERTIFICATION
25-023-090005-S00 (CONTINUED)	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 27-T5N-R10W: That portion of said Section 27 south and east of Highway. (I.D. # 523450)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 26-T5N-R10W: That portion of said Section 26 south and east of Highway. (I.D. # 523450)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 33-T5N-R11W: NE/4 & NE/4 NW/4. (I.D. # 525200)	42/388
	12/31/81	The Anaconda Company	Atlantic Richfield Company	Section 25-T5N-R12W: Portion of N/2 NW/4, Portion of SW/4 SE/4 NW/4, Portion of E/2 SE/4 and Government Lot # 2. (I.D. # 523800)	42/388

EXHIBIT C
ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE
EFFECTIVE JANUARY 7, 1997,
BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Anaconda-Deer Lodge County Property

COVENANTS

A. CREATION OF COVENANTS. The following covenants (the "Covenants") shall burden the real property (described on Exhibit "A") and are intended to be and shall be construed as covenants of Assignee and its successors in interest, assigns and transferees which run with the land. Capitalized terms used in the Covenants shall have the meanings set forth in the Assignment, Conveyance and Bill of Sale and in paragraph B below entitled "Definitions."

1. Restrictions on Use.

(a) The property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, of any Remedial Action (as defined in paragraph B.6. below) required under Applicable Law (as defined in paragraph B.1. below) or by any federal, state or local governmental entity, or any other actions that Assignor deems necessary or advisable to address Environmental Conditions (as defined in paragraph B.4. below) on or related to the property;

(b) Any existing fencing or any additional fencing erected as part of a Remedial Action shall be maintained by the property owner in good condition and repair;

(c) All construction and/or drilling of new water wells on the property shall be prohibited, except that Assignee may construct new wells on the property for monitoring or sampling purposes. This restriction shall not limit the use of existing wells on the property;

(d) The property owner shall maintain any existing drainage control structures in good condition and repair;

(e) The property owner shall not permit public access to the property;

(f) The property owner shall take such steps as may be reasonably necessary to control noxious or other weeds on the property in accordance with applicable state or local laws and regulations; and

(g) The property owner shall not permit residential, commercial or recreational development, agricultural use or wildlife management on the property.

EXHIBIT C
ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE
EFFECTIVE JANUARY 7, 1997,
BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Anaconda-Deer Lodge County Property

2. Access.

The property owner shall grant access to the property to Atlantic Richfield Company, CH-Twenty, Inc., ARCO Environmental Remediation, L.L.C., EPA, the State and their respective agents, employees, representatives and contractors for the purpose of conducting any (a) investigation, monitoring, sampling or other activities with respect to the property, or (b) any Remedial Action that Assignee, EPA or the State deems necessary or advisable with respect to the property to address Environmental Conditions thereon. The property owner also may grant access to any other persons or entities for any of the foregoing purposes.

B. DEFINITIONS. For purposes of these Covenants, the following terms shall have the meanings ascribed to them in this section.

1. Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of federal, state or local governmental or judicial entities, as the same may change from time to time.

2. CERCLA shall mean the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601, *et seq.*, as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. 99-499, 100 Stat. 9613 ("SARA"), and as hereafter amended.

3. Covenants shall mean the Covenants described in paragraph A above.

4. Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: (i) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials or Mining Wastes; or (ii) any mining, milling, smelting, processing, refining or other operations by Purchaser or its predecessors.

5. EPA shall mean the United States Environmental Protection Agency.

6. Remedial Action shall mean any response, removal or remedial action, including operation and maintenance and related institutional controls, described in an Action Memorandum, Record of Decision or other decision document within the meaning of those terms under CERCLA or

EXHIBIT C
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EFFECTIVE JANUARY 7, 1997,
BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Anaconda-Deer Lodge County Property

CECRA, regardless of whether such actions are undertaken pursuant to CERCLA or CECRA authority, and any reclamation, restoration or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

7. State shall mean the State of Montana.

8. Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401, *et seq.*); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251, *et seq.*); the Resource Conservation and Recovery Act ("RCRA") (42 U.S.C. §§ 6901, *et seq.*); the Safe Drinking Water Act (42 U.S.C. §§ 300(f), *et seq.*); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA") (M.C.A. §§ 75-10-701, *et seq.*); the Montana Water Quality Act (M.C.A. §§ 75-10-701, *et seq.*); the Clean Air Act of Montana (M.C.A. §§ 75-2-101, *et seq.*); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101, *et seq.*); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101, *et seq.*); all as amended and as may change from time to time; and any provisions or theories of common law providing for any cause of action, remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

9. Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or Remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," "hazardous or deleterious substance," or "pollutant or contaminant" under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, CERCLA and/or RCRA; or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated biphenyls (PCBs), asbestos or urea formaldehyde foam insulation.

10. Mining Wastes shall mean any solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without

EXHIBIT C
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Anaconda-Deer Lodge County Property

limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust and other waste materials.

11. Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever.

C. BENEFITED PROPERTIES. The Covenants shall be for the benefit of the properties described below, their current owners and their successors in interest, assigns and transferees:

1. That portion of the S/2 S/2 of Section 9, T4N, R10W, P.M.M., Anaconda-Deer Lodge County, Montana presently owned by Assignor; and

2. All other real properties which are adjacent to, or contiguous with, the property described in C.1. above.

D. BENEFITS TO BENEFITED PROPERTIES. Assignor and Assignee acknowledge that the benefits to the Benefited Properties by reason of the Covenants include without limitation the following:

1. The reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the property on, or in the vicinity of, the Benefited Properties; and

2. The maintenance, use and potential development of the property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

E. ENFORCEMENT RIGHTS -COVENANTS.

1. Enforcement of Covenants. Assignor and Assignee hereby agree that each Covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the property, including without limitation all successors in interest, assigns and transferees of Assignee.

2. Parties Eligible to Enforce Covenants. Each of the Covenants set forth in this conveyance agreement shall be enforceable in perpetuity as follows:

EXHIBIT C
ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE
EFFECTIVE JANUARY 7, 1997,
BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Anaconda-Deer Lodge County Property

(a) In Contract. Atlantic Richfield Company shall be entitled to enforce the provisions of the Covenants against Assignee pursuant to the terms and conditions of this Assignment.

(b) Assignor Property. The Assignor, as the owner of the property described in Paragraph C.1. above, and any subsequent transferees of such property, shall be entitled to enforce the covenants to the fullest extent permitted by Montana law.

(c) Adjacent Property Owners. All adjacent property owners, including Assignor, shall be entitled to enforce the Covenants to the fullest extent permitted by Montana law.

3. Waiver of Defenses. Assignee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

4. Specific Performance. Assignee hereby specifically agrees that in addition to any other remedies, the remedy of "specific performance" shall be available to any party entitled to enforce the Covenants.

F. MODIFICATION OF COVENANTS. The Covenants may be modified as follows:

1. Required Approvals. Any proposed modification must be approved in a writing executed by (a) Atlantic Richfield Company, (b) the current owner of the property described in Paragraph C.1. above, and (c) the owner of the parcel burdened by the Covenant to be modified. Such written approval may be evidenced by execution of a written instrument created to amend the Covenants.

2. Recordation of Modification. In order to be effective, any modification of the Covenants must be (a) in writing, (b) executed by each of the persons described in paragraph F.1. above, with each signature duly notarized (to the extent required by Montana law), and (c) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Covenants. For purposes of these provisions, a modification of the Covenants may include (i) the imposition of new covenants, or (ii) the termination of all or part of the existing Covenants.

EXHIBIT D

ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE
EFFECTIVE JANUARY 7, 1997,
BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Anaconda-Deer Lodge County Property

COVENANTS

A. CREATION OF COVENANTS. The following covenants (the "Covenants") shall burden the real property (described on Exhibit "B") and are intended to be and shall be construed as covenants of Assignee and its successors in interest, assigns and transferees which run with the land. Capitalized terms used in the Covenants shall have the meanings set forth in the Assignment, Conveyance and Bill of Sale and in paragraph B below entitled "Definitions."

1. Restrictions on Use.

(a) The property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, of any Remedial Action (as defined in paragraph B.6. below) required under Applicable Law (as defined in paragraph B.1. below) or by any federal, state or local governmental entity, or any other actions that Assignor deems necessary or advisable to address Environmental Conditions (as defined in paragraph B.4. below) on or related to the property;

(b) Any existing fencing or any additional fencing erected as part of a Remedial Action shall be maintained by the property owner in good condition and repair;

(c) All construction and/or drilling of new water wells on the property shall be prohibited, except that Assignee may construct new wells on the property for monitoring or sampling purposes. This restriction shall not limit the use of existing wells on the property;

(d) The property owner shall maintain any existing drainage control structures in good condition and repair;

(e) The property owner shall take such steps as may be reasonably necessary to control noxious or other weeds on the property in accordance with applicable state or local laws and regulations; and

(f) The property owner shall not permit residential, commercial or industrial development on the property.

EXHIBIT D

ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE
EFFECTIVE JANUARY 7, 1997,
BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Anaconda-Deer Lodge County Property

2. Access.

The property owner shall grant access to the property to Atlantic Richfield Company, CH-Twenty, Inc., ARCO Environmental Remediation, L.L.C., EPA, the State and their respective agents, employees, representatives and contractors for the purpose of conducting any (a) investigation, monitoring, sampling or other activities with respect to the property, or (b) any Remedial Action that Assignee, EPA or the State deems necessary or advisable with respect to the property to address Environmental Conditions thereon. The property owner also may grant access to any other persons or entities for any of the foregoing purposes.

B. DEFINITIONS. For purposes of these Covenants, the following terms shall have the meanings ascribed to them in this section.

1. Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of federal, state or local governmental or judicial entities, as the same may change from time to time.

2. CERCLA shall mean the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601, *et seq.*, as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. 99-499, 100 Stat. 9613 ("SARA"), and as hereafter amended.

3. Covenants shall mean the Covenants described in paragraph A above.

4. Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: (i) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials or Mining Wastes; or (ii) any mining, milling, smelting, processing, refining or other operations by Purchaser or its predecessors.

5. EPA shall mean the United States Environmental Protection Agency.

6. Remedial Action shall mean any response, removal or remedial action, including operation and maintenance and related institutional controls, described in an Action Memorandum,

EXHIBIT D

ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE
EFFECTIVE JANUARY 7, 1997,
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Anaconda-Deer Lodge County Property

Record of Decision or other decision document within the meaning of those terms under CERCLA or CECRA, regardless of whether such actions are undertaken pursuant to CERCLA or CECRA authority, and any reclamation, restoration or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

7. State shall mean the State of Montana.

8. Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401, *et seq.*); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251, *et seq.*); the Resource Conservation and Recovery Act ("RCRA") (42 U.S.C. §§ 6901, *et seq.*); the Safe Drinking Water Act (42 U.S.C. §§ 300(f), *et seq.*); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA") (M.C.A. §§ 75-10-701, *et seq.*); the Montana Water Quality Act (M.C.A. §§ 75-10-701, *et seq.*); the Clean Air Act of Montana (M.C.A. §§ 75-2-101, *et seq.*); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101, *et seq.*); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101, *et seq.*); all as amended and as may change from time to time; and any provisions or theories of common law providing for any cause of action, remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

9. Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or Remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," "hazardous or deleterious substance," or "pollutant or contaminant" under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, CERCLA and/or RCRA; or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated biphenyls (PCBs), asbestos or urea formaldehyde foam insulation.

EXHIBIT D

ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE
EFFECTIVE JANUARY 7, 1997,
BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Anaconda-Deer Lodge County Property

10. Mining Wastes shall mean any solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust and other waste materials.

11. Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever.

C. BENEFITED PROPERTIES. The Covenants shall be for the benefit of the properties described below, their current owners and their successors in interest, assigns and transferees:

1. That portion of the S/2 S/2 of Section 9, T4N, R10W, P.M.M., Anaconda-Deer Lodge County, Montana presently owned by Assignor; and

2. All other real properties which are adjacent to, or contiguous with, the property described in C.1. above.

D. BENEFITS TO BENEFITED PROPERTIES. Assignor and Assignee acknowledge that the benefits to the Benefited Properties by reason of the Covenants include without limitation the following:

1. The reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the property on, or in the vicinity of, the Benefited Properties; and

2. The maintenance, use and potential development of the property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

E. ENFORCEMENT RIGHTS -COVENANTS.

1. Enforcement of Covenants. Assignor and Assignee hereby agree that each Covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the property, including without limitation all successors in interest, assigns and transferees of Assignee.

EXHIBIT D

ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE
EFFECTIVE JANUARY 7, 1997,
BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Anaconda-Deer Lodge County Property

2. Parties Eligible to Enforce Covenants. Each of the Covenants set forth in this conveyance agreement shall be enforceable in perpetuity as follows:

(a) In Contract. Atlantic Richfield Company shall be entitled to enforce the provisions of the Covenants against Assignee pursuant to the terms and conditions of this Assignment.

(b) Assignor Property. The Assignor, as the owner of the property described in Paragraph C.1. above, and any subsequent transferees of such property, shall be entitled to enforce the covenants to the fullest extent permitted by Montana law.

(c) Adjacent Property Owners. All adjacent property owners, including Assignor, shall be entitled to enforce the Covenants to the fullest extent permitted by Montana law.

3. Waiver of Defenses. Assignee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

4. Specific Performance. Assignee hereby specifically agrees that in addition to any other remedies, the remedy of "specific performance" shall be available to any party entitled to enforce the Covenants.

F. MODIFICATION OF COVENANTS. The Covenants may be modified as follows:

1. Required Approvals. Any proposed modification must be approved in a writing executed by (a) Atlantic Richfield Company, (b) the current owner of the property described in Paragraph C.1. above, and (c) the owner of the parcel burdened by the Covenant to be modified. Such written approval may be evidenced by execution of a written instrument created to amend the Covenants.

2. Recordation of Modification. In order to be effective, any modification of the Covenants must be (a) in writing, (b) executed by each of the persons described in paragraph F.1. above, with each signature duly notarized (to the extent required by Montana law), and (c) duly recorded in the Anaconda-Deer Lodge County real property records.

EXHIBIT D

ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Anaconda-Deer Lodge County Property

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Covenants. For purposes of these provisions, a modification of the Covenants may include (i) the imposition of new covenants, or (ii) the termination of all or part of the existing Covenants.

EXHIBIT "E"

ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

STATE: MONTANA

COUNTY: ANACONDA - DEER LODGE

ANACONDA - DEER LODGE WATER RIGHTS

Water Use Permit Numbers

(1) 82956-S76G;

(2) 92738-S76G;

(3) 82226-S76G;

(4) 88738-G76G;

Statement of Claim Numbers

(5) 76G-W-032356-00;

(6) 1.25 cfs out of water right 76G-W-032342-00;

(7) 1.25 cfs out of water right 76G-W-032350-00;

(8) 7.32 cfs out of water right 76G-W-032373-00;

(9) 76G-W127633-00;

(10) 76G-W127612-00;

(11) 76G-W127623-00;

(12) 76G-W127613-00;

(13) 76G-O 032389-00;

(14) 76G-W127630-00;

(15) 76G-W127639-00;

(16) 76G-W032371-00;

(17) 76G-W032385-00;

(18) 76G-W127616-00;

(19) 76G-W127617-00;

EXHIBIT "E"

ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Statement of Claim Numbers (Continued)

(20) 76G-W127635-00;

(21) 76G-W127642-00;

(22) 76G-W032367-00;

(23) 76G-W127638-00;

(24) 76G-W127636-00;

(25) 76G-W127626-00;

(26) 16.48 cfs out of water right 76G-W-032369-00;

(27) 21.60 cfs out of water right 76G-W-127614-00;

(28) .66 cfs out of water right 76G-W-032368-00;

(29) 2.22 cfs out of water right 76G-W-127627-00;

(30) 6.16 cfs out of water right 76G-W-127619-00;

(31) 14.14 cfs out of water right 76G-W-032374-00;

(32) 17.51 cfs out of water right 76G-W-127640-00;

(33) 3.90 cfs out of water right 76G-W-127646-00;

(34) 7.88 cfs out of water right 76G-W-032372-00;

(35) 2.38 cfs out of water right 76G-W-127611-00;

(36) 3.00 cfs out of water right 76G-W-127610-00;

(37) 3.56 cfs out of water right 76G-W-032391-00;

(38) 76G-W-215638-00;

(39) 76G-W-215639-00;

(40) 76G-W-215640-00;

(41) 76GJ-W-124873-00;

(42) 76GJ-W-124877-00;

EXHIBIT "E"

ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Statement of Claim Numbers (Continued)

All the water and water rights previously reserved by Christian Land and Cattle Co., Inc. in its conveyance to Rutledge Ranches, Inc. in any and all of the following water rights:

(43) 6.20 cfs out of water right 76G-W-032387-00;

(44) 5.18 cfs out of water right 76G-W-032383-00;

(45) 5.66 cfs out of water right 76G-W-032375-00;

(46) 11.46 cfs out of water right 76G-W-032370-00;

(47) 5.38 cfs out of water right 76G-W-127620-00;

(48) 13.34 cfs out of water right 76G-W-127618-00;

(49) 15.50 cfs out of water right 76G-W-127631-00;

Certificate of Water Right Numbers

(50) 88738-G76G;

(51) 86691-G76G;

(52) 76G-C-037101-00;

(53) 76G-C-052914-00;

(54) 76G-C-054547-00;

(55) 76G-C-068045-00;

(56) 76G-C-074714-00;

(57) 76G-C-077613-00;

(58) 76G-C-085591-00;

(59) 76G-C-000637-00;

(60) 76G-C-003713-00;

(61) 76G-C-008678-00;

(62) 76G-C-030389-00;

EXHIBIT "E"

ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Exempt Existing Water Rights

(63) 76G-E-074201-00;

(64) 76G-E-074613-00;

(65) 76G-E-077614-00;

(66) 76G-E-078254-00.

TE OF MONTANA)
nty of Deer Lodge) ss

I, hereby certify that the within instrument was filed in my office on the 27TH day of JUNE, 1997 at 21 minutes past 1 o'clock P .M., and is recorded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

County Recorder Barbara Vaughn Deputy Fee$ 22.00

152316

EXHIBIT "E"

ATTACHED TO AND MADE A PART OF ASSIGNMENT, CONVEYANCE AND BILL OF SALE EFFECTIVE JANUARY 7, 1997, BY AND BETWEEN CH-TWENTY, INC. AND ARCO ENVIRONMENTAL REMEDIATION, L.L.C.

Exempt Existing Water Rights

(63) 76G-E-074201-00;

(64) 76G-E-074613-00;

(65) 76G-E-077614-00;

(66) 76G-E-078254-00.

STATE OF MONTANA)
County of Deer Lodge) ss

I, hereby certify that the within instrument was filed in my office on the 27TH day of JUNE, 1997 at 21 minutes past 1 o'clock P.M., and is recorded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

County Recorder Barbara Vaughn Deputy Fee$ 22.00

152316

153668

Book 116 Page 588

QUIT CLAIM DEED

(Drag Strip Parcel)

THIS DEED is made effective as of January 13th, 1998, between Anaconda-Deer Lodge County ("Grantor"), a consolidated governmental entity organized under the Constitution and laws of the State of Montana, whose address is 800 South Main, Anaconda, MT 59711, and the Lost Creek Raceway Association Inc.,("Grantee")a corporation organized under the laws of the State of Montana.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, water and water rights, ditch and ditch rights, situated on or appurtenant to the Property , or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made pursuant to (i)Ordinance 89 of Anaconda-Deer Lodge County, Montana, (ii)the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994, a Memorandum of which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records, and (iii) the terms and conditions of that certain Quit Claim Deed dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 167 of the Deer Lodge County real property records. In addition, Grantee has agreed to (a) take the Property subject to certain restrictive covenants, and (b) assume certain obligations as more particularly described in the Memorandum and in the Additional Provisions set forth below.

This Property is within a Superfund site. A permit must be obtained before any development or construction.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quit Claim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

ADL shall mean Anaconda-Deer Lodge County and its successors and assigns.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

ARCO shall mean Atlantic Richfield Company, and its successors and assigns.

Conveyance Agreement shall mean that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among ARCO, Grantor, and the Old Works Golf Course Authority.

Development Permit System shall mean the Anaconda-Deer Lodge Development Permit System adopted on December 2, 1992 by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any

federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Memorandum of Conveyance Agreement shall mean that certain Memorandum of Real Property Transfer/Conveyance Agreement which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures set forth in the O&M Plan for the Property.

O&M Plan shall mean the Operations and Maintenance plans and procedures described in Exhibits A-1 and A-2 to the Memorandum of Conveyance Agreement.

OW/EADA Administrative Order shall mean the Administrative Order issued by EPA to ARCO on April 7, 1994, EPA Docket No. CERCLA VIII-94-08, and all attachments thereto and deliverables submitted thereunder, with respect to implementation of the OW/EADA Remedy, a copy of which is attached as Exhibit B to the Memorandum of Conveyance Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL Site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the Record of Decision issued March 8, 1994, as more specifically described in the OW/EADA Administrative Order and attachments thereto, including any operation and maintenance requirements of such remedy.

Open Space shall have the meaning as set forth in the Development Permit System.

Operation and Maintenance or O&M shall mean those measures required to maintain the effectiveness of the OW/EADA Remedy and shall include without limitation those measures set forth in the O&M Plan for the Property.

Proposed Plan shall mean the Anaconda Smelter Superfund Site, Old Works/East Anaconda Development Area Operable Unit Proposed Plan issued by EPA in September 1993 and announcing a preferred alternative for the OW/EADA OU.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and

3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to (i) the Property, or any portion thereof, subsequent to the execution of this Quit Claim Deed, or (ii) any of the rights, duties and obligations arising under the Conveyance Agreement.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUIT CLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures herein;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without

limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quit Claim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record or obtained by Grantor from ARCO relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information:

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

5. Notices. Grantee is hereby notified that this property is subject to the terms and conditions of the Agreement and Covenant Not to Sue issued in the matter of Anaconda Smelter Superfund Site, Old Works/East Anaconda Development Area Operable Unit(OW/EADA), EPA Docket No. CERCLA 94-12. Grantor hereby notifies Grantee and all subsequent owners of the Property or any interest in all or any portion of the Property of the Restrictive Covenants and Performance Standards contained herein, and all documents related to the remediation of the Property herein including, but not limited to the Record of Decision, Operation and Maintenance Requirements, the OW/EADA Administrative Order, and the Agreement and Covenant Not to Sue issued in the matter of Anaconda Smelter Superfund Site, Old Works/East Anaconda Development Area Operable Unit(OW/EADA), EPA Docket No. CERCLA 94-12. All such restrictions and covenants shall be binding on Grantee's Successors in Interest and Assigns and all subsequent owners of the Properties. Grantee shall strictly enforce all such restrictions and covenants against its Successors in Interest and Assigns and all subsequent owners of the Properties.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter Site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter Site.

b. ARCO and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter Site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy based upon the remedial alternatives evaluated in the remedial investigation/feasibility study conducted by Grantor at the OW/EADA

OU, the Proposed Plan, public comments received on the Proposed Plan, and in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue ARCO, Grantor, their affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; and (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, ARCO, their affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures."

E. RESTRICTIVE COVENANTS.

1. Purpose. The following Restrictive Covenants are made pursuant to and in accordance with the Conveyance Agreement.

2. Covenants Running With the Land. The following Restrictive Covenants shall burden the Property and are intended to

be and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the O&M Plan for the Property;

c. All use, construction and/or drilling of water wells on the property for potable water purposes shall be prohibited;

d. Residential development shall be prohibited on the Property;

e. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

f. The Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU under the OW/EADA Administrative Order as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the

Development Permit System, Environmental Laws and other Applicable Laws;

g. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited; and

h. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the Restrictive Covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator.

i. Grantee hereby agrees to provide Grantor, ARCO, its employees, agents, contractors, subcontractors, representatives and designees, and authorized representatives of EPA and the State, with a right of access to and use of any or all of the Property for purposes of implementing or causing to be implemented: (i) the OW/EADA Remedy, including any Operation and Maintenance Obligations pertaining to such Remedy; (ii) any Remedial Action directed, ordered, or otherwise required under any Environmental Laws or by any federal, state or local governmental entity or by any court; or (iii) any other actions Grantor or ARCO deem necessary or advisable to address Environmental Conditions on or related to the Property. Notwithstanding the foregoing, Grantor and ARCO shall use their best efforts to provide twenty-four (24) hours' notice prior to entering the Property for the purposes described in clause (iii) of the immediately preceding sentence. This right of access and use shall include, but shall not be limited to, the right to oversee all actions designed to accomplish the purposes of the OW/EADA Remedy or any other Remedial Action on the Property, the right to enter onto the Property to excavate and remove soils, monitor and sample (or to receive split samples of) environmental media and to conduct other information gathering activities such as field investigations, data collection, installation of

monitoring wells and soil borings, surface water and groundwater sampling, surveys, testing and periodic monitoring. Grantee hereby agree to release and covenant not to sue Grantor and ARCO for any claims, causes of action, liabilities or actual or consequential damages arising out of or relating to the non-negligent performance of any activities on the Properties within the scope of the right of access and use described herein. No grant, transfer, or conveyance of title, easement or other interest in the Property shall be made or affected without a provision allowing the access and use and containing the covenants not to sue and indemnities set forth herein, and all such conveyances of title, grants of easements or other grants, transfers or conveyances of any interest in any or all of the Properties shall contain a covenant providing for the use and access and the covenants and releases described herein. At least 90 days prior to any grant, transfer or conveyance of any interest in any or all of the Property, the owner of the Property shall notify ARCO by registered mail of the intent of the owner to grant, transfer or convey an interest in the property, and of provisions to be made to ensure the subsequent owner of the Property will provide the use and access described herein.

3. Benefitted Properties. The Restrictive Covenants shall be for the benefit of the properties described below, their current owners and their Successors in Interest and Assigns:

a. The adjacent real property described on Attachment 2 attached hereto which is presently owned by ARCO Environmental Remediation, L.L.C.; and

b. All other real properties which are adjacent to the Property.

c. All other real property located in Anaconda-Deer Lodge County, Montana.

4. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the Benefitted Properties by reason of the Restrictive Covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property on, or in the vicinity of, the Benefitted Properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

If Grantee transfers or conveys all or any part of its interest in the Property or any interest in the Property to a third party, then Grantee shall be required to include in its transfer or conveyance documents to such third party the foregoing Restrictive Covenants, releases and covenants not to sue. Grantee shall strictly enforce against such third party each and every Restrictive Covenant release and covenant not to sue with respect to the property which has been transferred to such third party. No grant, transfer, lease or conveyance of title, easement or other form of conveyance or transfer of any interest in all or any portion of the Property shall be made or effected without a provision restricting the use of the Property set forth herein and all such conveyances of title, grants, leases, transfers or conveyance of any interest in all or any of the Property shall contain the restriction set forth in this section except that each subsequent transferee's name shall be substituted in each subsequent document as the person or entity to be charged with compliance herewith.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each Restrictive Covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the Restrictive Covenants set forth in this Quit Claim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor shall be entitled to enforce the provisions of the Restrictive Covenants against Grantee pursuant to the terms and conditions of this Quit Claim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Property Owners in ADL. All owners of real property located in Anaconda-Deer Lodge County, Montana shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to such property owners in such proceedings.

3. Specific Performance/Waiver of Defenses. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to such property owners in any proceedings to enforce the Restrictive Covenants. Grantee hereby waives to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The Restrictive Covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by ARCO, ADL and the owner of the Parcel burdened by the Restrictive Covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. If EPA and the State do not object to such modifications in writing within twenty-one (21) days of delivery of such

notice, the modifications shall be deemed accepted by EPA and the State. Such written approval by ARCO, ADL and the parcel owner may be evidenced by execution of the instrument created to amend the Restrictive Covenants.

b. Recordation of Modification. In order to be effective, any modification of the Restrictive Covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Restrictive Covenants. For purposes of these provisions, a modification of the Restrictive Covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing Restrictive Covenants.

The parties have executed this Quit Claim Deed effective for all purposes as of the date first above written.

GRANTOR:

Anaconda-Deer Lodge County, whose address is 800 South Main, Anaconda, MT 59711

By: _____
Carl J. Stetzner, Chief Executive

GRANTEE:

Lost Creek Raceway Association Inc.

By: _____
John L. Lescantz, President

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 13th day of January, 1998 by Carl J. Stetzner, Chief Executive of Anaconda-Deer Lodge County.

Witness my hand and official seal.

My commission expires: 10-11-98

Carol K. Gillily
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 13th day of January, 1998 by John L. Lescantz, President, Lost Creek Raceway Association Inc.

Witness my hand and official seal.

My commission expires: January 10, 2002

Linda K. Bubash
Notary Public

ATTACHMENT 1

Legal Description of Property

That parcel described as Parcel F-2 according to the Amended Plat of Parcel F Minor Subdivision, Plat 286-A, Anaconda-Deer Lodge County Clerk and Recorder's Office, Anaconda-Deer Lodge County, Montana.

25×0

ATTACHMENT 2

Legal Description of Adjacent Property owned by ARCO Environmental Remediation LLC,

That portion of the North ½ Section 31, Township 5 North, Range 10 West, as described on Certificate of Survey No. 223-B, Anaconda-Deer Lodge County Clerk and Recorder's Office, Anaconda-Deer Lodge County, Montana.

STATE OF MONTANA) ss
County of Deer Lodge)

I, hereby certify that the within instrument was filed in my office on the 14TH day of JANUARY, 1998 at 12 minutes past 10 o'clock A .M., and is recorded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

PETER BOYCE County Recorder Barbara Vaughn Deputy Fee$ 0

153668

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MODIFICATION OF RESTRICTIVE COVENANTS AND RELATED DEED PROVISIONS

This Modification of Restrictive Covenants and Related Deed Provisions ("Modification Agreement") is executed this 25 day of April, 2002 by Atlantic Richfield Company, a Delaware corporation, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the constitutional laws of the State of Montana ("ADL")

Recitals

A. On or about May 5 1994, ARCO conveyed to ADL certain real property located in Anaconda-Deer Lodge County commonly referred to as the "Golf Course Parcel" pursuant to and in accordance with that certain Quitclaim Deed dated May 5, 1994 and recorded in the Anaconda-Deer Lodge County real property records in Book 96 at Page 198 on May 5, 1994 (the "Original Deed").

B. The Original Deed contains certain restrictive covenants (the "Restrictive Covenants") that limit the use of the Golf Course Parcel in the manner more particularly described in the Original Deed and certain provisions governing the transfer of the Golf Course Parcel or any interest therein.

C. Atlantic Richfield Company and ADL now desire to (i) modify the Restrictive Covenants with respect to a portion of the property (the "Hotel Site") to permit the use, construction, development, operation and disposition of a hotel on the Hotel Site, and (ii) modify the Original Deed provisions relating to transfers of the entire Golf Course Parcel.

D. In accordance with paragraph H of the Quitclaim Deed, the Restrictive Covenants may be modified if such modifications are approved in writing by Atlantic Richfield Company, ADL and the owner of the parcel burdened by the Restrictive Covenants. The present owner of the Hotel Site is ADL.

E. In addition to the approval of Atlantic Richfield Company and ADL, paragraph H of the Quitclaim Deed requires that written notice of the proposed modification be provided to the Environmental Protection Agency (the "EPA") and the State of Montana (the "State"). Atlantic Richfield Company and ADL have complied with such notice provisions. As confirmation thereof, Atlantic Richfield Company and ADL have obtained the written consent of the EPA and the State to this modification. Such consent is evidenced by the copy of the Consent to Modification of Covenants and Related Deed Provisions attached hereto as Attachment 1 (the "Consent").

F. The provisions of the Original Deed relating to transfer of the Golf Course Parcel may be modified by the parties to the Original Deed: Atlantic Richfield Company and ADL. However, the approval of the EPA and the State is required. Such approval also is evidenced by the Consent attached hereto as "Attachment 1."

Thu Jul 31 2014 15:01

NOW, THEREFORE, the parties hereby agree to modify the Restrictive Covenants and related transfer provisions of the Original Deed as provided below:

Modification of Deed

1. General. This Modification Agreement is for the purpose of modifying certain of the provisions of the Original Deed. To the extent that the provisions of this Modification Agreement conflict with the provisions of the Original Deed, the provisions of this Modification Agreement shall control. Capitalized terms used in this Modification Agreement shall have the meaning ascribed to them in the Original Deed, unless otherwise defined herein.

2. Hotel Site. The changes to the Restrictive Covenants set forth in this Modification Agreement are applicable only to the Hotel Site. The legal description of the Hotel Site is as follows:

Tract 1, Certificate of Survey No. 324-A,
Filed on October 9, 2001 at Reception No. 163470,
County of Anaconda-Deer Lodge, State of Montana.

The Restrictive Covenants with respect to the remainder of the Golf Course Parcel described in the Original Deed shall remain in full force and effect.

3. Modification of Covenants/Permitted Use. The Restrictive Covenants are hereby modified to permit the ownership, use, operation, development and disposition of a hotel and related facilities on the Hotel Site. For purposes of this provision, the term "hotel and related facilities" shall mean a resort hotel and related restaurant, banquet and meeting room facilities, landscaping, parking lot, and other facilities normally associated with the use or operation of hotel and conference facilities. Specifically, paragraph E.2.c. of the Original Deed (insofar as and only insofar as it relates to the Hotel Site) is hereby modified to provide as follows:

(i) Paragraph E.2.c. is modified to provide as follows:

c. The Property may only be used for resort hotel and related facilities, golf, park or other Open Space purposes;

(ii) Paragraph E.2.k. (limiting transfer of the Hotel Parcel to "Qualified Transferees") is hereby deleted in its entirety.

(iii) Paragraph E.2.p. in hereby modified to permit irrigation of the landscaping associated with the hotel and related facilities. Paragraph E.2.p. shall provide as follows:

p. Any and all irrigation of those portions of the Property other than the Golf Course (as shown on Attachment 3) and the Hotel Parcel shall be prohibited. Irrigation of the Golf Course only shall be permitted so long as such irrigation (i) is

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permitted by the OW/EADA Remedy, (ii) is in compliance with the O & M Plan, and (iii) does not exacerbate the existing Environmental Conditions on the Property. Irrigation of the Hotel Parcel only shall be permitted so long as such irrigation (y) is for the purpose of maintaining landscaping for the Hotel and related facilities, and (z) does not exacerbate the Environmental Conditions on the Hotel Parcel or the remainder of the Property.

4. Modification of Transfer Provisions. Paragraph F of the Original Deed is hereby deleted in its entirety. In its place shall be the following provisions (which relate to the entire Golf Course Parcel, including the Hotel Site):

F. TRANSFERS OF PROPERTY

1. Provisions of Subsequent Conveyance Instruments. Grantee hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation grant of an easement burdening the Property or grant of a lease of all or any part of the Property), the Grantee shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Deed and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the covenants set forth in that certain Quitclaim Deed dated and recorded on May 5, 1994 in Book 96, at Page 198 of the Anaconda-Deer Lodge County real property records, as amended by that certain Modification of Restrictive Covenants and Related Deed Provisions dated and recorded 5-2, 2002 in Book 149, at Page 01 of such records (the "Covenant Deed"), (ii) abide by an enforce the covenants as owner of the Property, and (iii) be bound by the release and covenant not to sue provisions of the Covenant Deed as if the Grantee hereunder were the grantee under the Covenant Deed.
>
> Grantee hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

Thu Jul 31 2014 15:02

2. Notice of Conveyance. At least forty-five (45) days prior to any grant, transfer or conveyance of any interest in all or any part of the Property, the owner of the Property intending to make the grant, transfer or conveyance shall notify Atlantic Richfield Company or its designee in writing by certified mail or personal delivery of such intent, and of provisions to be made to ensure the subsequent owner of the Property will abide by the Covenants and provide the releases and covenants not to sue in this Deed for Grantor's benefit. Any designation by Atlantic Richfield Company of a person or entity to receive notices under this Paragraph F.2. shall be in writing, shall refer to this provision and shall be recorded in the County real property records. Notice shall be provided to Atlantic Richfield Company at the following address: 307 E. Park Avenue, Suite 400, Anaconda, MT 59711 or such other address as Atlantic Richfield Company may provide to the owner of the Property from time to time.

3. Binding Effect. Notwithstanding the foregoing, any person or entity who acquires any right, title or interest in all or any part of the Property shall be conclusively deemed to have consented and agreed to the provisions of Paragraph F.2., whether or not any reference to this Deed or these provisions is contained in the deed or other conveyance instruments by which such person or entity acquires an interest in the Property.

5. Continued Validity of Other Provisions. Except as modified by this Modification Agreement, the provisions of the Original Deed (including without limitation the Restrictive Covenants) shall remain in full force and effect.

6. Effective Date. This Modification Agreement shall be effective as of the date recorded in the Anaconda-Deer Lodge County real property records.

7. Counterparts. This Modification Agreement may be executed in counterparts.

The parties have executed this Modification Agreement as of the date first written above.

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: _____
Duronda Smith, Land Manager

Thu Jul 31 2014 15:02

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the constitutional laws of the State of Montana

By: _____, as ~~Chairperson~~ of Anaconda-Deer Lodge ~~County Commission~~
Chief Executive

STATE OF TEXAS)
) ss.
COUNTY OF COLLIN)

The foregoing instrument was acknowledged before me this 12th day of February, 2002, Duronda Smith as Land Manager for Atlantic Richfield Company, a Delaware corporation.

Witness my hand and official seal.

My commission expires: 1/28/04

Kay W. Hill
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 19 day of Feb. 2002, ~~2001~~ by Peter J. Boyce, as ~~Chairperson~~ Chief Executive of Anaconda-Deer Lodge County ~~Commission~~ on behalf of Anaconda-Deer Lodge County, a consolidated governmental entity organized under the constitutional laws of the State of Montana.

Witness my hand and official seal.

My commission expires: 10-11-2002

Carol Gilluly
Notary Public

Thu Jul 31 2014 15:03

ATTACHMENT 1

(To Modification of Restrictive Covenants and Related Deed Provisions)

Consent to Modification of Covenants and Related Deed Provisions

See Attached Document

CONSENT TO MODIFICATION OF
COVENANTS AND RELATED DEED PROVISIONS

The United States Environmental Protection Agency and the State of Montana, acting by and through the Montana Department of Environmental Quality, hereby (i) acknowledge receipt of notice as required by the provisions of the Quit Claim Deed (Golf Course Parcel) dated May 5, 1994, (ii) consent to the modification of covenants set forth in the foregoing instrument, and (iii) approve the modifications of the related deed provisions set forth in the foregoing instrument.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Date: 2/7/02 By: Michael T. Risner
Michael T. Risner
Director, Legal Enforcement Program

Date: 02/11/02 By: Sharon L. Kercher
Sharon L. Kercher
Director, Technical Enforcement Program

STATE OF MONTANA,
Acting by and through the
Montana Department of Environmental Quality

Date: 2/14/02 By: Jan Sensibaugh
Jan Sensibaugh
Director, Montana Department of Environmental Quality

State of Montana }
County of Deer Lodge } SS

I hereby certify that the within instrument was filed for record in my office on the 2ND day of MAY A.D. 2002 at 8 min. past 11 o'clock A m. and recorded on page ____ of Book ____ of ____ Records of Deer Lodge County Montana, fee $ No FEE

MARIE HATCHER County Recorder
By Barbara J. Vaughn Deputy

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Thu Jul 31 2014 15:04

MODIFICATION OF COVENANTS

This Modification of Covenants ("Modification Agreement") is executed this 2nd day of May, 2003 by Atlantic Richfield Company, a Delaware corporation, and ARCO Environmental Remediation, L.L.C., a Delaware limited liability company ("AERL").

Recitals

A. CH-Twenty, Inc. conveyed to AERL certain real property (the "AERL Property") located in Anaconda-Deer Lodge County ("ADL") pursuant to and in accordance with that certain Assignment, Conveyance and Bill of Sale dated effective January 7, 1997 and recorded in the ADL real property records in Book 113 at Page 112 on June 27, 1997 (the "Original Deed").

B. The Original Deed contains certain covenants (the "Covenants") for the benefit of Atlantic Richfield Company and others that limit the use of the AERL Property in the manner more particularly described in the Original Deed.

C. Atlantic Richfield Company and AERL desire to modify the Covenants with respect to the property described on Certificate of Survey No. 347-B, Tract No. 1 to permit limited industrial and commercial use and/or development as provided herein. A copy of the Certificate of Survey No. 347-B is attached hereto as Exhibit A ("Property").

D. In accordance with paragraph F of the provisions of the Original Deed governing the Covenants (which are set forth in Exhibit C to the Original Deed), the Covenants may be modified with the consent of (i) Atlantic Richfield Company, (ii) the current owner of the benefited property, and (iii) the current owner of the parcel burdened by the Covenants. The present owner of the benefited property is AERL. The present owner of the burdened property is AERL.

NOW, THEREFORE, the parties hereby agree to modify the Covenants set forth in the Original Deed as provided below:

Modification of Covenants

1. General. This Modification Agreement is for the purpose of modifying certain of the provisions of the Original Deed which created covenants that are applicable to the AERL Property. To the extent that the provisions of this Modification Agreement conflict with the provisions of the Original Deed, the provisions of this Modification Agreement shall control. Capitalized terms used in this Modification Agreement shall have the meaning ascribed to them in the Original Deed, unless otherwise defined herein.

2. Survey Property. The changes to the Covenants set forth in this Modification Agreement are applicable only to the property described on Certificate of Survey No. 347-B, Tract No. 1. The Covenants with respect to the remainder of the AERL Property described in the Original Deed shall remain in full force and effect.

3. Modification of Covenants/Permitted Uses. Section A.1.(e) and (g) are deleted in their entirety. In their place shall be the following new covenants, (e), (g) and (h).

(e) the Property owner shall permit public access to the Property only for the purposes of (i) permitting, planning, development, construction, replacement, repair and maintenance of commercial or industrial facilities on the Property, (ii) providing ingress to, and egress from, commercial and industrial facilities located on the Property, (iii) permitting parking in designated parking for such facilities by employees, invitees and other patrons of any facilities located thereon, and (iv) other purposes necessary, useful or convenient for the conduct of any commercial or industrial uses of the Property. All other public access to the Property shall be prohibited.

(g) The Property owner shall not permit residential use or development on the Property.

(h) The Property owner shall not permit any commercial, industrial or other activities if otherwise permitted by the Restrictive Covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property, except for those commercial, industrial or other activities which would qualify as a Small Quantity Generator.

The existing Covenants in Section A.1.(a) through and including A.1.(d) and A.1.(f) shall remain in full force and affect.

4. Continued Validity of Other Provisions. Except as modified by this Modification Agreement, the provisions of the Original Deed (including without limitation the Covenants) shall remain in full force and effect.

5. Effective Date. This Modification Agreement shall be effective as of the date recorded in the Anaconda-Deer Lodge County real property records.

The parties have executed this Modification Agreement as of the date first written above.

ATLANTIC RICHFIELD COMPANY,
a Delaware corporation

By:_____
Sandra M. Stash
Vice President and General Manager

ARCO ENVIRONMENTAL REMEDIATION, L.L.C.,
a Delaware limited liability company

By:_____
Sandra M. Stash, Vice-President
Environmental Management

STATE OF MONTANA)
) ss.
COUNTY OF SILVER BOW)

The foregoing instrument was acknowledged before me this 2nd day of May, 2003 by Sandra M. Stash as Vice President and General Manager for Atlantic Richfield Company, a Delaware corporation.

Witness my hand and official seal.

My commission expires: Aug 8, 2005

ROBERT JORDAN NOTARIAL SEAL STATE OF MONTANA

Notary Public for the State of Montana

STATE OF MONTANA)
) ss.
COUNTY OF SIVLER BOW)

The foregoing instrument was acknowledged before me this 2nd day of May, 2003 by Sandra M. Stash, as Vice-President, Environmental Management of ARCO Environmental Remediation, L.L.C., a Delaware limited liability company.

Witness my hand and official seal.

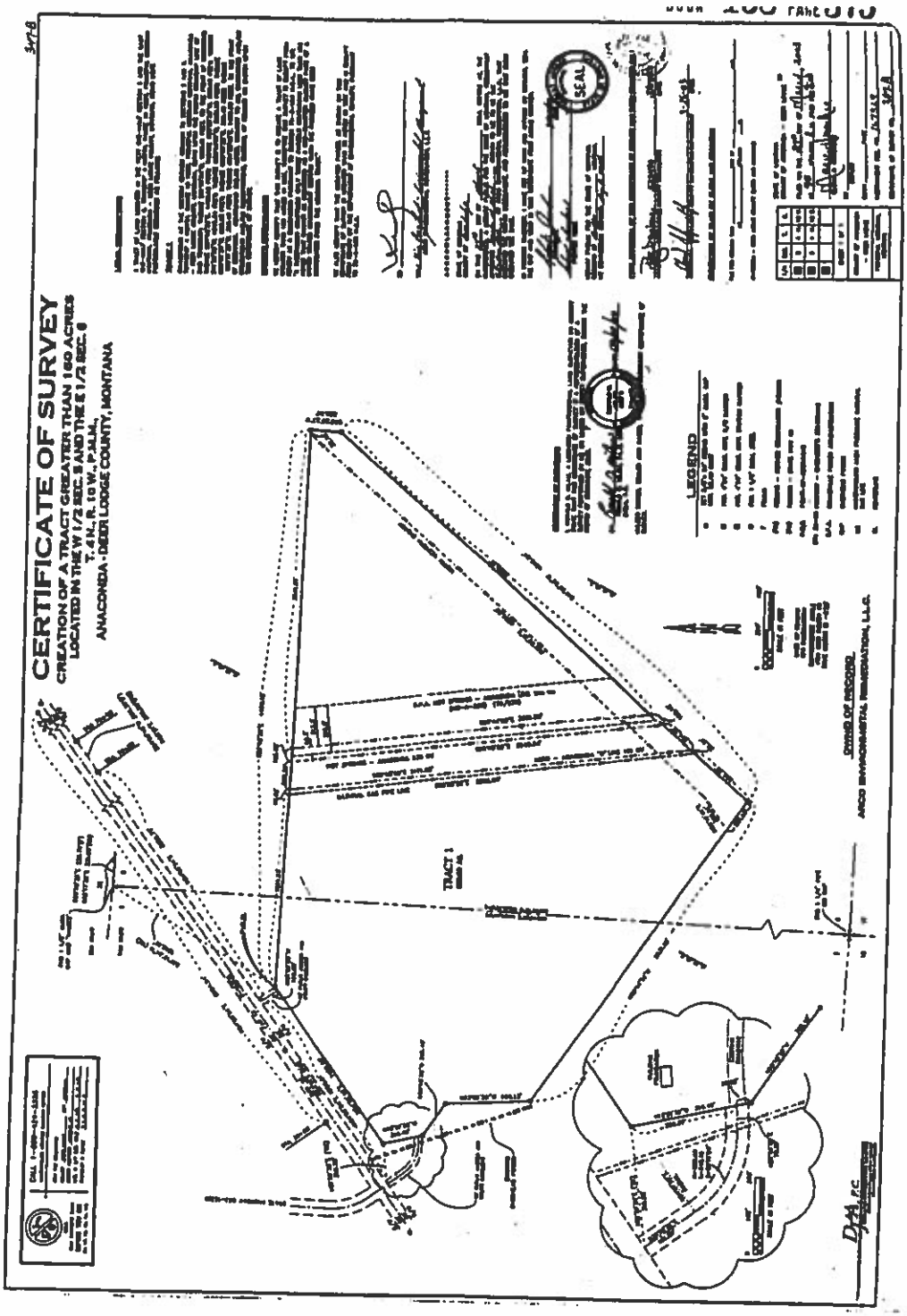
My commission expires: Aug. 8, 2005.

ROBERT JORDAN NOTARIAL SEAL STATE OF MONTANA

Notary Public for the State of Montana

EXHIBIT A
(to Modification of Covenants)

See Attached Map / Survey



STATE OF MONTANA)

County of Deer Lodge)

167491

I hereby certify that the within instrument was filed in my office on the 8TH day of MAY, 2003 at 43 minutes past 1 o'clock P. M., and is recorded on Page _____ of Book _____ of Records of Deer Lodge County, Montana.

MARIE HATCHER County Recorder Barbara Vaughn Deputy

Fees $ 36.00

173924

BOOK 178 PAGE 963

ATTACHMENT "D"

NOTICE OF RESPONSE ACTION ACTIVITIES AND COVENANTS

NOTICE IS HEREBY GIVEN:

The undersigned, Don Ueland and _____, are owners of that certain real property described as follows:

LEGAL DESCRIPTION:

Section 1, Township 4 North, Range 11 West
Lots 5B of the Arbiter Minor Subdivision
Plat No. 281-A

Geocode ID No. 30-1285-01-1-01-13-0000

Tax Parcel ID No. 525290

Section 1, Township 4 North, Range 11 West
Lot 5E of the Arbiter Minor Subdivision
Plat No. 281-A

Geocode ID No. 30-1285-01-1-01-12-0000

Tax Parcel ID No. 525280

Anaconda-Deer Lodge County, Montana

The undersigned have permitted the Atlantic Richfield Company or its designee to undertake and perform certain environmental response action activities on the real property which are more particularly described in Exhibit "1" hereto. In order to ensure that the response action is maintained, owner has agreed to perform and comply with the Property Management Plan set forth in Exhibit "3", and any other necessary response action for future development on the real property.

The undersigned have also imposed the covenants described in Exhibit "2" hereto on the real property as covenants running with the land and have agreed to attach such covenants to any deed or other instrument conveying any right, title or interest to all or any portion of the real property.

IN WITNESS WHEREOF, the parties have signed this Notice of Response Action Activities and Covenants this 8 day of August, 2005.

Uleland Ranches Inc.

Dan Uleland

STATE OF MONTANA)
)ss:
COUNTY OF Silver Bow)

On this 8th day of August, 2005 before me, a Notary Public for the State of Montana, personally appeared Dan Uleland and _____ known to me to be the persons that executed the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal the day and year in this certificate first above written.

Robert Jordan
Notary Public for the State of Montana
Residing at Butte, MT.
My Commission Expires: August 8, 2009

ROBERT JORDAN NOTARIAL SEAL STATE OF MONTANA

EXHIBIT "1"

RESPONSE ACTION WORK PLAN SUMMARY

Property Description:

Ueland Ranches Parcels (Lots 5B and 5E of the Arbiter Minor Subdivision; Plat No. 281-A) are located within the Arbiter Industrial Complex (AIC) approximately 1 mile east of Anaconda and is shown of Figure 1. The property encompasses a total of 2.6 acres and is currently used for industrial equipment repair and storage. A commercial/industrial building is located on the property and is serviced by overhead power, an underground gas line, AIC sanitary sewer system, and the Anaconda-Deer Lodge County (ADLC) potable water system. Sampling investigations have been performed on the site in order to characterize the presence and extent of waste materials. Ueland Ranches Parcels were identified as having arsenic concentrations over the commercial/industrial action level of 500 ppm arsenic under these investigations.

Remedial Action Summary:

The area that requires Remedial Action under the approved Ueland Ranches Parcels Individual Site Work Plan (ISWP) is shown Figure 1 and is located within the Old Works Waste Management Area (WMA). The Atlantic Richfield Company and EPA reviewed and evaluated several RA alternatives for the properties, which are described in the *Industrial Area Remedial Action Work Plan/Final Design Report Volume IV, Addendum D, Report I – Industrial Area* (Atlantic Richfield Company, August 2002). In order to meet the remedial action requirements, a six-inch Type B1 gravel cover will be placed over the existing subgrade of the entire Ueland Ranches Lots 5B and 5E parcels. The Type B1 gravel cover will consist of a one-inch minus road mix material and will be compacted to provide a durable working surface for the anticipated future land use. The six-inch gravel cover has been designed to provide a permanent commercial/industrial cover over the property and will: 1) prevent direct human contact with waste materials exceeding unacceptable arsenic concentrations; 2) minimize infiltration to underlying waste materials; and 3) provide a durable working surface for the anticipated land use. Grading will be completed to enhance the existing contours and to promote surface water drainage. Lot 5B grading will promote drainage across the lot in a southeasterly direction into a swale to be constructed along eastern lot boundary and ultimately conveyed into the Arbiter Ditch 1. Lot 5E grading will promote drainage across the Lots 5E and 5D in a northeasterly direction and ultimately conveyed into the Arbiter Ditch 1. Details on the storm water controls proposed for the AIC are provided in the in the *Industrial Area Remedial Action Work Plan/Final Design Report Volume IV, Addendum D, Report IV – Arbiter Industrial Complex* (Atlantic Richfield Company, October 2002). The Ueland Ranches Parcels are not within the 100-year flood plain of Warm Springs Creek; therefore, no potentially harmful effects from a flood event are anticipated.

Storm water flows should be adequately conveyed over the property into the storm water ditch system. Efforts will be made during the installation of the Type B1 gravel cover to maintain and enhance the existing storm water drainage pattern on the property. It should be noted that the

Type B1 gravel cover is intended to reduce infiltration and slightly more storm water may be experienced over the property during a given storm event. However, due to the relatively small size of the property, the increased flows caused by the Type B1 gravel cover are expected to be minimal.

EXHIBIT "2"

COVENANTS

A. CREATION OF COVENANTS. The following covenants (the "Covenants") shall burden the Property (described on Attachment "A" to the Landowner Agreement) and are intended to be and shall be construed as covenants of Property Owner and its successors in interest, assigns and transferees.

1. Covenants.

(a) Development of Property. Except as provided in Paragraph 1(f) below, the Property Owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates (i) the implementation, effectiveness, purposes, integrity, of any prior, current or future remedial action, response action or monitoring and maintenance activities (M&M) of the response action required under any applicable laws or by any federal, state or local governmental entity, or (ii) any other actions that the Environmental Protection Agency ("EPA"), the State of Montana ("State") or Atlantic Richfield Company ("Atlantic Richfield") deems necessary or advisable to address environmental conditions on or related to the Property;

(b) Applicable Laws. The Property shall be maintained and managed in accordance with and in a manner consistent with the requirements of the response action and any applicable judgments, federal, state or local laws, rules, regulations, orders, decrees, or other governmental enforcement actions relating to environmental conditions on the Property;

(c) Structures. The Property Owner shall maintain the integrity of any existing drainage control structures, shall ensure that the drainage control structures are free of debris or other material and shall not destroy the same. The Property Owner shall maintain all existing and future response action structures, including, but not limited to, vegetation cover, storm water management structures, or other similar structures, in good condition and repair so as to remain functional at all times

(d) Noxious Weeds. The Property Owner shall take such steps, as may be reasonably necessary to control noxious or other weeds on the Property in accordance with applicable laws and the Property Management Plan;

(e) Property Management Plan and Activities. The Property Owner shall comply with and implement the Property Management Plan requirements for the Property as provided in Exhibit "3" to the Notice of Response Action Activities and Covenants, or any part thereof. All property management activities and any associated costs or expenses resulting from construction or development on the Property by the Property Owner will be the sole responsibility of the Property Owner; and

(f) Residential Use or Development. The use or development of the Property for residential purposes is prohibited, unless the Property Owner complies with the provisions of Paragraph 1(g) below (relating to future development of the Property).

(g) Future Development. The Property owner shall be responsible for any additional response action, which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional response action which may be necessary to accommodate Future Development" shall mean any and all response action beyond that which Atlantic Richfield is required to implement at the Anaconda Smelter Site under any Administrative Order or Consent Decree in the absence of Future Development. Any such additional response action must be undertaken in accordance with and in a manner consistent with the requirements of the Anaconda-Deer Lodge Development Permit System ("DPS"), local, state and federal environmental laws, regulations and ordinances and other applicable local, state and federal laws, regulations and ordinances. After implementation of the DPS permit, Atlantic Richfield or its designee will coordinate with Property owner to assess the need for additional remediation based on the residual arsenic concentration levels.

(h) Water Well. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including with limitation EPA and the State)) shall be prohibited.

2. Access. The Property Owner shall grant access to the Property at all reasonable times to Atlantic Richfield, EPA, the State and their respective agents, employees, representatives and contractors for the purpose of (a) monitoring Property Owner's compliance with the Covenants set forth in paragraph 1 above, (b) conducting any investigation, monitoring, maintenance, sampling or other activities with respect to the Property, or (c) any response activities or remedial action that Atlantic Richfield, EPA or the State deems necessary or advisable with respect to the Property to address environmental conditions thereon. The Property Owner also may grant access to any other persons or entities for any of the foregoing purposes.

3. Release and Covenant Not to Sue. Owner, for itself and its successors, assigns and transferees, hereby fully and irrevocably releases and covenants not to sue Atlantic Richfield, and their respective subsidiaries, affiliates, officers, directors, agents representatives, contractors, insurers, employees, successors and assigns for any of the following:

(a) Any private cost recovery suit, contribution action, or any other action under environmental laws or the common law arising out of or related to: (i) any environmental conditions on, about, beneath, from or related to the Property; (ii) implementation of any response action, monitoring and maintenance obligations, and/or institutional controls required under the applicable Record of Decision(s) or other applicable government orders, or (iii) any requirements of the applicable regulatory or permitting authority, related to the environmental conditions on, about, beneath or related to the Property; and

(b) Any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to the following: (i) the use, operation, development or disposition of the Property, (ii) any errors, omissions or misstatements in any information provided or disclosed to Owner by Atlantic Richfield relating to the Property or any response action activities undertaken by Atlantic Richfield with respect to the Property, or (iii) the presence of hazardous materials on, at, under, near or associated with the Property.

Notwithstanding anything to the contrary in this Paragraph 3, the foregoing release and covenant not to sue shall not apply to claims arising from Atlantic Richfield's failure to comply with its obligations under the Landowner Agreement.

4. Notice of Transfer. At least thirty (30) days prior to the sale, transfer, exchange or other disposition of all or any part of the Property (a "Transfer"), the Property Owner shall notify Atlantic Richfield or its designee in writing of (i) the proposed date of transfer, (ii) the name and address of the transferee, (iii) the form of transfer (i.e., sale, exchange or other disposition), (iv) the legal description of Property, (v) the property tax parcel identification number, and (vi) the Geo-Code identification number.

B. BENEFITTED PROPERTIES - BENEFITS. . The benefits from the Covenants include: (i) the reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property, and (ii) the maintenance and use of the Property in a manner to allow economic benefits to accrue to adjacent property owners and other property owners in Anaconda-Deer Lodge County, while protecting human health and the environment.

C. ENFORCEMENT RIGHTS - COVENANTS.

1. General . The Property Owner hereby agrees that each Covenant set forth above is intended to and shall be a Covenant running with the land, binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all successors in interest, assigns and transferees of Owner.

2. Enforcement of Covenants. Atlantic Richfield, EPA and MDEQ shall have the right, but not the obligation, to enforce the Covenants. Each Covenant shall be enforceable, in perpetuity, to the fullest extent permitted by Montana Law.

3. Enforcement of Obligations. The obligations set forth in the Property Management Plan may be enforced by Atlantic Richfield, EPA, MDEQ or its designee.

4. Specific Performance. The Property Owner hereby specifically agrees that in addition to all other remedies available under this Agreement, at law or in equity, the remedy of "specific performance" shall be available to any party entitled to enforce the Covenants and the Property Management Obligations. The Property Owner hereby waives, to the fullest extent permitted by Montana law, any rights it may have to argue that specific performance is an inappropriate remedy.

D. CONVEYANCE/SUBSEQUENT OWNERS

1. Transfer of Property. Any person or entity who acquires any right, title or interest in any portion of the Property shall be conclusively deemed to have consented and agreed to every Covenant contained herein and agreed to perform monitoring and maintenance on the property and comply with the Property Management Plan, whether or not any reference to the Landowner Agreement, these Covenants or the Property Management Plan is contained in the instruments by which such person or entity acquires an interest in the Property.

2. Provisions of Subsequent Conveyance Instruments. Owner hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation grant of an easement burdening the Property or grant of a lease of all or any part of the Property), the Owner shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to the Notice of Response Actions, Activities and Covenants and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the covenants set forth in that certain _____ Deed dated _____, and recorded on _____ in Book _____, at Page ____ of the Anaconda-Deer Lodge County real property records (the "Covenant Deed"), (ii) abide by and enforce the covenants as owner of the Property, and (iii) be bound by the release, covenant not to sue provisions of the Covenant Deed as if the Grantee hereunder were the grantee under the Covenant Deed.
>
> Owner hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute the deed or conveyance instrument which contains the agreement set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

E. MODIFICATION OF COVENANTS. The Covenants may be modified as follows:

1. Required Approvals. Any proposed modifications must be approved in writing executed by: (i) Atlantic Richfield or its designee, and (ii) the owner of the parcel burdened by the Covenant to be modified. Such written approval may be evidenced by execution of a written instrument created to amend the Covenants.

2. Recordation of Modification. In order to be effective, any modification of the Covenants must be (a) in writing, (b) executed by each of the persons or entities described in paragraph E(1) above, with each signature duly notarized (to the extent required by Montana law), and (c) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification, which complies with the foregoing requirements, shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the

original Covenants. For purposes of these provisions, a modification of the Covenants may include (i) the imposition of new covenants, or (ii) the termination of all or part of the existing Covenants.

F. THIRD PARTY BENEFICIARIES – EPA and MDEQ shall be third party beneficiaries of these Covenants to the extent provided in the Covenants.

EXHIBIT "3"

PROPERTY MANAGEMENT PLAN

Property Management:

Upon completion of Remedial Action construction activities it is the responsibility of landowner and any subsequent landowners to ensure that maintenance activities are implemented in accordance with approved plans. The Landowner will be responsible for maintaining the Type B1 cover in good condition, in accordance with the approved maintenance plan, so as to minimize erosion or degradation of the cover.

The Type B1 gravel cover must be inspected semi annually and any damage or noticeable thin areas repaired by the landowner. Covered areas disturbed by excavation to install utilities, etc. must have a minimum of 6 inches of compacted gravel. The Type B1 material was processed for the Old Works Industrial Area remedial action. The material is designed to bind in a tight matrix to minimize infiltration. This material is different than standard road mix or base coarse material, which is designed to allow water to drain through the material. To help facilitate future cap maintenance of the Arbiter parcels, 1,500 cubic yards of gravel material will be available to the landowner and stockpiled at a central AIC location following construction. The Atlantic Richfield Company is responsible for providing additional material in the future, if necessary. This material will be used by the landowners to repair damages to the Type B1 cover where: 1) the cover wears to a depth less than six inches; 2) the cover has become loose or unsealed on the surface; or 3) depressions have developed in the cover creating areas of ponded water. Any thin patches made in the Type B1 cover should be sufficiently compacted under normal vehicle traffic. Waste material encountered during maintenance activities will be disposed of by the landowner and/or developer in the ADLC Waste Repository (B2.12 Sub-Cell/Opportunity Ponds).

Property Development:

Future development of the property must comply with the *Anaconda-Deer Lodge County Development Permit System* (ADLC, September 1992) and any amendments thereof and other applicable federal, state, and local laws. It is the responsibility of the landowner/developer and/or subsequent landowners, as well as ADLC, in implementing and enforcing the *Anaconda-Deer Lodge County Development Permit System* (ADLC, September 1992). The developer/landowner of WMA properties is or shall be required to: (a) maintain or develop the property consistent with the approved land use, (b) develop the property in a protective manner, (c) maintain the property and structures intended for development, and (d) not interfere with Superfund structures associated with the remedy and associated maintenance. Some of these properties have the potential for redevelopment, which development will be required to be consistent with certain restrictions, such as that the cover remain protective (or wastes removed) for the new land use. The developer/landowner, prior to development, must apply for a building permit in accordance with the *Anaconda-Deer Lodge County Development Permit System* (ADLC, September 1992) any other required permits and allow for property inspection by the ADLC building inspector. EPA approved landowner agreements or private party agreements with the developer/landowner will be used to implement final remediation, restrictive covenants, access, and maintenance of

the remedy development. This will ensure that the development occurs in a manner that is protective of human health and the environment. The Remedial Action has been designed to meet objectives for industrial or commercial land use; therefore, the land use is expected to continue as such. Anaconda-Deer Lodge County has implemented the *Anaconda-Deer Lodge County Development Permit System* (ADLC, September 1992) that sets forth certain requirements for the development of property throughout the County and multiple development districts including the Superfund Planning Area Overlay District (SPAOD). The Ueland Ranches Parcels are within the SPAOD and should the current use of the property change from industrial or future development occur, the landowner is responsible for complying with the provisions of any local, state, or federal requirements. This includes the requirement to sample, properly handle, and address any soils that exceed certain levels. Waste material encountered during any future construction will be disposed of by the landowner and/or developer in the ADLC Waste Repository (B2.12 Sub-Cell/Opportunity Ponds).

State of Montana,
County of Deer Lodge } SS
I hereby certify that the within instrument was filed for record in my office on the 6th day of September A.D. 2005 at 50 min. past 3 o'clock p. m. and recorded on page of Book of Records of Deer Lodge County Montana Fee $ 121.00
MARIE HATCHER County Recorder
By Susan A Mannix Deputy

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ATTACHMENT "D"

NOTICE OF RESPONSE ACTION ACTIVITIES AND COVENANTS

NOTICE IS HEREBY GIVEN:

The undersigned David Berk and _____, are owners of that certain real property described as follows:

LEGAL DESCRIPTION:

Section 1, Township 4 North, Range 11 West
Lots 3C of the Arbiter Minor Subdivision, Plat No. 281-A, and
Certificate of Survey No. 295-B

Geocode ID No. 30-1285-01-1-01-04-0000

Tax Parcel ID No. 525140

Anaconda-Deer Lodge County, Montana

The undersigned have permitted the Atlantic Richfield Company or its designee to undertake and perform certain environmental response action activities on the real property which are more particularly described in Exhibit "1" hereto. In order to ensure that the response action is maintained, owner has agreed to perform and comply with the Property Management Plan set forth in Exhibit "3", and any other necessary response action for future development on the real property.

The undersigned have also imposed the covenants described in Exhibit "2" hereto on the real property as covenants running with the land and have agreed to attach such covenants to any deed or other instrument conveying any right, title, or interest to all or any portion of the real property.

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IN WITNESS WHEREOF, the parties have signed this Notice of Response Action Activities and Covenants this 4 day of Oct, 2006

STATE OF MONTANA)
COUNTY OF Deer Lodge) ss:

On this 4th day of Oct, 2006 before me, a Notary Public for the State of Montana, personally appeared Dale R. Beck and _____ known to me to be the persons that executed the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal the day and year in this certificate first above written.

Janice Hiquet
Notary Public for the State of Montana
Residing at Anaconda
My Commission Expires: 5/1/2008

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EXHIBIT "I"

RESPONSE ACTION WORK PLAN SUMMARY

Property Description:

Beck Parcel (Lots 3C of the Arbiter Minor Subdivision Plat No. 281-A) is located within the Arbiter Industrial Complex (AIC) approximately 1 mile east of Anaconda and is shown of Figure 1. The property encompasses a total of 1.9 acres and is currently used for industrial equipment storage. A commercial/industrial building is located on the property and is serviced by underground utilities. Sampling investigations have been performed on the site in order to characterize the presence and extent of waste materials. Beck Parcel was identified as having arsenic concentrations over the commercial/industrial action level of 500 ppm arsenic under these investigations.

Remedial Action Summary:

The area that requires Remedial Action under the approved Beck Parcel Individual Site Work Plan (ISWP) is shown Figure 1 and is located within the Old Works Waste Management Area (WMA). The Atlantic Richfield Company and EPA reviewed and evaluated several RA alternatives for the properties, which are described in the *Industrial Area Remedial Action Work Plan/Final Design Report Volume IV, Addendum D, Report I – Industrial Area* (Atlantic Richfield Company, August 2002). In order to meet the remedial action requirements, a six-inch Type B1 gravel cover will be placed over the existing subgrade of the entire Beck Parcel. The Type B1 gravel cover will consist of a one-inch minus road mix material and will be compacted to provide a durable working surface for the anticipated future land use. The six-inch gravel cover has been designed to provide a permanent commercial/industrial cover over the property and will: 1) prevent direct human contact with waste materials exceeding unacceptable arsenic concentrations; 2) minimize infiltration to underlying waste materials; and 3) provide a durable working surface for the anticipated land use. Grading will be completed to enhance the existing contours and to promote surface water drainage. Grading will be completed to enhance the existing contours and to promote surface water drainage. The Beck Parcel grading will promote drainage across the lot in a southwesterly direction into a swale to be constructed along the southwestern lot boundary and ultimately conveyed into the AIC Ditch 8 (see Figure 2). The AIC Ditch 8 will be located along the west lot boundary and extend south of the Beck Parcel. Details on the storm water controls proposed for the AIC are provided in the in the *Industrial Area Remedial Action Work Plan/Final Design Report Volume IV, Addendum D, Report IV – Arbiter Industrial Complex* (Atlantic Richfield Company, October 2002). The Beck Parcel is not within the 100-year flood plain of Warm Springs Creek; therefore, no potentially harmful effects from a flood event are anticipated.

Storm water flows should be adequately conveyed over the property into the storm water ditch system. Efforts will be made during the installation of the Type B1 gravel cover to maintain and enhance the existing storm water drainage pattern on the property. It should be noted that the Type B1 gravel cover is intended to reduce infiltration and slightly more storm water may be

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experienced over the property during a given storm event. However, due to the relatively small size of the property, the increased flows caused by the Type B L gravel cover are expected to be minimal.

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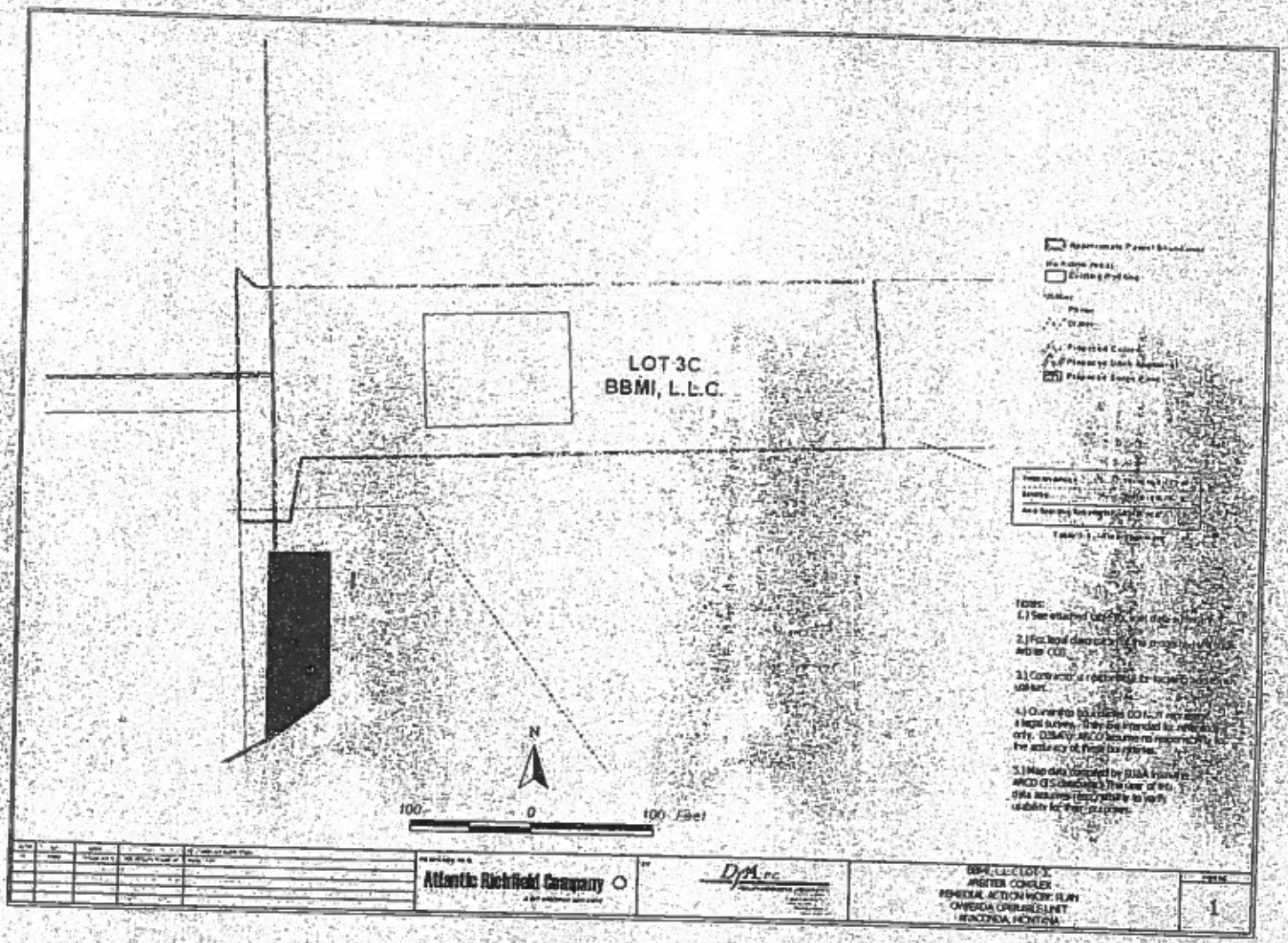

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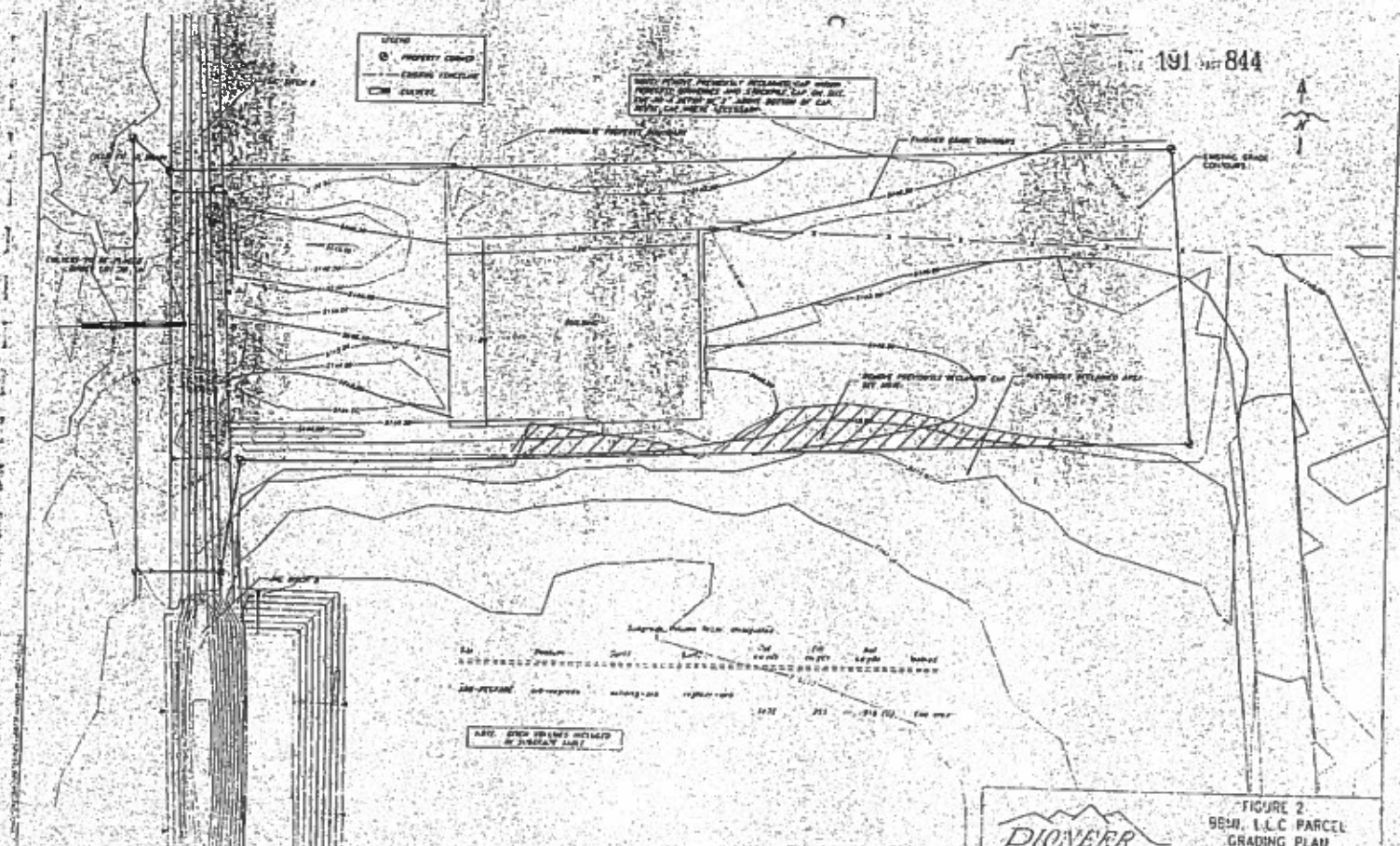

FIGURE 2
SBUR, L.L.C PARCEL
GRADING PLAN

EXHIBIT "2"

COVENANTS

A. CREATION OF COVENANTS. The following covenants (the "Covenants") shall burden the Property (described on Attachment "A" to the Landowner Agreement) and are intended to be and shall be construed as covenants of Property Owner and its successors in interest, assigns and transferees.

1. Covenants.

(a) Development of Property. Except as provided in Paragraph 1(f) below, the Property Owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates (i) the implementation, effectiveness, purposes, integrity, of any prior, current or future remedial action, response action or monitoring and maintenance activities (M&M) of the response action required under any applicable laws or by any federal, state or local governmental entity, or (ii) any other actions that the Environmental Protection Agency ("EPA"), the State of Montana ("State") or Atlantic Richfield Company ("Atlantic Richfield") deems "necessary" or "advisable" to address environmental conditions on or related to the Property.

(b) Applicable Laws. The Property shall be maintained and managed in accordance with and in a manner consistent with the requirements of the response action and any applicable judgments, federal, state or local laws, rules, regulations, orders, decrees, or other governmental enforcement actions relating to environmental conditions on the Property;

(c) Structures. The Property Owner shall maintain the integrity of any existing drainage control structures, shall ensure that the drainage control structures are free of debris or other material and shall not destroy the same. The Property Owner shall maintain all existing and future response action structures, including, but not limited to, vegetation cover, storm water management structures, or other similar structures, in good condition and repair so as to remain functional at all times.

(d) Noxious Weeds. The Property Owner shall take such steps, as may be reasonably necessary to control noxious or other weeds on the Property in accordance with applicable laws and the Property Management Plan.

(e) Property Management Plan and Activities. The Property Owner shall comply with and implement the Property Management Plan requirements for the Property as provided in Exhibit "3" to the Notice of Response Action Activities and Covenants, or any part thereof. All property management activities and any associated costs or expenses resulting from construction or development on the Property by the Property Owner will be the sole responsibility of the Property Owner; and

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(f) Residential Use or Development. The use or development of the Property for residential purposes is prohibited, unless the Property Owner complies with the provisions of Paragraph 1(g) below (relating to future development of the Property).

(g) Future Development. The Property owner shall be responsible for any additional response action, which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional response action which may be necessary to accommodate Future Development" shall mean any and all response action beyond that which Atlantic Richfield is required to implement at the Anaconda Smelter Site under any Administrative Order or Consent Decree in the absence of Future Development. Any such additional response action must be undertaken in accordance with and in a manner consistent with the requirements of the Anaconda-Deer Lodge Development Permit System ("DPS"), local, state and federal environmental laws, regulations and ordinances and other applicable local, state and federal laws, regulations and ordinances. After implementation of the DPS permit, Atlantic Richfield or its designee will coordinate with Property owner to assess the need for additional remediation based on the residual arsenic concentration levels.

(h) Water Well. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including with limitation EPA and the State)) shall be prohibited.

2. Access. The Property Owner shall grant access to the Property at all reasonable times to Atlantic Richfield, EPA, the State and their respective agents, employees, representatives and contractors for the purpose of (a) monitoring Property Owner's compliance with the Covenants set forth in paragraph 1 above, (b) conducting any investigation, monitoring, maintenance, sampling or other activities with respect to the Property, or (c) any response activities or remedial action that Atlantic Richfield, EPA or the State deems necessary or advisable with respect to the Property to address environmental conditions thereon. The Property Owner also may grant access to any other persons or entities for any of the foregoing purposes.

3. Release and Covenant Not to Sue. Owner, for itself and its successors, assigns and transferees, hereby fully and irrevocably releases and covenants not to sue Atlantic Richfield, and their respective subsidiaries, affiliates, officers, directors, agents representatives, contractors, insurers, employees, successors and assigns for any of the following:

(a) Any private cost recovery suit, contribution action, or any other action under environmental laws or the common law arising out of or related to: (i) any environmental conditions on, about, beneath, from or related to the Property; (ii) implementation of any response action, monitoring and maintenance obligations, and/or institutional controls required under the applicable Record of Decision(s) or other applicable government orders, or (iii) any requirements of the applicable regulatory or permitting authority, related to the environmental conditions on, about, beneath or related to the Property; and

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(b) Any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to the following: (i) the use, operation, development or disposition of the Property, (ii) any errors, omissions or misstatements in any information provided or disclosed to Owner by Atlantic Richfield relating to the Property or any response action activities undertaken by Atlantic Richfield with respect to the Property, or (iii) the presence of hazardous materials on, at, under, near or associated with the Property.

Notwithstanding anything to the contrary in this Paragraph 3, the foregoing release and covenant not to sue shall not apply to claims arising from Atlantic Richfield's failure to comply with its obligations under the Landowner Agreement.

4. Notice of Transfer. At least thirty (30) days prior to the sale, transfer, exchange or other disposition of all or any part of the Property (a "Transfer"), the Property Owner shall notify Atlantic Richfield or its designee in writing of (i) the proposed date of transfer, (ii) the name and address of the transferee, (iii) the form of transfer (i.e., sale, exchange or other disposition), (iv) the legal description of Property, (v) the property tax parcel identification number, and (vi) the Geo-Code identification number.

B. BENEFITTED PROPERTIES - BENEFITS. The benefits from the Covenants include: (i) the reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property, and (ii) the maintenance and use of the Property in a manner to allow economic benefits to accrue to adjacent property owners and other property owners in Anaconda-Deer Lodge County, while protecting human health and the environment.

C. ENFORCEMENT RIGHTS - COVENANTS.

1. General. The Property Owner hereby agrees that each Covenant set forth above is intended to and shall be a Covenant running with the land, binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all successors in interest, assigns and transferees of Owner.

2. Enforcement of Covenants. Atlantic Richfield, EPA and MDEQ shall have the right, but not the obligation, to enforce the Covenants. Each Covenant shall be enforceable, in perpetuity, to the fullest extent permitted by Montana Law.

3. Enforcement of Obligations. The obligations set forth in the Property Management Plan may be enforced by Atlantic Richfield, EPA, MDEQ or its designee.

4. Specific Performance. The Property Owner hereby specifically agrees that in addition to all other remedies available under this Agreement, at law or in equity, the remedy of "specific performance" shall be available to any party entitled to enforce the Covenants and the Property Management Obligations. The Property Owner hereby waives, to the fullest extent permitted by Montana law, any rights it may have to argue that specific performance is an inappropriate remedy.

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D. CONVEYANCE/SUBSEQUENT OWNERS.

1. Transfer of Property. Any person or entity who acquires any right, title or interest in any portion of the Property shall be conclusively deemed to have consented and agreed to every Covenant contained herein and agreed to perform monitoring and maintenance on the property and comply with the Property Management Plan, whether or not any reference to the Landowner Agreement, these Covenants or the Property Management Plan is contained in the instruments by which such person or entity acquires an interest in the Property.

2. Provisions of Subsequent Conveyance Instruments. Owner hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation grant of an easement burdening the Property or grant of a lease of all or any part of the Property), the Owner shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to the Notice, of Response Actions, Activities and Covenants and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to (i) accept the Property subject to the covenants set forth in that certain _____ Deed dated _____, and recorded on _____ in Book _____ at Page _____ of the Anaconda-Deer Lodge County real property records (the "Covenant Deed"), (ii) abide by and enforce the covenants as owner of the Property, and (iii) be bound by the release, covenant not to sue provisions of the Covenant Deed as if the Grantee hereunder were the grantee under the Covenant Deed.
>
> Owner hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute the deed or conveyance instrument which contains the agreement set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

E. MODIFICATION OF COVENANTS. The Covenants may be modified as follows:

1. Required Approvals. Any proposed modifications must be approved in writing executed by: (i) Atlantic Richfield or its designee, and (ii) the owner of the parcel burdened by the Covenant to be modified. Such written approval may be evidenced by execution of a written instrument created to amend the Covenants.

2. Recordation of Modification. In order to be effective, any modification of the Covenants must be (a) in writing, (b) executed by each of the persons or entities described in paragraph E(1) above, with each signature duly notarized (to the extent required by Montana law), and (c) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification, which complies with the foregoing requirements, shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the

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original Covenants. For purposes of these provisions, a modification of the Covenants may include (i) the imposition of new covenants, or (ii) the termination of all or part of the existing Covenants.

F. THIRD PARTY BENEFICIARIES - EPA and MDEQ shall be third-party beneficiaries of these Covenants to the extent provided in the Covenants.

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EXHIBIT "3"

PROPERTY MANAGEMENT PLAN

Property Management:

Upon completion of RA construction activities by Atlantic Richfield and its contractors, it is the responsibility of Atlantic Richfield to ensure that maintenance activities are implemented in accordance with approved plans. Through a Landowner Agreement between Atlantic Richfield and the Landowner, the Landowner will be responsible for maintaining the Type B1 cover in good condition, in accordance with the approved maintenance plan, so as to minimize erosion or degradation of the cover. Monitoring and maintenance of the gravel surface, ditches and culverts contained within Beck Parcel are the responsibility of the landowner. Monitoring and maintenance of the AIC detention basin and discharge pipe will be the responsibility of Atlantic Richfield.

The Type B1 gravel cover must be inspected semi-annually and any damage or noticeable thin areas repaired by the landowner. Covered areas disturbed by excavation to install utilities, etc. must have a minimum of 6 inches of compacted gravel. Atlantic Richfield is responsible for providing materials for maintenance. The Type B1 material was processed for the Old Works IA RA. The material is designed to bind in a tight matrix to minimize infiltration. This material is different than standard road mix or base course material, which is designed to allow water to drain through the material. To help facilitate future cap maintenance, 1,500 cy of gravel material will be available to the landowner and stockpiled on Lot 3A of the Arbiter Minor Subdivision, Plat No. 281-A. This amount of material makes up 5% of the total Type B1 gravel cover volume for all Arbiter parcels and has been considered to be an adequate amount for general maintenance purposes. Atlantic Richfield is responsible for providing additional material in the future, if necessary. This material will be used by the landowners to repair damages to the Type B1 gravel cover where: 1) the cover wears to a depth less than six inches; 2) the cover has become loose or unsealed on the surface; or 3) depressions have developed in the cover creating areas of ponded water. Any thin patches made in the Type B1 gravel cover should be sufficiently compacted to withstand normal vehicle traffic. Waste material encountered during future construction or maintenance will be disposed of by the landowner and/or developer in the ADLC Waste Repository (B2.12 Subcell/Opportunity Ponds).

Property Development:

Future development of the property must comply with the *Anaconda/Deer Lodge County* (ADLC) *Development Permit System* (DPS) (ADLC, 1992) and other applicable federal, state, and local laws and is the responsibility of the landowner/developer and/or subsequent landowners, as well as ADLC, in implementing and enforcing the *Anaconda/Deer Lodge County* (ADLC) *Development Permit System* (DPS) (ADLC, 1992). The developer/landowner of WMA properties is or will be required to: (a) maintain or develop the property consistent with the approved land use; (b) develop the property in a protective manner; (c) maintain the property and structures intended for development; and (d) not interfere with Superfund structures associated with the remedy and associated maintenance. Some of these properties have the potential for redevelopment, future developments will be required to be consistent with certain restrictions,

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such as that the cover remain protective (or wastes removed) for the new land use. The developer/landowner, prior to development, must apply for a building permit in accordance with the *Anaconda-Deer Lodge County (ADLC) Development Permit System* (DPS) (ADLC 1992) and allow for property inspection by the ADLC building inspector. The EPA-approved landowner agreements or private party agreements with the developer/landowner will be used to implement final remediation, restrictive covenants, access, and maintenance of the remedy development. This will ensure that the development occurs in a manner that is protective of human health and the environment. The RA has been designed to meet objectives for industrial or commercial land use; therefore, the land use is expected to continue as such. Anaconda-Deer Lodge County has implemented the *Anaconda-Deer Lodge County (ADLC) Development Permit System* (DPS) (ADLC 1992) that sets forth certain requirements for the development of property throughout the County and multiple development districts including the Superfund Planning Area Overlay District (SPAOD). The Beck Parcel is within the SPAOD and should the current use of the property change from industrial or future development occur, the landowner is responsible for complying with the provisions of any local, state, or federal requirements. This includes the requirement to sample, properly handle, and address any soils that exceed certain levels. Waste materials encountered during any future construction will be disposed of by the landowner and/or developer in the ADLC Waste Repository (B2.12 Subcell/Opportunity Ponds).

State of Montana,
County of Deer Lodge } SS

I hereby certify that the within instrument was filed for record in my office on the 17th day of October A.D. 2006 at 45 min. past 3 o'clock p m and recorded on page 839-851 of Book 191 of Records of Deer Lodge County Montana, fee $ 91.00.

MARY TATOM County Recorder
By Deborah R. Dokter Deputy

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ATTACHMENT "D"

NOTICE OF RESPONSE ACTION ACTIVITIES AND COVENANTS

NOTICE IS HEREBY GIVEN:

The undersigned, James W Yeomen for Anaconda Local Development Corporation and _____, are owners of that certain real property described as follows:

LEGAL DESCRIPTION:

Section 1, Township 4 North, Range 11 West
Lots 3D, 4A, 4C, 4E, 4F, 5C, and 5D of the Arbiter Minor Subdivision
Plat No. 281-A, and Certificate of Survey No. 295-A)

Geocode ID No. 30-1285-01-1-01-09-0000
30-1285-01-1-01-10-0000
30-1285-01-1-01-11-0000
30-1285-01-1-01-15-0000
30-1285-01-1-01-16-0000
30-1285-01-1-01-17-0000
30-1285-01-1-01-19-0000

Tax Parcel ID No. 525160
525170
525180
525270
525310
525320
525330

Anaconda-Deer Lodge County, Montana

The undersigned have permitted the Atlantic Richfield Company or its designee to undertake and perform certain environmental response action activities on the real property which are more particularly described in Exhibit "1" hereto. In order to ensure that the response action is maintained, owner has agreed to perform and comply with the Property Management Plan set forth in Exhibit "3", and any other necessary response action for future development on the real property.

The undersigned have also imposed the covenants described in Exhibit "2" hereto on the real property as covenants running with the land and have agreed to attach such covenants to any

deed or other instrument conveying any right, title or interest to all or any portion of the real property.

IN WITNESS WHEREOF, the parties have signed this Notice of Response Action Activities and Covenants this 20 day of April, 2007.

Its. ALDC

STATE OF MONTANA)
)ss:
COUNTY OF Deer Lodge)

On this 20 day of April, 2007 before me, a Notary Public for the State of Montana, personally appeared James W Jones and _____ known to me to be the persons that executed the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal the day and year in this certificate first above written.

Notary Public for the State of Montana
Residing at Anaconda Deer Lodge County
My Commission Expires: 10/28/2010

EXHIBIT "1"

RESPONSE ACTION WORK PLAN SUMMARY

The area that requires Remedial Action under the approved *Draft Old Works/East Anaconda Development Area Operable Unit Individual Site Work Plan (ISWP) Anaconda Local Development Corporation (ADLC) Arbiter Industrial Complex(AIC) Lots (Arbiter Minor Subdivision; Plat No. 281-A, and Certificate of Survey No. 295-A)* (Atlantic Richfield Company, _____) is shown on Figure 1 and is summarized as follows:

- Grading will be completed to enhance the existing contours and promote surface water drainage into the Arbiter Industrial Complex Storm Water System. The Arbiter Industrial Complex Storm Water System will be constructed to convey storm water into the Arbiter Industrial Complex Storm Water Basin and will consist of a network of drainage ditches and storm water piping (see Figure 1).

- A six-inch compacted gravel cover will be placed over the graded subgrade in the areas shown on Figure 1. The gravel cover material will consist of a one-inch minus road mix material meeting the following specifications:

Sieve Designation	Percent by Weight Passing
1-inch	100
3/4 inch	97-100
3/8 inch	50-85
#4	35-71
#10	25-50
#40	12-30
#200	8-16
Liquid Limit	35 Max.
Plastic Limit	4-12
LA Abrasion	< 50
#200	< (2/3) of #40

- A 18-inch vegetative cover will be placed over the graded subgrade in the areas shown on Figure 1. Vegetative cover soil material will meet the following specifications:

PARAMETERS	CRITERIA
Texture	(Cannot be sand, clay or loamy sand)
Rock Fragments	<45% by volume in the bank, 6-inch maximum rock diameter
Saturation Percentage	>25% and <85%
pH	>6.5 and <8.5 standard units
Electrical Conductivity	<4,000 umhos/cm with standard seed mix <6,000 umhos/cm for salt tolerant

Sodium Adsorption Ratio	<12 for root zone materials <20 for general fill
Total Elemental Concentration Arsenic Cadmium Copper Lead Zinc	 <100 mg/kg and approach 30 mg/kg <4 mg/kg <100 mg/kg <100 mg/kg <250 mg/kg

µmhos/cm = micromhos per centimeter
mg/kg = milligrams per kilogram

EXHIBIT "2"

COVENANTS

A. CREATION OF COVENANTS. The following covenants (the "Covenants") shall burden the Property (described on Attachment "A" to the Landowner Agreement) and are intended to be and shall be construed as covenants of Property Owner and its successors in interest, assigns and transferees.

1. Covenants.

(a) Development of Property. Except as provided in Paragraph 1(f) below, the Property Owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates (i) the implementation, effectiveness, purposes, integrity, of any prior, current or future remedial action, response action or monitoring and maintenance activities (M&M) of the response action required under any applicable laws or by any federal, state or local governmental entity, or (ii) any other actions that the Environmental Protection Agency ("EPA"), the State of Montana ("State") or Atlantic Richfield Company ("Atlantic Richfield") deems necessary or advisable to address environmental conditions on or related to the Property;

(b) Applicable Laws. The Property shall be maintained and managed in accordance with and in a manner consistent with the requirements of the response action and any applicable judgments, federal, state or local laws, rules, regulations, orders, decrees, or other governmental enforcement actions relating to environmental conditions on the Property;

(c) Structures. The Property Owner shall maintain the integrity of any existing drainage control structures, shall ensure that the drainage control structures are free of debris or other material and shall not destroy the same. The Property Owner shall maintain all existing and future response action structures, including, but not limited to, vegetation cover, storm water management structures, or other similar structures, in good condition and repair so as to remain functional at all times;

(d) Noxious Weeds. The Property Owner shall take such steps, as may be reasonably necessary to control noxious or other weeds on the Property in accordance with applicable laws and the Property Management Plan;

(e) Property Management Plan and Activities. The Property Owner shall comply with and implement the Property Management Plan requirements for the Property as provided in Exhibit "3" to the Notice of Response Action Activities and Covenants, or any part thereof. All property management activities and any associated costs or expenses resulting from construction or development on the Property by the Property Owner will be the sole responsibility of the Property Owner;

(f) Residential Use or Development. The use or development of the Property for residential purposes is prohibited, unless the Property Owner complies with the provisions of Paragraph 1(g) below (relating to future development of the Property);

(g) Future Development. The Property owner shall be responsible for any additional response action, which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional response action which may be necessary to accommodate Future Development" shall mean any and all response action beyond that which Atlantic Richfield is required to implement at the Anaconda Smelter Hill NPL Site under any Administrative Order or Consent Decree in the absence of Future Development. Any such additional response action must be undertaken in accordance with and in a manner consistent with the requirements of the Anaconda-Deer Lodge Development Permit System ("DPS"), local, state and federal environmental laws, regulations and ordinances and other applicable local, state and federal laws, regulations and ordinances. After implementation of the DPS permit, Atlantic Richfield or its designee will coordinate with Property owner to assess the need for additional remediation based on the residual arsenic concentration levels; and

(h) Water Well. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including with limitation EPA and the State)) shall be prohibited.

2. Access. The Property Owner shall grant access to the Property at all reasonable times to Atlantic Richfield, EPA, the State and their respective agents, employees, representatives and contractors for the purpose of (a) monitoring Property Owner's compliance with the Covenants set forth in paragraph 1 above, (b) conducting any investigation, monitoring, maintenance, sampling or other activities with respect to the Property, or (c) any response activities or remedial action that Atlantic Richfield, EPA or the State deems necessary or advisable with respect to the Property to address environmental conditions thereon. The Property Owner also may grant access to any other persons or entities for any of the foregoing purposes.

3. Release and Covenant Not to Sue. Owner, for itself and its successors, assigns and transferees, hereby fully and irrevocably releases and covenants not to sue Atlantic Richfield, and their respective subsidiaries, affiliates, officers, directors, agents representatives, contractors, insurers, employees, successors and assigns for any of the following:

(a) Any private cost recovery suit, contribution action, or any other action under environmental laws or the common law arising out of or related to: (i) any environmental conditions on, about, beneath, from or related to the Property; (ii) implementation of any response action, monitoring and maintenance obligations, and/or institutional controls required under the applicable Record of Decision(s) or other applicable government orders, or (iii) any requirements of the applicable regulatory or permitting authority, related to the environmental conditions on, about, beneath or related to the Property; and

(b) Any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to the following: (i) the use, operation, development or disposition of the Property, (ii) any errors, omissions or misstatements in any information provided or disclosed to Owner by Atlantic Richfield relating to the Property or any response action activities undertaken by Atlantic Richfield with respect to the Property, or (iii) the presence of hazardous materials on, at, under, near or associated with the Property.

Notwithstanding anything to the contrary in this Paragraph 3, the foregoing release and covenant not to sue shall not apply to claims arising from Atlantic Richfield's failure to comply with its obligations under the Landowner Agreement.

4. Notice of Transfer. At least thirty (30) days prior to the sale, transfer, exchange or other disposition of all or any part of the Property (a "Transfer"), the Property Owner shall notify Atlantic Richfield or its designee in writing of (i) the proposed date of transfer, (ii) the name and address of the transferee, (iii) the form of transfer (i.e., sale, exchange or other disposition), (iv) the legal description of Property, (v) the property tax parcel identification number, and (vi) the Geo-Code identification number.

B. BENEFITTED PROPERTIES - BENEFITS. . The benefits from the Covenants include: (i) the reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property, and (ii) the maintenance and use of the Property in a manner to allow economic benefits to accrue to adjacent property owners and other property owners in Anaconda-Deer Lodge County, while protecting human health and the environment.

C. ENFORCEMENT RIGHTS - COVENANTS.

1. General . The Property Owner hereby agrees that each Covenant set forth above is intended to and shall be a Covenant running with the land, binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all successors in interest, assigns and transferees of Owner.

2. Enforcement of Covenants. Atlantic Richfield, EPA and MDEQ shall have the right, but not the obligation, to enforce the Covenants. Each Covenant shall be enforceable, in perpetuity, to the fullest extent permitted by Montana Law.

3. Enforcement of Obligations. The obligations set forth in the Property Management Plan may be enforced by Atlantic Richfield, EPA, MDEQ or its designee.

4. Specific Performance. The Property Owner hereby specifically agrees that in addition to all other remedies available under this Agreement, at law or in equity, the remedy of "specific performance" shall be available to any party entitled to enforce the Covenants and the Property Management Obligations. The Property Owner hereby waives, to the fullest extent permitted by Montana law, any rights it may have to argue that specific performance is an inappropriate remedy.

D. CONVEYANCE/SUBSEQUENT OWNERS

1. Transfer of Property. Any person or entity who acquires any right, title or interest in any portion of the Property shall be conclusively deemed to have consented and agreed to every Covenant contained herein and agreed to perform monitoring and maintenance on the property and comply with the Property Management Plan, whether or not any reference to the Landowner Agreement, these Covenants or the Property Management Plan is contained in the instruments by which such person or entity acquires an interest in the Property.

2. Provisions of Subsequent Conveyance Instruments. Owner hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation grant of an easement burdening the Property or grant of a lease of all or any part of the Property), the Owner shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to the Notice of Response Actions, Activities and Covenants and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the covenants set forth in that certain _____ Deed dated _____, and recorded on _____ in Book _____, at Page ____ of the Anaconda-Deer Lodge County real property records (the "Covenant Deed"), (ii) abide by and enforce the covenants as owner of the Property, and (iii) be bound by the release, covenant not to sue provisions of the Covenant Deed as if the Grantee hereunder were the grantee under the Covenant Deed.
>
> Owner hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute the deed or conveyance instrument which contains the agreement set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

E. MODIFICATION OF COVENANTS. The Covenants may be modified as follows:

1. Required Approvals. Any proposed modifications must be approved in writing executed by: (i) Atlantic Richfield or its designee, and (ii) the owner of the parcel burdened by the Covenant to be modified. Such written approval may be evidenced by execution of a written instrument created to amend the Covenants.

2. Recordation of Modification. In order to be effective, any modification of the Covenants must be (a) in writing, (b) executed by each of the persons or entities described in paragraph E(1) above, with each signature duly notarized (to the extent required by Montana law), and (c) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification, which complies with the foregoing requirements, shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the

original Covenants. For purposes of these provisions, a modification of the Covenants may include (i) the imposition of new covenants, or (ii) the termination of all or part of the existing Covenants.

F. THIRD PARTY BENEFICIARIES – EPA and MDEQ shall be third party beneficiaries of these Covenants to the extent provided in the Covenants.

EXHIBIT "3"

PROPERTY MANAGEMENT PLAN

Property Management:

1.0 Introduction

Upon implementation of the remedy, Owner shall restrict land use to that which will not adversely impact or is inconsistent with the effectiveness, purpose or integrity of the remedy or monitoring and maintenance of the remedy by Atlantic Richfield. This Property Management Plan describes the actions and activities, which Landowner must undertake and perform in order to ensure the effectiveness, purposes and/or integrity of the response actions implemented on the Property. The affirmative obligations of Landowner to manage repair and/or replace the components of the response actions are set forth in Section 2.0 below.

2.0 Management, Repair and Replacement Obligations

2.1 Vegetative Covers

The Landowner will be responsible for management of the remedy upon completion of the remedial action activities. Landowner shall manage the vegetation components of the Response Action in good condition. Land management may include one or more of the following: (i) addition and/or application of fertilizer; (ii) addition and/or application of seed; (iii) weed control (iv) repair erosion areas, and (iv) land management Best Management Practices ("BMPs"). Immediately upon the implementation of the response action, Landowner shall restrict or limit land use, including but not limited to vehicle and human traffic.

2.2 Gravel Covers

The gravel material provided by Atlantic Richfield will be used by the landowner to repair damages to the gravel cover where: 1) the cover wears to a depth less than six inches; 2) the cover has become loose or unsealed on the surface; or 3) depressions have developed in the cover creating areas of ponded water. Any thin patches made in the gravel cover should be sufficiently compacted to withstand normal vehicle traffic. Gravel covered areas disturbed by excavation to install utilities, etc. must be restored to the original gravel cover specifications. Atlantic Richfield is responsible for providing the gravel materials for maintenance which will be stockpiled at a central location following implementation of the response action.

2.3 Storm Water Controls

Owner's obligations under this Section 2.3 shall include, without limitation, undertaking and performing all actions as may be deemed necessary and/or appropriate by the EPA and or the MDEQ to maintain the integrity of storm water components of the response actions resulting from landowner action or inaction. Landowner shall ensure that any storm water control structure such as drainage ditches, storm water piping, and drop inlets remain clear of debris and refuse. Landowner shall not destroy any storm water control structure.

2.4 Inspections

Inspections of the Engineered Covers and Arbiter Industrial Complex storm water controls will be conducted periodically by Atlantic Richfield, the EPA, the MDEQ and/or their designees to evaluate the condition of the Engineered Covers and the Arbiter Industrial Complex storm water controls.

2.5 Property Development

Future development of the property must comply with the *Anaconda-Deer Lodge County (ADLC) Development Permit System (DPS)* (ADLC, 1992) and other applicable federal, state, and local laws and is the responsibility of the landowner/developer and/or subsequent landowners. Anaconda-Deer Lodge County has implemented the *Anaconda-Deer Lodge County (ADLC) Development Permit System (DPS)* (ADLC, 1992) that sets forth certain requirements for the development of property throughout the County and multiple development districts including the Superfund Planning Area Overlay District (SPAOD). The Arbiter Industrial Complex Lots 3A, 3D, 4A, 4B, 4C, 4E, 4F, 5C, and 5D are within the SPAOD and should the current use of the property change from industrial or future development occur, the landowner is responsible for complying with the provisions of any local, state, or federal requirements. This includes the requirement to sample, properly handle, and address any soils that exceed certain levels. Waste materials encountered during any future construction will be disposed of by the landowner and/or developer in the Anaconda Smelter Development Repository (B2.12 Subcell/Opportunity Ponds).

State of Montana,
County of Deer Lodge } SS
I hereby certify that the within instrument was filed
for record in my office on the 27th
day of April A.D. 2007
at 45 min. past 10
o'clock A m. and recorded on page
624-634 of Book 197
of Records of Deer Lodge County
Montana, fee $ 97.00
MARIE HATCHER County Recorder
By Deborah R. Dering Deputy

STATE OF MONTANA)
County of Deer Lodge)

179134

I hereby certify that the within instrument was filed in my office on the 12th day of September, 2007 at 1:55 minutes past P o'clock ___. M., and is recorded on Page _____ of Book _____ of Records of Deer Lodge County, Montana.
Marie Hatcher County Recorder _____ Deputy
Fees $ 92.00

BOOK 202 PAGE 180

ATTACHMENT "D"

NOTICE OF RESPONSE ACTION ACTIVITIES AND COVENANTS

NOTICE IS HEREBY GIVEN:

The undersigned, Leonard and Iris Hoscheid, are owners of that certain real property described as follows:

LEGAL DESCRIPTION:

Section 1, Township 4 North, Range 11 West
Lots 4D of the Arbiter Minor Subdivision
Plat No. 281-A, and Certificate of Survey No. 295-A)

Geocode ID No. 30-1285-01-1-01-08-0000

Tax Parcel ID No. 545900

Anaconda-Deer Lodge County, Montana

The undersigned have permitted the Atlantic Richfield Company or its designee to undertake and perform certain environmental response action activities on the real property which are more particularly described in Exhibit "1" hereto. In order to ensure that the response action is maintained, owner has agreed to perform and comply with the Property Management Plan set forth in Exhibit "3", and any other necessary response action for future development on the real property.

The undersigned have also imposed the covenants described in Exhibit "2" hereto on the real property as covenants running with the land and have agreed to attach such covenants to any deed or other instrument conveying any right, title or interest to all or any portion of the real property.

IN WITNESS WHEREOF, the parties have signed this Notice of Response Action Activities and Covenants this 11 day of Sept., 2007.

Leonard W Hoscheid
Iris M. Hoscheid

STATE OF MONTANA)
)ss:
COUNTY OF Deer Lodge)

On this 10 day of September, 2007 before me, a Notary Public for the State of Montana, personally appeared Leonard and Gis known to me to be the persons that executed the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal the day and year in this certificate first above written.

Julie Schalk
Notary Public for the State of Montana
Residing at Anaconda
My Commission Expires: 9-19-2010.

EXHIBIT "1"

RESPONSE ACTION WORK PLAN SUMMARY

The area that requires Remedial Action under the approved *Final Old Works/East Anaconda Development Area Operable Unit Individual Site Work Plan (ISWP) Hoscheid Arbiter Industrial Complex(AIC) Lot4D (Arbiter Minor Subdivision; Plat No. 281-A, and Certificate of Survey No. 295-A)* (Atlantic Richfield Company, August 31, 2007) is shown on Figure 1 and is summarized as follows:

- Grading will be completed to enhance the existing contours and promote surface water drainage into the Arbiter Industrial Complex Storm Water System. The Arbiter Industrial Complex Storm Water System will be constructed to convey storm water into the Arbiter Industrial Complex Storm Water Basin and will consist of a network of drainage ditches and storm water piping (see Figure 1).

- A six-inch compacted gravel cover will be placed over the graded subgrade in the areas shown on Figure 1. The gravel cover material will consist of a one-inch minus road mix material meeting the following specifications:

Sieve Designation	Percent by Weight Passing
1-inch	100
3/4 inch	97-100
3/8 inch	50-85
#4	35-71
#10	25-50
#40	12-30
#200	8-16
Liquid Limit	35 Max.
Plastic Limit	4-12
LA Abrasion	< 50
#200	< (2/3) of #40

EXHIBIT "2"

COVENANTS

A. CREATION OF COVENANTS. The following covenants (the "Covenants") shall burden the Property (described on Attachment "A" to the Landowner Agreement) and are intended to be and shall be construed as covenants of Property Owner and its successors in interest, assigns and transferees.

1. Covenants.

(a) Development of Property. Except as provided in Paragraph 1(f) below, the Property Owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates (i) the implementation, effectiveness, purposes, integrity, of any prior, current or future remedial action, response action or monitoring and maintenance activities (M&M) of the response action required under any applicable laws or by any federal, state or local governmental entity, or (ii) any other actions that the Environmental Protection Agency ("EPA"), the State of Montana ("State") or Atlantic Richfield Company ("Atlantic Richfield") deems necessary or advisable to address environmental conditions on or related to the Property;

(b) Applicable Laws. The Property shall be maintained and managed in accordance with and in a manner consistent with the requirements of the response action and any applicable judgments, federal, state or local laws, rules, regulations, orders, decrees, or other governmental enforcement actions relating to environmental conditions on the Property;

(c) Structures. The Property Owner shall maintain the integrity of any existing drainage control structures, shall ensure that the drainage control structures are free of debris or other material and shall not destroy the same. The Property Owner shall maintain all existing and future response action structures, including, but not limited to, vegetation cover, storm water management structures, or other similar structures, in good condition and repair so as to remain functional at all times;

(d) Noxious Weeds. The Property Owner shall take such steps, as may be reasonably necessary to control noxious or other weeds on the Property in accordance with applicable laws and the Property Management Plan;

(e) Property Management Plan and Activities. The Property Owner shall comply with and implement the Property Management Plan requirements for the Property as provided in Exhibit "3" to the Notice of Response Action Activities and Covenants, or any part thereof. All property management activities and any associated costs or expenses resulting from construction or development on the Property by the Property Owner will be the sole responsibility of the Property Owner;

(f) Residential Use or Development. The use or development of the Property for residential purposes is prohibited, unless the Property Owner complies with the provisions of Paragraph 1(g) below (relating to future development of the Property);

(g) Future Development. The Property owner shall be responsible for any additional response action, which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional response action which may be necessary to accommodate Future Development" shall mean any and all response action beyond that which Atlantic Richfield is required to implement at the Anaconda Smelter Hill NPL Site under any Administrative Order or Consent Decree in the absence of Future Development. Any such additional response action must be undertaken in accordance with and in a manner consistent with the requirements of the Anaconda-Deer Lodge Development Permit System ("DPS"), local, state and federal environmental laws, regulations and ordinances and other applicable local, state and federal laws, regulations and ordinances. After implementation of the DPS permit, Atlantic Richfield or its designee will coordinate with Property owner to assess the need for additional remediation based on the residual arsenic concentration levels; and

(h) Water Well. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including with limitation EPA and the State)) shall be prohibited.

2. Access. The Property Owner shall grant access to the Property at all reasonable times to Atlantic Richfield, EPA, the State and their respective agents, employees, representatives and contractors for the purpose of (a) monitoring Property Owner's compliance with the Covenants set forth in paragraph 1 above, (b) conducting any investigation, monitoring, maintenance, sampling or other activities with respect to the Property, or (c) any response activities or remedial action that Atlantic Richfield, EPA or the State deems necessary or advisable with respect to the Property to address environmental conditions thereon. The Property Owner also may grant access to any other persons or entities for any of the foregoing purposes.

3. Release and Covenant Not to Sue. Owner, for itself and its successors, assigns and transferees, hereby fully and irrevocably releases and covenants not to sue Atlantic Richfield, and their respective subsidiaries, affiliates, officers, directors, agents representatives, contractors, insurers, employees, successors and assigns for any of the following:

(a) Any private cost recovery suit, contribution action, or any other action under environmental laws or the common law arising out of or related to: (i) any environmental conditions on, about, beneath, from or related to the Property; (ii) implementation of any response action, monitoring and maintenance obligations, and/or institutional controls required under the applicable Record of Decision(s) or other applicable government orders, or (iii) any requirements of the applicable regulatory or permitting authority, related to the environmental conditions on, about, beneath or related to the Property; and

(b) Any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to the following: (i) the use, operation, development or disposition of the Property, (ii) any errors, omissions or misstatements in any information provided or disclosed to Owner by Atlantic Richfield relating to the Property or any response action activities undertaken by Atlantic Richfield with respect to the Property, or (iii) the presence of hazardous materials on, at, under, near or associated with the Property.

Notwithstanding anything to the contrary in this Paragraph 3, the foregoing release and covenant not to sue shall not apply to claims arising from Atlantic Richfield's failure to comply with its obligations under the Landowner Agreement.

4. Notice of Transfer. At least thirty (30) days prior to the sale, transfer, exchange or other disposition of all or any part of the Property (a "Transfer"), the Property Owner shall notify Atlantic Richfield or its designee in writing of (i) the proposed date of transfer, (ii) the name and address of the transferee, (iii) the form of transfer (i.e., sale, exchange or other disposition), (iv) the legal description of Property, (v) the property tax parcel identification number, and (vi) the Geo-Code identification number.

B. BENEFITTED PROPERTIES - BENEFITS. The benefits from the Covenants include: (i) the reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property, and (ii) the maintenance and use of the Property in a manner to allow economic benefits to accrue to adjacent property owners and other property owners in Anaconda-Deer Lodge County, while protecting human health and the environment.

C. ENFORCEMENT RIGHTS - COVENANTS.

1. General . The Property Owner hereby agrees that each Covenant set forth above is intended to and shall be a Covenant running with the land, binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all successors in interest, assigns and transferees of Owner.

2. Enforcement of Covenants. Atlantic Richfield, EPA and MDEQ shall have the right, but not the obligation, to enforce the Covenants. Each Covenant shall be enforceable, in perpetuity, to the fullest extent permitted by Montana Law.

3. Enforcement of Obligations. The obligations set forth in the Property Management Plan may be enforced by Atlantic Richfield, EPA, MDEQ or its designee.

4. Specific Performance. The Property Owner hereby specifically agrees that in addition to all other remedies available under this Agreement, at law or in equity, the remedy of "specific performance" shall be available to any party entitled to enforce the Covenants and the Property Management Obligations. The Property Owner hereby waives, to the fullest extent permitted by Montana law, any rights it may have to argue that specific performance is an inappropriate remedy.

D. CONVEYANCE/SUBSEQUENT OWNERS

1. Transfer of Property. Any person or entity who acquires any right, title or interest in any portion of the Property shall be conclusively deemed to have consented and agreed to every Covenant contained herein and agreed to perform monitoring and maintenance on the property and comply with the Property Management Plan, whether or not any reference to the Landowner Agreement, these Covenants or the Property Management Plan is contained in the instruments by which such person or entity acquires an interest in the Property.

2. Provisions of Subsequent Conveyance Instruments. Owner hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation grant of an easement burdening the Property or grant of a lease of all or any part of the Property), the Owner shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to the Notice of Response Actions, Activities and Covenants and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the covenants set forth in that certain _____ Deed dated _____, and recorded on _____ in Book _____, at Page ____ of the Anaconda-Deer Lodge County real property records (the "Covenant Deed"), (ii) abide by and enforce the covenants as owner of the Property, and (iii) be bound by the release, covenant not to sue provisions of the Covenant Deed as if the Grantee hereunder were the grantee under the Covenant Deed.
>
> Owner hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute the deed or conveyance instrument which contains the agreement set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

E. MODIFICATION OF COVENANTS. The Covenants may be modified as follows:

1. Required Approvals. Any proposed modifications must be approved in writing executed by: (i) Atlantic Richfield or its designee, and (ii) the owner of the parcel burdened by the Covenant to be modified. Such written approval may be evidenced by execution of a written instrument created to amend the Covenants.

2. Recordation of Modification. In order to be effective, any modification of the Covenants must be (a) in writing, (b) executed by each of the persons or entities described in paragraph E(1) above, with each signature duly notarized (to the extent required by Montana law), and (c) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification, which complies with the foregoing requirements, shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the

original Covenants. For purposes of these provisions, a modification of the Covenants may include (i) the imposition of new covenants, or (ii) the termination of all or part of the existing Covenants.

F. THIRD PARTY BENEFICIARIES – EPA and MDEQ shall be third party beneficiaries of these Covenants to the extent provided in the Covenants.

EXHIBIT "3"

PROPERTY MANAGEMENT PLAN

Property Management:

1.0 Introduction

Upon implementation of the remedy, Owner shall restrict land use to that which will not adversely impact or is inconsistent with the effectiveness, purpose or integrity of the remedy or monitoring and maintenance of the remedy by Atlantic Richfield. This Property Management Plan describes the actions and activities, which Landowner must undertake and perform in order to ensure the effectiveness, purposes and/or integrity of the response actions implemented on the Property. The affirmative obligations of Landowner to manage repair and/or replace the components of the response actions are set forth in Section 2.0 below.

2.0 Management, Repair and Replacement Obligations

2.1 Gravel Covers

The gravel material provided by Atlantic Richfield will be used by the landowner to repair damages to the gravel cover where: 1) the cover wears to a depth less than six inches; 2) the cover has become loose or unsealed on the surface; or 3) depressions have developed in the cover creating areas of ponded water. Any thin patches made in the gravel cover should be sufficiently compacted to withstand normal vehicle traffic. Gravel covered areas disturbed by excavation to install utilities, etc. must be restored to the original gravel cover specifications. Atlantic Richfield is responsible for providing the gravel materials for maintenance which will be stockpiled at a central location following implementation of the response action.

2.2 Storm Water Controls

Owner's obligations under this Section shall include, without limitation, undertaking and performing all actions as may be deemed necessary and/or appropriate by the EPA and or the MDEQ to maintain the integrity of storm water components of the response actions resulting from landowner action or inaction. Landowner shall ensure that any storm water control structure such as drainage ditches, and drop inlets shall remain clear of debris and refuse. Landowner shall not destroy any storm water control structure.

2.3 Inspections

Inspections of the Engineered Covers and Arbiter Industrial Complex storm water controls will be conducted periodically by Atlantic Richfield, the EPA, the MDEQ and/or their designees to evaluate the condition of the Engineered Covers and the Arbiter Industrial Complex storm water controls.

2.4 Property Development

Future development of the property must comply with the *Anaconda-Deer Lodge County (ADLC) Development Permit System (DPS)* (ADLC, 1992) and other applicable federal, state, and local laws and is the responsibility of the landowner/developer and/or subsequent landowners. Anaconda-Deer Lodge County has implemented the *Anaconda-Deer Lodge County (ADLC) Development Permit System (DPS)* (ADLC, 1992) that sets forth certain requirements for the development of property throughout the County and multiple development districts including the Superfund Planning Area Overlay District (SPAOD). The Arbiter Industrial Complex (Lot 4D of the Arbiter Minor Subdivision) is within the SPAOD and should the current use of the property change from industrial or future development occur, the landowner is responsible for complying with the provisions of any local, state, or federal requirements. This includes the requirement to sample, properly handle, and address any soils that exceed certain levels. Waste materials encountered during any future construction will be disposed of by the landowner and/or developer in the Anaconda Smelter Development Repository (B2.12 Subcell/Opportunity Ponds).

Legend

- Soil Sample Location
- Approximate Lot Lines
- Previously Reclaimed
- Remedial Action Pending
- Gravel Cover
- Vegetative Cover
- Storm Water Basin

Utilities

- Gas Line
- Fiber Optic Phone
- O/H Power
- Sewer
- Water
- Existing Storm Water Ditch
- Proposed Storm Water Ditch
- Storm Water Pipe
- R.R. Tracks (To be Removed by Landowner)
- Roads

Notes:
1) Lot lines DO NOT represent weight survey
Map are intended for reference use only

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					Atlantic Richfield Company A BP affiliated company	ARBITER INDUSTRIAL COMPLEX SITE LAYOUT PLAN ANACONDA, MONTANA	1

ATTACHMENT "D"

NOTICE OF RESPONSE ACTION ACTIVITIES AND COVENANTS

NOTICE IS HEREBY GIVEN:

The undersigned, Terry Miller, is owner of that certain real property described as follows:

LEGAL DESCRIPTION:

Section 1, Township 4 North, Range 11 West
Lots 4G of the Arbiter Minor Subdivision
Plat No. 281-A, and Certificate of Survey No. 295-A)

Geocode ID No. 30-1285-01-1-01-18-0000

Tax Parcel ID No. 525190

Anaconda-Deer Lodge County, Montana

The undersigned have permitted the Atlantic Richfield Company or its designee to undertake and perform certain environmental response action activities on the real property which are more particularly described in Exhibit "1" hereto. In order to ensure that the response action is maintained, owner has agreed to perform and comply with the Property Management Plan set forth in Exhibit "3", and any other necessary response action for future development on the real property.

The undersigned have also imposed the covenants described in Exhibit "2" hereto on the real property as covenants running with the land and have agreed to attach such covenants to any deed or other instrument conveying any right, title or interest to all or any portion of the real property.

IN WITNESS WHEREOF, the parties have signed this Notice of Response Action Activities and Covenants this 4 day of April, 2008.

x Terry J. Miller

_____

STATE OF MONTANA)
)ss:
COUNTY OF Deer Lodge)

On this 4 day of April, 2008 before me, a Notary Public for the State of Montana, personally appeared Terry Miller and ——— known to me to be the persons that executed the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal the day and year in this certificate first above written.

Janel Roe
Notary Public for the State of Montana
Residing at Anaconda, MT
My Commission Expires: 05-26-08

JANE ROE NOTARIAL SEAL STATE OF MONTANA

EXHIBIT "1"

RESPONSE ACTION WORK PLAN SUMMARY

The area that requires Remedial Action under the approved *Final Old Works/East Anaconda Development Area Operable Unit Individual Site Work Plan (ISWP) Miller Mechanical Arbiter Industrial Complex(AIC) Lot4G (Arbiter Minor Subdivision; Plat No. 281-A, and Certificate of Survey No. 295-A) Revision 1* (Atlantic Richfield Company, March 19, 2008) is shown on Figure 1 and is summarized as follows:

- Grading will be completed to enhance the existing contours and promote surface water drainage into the Arbiter Industrial Complex Storm Water System. The Arbiter Industrial Complex Storm Water System will be constructed to convey storm water into the Arbiter Industrial Complex Storm Water Basin and will consist of a network of drainage ditches and storm water piping (see Figure 1).

- A six-inch compacted gravel cover will be placed over the graded subgrade in the areas shown on Figure 1. The gravel cover material will consist of a one-inch minus road mix material meeting the following specifications:

Sieve Designation	Percent by Weight Passing
1-inch	100
3/4 inch	97-100
3/8 inch	50-85
#4	35-71
#10	25-50
#40	12-30
#200	8-16
Liquid Limit	35 Max.
Plastic Limit	4-12
LA Abrasion	< 50
#200	< (2/3) of #40

Legend

- Soil Sample Location
- Approximate Lot Lines
- Previously Reclaimed
- Remedial Action Pending
- Gravel Cover
- Vegetative Cover
- Storm Water Basin

Utilities

- Gas Line
- Fiber Optic Phone
- O/H Power
- Sewer
- Water
- Existing Storm Water Ditch
- Proposed Storm Water Ditch
- Storm Water Pipe
- R.R. Tracks (To be Removed by Landowner)
- Roads

Notes:
1) Lot lines DO NOT represent a legal survey. They are intended to indicate use only.

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Atlantic Richfield Company
A BP affiliated company

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ARBITER INDUSTRIAL COMPLEX
SITE LAYOUT PLAN
ANACONDA, MONTANA

1

EXHIBIT "2"

COVENANTS

A. CREATION OF COVENANTS. The following covenants (the "Covenants") shall burden the Property (described on Attachment "A" to the Landowner Agreement) and are intended to be and shall be construed as covenants of Property Owner and its successors in interest, assigns and transferees.

1. Covenants.

(a) Development of Property. Except as provided in Paragraph 1(f) below, the Property Owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates (i) the implementation, effectiveness, purposes, integrity, of any prior, current or future remedial action, response action or monitoring and maintenance activities (M&M) of the response action required under any applicable laws or by any federal, state or local governmental entity, or (ii) any other actions that the Environmental Protection Agency ("EPA"), the State of Montana ("State") or Atlantic Richfield Company ("Atlantic Richfield") deems necessary or advisable to address environmental conditions on or related to the Property;

(b) Applicable Laws. The Property shall be maintained and managed in accordance with and in a manner consistent with the requirements of the response action and any applicable judgments, federal, state or local laws, rules, regulations, orders, decrees, or other governmental enforcement actions relating to environmental conditions on the Property;

(c) Structures. The Property Owner shall maintain the integrity of any existing drainage control structures, shall ensure that the drainage control structures are free of debris or other material and shall not destroy the same. The Property Owner shall maintain all existing and future response action structures, including, but not limited to, vegetation cover, storm water management structures, or other similar structures, in good condition and repair so as to remain functional at all times;

(d) Noxious Weeds. The Property Owner shall take such steps, as may be reasonably necessary to control noxious or other weeds on the Property in accordance with applicable laws and the Property Management Plan;

(e) Property Management Plan and Activities. The Property Owner shall comply with and implement the Property Management Plan requirements for the Property as provided in Exhibit "3" to the Notice of Response Action Activities and Covenants, or any part thereof. All property management activities and any associated costs or expenses resulting from construction or development on the Property by the Property Owner will be the sole responsibility of the Property Owner;

(f) Residential Use or Development. The use or development of the Property for residential purposes is prohibited, unless the Property Owner complies with the provisions of Paragraph 1(g) below (relating to future development of the Property);

(g) Future Development. The Property owner shall be responsible for any additional response action, which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional response action which may be necessary to accommodate Future Development" shall mean any and all response action beyond that which Atlantic Richfield is required to implement at the Anaconda Smelter Hill NPL Site under any Administrative Order or Consent Decree in the absence of Future Development. Any such additional response action must be undertaken in accordance with and in a manner consistent with the requirements of the Anaconda-Deer Lodge Development Permit System ("DPS"), local, state and federal environmental laws, regulations and ordinances and other applicable local, state and federal laws, regulations and ordinances. After implementation of the DPS permit, Atlantic Richfield or its designee will coordinate with Property owner to assess the need for additional remediation based on the residual arsenic concentration levels; and

(h) Water Well. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including with limitation EPA and the State)) shall be prohibited.

2. Access. The Property Owner shall grant access to the Property at all reasonable times to Atlantic Richfield, EPA, the State and their respective agents, employees, representatives and contractors for the purpose of (a) monitoring Property Owner's compliance with the Covenants set forth in paragraph 1 above, (b) conducting any investigation, monitoring, maintenance, sampling or other activities with respect to the Property, or (c) any response activities or remedial action that Atlantic Richfield, EPA or the State deems necessary or advisable with respect to the Property to address environmental conditions thereon. The Property Owner also may grant access to any other persons or entities for any of the foregoing purposes.

3. Release and Covenant Not to Sue. Owner, for itself and its successors, assigns and transferees, hereby fully and irrevocably releases and covenants not to sue Atlantic Richfield, and their respective subsidiaries, affiliates, officers, directors, agents representatives, contractors, insurers, employees, successors and assigns for any of the following:

(a) Any private cost recovery suit, contribution action, or any other action under environmental laws or the common law arising out of or related to: (i) any environmental conditions on, about, beneath, from or related to the Property; (ii) implementation of any response action, monitoring and maintenance obligations, and/or institutional controls required under the applicable Record of Decision(s) or other applicable government orders, or (iii) any requirements of the applicable regulatory or permitting authority, related to the environmental conditions on, about, beneath or related to the Property; and

(b) Any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to the following: (i) the use, operation, development or disposition of the Property, (ii) any errors, omissions or misstatements in any information provided or disclosed to Owner by Atlantic Richfield relating to the Property or any response action activities undertaken by Atlantic Richfield with respect to the Property, or (iii) the presence of hazardous materials on, at, under, near or associated with the Property.

Notwithstanding anything to the contrary in this Paragraph 3, the foregoing release and covenant not to sue shall not apply to claims arising from Atlantic Richfield's failure to comply with its obligations under the Landowner Agreement.

4. Notice of Transfer. At least thirty (30) days prior to the sale, transfer, exchange or other disposition of all or any part of the Property (a "Transfer"), the Property Owner shall notify Atlantic Richfield or its designee in writing of (i) the proposed date of transfer, (ii) the name and address of the transferee, (iii) the form of transfer (i.e., sale, exchange or other disposition), (iv) the legal description of Property, (v) the property tax parcel identification number, and (vi) the Geo-Code identification number.

B. BENEFITTED PROPERTIES - BENEFITS. . The benefits from the Covenants include: (i) the reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property, and (ii) the maintenance and use of the Property in a manner to allow economic benefits to accrue to adjacent property owners and other property owners in Anaconda-Deer Lodge County, while protecting human health and the environment.

C. ENFORCEMENT RIGHTS - COVENANTS.

1. General . The Property Owner hereby agrees that each Covenant set forth above is intended to and shall be a Covenant running with the land, binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all successors in interest, assigns and transferees of Owner.

2. Enforcement of Covenants. Atlantic Richfield, EPA and MDEQ shall have the right, but not the obligation, to enforce the Covenants. Each Covenant shall be enforceable, in perpetuity, to the fullest extent permitted by Montana Law.

3. Enforcement of Obligations. The obligations set forth in the Property Management Plan may be enforced by Atlantic Richfield, EPA, MDEQ or its designee.

4. Specific Performance. The Property Owner hereby specifically agrees that in addition to all other remedies available under this Agreement, at law or in equity, the remedy of "specific performance" shall be available to any party entitled to enforce the Covenants and the Property Management Obligations. The Property Owner hereby waives, to the fullest extent permitted by Montana law, any rights it may have to argue that specific performance is an inappropriate remedy.

D. CONVEYANCE/SUBSEQUENT OWNERS

1. Transfer of Property. Any person or entity who acquires any right, title or interest in any portion of the Property shall be conclusively deemed to have consented and agreed to every Covenant contained herein and agreed to perform monitoring and maintenance on the property and comply with the Property Management Plan, whether or not any reference to the Landowner Agreement, these Covenants or the Property Management Plan is contained in the instruments by which such person or entity acquires an interest in the Property.

2. Provisions of Subsequent Conveyance Instruments. Owner hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation grant of an easement burdening the Property or grant of a lease of all or any part of the Property), the Owner shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to the Notice of Response Actions, Activities and Covenants and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the covenants set forth in that certain _____ Deed dated _____, and recorded on _____ in Book _____, at Page ____ of the Anaconda-Deer Lodge County real property records (the "Covenant Deed"), (ii) abide by and enforce the covenants as owner of the Property, and (iii) be bound by the release, covenant not to sue provisions of the Covenant Deed as if the Grantee hereunder were the grantee under the Covenant Deed.
>
> Owner hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute the deed or conveyance instrument which contains the agreement set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

E. MODIFICATION OF COVENANTS. The Covenants may be modified as follows:

1. Required Approvals. Any proposed modifications must be approved in writing executed by: (i) Atlantic Richfield or its designee, and (ii) the owner of the parcel burdened by the Covenant to be modified. Such written approval may be evidenced by execution of a written instrument created to amend the Covenants.

2. Recordation of Modification. In order to be effective, any modification of the Covenants must be (a) in writing, (b) executed by each of the persons or entities described in paragraph E(1) above, with each signature duly notarized (to the extent required by Montana law), and (c) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification, which complies with the foregoing requirements, shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the

original Covenants. For purposes of these provisions, a modification of the Covenants may include (i) the imposition of new covenants, or (ii) the termination of all or part of the existing Covenants.

F. THIRD PARTY BENEFICIARIES – EPA and MDEQ shall be third party beneficiaries of these Covenants to the extent provided in the Covenants.

EXHIBIT "3"

PROPERTY MANAGEMENT PLAN

Property Management:

1.0 Introduction

Upon implementation of the remedy, Owner shall restrict land use to that which will not adversely impact or is inconsistent with the effectiveness, purpose or integrity of the remedy or monitoring and maintenance of the remedy by Atlantic Richfield. This Property Management Plan describes the actions and activities, which Landowner must undertake and perform in order to ensure the effectiveness, purposes and/or integrity of the response actions implemented on the Property. The affirmative obligations of Landowner to manage repair and/or replace the components of the response actions are set forth in Section 2.0 below.

2.0 Management, Repair and Replacement Obligations

2.1 Gravel Covers

The gravel material provided by Atlantic Richfield will be used by the landowner to repair damages to the gravel cover where: 1) the cover wears to a depth less than six inches; 2) the cover has become loose or unsealed on the surface; or 3) depressions have developed in the cover creating areas of ponded water. Any thin patches made in the gravel cover should be sufficiently compacted to withstand normal vehicle traffic. Gravel covered areas disturbed by excavation to install utilities, etc. must be restored to the original gravel cover specifications. Atlantic Richfield is responsible for providing the gravel materials for maintenance which will be stockpiled at a central location following implementation of the response action.

2.2 Storm Water Controls

Owner's obligations under this Section 2.3 shall include, without limitation, undertaking and performing all actions as may be deemed necessary and/or appropriate by the EPA and or the MDEQ to maintain the integrity of storm water components of the response actions resulting from landowner action or inaction. Landowner shall ensure that any storm water control structure such as drainage ditches, storm water piping, and drop inlets shall remain clear of debris and refuse. Landowner shall not destroy any storm water control structure.

2.3 Inspections

Inspections of the Engineered Covers and Arbiter Industrial Complex storm water controls will be conducted periodically by Atlantic Richfield, the EPA, the MDEQ and/or their designees to evaluate the condition of the Engineered Covers and the Arbiter Industrial Complex storm water controls.

2.4 Property Development

Future development of the property must comply with the *Anaconda-Deer Lodge County (ADLC) Development Permit System (DPS)* (ADLC, 1992) and other applicable federal, state, and local laws and is the responsibility of the landowner/developer and/or subsequent landowners. Anaconda-Deer Lodge County has implemented the *Anaconda-Deer Lodge County (ADLC) Development Permit System (DPS)* (ADLC, 1992) that sets forth certain requirements for the development of property throughout the County and multiple development districts including the Superfund Planning Area Overlay District (SPAOD). The Arbiter Industrial Complex Lot 4G is within the SPAOD and should the current use of the property change from industrial or future development occur, the landowner is responsible for complying with the provisions of any local, state, or federal requirements. This includes the requirement to sample, properly handle, and address any soils that exceed certain levels. Waste materials encountered during any future construction will be disposed of by the landowner and/or developer in the Anaconda Smelter Development Repository (B2.12 Subcell/Opportunity Ponds).

State of Montana,
County of Deer Lodge } SS
I hereby certify that the within instrument was filed
for record in my office on the 11th
day of April A.D. 2008
at 15 min. past 9
o'clock A m. and recorded on page
603-613 of Book 207
of Records of Deer Lodge County
Montana, fee $ 97.00
MARIE HATCHER County Recorder
By Deputy

181151

185408

BOOK 223 PAGE 794

State of Montana,
County of Deer Lodge } SS

I hereby certify that the within instrument was filed for record in my office on the 22ND day of April A.D. 2010 at 15 min. past 3 o'clock P. m. and recorded on page _____ of Book _____ of _____ Records of Deer Lodge County Montana, fee $ 49.00

MARIE HATCHER County Recorder
By Linda K. Jordan Deputy

Atlantic Richfield Company
Attention: Rob Jordan
317 Anaconda Road
Butte, Montana 59701

MODIFICATION OF COVENANTS
(Lots 1 through 5 of Block 3 of Plat 178-B)

This Modification of Covenants ("Modification Agreement") is executed this 13th day of April, 2010 by and between, Anaconda Local Development Corporation, a Montana non-profit corporation ("ALDC"), whose address is 118, East 7th Street, Anaconda, Montana 59701, and Atlantic Richfield Company, a Delaware corporation ("AR"), whose address is 317 Anaconda Road, Butte, Montana 59701.

Recitals

A. AR conveyed Tracts 1 and 2 of Certificate of Survey 43-D (the "Tracts 1 and 2") to ALDC pursuant to and in accordance with the terms and conditions of that certain Deed of Gift dated December 15, 1982 and recorded on December 31, 1982 in the Anaconda-Deer Lodge County real property records in Book 45 at Page 174 (the "Original Deed").

B. The Covenant Deed contains a covenant which serves to restrict the use of Tracts 1 and 2 for use as an industrial park and related purposes only ("Existing Covenant").

C. Following the conveyance of Tracts 1 and 2 from AR to ALDC pursuant to the Original Deed, ALDC caused the Property to be subdivided into certain blocks and lots which are more particularly described and depicted on Plat 178-B.

D. ALDC and AR desire to modify the Existing Covenant with respect to Lots 1 through 5 of Block 3 of Plat 178-B pursuant to and in accordance with the terms and conditions of this Modification Agreement.

NOW, THEREFORE, the parties hereby agree to modify the Existing Covenant as follows:

1. General. This Modification Agreement is for the purpose of modifying the Existing Covenant with respect to Lots 1 through 5 of Block 3 of Plat 178-B. To the extent that the provisions of

this Modification Agreement conflict with the provisions of the Original Deed, the provisions of this Modification Agreement shall control.

2. Termination of Existing Covenant. The Existing Covenant shall have no further force or effect with respect to Lots 1 through 5 of Block 3 of Plat 178-B (the "Property") and is hereby replaced with the covenants set forth in paragraph 3 of this Modification Agreement.

3. Creation of New Covenants. The following covenants (the "Covenants") shall burden Lots 1 through 5 of Block 3 of Plat 178-B and are intended to be and shall be construed to as covenants of the property owner and its successors in interest, assigns and transferees:

a. Covenants.

(1) Development of Property. Except as provided in paragraph (4) below, the property owner shall not take, authorize or allow any direct or indirect action which alters, disturbs or interferes with the environmental response action activities that have been undertaken or may in the future be undertaken on the property.

(2) Applicable Laws. The property shall be maintained and managed in accordance with and in a manner consistent with the requirements of the response actions and any applicable judgments, federal, state or local laws, rules, regulations, orders, decrees, or other governmental enforcement actions relating to environmental conditions on the Property.

(3) Noxious Weeds. The property owner shall take such steps, as may be reasonably necessary to control noxious or other weeds on the property in accordance with applicable laws.

(4) Future Development. The property owner shall be solely responsible for any additional response actions which may be necessary to accommodate future development of the property. For purposes of this provision, the phrase "additional response actions which may be necessary to accommodate future development" shall mean any and all response actions beyond that which Atlantic Richfield is required to implement at the Anaconda Smelter Site under any administrative order or consent decree in the absence of future development. Any such additional response actions must be undertaken in accordance with and in a manner consistent with the requirements of the Anaconda-Deer Lodge Development Permit System, environmental laws and other applicable laws.

(5) Water Well. All use, construction and/or drilling of water wells for any consumptive purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with applicable laws and which are approved by governmental entities with jurisdiction over such matters) shall be prohibited.

(6) Residential Development. The use or development of the property for residential purposes is prohibited. For purposes of this

paragraph, the term "residential" shall mean any one or more of the following: (1) use or development of the property as living quarters for one or more persons, (2) occupancy of all or any part of the property by one or more persons for more than eighty (80) hours per week in connection with any such person's employment or conduct of business on the property, and (3) use or development of the property for any other purpose defined by, or determined to be, residential use or development by the United States Environmental Protection Agency, the State of Montana, Anaconda-Deer Lodge County or any other governmental entity having jurisdiction over the subject matter.

b. Access. The property owner shall grant access to the property at all reasonable times to AR, the United States Environmental protection Agency, the State of Montana and their respective agents, employees, representatives and contractors for the purpose of (a) monitoring property owner's compliance with paragraph 1 above, (b) conducting any investigation, monitoring, maintenance, sampling or other activities with respect to the property, or (c) any response actions that AR, the United States Environmental protection Agency, the State of Montana deems necessary or advisable with respect to the property to address environmental conditions thereon. The property owner also may grant access to any other persons or entities for any of the foregoing purposes.

c. Notice of Transfer. Promptly following any sale, transfer, exchange or other disposition of all or any part of the property (a "Transfer"), the property owner shall notify Atlantic Richfield or its designee in writing of the Transfer and shall include a copy of the Transfer instrument in such notice.

4. Enforcement Rights. The property owner hereby agrees that each of the Covenants set forth in paragraph 3 of this Modification Agreement is intended to and shall be a covenant running with the land, binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all successors in interest, assigns and transferees of Owner. AR or its designee, the United States Environmental protection Agency, the State of Montana shall have the right, but not the obligation, to enforce the Covenants. Each Covenant shall be enforceable, in perpetuity, to the fullest extent permitted by Montana Law. The Property Owner hereby specifically agrees that in addition to all other remedies available under this Modification Agreement, at law or in equity, the remedy of "specific performance" shall be available to any party entitled to enforce the Covenants

5. Conveyance/Subsequent Owners. The property owner hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation grant of an easement burdening the Property or grant of a lease of all or any part of the Property), the property owner shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Modification Agreement and modified only so as to fit appropriately in the context of the conveyance instrument):

Grantee hereby agrees to: (i) accept the Property subject to the covenants set forth in that certain Modification of Covenants dated April 13, 2010, and recorded on April 22, 2010 in Book 223, at Page 794 of the Anaconda-Deer Lodge County real property records (the

"Modification Agreement") and (ii) abide by and enforce the covenants as owner of the Property.

Owner hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute the deed or conveyance instrument which contains the agreement set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

Notwithstanding the foregoing, any person or entity who acquires any right, title or interest in any portion of the Property shall be conclusively deemed to have consented and agreed to every Covenant contained in paragraph 3 of this Modification Agreement, whether or not any reference to this Modification Agreement or the Covenants is contained in the instruments by which such person or entity acquires an interest in the Property.

6. Modification of Covenants--General. Subject to the terms and conditions of paragraph 7 of this Modification Agreement, any proposed modifications of the Covenants set forth in paragraph 3 of this Modification Agreement must be approved in writing by AR or its designee and the owner of the parcel burdened by the Covenant(s) to be modified. In order to be effective, any modification of the Covenants must be dated after the date of this Modification Agreement and duly recorded in the Anaconda-Deer Lodge County real property records. Any modification that complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof.

7. Modification of Covenants—Residential Development. Prior to proposing any modification of the Covenant set forth in paragraph 3.a.(6) of this Modification Agreement, the property owner/developer shall submit a residential development plan to AR for its review and approval, which will not be unreasonably withheld. The residential development plan shall include (i) a legal description of the portion of the Property proposed for residential development, (ii) construction drawings and specifications for the residential development, and (iii) plans for the performance and implementation of all response actions which may be necessary to accommodate the residential development including an excavation plan, a waste disposal plan and a backfill and grading/final cover plan. Within ninety (90) days of submission of any such residential development plan, AR shall either approve the residential development plan in writing or provide written comments to the property owner/developer specifying all deficiencies in the plan as submitted. If AR or its designee does not either approve the residential development plan in writing or provide written comments to the property owner/developer specifying all deficiencies in the plan as submitted within such ninety (90) day period, the residential development plan will be deemed approved by AR or its designee. It is understood and agreed that AR shall approve a modification of the Covenant set forth in paragraph 3.a.(6) of this Modification Agreement to the extent necessary to allow for residential development in accordance with the terms and conditions of an approved residential development plan but shall have the right to condition such approval on (i) strict compliance with the terms and conditions of the approved residential development plan by the property owner/developer and (ii) the provision by the property owner/developer of reasonable financial assurances satisfactory to AR.

8. Coordination/Continued Validity of Other Provisions. This Modification Agreement is intended to operate in conjunction with the Original Deed. Except as expressly provided in this Modification Agreement, the provisions of the Original Deed shall remain in full force and effect.

9. Notices. All notices, submissions or other communications required or allowed under this Modification Agreement shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change of address as provided herein. All notices, submissions or other communications hereunder shall be in writing shall be given by certified mail, return receipt requested, and shall be considered effective as of the date of the return receipt.

IF TO AR ORITS DESIGNEE:

Anaconda Regional Water, Waste
& Soils Project Manager
Atlantic Richfield Company
317 Anaconda Road
Butte, MT 59701

With copies (which will not constitute notice) to:

Jean Martin, Esq.
Atlantic Richfield Company
501 Westlake Park Blvd.
Westlake 1, Room 16.164
Houston, Texas 77079

And

John P. Davis, Esq.
Poore, Roth & Robinson, P.C.
1341 Harrison Avenue
Butte, Montana 59701

IF TO PROPERTY OWNER:

Jim Davison
Anaconda Local Development Corporation
118 East 7th Street
Anaconda, MT 59711

Any party may change the address to which notices are required to be sent by giving notice of such change in the manner provided in this paragraph. Any notice of a change of address will be effective only upon actual receipt.

10. Effective Date. This Modification Agreement shall be effective as of the date recorded in the Anaconda-Deer Lodge County real property records.

The parties have executed this Modification Agreement as of the date first written above.

ANACONDA LOCAL DEVELOPMENT
CORPORATION, a Montana non-profit corporation

By: _____
~~Jim Davison,~~ PRESIDENT
PATRICK J. REARDON

ATLANTIC RICHFIELD COMPANY,
a Delaware corporation

By: _____
Robin J. Bullock, Portfolio Manager E&P,
OB&C and Decommissioning

STATE OF MONTANA)
) ss.
COUNTY OF SILVER BOW) → PATRICK J. REARDON

On this 8 day of April, 2010, before me, a Notary Public for the State of Montana, personally appeared ~~Jim Davison~~, known to me to be the PRESIDENT of Anaconda Local Development Corporation and acknowledged to me that he executed the foregoing instrument on behalf of Anaconda Local Development Corporation.

Witness my hand and official seal.

JAMES H. DAVISON NOTARIAL (SEAL) SEAL STATE OF MONTANA

Notary Public for the State of Montana
Residing at: Anaconda Deer Lodge County
My commission expires: 2/22/2010

STATE OF MONTANA)
) ss.
COUNTY OF SILVER BOW)

On this 13th day of April, 2010, before me, a Notary Public for the State of Montana, personally appeared Robin J. Bullock, known to me to be the Portfolio Manager E&P, OB&C and Decommissioning of Atlantic Richfield Company and acknowledged to me that she executed the foregoing instrument on behalf of Atlantic Richfield Company.

Witness my hand and official seal.

ROBERT JORDAN NOTARIAL (SEAL) SEAL STATE OF MONTANA

Notary Public for the State of Montana
Residing at: Butte
My commission expires: August 8, 2013

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ATTACHMENT "A"

NOTICE OF RESPONSE ACTION ACTIVITIES AND COVENANTS

NOTICE IS HEREBY GIVEN:

The undersigned, Pintler Pets, is the owner of that certain real property described in Exhibit 1 hereto (the "Property"). The undersigned has permitted the Atlantic Richfield Company or its designee to undertake and perform certain environmental response action activities on the Property which are more particularly described and depicted in Exhibits 2 and 3 hereto. In order to ensure that the response actions are maintained, the undersigned have agreed to perform and comply with the covenants and other terms and conditions set forth in Exhibit 4 hereto as covenants running with the land that are binding on Owner and all future owners of the Property.

IN WITNESS WHEREOF, the parties have signed this Notice of Response Action Activities and Covenants this 11th day of May, 2012.

Pintler Pets:

Pat Phillip

Pat Phillip, Member

STATE OF MONTANA)
)ss:
COUNTY OF Silver Bow)

On this 11th day of May, 2012 before me, a Notary Public for the State of Montana, personally appeared Pat Phillip known to me to be a member of Pintler Pets and acknowledged to me that she executed the foregoing instrument on behalf of Pintler Pets.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal the day and year in this certificate first above written.

ROBERT JORDAN NOTARIAL SEAL STATE OF MONTANA

Notary Public for the State of Montana
Residing at Butte
My Commission Expires: August 8, 2013

EXHIBIT 1

DESCRIPTION OF THE REAL PROPERTY

Section 1, Township 4 North, Range 11 West

Lot 1B Arbiter Minor Subdivision; Plat No. 281-A

Geocode ID No. 30-1285-01-1-01-01-0000

Tax Parcel ID No. 525120

Anaconda-Deer Lodge County, Montana

EXHIBIT 2

DESCRIPTION OF RESPONSE ACTION ACTIVITIES

The environmental response action activities performed on the Property are described in detail in that certain *Old Works-Industrial Area (IA) Remedial Action Work Plan/Final Design Report (RAWP/FDR), Volume IV, Addendum D, Report IV – Arbiter Industrial Complex, Individual Site Work Plan (ISWP), Pintler Pets Parcel (*Lot 1B Arbiter Minor Subdivision; Plat No. 281-A*)* (Atlantic Richfield Company, _____, 2012) (Atlantic Richfield Company, March 20, 2012) (the "Response Action Work Plan"). A copy of the Response Action Work Plan is available for review at the Anaconda-Deer Lodge County Planning Department. The response action activities performed on the Property are depicted on Exhibit "3" hereto and are generally summarized as follows:

- *Constructed engineered covers over waste materials in recreational and potential commercial/industrial areas exceeding arsenic levels of 1,000 parts per million (ppm);*
- *Covered or treated soils exceeding arsenic levels of 500 ppm in current commercial/industrial areas;*
- *Constructed surface controls to manage surface water runoff from Stuckey Ridge, Smelter Hill, and throughout the site to minimize discharge into Warm Springs Creek;*
- *Preserved, to the extent practicable, historic features in the Old Works Historic District."*

EXHIBIT 3

DEPICTION OF RESPONSE ACTION ACTIVITIES

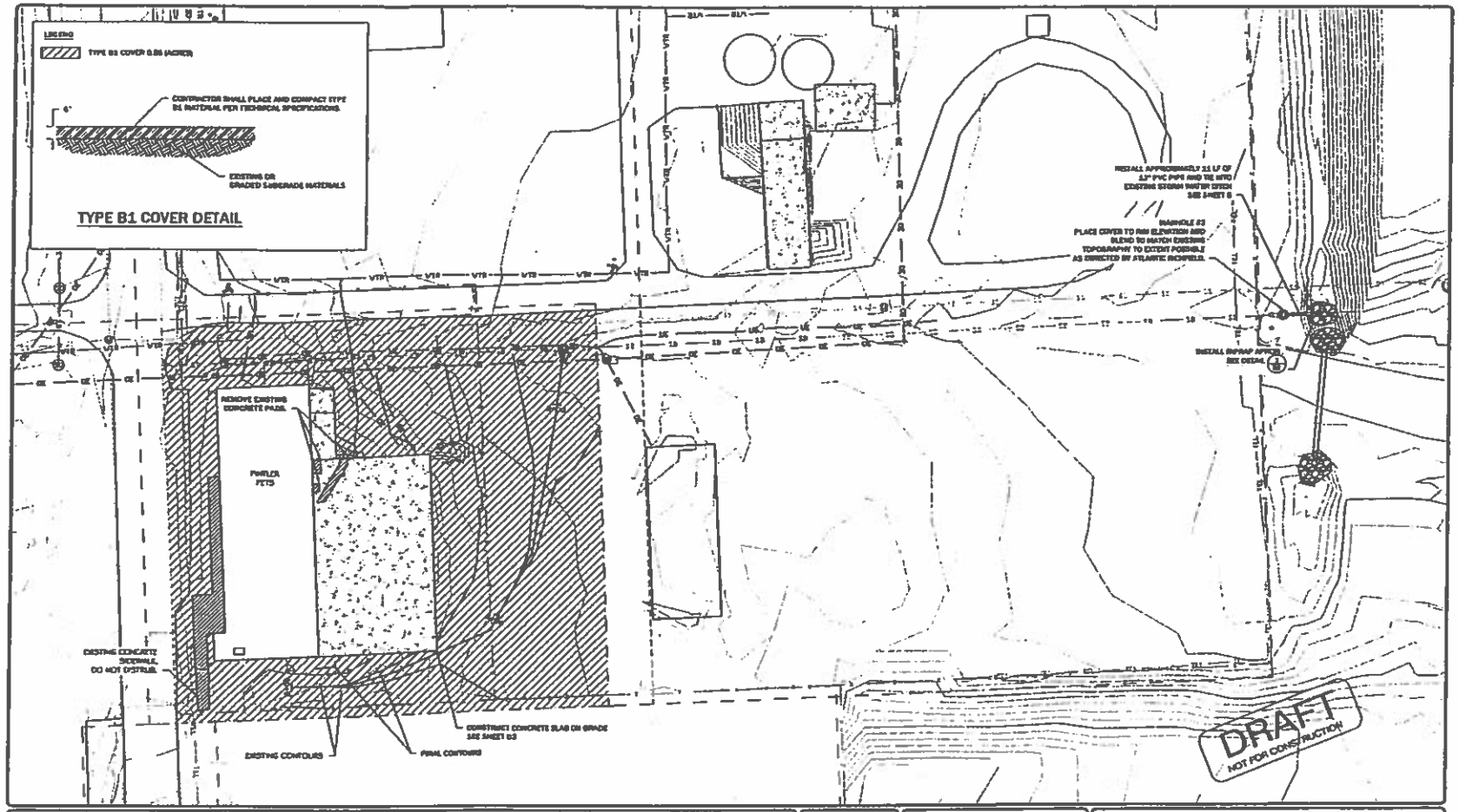

FIGURE 1

ARBITER INDUSTRIAL COMPLEX SITE COVER PLAN

PIONEER TECHNICAL SERVICES, INC.
63-1/2 WEST BROADWAY
BUTTE, MONTANA 59701
(406) 782-8177

DATE 3/13/2012

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EXHIBIT 4

COVENANTS

A. CREATION OF COVENANTS. The following covenants (the "Covenants") shall burden the Property and are intended to be and shall be construed as covenants of Property Owner that run with the land and are binding on the Property Owner and its successors in interest, assigns and transferees.

1. Covenants.

(a) Development of Property. Except as provided in Paragraph A.1(c) below, the Property Owner shall not take, authorize or allow any direct or indirect action which alters, disturbs or interferes with the environmental response action activities that have been undertaken or may in the future be undertaken on the Property.

(b) Residential Development. The use or development of the property for residential purposes is prohibited. For purposes of this paragraph, the term "residential" shall mean any one or more of the following: (1) use or development of the property as living quarters for one or more persons, (2) occupancy of all or any part of the property by one or more persons for more than eighty (80) hours per week in connection with any such person's employment or conduct of business on the property, and (3) use or development of the property for any other purpose defined by, or determined to be, residential use or development by the United States Environmental Protection Agency, the State of Montana, Anaconda-Deer Lodge County or any other governmental entity having jurisdiction over the subject matter.

(c) Future Development. All future development on, at, under, near or associated with the Property shall strictly conform to, and be undertaken in a manner consistent with, the requirements of all applicable local, state or federal laws, regulations, ordinances and other governmental decision document relating to the Property including, without limitation, the requirements of the Anaconda-Deer Lodge County Development Permit System.

2. Access. The Property Owner shall grant access to the Property at all reasonable times to Atlantic Richfield, the United State Environmental Protection Agency ("EPA"), the State of Montana (the "State") and their respective designees for the purpose of (a) monitoring Property Owner's compliance with the Covenants, (b) conducting any investigation, monitoring, maintenance, sampling or other activities with respect to the Property, or (c) any response activities or remedial action that Atlantic Richfield, EPA or the State deems necessary or advisable with respect to the Property to address environmental conditions thereon. Atlantic Richfield, EPA, the State and/or their respective designees, as the case may be, shall provide Owner with either written or verbal notice at least two (24) hours prior to entering onto the Property for any of the purposes authorized pursuant to this paragraph. Additionally, Atlantic Richfield, EPA, the State and/or their respective designees, as the case may be, will make every reasonable effort to minimize any inconvenience to Owner during any such entry, and will work

closely with Owner to address any concerns Owner may have about such entry.

B. BENEFITTED PROPERTIES - BENEFITS. The benefits from the Covenants include: (i) the reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property, and (ii) the maintenance and use of the Property in a manner to allow economic benefits to accrue to adjacent property owners and other property owners in Anaconda-Deer Lodge County, while protecting human health and the environment.

C. ENFORCEMENT RIGHTS –COVENANTS.

1. General. The Property Owner hereby agrees that each Covenant set forth above is intended to and shall be a covenant running with the land, binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all successors in interest, assigns and transferees of Owner.

2. Enforcement of Covenants. Atlantic Richfield, EPA and the State shall have the right, but not the obligation, to enforce the Covenants. Each Covenant shall be enforceable, in perpetuity, to the fullest extent permitted by Montana law.

3. Specific Performance. The Property Owner hereby specifically agrees that in addition to all other remedies available at law or in equity, the remedy of "specific performance" shall be available to any party entitled to enforce the Covenants

D. CONVEYANCE/SUBSEQUENT OWNERS

1. Transfer of Property. Any person or entity who acquires any right, title or interest in any portion of the Property shall be conclusively deemed to have consented and agreed to every Covenant contained herein, whether or not any reference to the Landowner Agreement or these Covenants is contained in the instruments by which such person or entity acquires an interest in the Property.

2. Provisions of Subsequent Conveyance Instruments. Owner hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation grant of an easement burdening the Property or grant of a lease of all or any part of the Property), the Owner shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to the Notice of Response Actions, Activities and Covenants and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the covenants set forth in that certain Notice of Response Actions and Covenants dated _____, and recorded on _____ in Book _____, at Page ____ of the Anaconda-Deer Lodge County real property records and (ii) abide by and enforce the covenants as owner of the Property.

Owner hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute the deed or conveyance instrument which contains the agreement set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

E. MODIFICATION OF COVENANTS. The Covenants may be modified as follows:

1. Required Approvals. Any proposed modifications must be approved in writing executed by: (i) Atlantic Richfield or its designee, and (ii) the owner of the parcel burdened by the Covenant(s) to be modified. Such written approval may be evidenced by execution of a written instrument created to amend the Covenants.

2. Recordation of Modification. In order to be effective, any modification of the Covenants must be (a) in writing, (b) executed by each of the persons or entities described in paragraph E(1) above, with each signature duly notarized (to the extent required by Montana law), and (c) duly recorded in the Anaconda-Deer Lodge County real property records. Any modification, which complies with the foregoing requirements, shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Covenants. For purposes of these provisions, a modification of the Covenants may include (i) the imposition of covenants, or (ii) the termination of all or part of the existing Covenants.

F. THIRD PARTY BENEFICIARIES – EPA and the State shall be third party beneficiaries of the Covenants to the extent provided in the Covenants.

State of Montana,
County of Deer Lodge } SS
I hereby certify that the within instrument was filed for record in my office on the 7 day of June A.D. 2013 at 09 min. past 11 o'clock A m. and recorded on page _____ of Book _____ of _____ Records of Deer Lodge County Montana, fee $ 36.00
Dan Blacker County Recorder
By Jessica A. Billingsley Deputy

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ATTACHMENT "D"

NOTICE OF RESPONSE ACTION ACTIVITIES AND COVENANTS

NOTICE IS HEREBY GIVEN:

The undersigned, Michael T. Stokan the owner of that certain real property described as follows:

LEGAL DESCRIPTION:

Section 1, Township 4 North, Range 11 West
Lot No. 6 of "6 Lot Minor Subdivision"
Plat No. 179-A

Geocode: 30-1285-01-3-03-02-0000

Tax Parcel ID No. 317300

The undersigned have permitted the Atlantic Richfield Company or its designee to undertake and perform certain environmental response action activities on the real property which are more particularly described in Exhibit "1" hereto. In order to ensure that the response action is maintained, owner has agreed to perform and comply with the Monitoring and Maintenance Plan set forth in Exhibit "3", and any other necessary response action for future development on the real property.

The undersigned have also imposed the covenants described in Exhibit "2" hereto on the real property as covenants running with the land and have agreed to attach such covenants to any deed or other instrument conveying any right, title or interest to all or any portion of the real property.

Michael Stokan
Michael Stokan

State of Montana)
)ss:
County of Deer Lodge)

On this 10th day of September, 2003 before me, a Notary Public for the State of Montana, personally appeared Michael J. Stokan and _____ known to me to be the persons that executed the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal the day and year in this certificate first above written.

Robert Jordan
Notary Public for the State of Montana
Residing at Butte, MT
My Commission Expires: Aug. 8, 2005

ROBERT JORDAN NOTARIAL SEAL STATE OF MONTANA

EXHIBIT "1"

DESCRIPTION OF RESPONSE ACTION ACTIVITIES

Attach Response Action Work Plan, Attachment "B" from Landowner Agreement

ATTACHMENT "B"

RESPONSE ACTION WORK PLAN

Attach Response Action Work Plan

Anaconda Smelter NPL Site
Old Works/East Anaconda Development Area Operable Unit

Final

Old Works – Industrial Area (IA) Remedial Action Work Plan/Final Design Report (RAWP/FDR), Volume IV, Addendum D, Report III

Landowner Remedial Action Work Plan (LRAWP)
Stokan Parcel *(Lot No. 6 of 6 Lot Minor Subdivision; Plat No.179-A)*

Prepared for:

Atlantic Richfield Company
307 East Park St., Suite 400
Anaconda, Montana 59711

Prepared by:

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1.0 INTRODUCTION

1.1 Purpose and Scope

This Landowner Remedial Action Work Plan (LRAWP) for the Old Works/East Anaconda Development Area (OW/EADA) Operable Unit (OU) Industrial Area (IA) evaluates current and anticipated future commercial/industrial properties within the OW/EADA OU. The following tasks were to be completed for non-characterized commercial/industrial areas:

- Evaluation of existing data;
- Visual observations;
- Additional data collection; and
- Discussion and work plan development with affected landowners or written documentation from the U.S. Environmental Protection Agency (EPA) that the landowner's property is below the level of concern for the specified land use.

This LRAWP describes the procedures to be used to assure that the remedy meets the performance standards during construction and is in compliance with OW/EADA OU Unilateral Administrative Order (UAO) EPA Docket No. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) VIII-94-08. This LRAWP also summarizes the Remedial Action (RA) objectives, reviews current and previous investigations, and summarizes results of the above tasks for the Stokan Parcel.

Several current and future (some properties not developed) commercial and open space properties exist within the OW/EADA OU. This LRAWP is limited to the Stokan Parcel currently under Michael Stokan's ownership within the boundaries of the OW/EADA OU IA (Figure 1). The final design for IA as described in the *Final Old Works –Industrial Area Remedial Action Work Plan/Final Design Report (RAWP/FDR) Volume IV Addendum D, Report I – Industrial Area* (Atlantic Richfield Company, 2002) has been provided to and approved by the EPA in consultation with the Montana Department of Environmental Quality (DEQ). This LRAWP is based upon the approved *IA RAWP/FDR Volume IV, Addendum D, Report I - IA* (Atlantic Richfield Company, 2002).

All RA construction activities within the OW/EADA OU will be performed in accordance with the applicable historic preservation, site-specific health and safety plan (SSHSP), and environmental monitoring requirements.

2.0 REMEDIAL ACTION OBJECTIVES & REQUIREMENTS

The objective of the OW/EADA remedy, as outlined in the *Record of Decision* (ROD) (EPA, 1994), specifically for the OW/EADA IA, is to achieve the following:

- *"Reduction of risk to human health through:*
  - *Reduction of surface soil arsenic concentrations to acceptable levels, and*
  - *Prevention of direct human contact with waste materials exceeding unacceptable levels.*
- *Reduction of risk to the environment through:*
  - *Minimization of infiltration and deep percolation of metal-laden pore water to ground water, and*
  - *Minimization of erosion and metal loading via transport of waste and contaminated soil to Warm Springs Creek.*
- *Preservation, to the extent practical, of historic features at the site."*

Major components of the IA remedy include the following requirements (ROD) (EPA, 1994):

- *"Construct engineered covers over waste materials in recreational and potential commercial/industrial areas exceeding arsenic levels of 1,000 parts per million (ppm);*
- *Cover or treat soils exceeding arsenic levels of 500 ppm in current commercial/industrial areas;*
- *Provide for future remediation of potential residential or commercial/industrial areas, at the time of development, to the appropriate arsenic action levels through the Anaconda-Deer Lodge County (ADL) Development Permit System (DPS);*
- *Construct surface controls to manage surface water runoff from Stuckey Ridge, Smelter Hill, and throughout the site to minimize discharge into Warm Springs Creek;*
- *Implement institutional controls to protect the above engineering controls and manage future land and water use;*

3.0 SITE CHARACTERIZATION

3.1 Previous OW/EADA OU Investigations

Several investigations have been completed at the OW/EADA OU. Previous investigations include the *Old Works Engineering Evaluation/Cost Analysis (EE/CA)* (PTI, 1989); the *OW/EADA Remedial Investigation/Feasibility Study (RI/FS)* (ARCO, 1993); the *OW/EADA Remedial Design/Remedial Action (RD/RA) Data Summary Report (DSR)* (ARCO, 1995); and the *Industrial Area-Subarea 3/Data Summary Report (IA/DSR)* (AERL, 1999). In addition, several field visits, additional data collection, and observation of the extent of waste material to the proximity of commercial/industrial properties have also been made in this area. This LRAWP will only discuss the investigation results within the areas specified in Figure 1.

3.1.1 OW/EADA Industrial Area

The *OW/EADA RI/FS* (ARCO, 1993) generally indicates that soils within the OW/EADA Industrial Area contain elevated levels of arsenic and other metals and that the elevated levels of arsenic and other metals are primarily contained within the top two inches of the surface. Subsurface soils (2-24 inches) show a significant decrease of all metals as compared to surface soils. The geometric mean for arsenic in the surface soils range from 678 ppm to 82 ppm, with the lower values coming from areas previously reclaimed in Subarea 5 (East Anaconda Yards).

Additional investigations were conducted within the OW/EADA IA in 1994 through 2001 under the OW/EADA Remedial Design (RD)/RA, to verify the extent of waste materials and to delineate areas exceeding the current land use action levels. Results of these investigations were provided in the *OW/EADA RD/RA DSR* (ARCO, 1995) and the *OW/EADA IA DSR* (AERL, 2001).

3.1.2 Stokan Parcel

The Stokan Parcel (Lot 6 of Minor Subdivision; Plat No.179-A) is located south of the Arbiter frontage road as shown on Figure 1. The property encompasses approximately 3.0 acres and is currently used to store used smelter equipment and over the road tractor-trailers. The equipment has been placed around the perimeter of the site. Two commercial/industrial buildings are located on the property and are serviced by overhead power, underground sewer, and a well. An unoccupied trailer is currently located west of the buildings, which the landowner plans to move off site in the near future. Sampling investigations have been performed on the site in order to characterize the presence and extent of waste materials and are described in the following sections (Figure 2).

The Stokan Parcel was identified as having arsenic concentrations over the commercial/industrial land use action level of 500 ppm arsenic under these investigations. Figure 2 shows the Stokan Parcel sampling locations and Table 1 shows results of sampling.

TABLE 1 – SOIL SAMPLING DATA

ID	DEPTH	ARSENIC (mg/kg)
A-14	0-2"	705.0
A-15	0-2"	550.0
OWIA0008027-001	0-7"	1070.0
OWIA0008027-002	7-19"	44.8
OWIA0008027-003	19-32"	39.5
OWIA0008028-001	0-2"	697.0
OWIA0008028-002	2-12"	58.2
OWIA0008028-003	12-36"	30.7
OWIA0008029-001	0-2"	442.0
OWIA0008029-002	2-10"	69.6
OWIA0008029-003	10-48"	9.4
OWIA0008030-001	0-1"	464.0
OWIA0008030-002	1-36"	2540.0
OWIA0008030-003	36-51"	1050.0
OWIA0008030-004	0-1"	455.0
OWIA0008031-001	0-2"	No Visual Waste
OWIA0008031-002	2-46"	Visual Waste
OWIA0008031-001	46-81"	Visual Waste

(mg/kg) – milligrams/kilogram

One of the test pits sampled under the OW/EADA RD/RA was found to have visual waste material present at depths to 81 inches. The depth limits of visual waste material were not reached during excavation of the test pit; therefore, it is likely that waste is present at depths exceeding 81 inches within the Stokan Parcel.

One well currently exists on the Stokan Parcel and groundwater extracted from the well was sampled by the Agencies in April 1998. The sample met Drinking Water Standards, as outlined in the *Anaconda Regional Water Waste & Soils (ARWW&S) ROD* (EPA, 1998) and is summarized in Table 2.

TABLE 2 – GROUND WATER SAMPLING DATA

Sample ID	Arsenic (mg/l)	Cadmium (mg/l)	Copper (mg/l)	Lead (mg/l)	Zinc (mg/l)
100626	0.002	< 0.0002	0.648	0.01	0.125
100627	0.002	< 0.0002	0.008	< 0.001	0.031

(mg/l) – milligrams/liter

4.0 SELECTED REMEDIAL ACTION

The area of the Stokan Parcel that requires RA under this LRAWP is shown in Figure 1. All future actions will be implemented through the Anaconda-Deer Lodge County (ADLC) Development Permit System (DPS) (ADLC, 1992). Based on a review of the data and the Anaconda Regional Water, Waste & Soils OU Record if Decision (EPA 1998), this property is situated on a source of waste material that has been determined to be waste-left in place (WLIP). The Atlantic Richfield Company and EPA reviewed and evaluated several RA alternatives for the property as described in the *IA RAWP/FDR Volume IV, Addendum D, Report I - IA* (Atlantic Richfield Company, 2002) and are outlined in the following sections.

The preferred design for waste materials within a WLIP is an Engineered Cover. The remedial requirements of the Engineered Cover design for this property include: 1) providing an effective barrier to human contact; 2) minimizing erosion; 3) minimizing infiltration; and 4) being compatible/durable for the anticipated land uses.

4.1 Engineered Cover

In order to meet the remedial requirements, a six-inch Type B1 gravel cover will be placed over the existing subgrade of the entire Stokan Parcel. The Type B1 gravel cover will consist of a one-inch minus road mix material and will be compacted to provide a durable working surface for the anticipated future land use. The six-inch gravel cover has been designed to provide a permanent commercial/industrial cover over the property and will: 1) prevent direct human contact with waste materials exceeding unacceptable arsenic concentrations; 2) minimize infiltration to underlying waste materials; and 3) provide a durable working surface for the anticipated land use. The effectiveness of the compacted Type B1 gravel cover to reduce infiltration is largely dependent the property's ability to drain storm water. Low spots that may create areas of ponding water (infiltration) during a storm event will be filled and/or graded to promote drainage prior to the installation of the Type B1 gravel cover.

4.2 Storm Water Controls

Grading will be completed to enhance the existing contours shown on Figure 2 to promote surface water drainage across the Stokan Parcel to the southeast into the existing ditch along the east property boundary, which was constructed during the 1996 RA [(described in the RAWP/FDR Volume III – Addendum C (ESA, 1996)]. The Stokan Parcel is not within the 100-year flood plain of Warm Springs Creek; therefore, no potentially harmful effects from a flood event are anticipated.

Storm water flows, including runoff from the McDowell Parcel, should be adequately conveyed over the existing 1-2% slope of the property into the existing ditch to the southeast. Efforts will be made during the installation of the Type B1 gravel cover to maintain and enhance the existing storm water drainage pattern on the property. It should be noted that the Type B1 gravel cover is intended to reduce infiltration and slightly more storm water may be experienced over the property during a given storm event. However, due to the relatively small size of the property, the increased flows caused by the Type B1 gravel cover are expected to be minimal.

4.3 Ground Water

A well is currently in place on the Stokan Parcel. A water sample was collected from the well by the Agencies in April 1998. The sample was analyzed for arsenic, cadmium, copper, lead and zinc and met federal drinking water standards. The well was re-sampled in June 2003, and sample results (Table 2) are below drinking water standards outlined in the *Anaconda Regional Water Waste & Soils (ARWW&S) Operable Unit (OU) Record of Decision ROD* (EPA, 1998). The existing Stokan well will be monitored consistent with the *Anaconda Regional Water Waste & Soils (ARWW&S) Short–Term Ground Water Monitoring Sampling and Analysis Plan* (AERL, 2000) until approval of the Final ARWW&S Long–Term Ground Water Monitoring Plan (LTGWMP) and at such time to be monitored under the LTGWMP, as appropriate.

It is anticipated that the implementation of contingent remedies based upon the results of regulatorally complete domestic well monitoring will occur if water quality standards exceedances are detected and verified. If a regulatorally complete domestic well monitoring result exceeds water quality standards, the specific sample will be re-analyzed by the laboratory to verify accuracy. If an exceedance is verified, bottle water will be immediately provided to the specific premises. The potable well will be resampled to confirm a water quality standard exceedance. If an exceedance is confirmed, a Domestic Well Contingent Remedy Plan will be prepared. Alternatives that may be evaluated in the Domestic Contingent Remedy Plan include the following:

1. Installing a Reverse Osmosis System (ROS);
2. Drilling the regulatory complete potable well deeper;
3. Continuing bottle water provisions; or
4. Connecting the user to a municipal water supply.

Because the Stokan well is located within a WLIP and the proximity of the well to a municipal water supply. The contingent remedy for the Stokan Parcel will include connecting the user to the municipal water supply for potable water purposes and deed restrictions limiting the existing well usage to commercial/industrial purposes only.

5.0 REMEDIAL ACTION IMPLEMENTATION

Implementation of the RA involves the initial corresponding site grading and construction of the Type B1 gravel cover. The details and responsibilities associated with each of these tasks are outlined in the following sections.

5.1 Construction

Construction of the Type B1 gravel cover and corresponding site grading work will be the responsibility of Atlantic Richfield Company and its contractors. Work will be performed accordance with the *IA RAWP/FDR Volume IV, Addendum D, Report I - IA* (Atlantic Richfield Company, 2002) Technical Specifications provided in Appendix A. Prior to construction, the property owner will be responsible for moving all equipment, materials, or movable structures except salvaged smelting equipment (ladles) and the trailer in order to facilitate construction of the Type B1 gravel cover. Approximately 2,400 cubic yards (cy) of Type B1 gravel material will be hauled to the property to construct the Type B1 cover. The smelting equipment in the

southeast corner of the site will remain in place until disposed of by the landowner. The trailer located west of the shop will be moved by the landowner at some time after construction of the cover. An additional 270 cy of material will be hauled to the property and stockpiled for the smelting equipment area, trailer area (150 cy) and future maintenance of the cover (120 cy), which is discussed in Section 6.1. Excess spoils material, if any, as a result of grading operations, will be transported to the ADLC Waste Repository (B2.12 Sub-Cell/Opportunity Ponds) by Atlantic Richfield Company and its contractors.

5.1.1 Air Monitoring

Based on local experience and data collected at other sites in the area as well as within the OW/EADA OU site boundary, exposure levels to contaminants of concern (COCs) during construction will be significantly below any health-based action levels. Personnel air monitoring is the responsibility of individual Atlantic Richfield Company contractors. Site and perimeter air monitoring may be periodically conducted during construction by Atlantic Richfield Company using Mini Ram to confirm the adequacy of dust control measures.

5.1.2 Dust Control

Fugitive dust emissions will be controlled during RA construction activities. If the air emissions from RA construction exceed performance standards, operations will cease or be modified until dust control measures are implemented that achieve compliance with these limits. Dust control measures will consist of application of water or water with a wetting agent additive to be applied during RA.

5.1.3 Reporting and Record Keeping

In accordance to the *OW/EADA RAWP/FDR Volume I* (ARCO, 1994), the contractor shall record on a daily basis the following information:

1. Accidents;
2. Product delivery and usage;
3. Quality Assurance/Quality Control (QA/QC) on required products; and
4. Laboratory analytical tests performed and results.

The QA/QC Oversight Engineer shall record on a daily basis the following information:

1. Field observations; and
2. Geotechnical and geochemical test frequencies and results.

The Atlantic Richfield Company will submit a monthly report of construction activities during performance of the RA.

At completion of all OW/EADA RA activities, a Remedial Action Completion Report (RACR) will be submitted to the Agencies and landowner as outlined in the UAO.

5.1.4 Schedule

Remedial action activities associated with the performance of this LRAWP may commence as early as summer 2003 pending Agency and landowner agreement with the LRAWP.

6.0 POST-REMEDIAL ACTION

Post RA involves the maintenance of storm water controls and the cover. A summary of the post-remedial action tasks and responsibilities associated with each is outlined in the following sections. It is anticipated that post-remedial action maintenance are consistent with and will be conducted in accordance with the Engineered Controls Inspection and Maintenance (I&M) Plan currently being developed under the ARWW&S OU and will be attached to the ARWW&S OU Site-Wide Monitoring & Maintenance (M&M) Plan.

6.1 Property Maintenance

Upon completion of RA construction activities by Atlantic Richfield and its Contractors, it is the responsibility of Atlantic Richfield to ensure that maintenance activities are implemented in accordance with approved plans. Through a Landowner Agreement between Atlantic Richfield and the Landowner, the Landowner will be responsible for the Type B1 cover in good conditions, in accordance with the approved maintenance plan, so as to minimize erosion or degradation of the cover.
The Type B1 gravel cover must be inspected semi annually and any damage or noticeable thin areas repaired by the landowner. Covered areas disturbed by excavation to install utilities, etc. must have a minimum of 6 inches of compacted gravel. The Atlantic Richfield Company is responsible for providing materials for maintenance. The Type B1 material was processed for the Old Works Industrial Area remedial action. The material is designed to bind in a tight matrix to minimize infiltration. This material is different than standard road mix or base coarse material, which is designed to allow water to drain through the material. To help facilitate future cap maintenance, 120 cubic yards of gravel material will be available to the landowner and stockpiled at an on-site location following construction. This amount of material makes up 5% of the total Type B1 cover volume and has been considered to be an adequate amount for general maintenance purposes. The Atlantic Richfield Company is responsible for providing additional material in the future, if necessary. This material will be used by the landowners to repair damages to the Type B1 cover where: 1) the cover wears to a depth less than six inches; 2) the cover has become loose or unsealed on the surface; or 3) depressions have developed in the cover creating areas of ponded water. Any thin patches made in the Type B1 cover should be sufficiently compacted under normal vehicle traffic. Waste material encountered during maintenance activities will be disposed of by the landowner and/or developer in the ADLC Waste Repository (B2.12 Sub-Cell/Opportunity Ponds).

6.2 Property Development

Future development of the property must comply with the ADLC DPS (ADLC, 1992) and other applicable federal, state, and local laws is the responsibility of the landowner/developer and/or subsequent landowners, as well as ADLC, in implementing and enforcing the ADLC DPS (ADLC, 1992). The developer/landowner of WLIP properties is or shall be required to: (a)

maintain or develop the property consistent with the approved land use, (b) develop the property in a protective manner, (c) maintain the property and structures intended for development, and (d) not interfere with Superfund structures associated with the remedy and associated maintenance. Some of these properties have the potential for redevelopment, which development will be required to be consistent with certain restrictions, such as that the cover remain protective (or wastes removed) for the new land use. The developer/landowner, prior to development, must apply for a building permit in accordance with the Anaconda-Deer Lodge County (ADLC) Development Permit System and allow for property inspection by the ADLC building inspector. EPA approved landowner agreements or private party agreements with the developer/landowner will be used to implement final remediation, restrictive covenants, access, and maintenance of the remedy development. This will ensure that the development occurs in a manner that is protective of human health and the environment. The RA has been designed to meet objectives for industrial or commercial land use; therefore, the land use is expected to continue as such. Anaconda-Deer Lodge County has implemented the ADLC DPS (ADLC, 1992) that sets forth certain requirements for the development of property throughout the County and multiple development districts including, the Superfund Planning Area Overlay District (SPAOD). The Stokan Parcel is within the SPAOD and should the current use of the property change from industrial or future development occur, the landowner is responsible for complying with the provisions of any local, state, or federal requirements. This includes the requirement to sample, properly handle, and address any soils that exceed certain levels. Waste material encountered during any future construction will be disposed of by the landowner and/or developer in the ADLC Waste Repository (B2.12 Sub-Cell/Opportunity Ponds).

7.0 REFERENCES

ADLC, 1992. Anaconda-Deer Lodge County Development Permit System. Anaconda, Montana. Adopted September 02, 1992.

AERL, 2001. Anaconda Smelter NPL Site, Old Works/East Anaconda Development Area Operable Unit. Industrial Area Remedial Design Unit. Industrial Area – Subarea 3 Data Summary Report. Addendum #3. September 2001.

AERL, 2000. Anaconda Smelter NPL Site, Anaconda Regional Water, Waste and Soils Operable Unit, Short-Term Ground Water Monitoring Sampling and Analysis Plan.

ARCO, 1995. Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit. Data Summary Report. ARCO, Anaconda, Montana.

ARCO, 1994. Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit. Remedial Action Work Plan/Final Design Report, Volume I. August 1994.

ARCO, 1993. Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit. Remedial Investigation/Feasibility Study. ARCO, Anaconda, Montana.

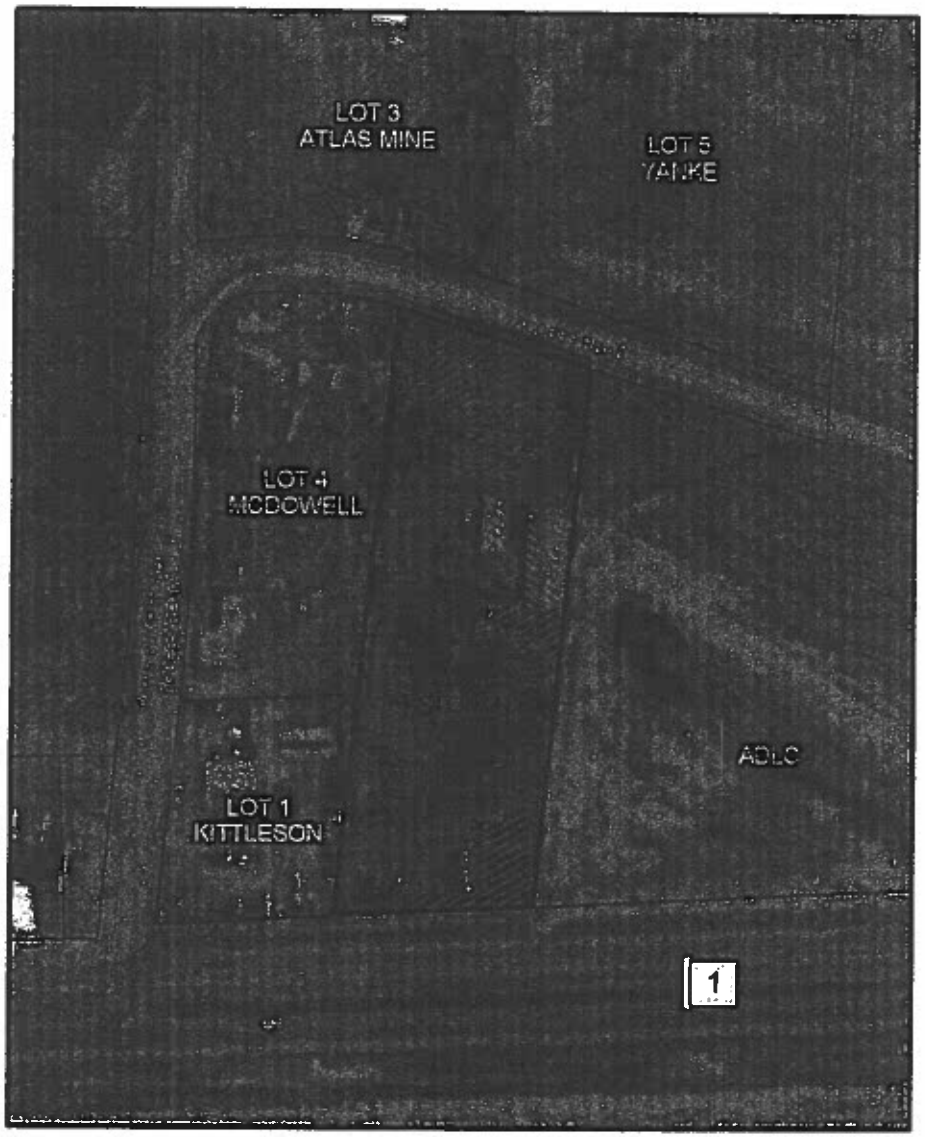
Atlantic Richfield Company, 2002. Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit. Industrial Area Remedial Action Work Plan/Final Design Report, Volume IV, Addendum D, Report I – Industrial Area. August 2002.

EPA, 1998. Record of Decision, Anaconda Smelter NPL Site, Anaconda Regional Water, Waste and Soils Operable Unit, Anaconda, Montana.

EPA, 1994. Record of Decision, Anaconda Smelter NPL Site, Old Works/East Anaconda Development Area Operable Unit. Anaconda, Montana.

ESA Consultants Inc., 1996. Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit. Remedial Action Work Plan/Final Design Report, Volume III – Addendum C. September 1996.

PTI, 1989. Accelerated Removals Engineering Evaluation/Cost Analysis Remedial Action Work Plan. Anaconda Smelter Site. PTI Environmental Services, Bellevue, Washington.



Stokan Property
Lot Lines
Building
Equipment To Be Moved
Roads

Total Area\Acres	131912 sq.ft. / 3.0 ac.
Structures	5769 sq.ft. / 0.1 ac.
Equipment To Be Moved	28463 sq.ft. / 0.7 ac.
Open Area	97679 sq.ft. / 2.3ac.

Table 1.1 - Area Summary

Placed Material	2336 cu/yrds
Stockpiled Material	120 cu/yrds - (5%)

Table 1.2 - Approx. Materials Quantity

Notes:
1.) For legal description of this property, reference COS #179-A Lot 6.

2.) Material placed quantity includes areas where land owner must remove equipment.

3.) Ownership boundaries DO NOT represent a legal survey. They are intended for reference only. DJ&A & ARCO assume no responsibility for the accuracy of these boundaries.

4.) Map data compiled by DJ&A from the ARCO GIS database. The user of this data assumes responsibility to verify usability for their purposes.

PROJECTION.....Montana State Plane
DATUM.....NAD83
ZONE.....Montana 2500
UNITS.....FEET

N
W E
S

200 0 200 Feet

REV#	BY	DATE	FILE	REVISION DESCRIPTION
0	MBM	09-Nov-2010	04_STOKAN.dwg	Data was moved to ARLU polygons

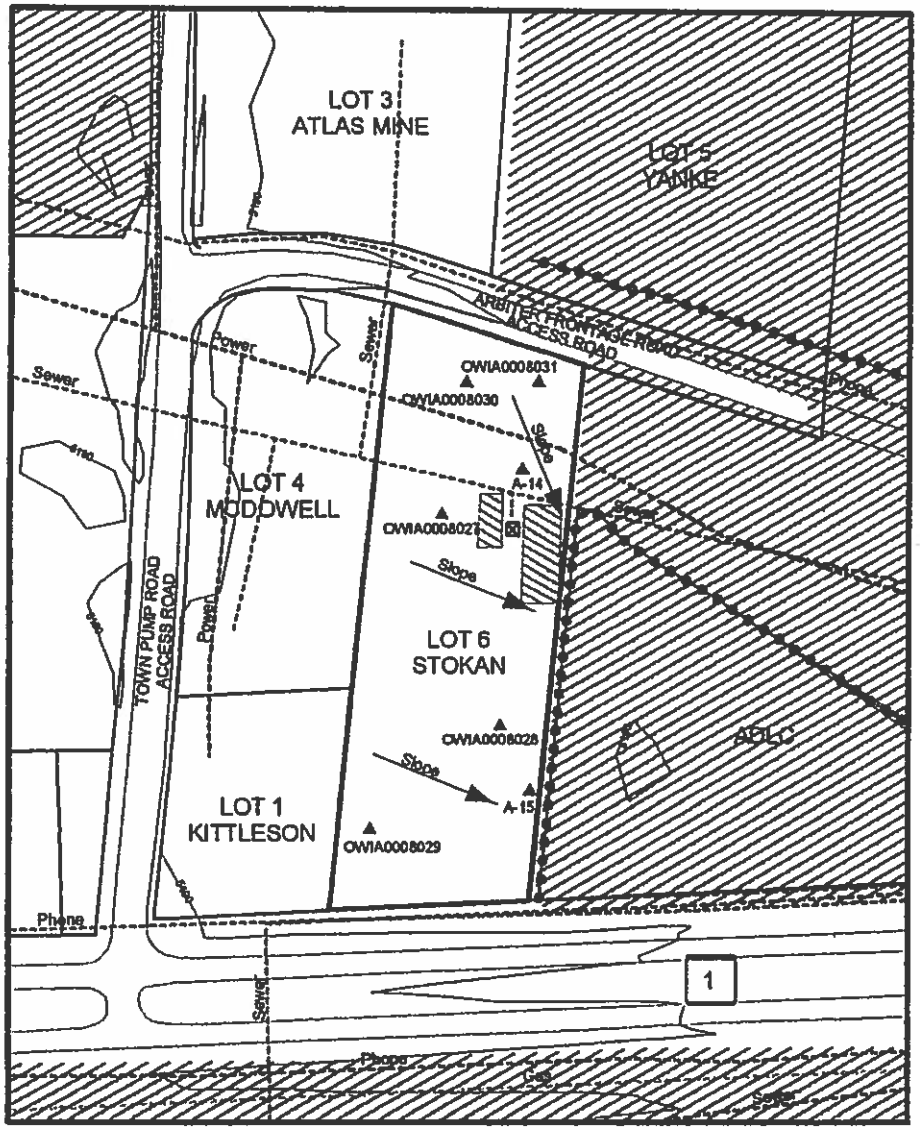
PREPARED FOR:
Atlantic Richfield Company
A BP affiliated company

BY:
DJ&A P.C.

STOKAN SITE PLAN
OW/EADA OPERABLE UNIT
ANACONDA, MONTANA

FIGURE
1

BOOK 317 PAGE 103



Stokan Property
Lot Lines
Previously Reclaimed
Existing Buildings
Sample Point
Well
Existing Storm Ditch
Flow Direction
Roads
Contours (10' Intervals)

Notes:
1.) For legal description of this property, reference COS #179-A Lot 6.

2.) Contractor is responsible for locating additional utilities.

3.) Ownership boundaries DO NOT represent a legal survey. They are intended for reference only. DJMA & ARCO assume no responsibility for the accuracy of these boundaries.

4.) Map data compiled by DJMA from the ARCO GIS database. The user of this data assumes responsibility to verify usability for their purposes.

N
W E
S

200 0 200 Feet

REV#	BY	DATE	FILE	REVISION DESCRIPTION
0	MSM	17-JAN-2003	RA_STOKAN2.gif	Data data added to ARLU polygons
1	MSM	23-APR-2003	RA_STOKAN2.gif	Additional sample locations
2	MSM	03-Jun-2003	RA_STOKAN2.gif	Additional sample locations

PREPARED FOR:
Atlantic Richfield Company
A BP affiliated company

BY: DJMA P.C.

STOKAN LANDOWNER REMEDIAL ACTION WORK PLAN
OW/EADA OPERABLE UNIT
ANACONDA, MONTANA

FIGURE
2

BOOK 317 PAGE 10

Signature Page

Approved by: _____ 9/10/03
Landowner Date

Approved by: _____ 9/10/03
Remedial Project Manager Date
Atlantic Richfield Company

EXHIBIT "2"

COVENANTS

Attach covenants from Attachment "C" of Landowner Agreement

ATTACHMENT "C"

COVENANTS

A. CREATION OF COVENANTS. The following covenants (the "Covenants") shall burden the Property (described on Attachment "A") and are intended to be and shall be construed as covenants of Property Owner and its successors in interest, assigns and transferees.

1. Covenants.

(a) Development of Property. Except as provided in Paragraph 1(h) below, the Property Owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates (i) the implementation, effectiveness, purposes, integrity, of any prior, current or future remedial action, response action or monitoring and maintenance activities (M&M) of the response action required under any applicable laws or by any federal, state or local governmental entity, or (ii) any other actions that the Environmental Protection Agency ("EPA"), the State of Montana ("State") or Atlantic Richfield Company ("Atlantic Richfield") deems necessary or advisable to address environmental conditions on or related to the Property;

(b) Applicable Laws. The Property shall be maintained in accordance with and in a manner consistent with the requirements of the response action and any applicable judgments, federal, state or local laws, rules, regulations, orders, decrees, or other governmental enforcement actions relating to environmental conditions on the Property;

(c) Fencing. Any existing fencing or any additional fencing erected as part of the response action activities shall be maintained by the Property Owner in good condition and repair;

(d) Structures. The Property Owner shall maintain any existing drainage control structures in good condition and free of debris or other material. The Property Owner shall maintain all existing and future response action structures, including, but not limited to, Engineered Cover in good condition and repair so as to remain functional at all times;

(e) Noxious Weeds. The Property Owner shall take such steps as may be reasonably necessary to control noxious or other weeds on the Property in accordance with applicable laws;

(f) Monitoring and Maintenance Plan and Activities. The Property Owner shall comply with and implement the Monitoring and Maintenance Plan ("M&M Plan") for the Property as provided in Exhibit "3", or any part thereof. All monitoring and maintenance activities and any associated costs or expenses resulting from construction or development on the Property by the Property Owner will be the sole responsibility of the Property Owner; and

(g) Residential Use or Development. The use or development of the Property for residential purposes is prohibited, unless the Property Owner complies with the provisions of Paragraph 1(h) below (relating to future development of the Property).

(h) Future Development. The Property owner shall be solely responsible for any additional response action which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional response action which may be necessary to accommodate Future Development" shall mean any and all Response Action beyond that which Atlantic Richfield is required to implement at the Anaconda Smelter Site under any Administrative Order or Consent Decree in the absence of Future Development. Any such additional response action must be undertaken in accordance with and in a manner consistent with the requirements of the Anaconda-Deer Lodge Development Permit System, environmental laws and other applicable laws. Further, prior to implementation of any additional response action(s) the Property Owner must obtain the written approval of Atlantic Richfield and EPA of the work plan for such action(s).

(i) Water Well. The Property Owner agrees to grant Atlantic Richfield access to monitor the existing potable water well located on the attached map ("Exhibit 1"). If at any time the water does not meet applicable drinking water standards, Property Owner agrees to cease using the well for potable purposes. In this event, Property Owner agrees to allow Atlantic Richfield to construct a hook-up of the Property's existing water supply system to the municipal water supply. In addition, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including without limitation EPA and the State)) shall be prohibited.

2. Access. The Property Owner shall grant access to the Property at all reasonable times to Atlantic Richfield, EPA, the State and their respective agents, employees, representatives and contractors for the purpose of (a) monitoring Property Owner's compliance with the Covenants set forth in paragraph 1 above, (b) conducting any investigation, monitoring, maintenance, sampling or other activities with respect to the Property, or (c) any response activities or remedial action that Atlantic Richfield, EPA or the State deems necessary or advisable with respect to the Property to address environmental conditions thereon. The Property Owner also may grant access to any other persons or entities for any of the foregoing purposes.

3. Release and Covenant Not to Sue. Owner, for itself and its successors, assigns and transferees, hereby fully and irrevocably releases and covenants not to sue Atlantic Richfield, and their respective subsidiaries, affiliates, officers, directors, agents representatives, contractors, insurers, employees, successors and assigns for any of the following:

(a) Any private cost recovery suit, contribution action, or any other action under environmental laws or the common law arising out of or related to: (i) any environmental conditions on, about, beneath, from or related to the Property; (ii) implementation of any Response Action, Monitoring & Maintenance ("M&M"), and/or institutional controls required under the applicable Record of Decision(s), other applicable government orders or any

requirements of the applicable regulatory or permitting authority related to the environmental conditions on, about, beneath or related to the Property; and

(b) Any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to the following: (i) the use, operation, development or disposition of the Property, (ii) any errors, omissions or misstatements in any information provided or disclosed to Owner by Atlantic Richfield relating to the Property, or (iii) the presence of hazardous materials on, at, under, near or associated with the Property.

4. Notice of Transfer. At least thirty (30) days prior to the sale, transfer, exchange or other disposition of all or any part of the Property (a "Transfer"), the Property Owner shall notify Atlantic Richfield or its designee in writing of (i) the proposed date of transfer, (ii) the name and address of the transferee, (iii) the form of transfer (i.e., sale, exchange or other disposition), (iv) the legal description of Property, (v) the property tax parcel identification number, and (vi) the geocode identification number.

B. BENEFITTED PROPERTIES - BENEFITS. The benefits from the Covenants include: (i) the reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property, and (ii) the maintenance and use of the Property in a manner to allow economic benefits to accrue to adjacent property owners and other property owners in Anaconda-Deer Lodge County, while protecting human health and the environment.

C. ENFORCEMENT RIGHTS - COVENANTS.

1. General . The Property Owner hereby agrees that each Covenant set forth above is intended to and shall be a Covenant running with the land, binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all successors in interest, assigns and transferees of Owner.

2. Enforcement of Covenants. Atlantic Richfield, EPA and MDEQ shall have the right, but not the obligation, to enforce the Covenants. Each Covenant shall be enforceable, in perpetuity, to the fullest extent permitted by Montana Law.

3. Enforcement of Obligations. The obligations set forth in the M&M Plan may be enforced by Atlantic Richfield, EPA, MDEQ or its designee.

4. Specific Performance. The Property Owner hereby specifically agrees that in addition to all other remedies available under this Agreement, at law or in equity, the remedy of "specific performance" shall be available to any party entitled to enforce the Covenants and the M&M Obligations. The Property Owner hereby waives, to the fullest extent permitted by Montana law, any rights it may have to argue that specific performance is an inappropriate remedy.

D. CONVEYANCE/SUBSEQUENT OWNERS

1. Transfer of Property. Any person or entity who acquires any right, title or interest in any portion of the Property shall be conclusively deemed to have consented and agreed to every Covenant contained herein and agreed to perform monitoring and maintenance on the property and comply with the M&M Plan, whether or not any reference to the Landowner Agreement, these Covenants or the M&M Plan is contained in the instruments by which such person or entity acquires an interest in the Property.

2. Provisions of Subsequent Conveyance Instruments. Owner hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation grant of an easement burdening the Property or grant of a lease of all or any part of the Property), the Owner shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Landowner Agreement and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the covenants set forth in that certain _____ Deed dated _____, and recorded on _____ in Book _____, at Page ____ of the Anaconda-Deer Lodge County real property records (the "Covenant Deed"), (ii) abide by and enforce the covenants as owner of the Property, and (iii) be bound by the release, covenant not to sue provisions of the Covenant Deed as if the Grantee hereunder were the grantee under the Covenant Deed.
>
> Owner hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute the deed or conveyance instrument which contains the agreement set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

E. MODIFICATION OF COVENANTS. The Covenants may be modified as follows:

1. Required Approvals. Any proposed modifications must be approved in writing executed by: (i) Atlantic Richfield or its designee, and (ii) the owner of the parcel burdened by the Covenant to be modified. Such written approval may be evidenced by execution of a written instrument created to amend the Covenants.

2. Recordation of Modification. In order to be effective, any modification of the Covenants must be (a) in writing, (b) executed by each of the persons or entities described in paragraph E (1) above, with each signature duly notarized (to the extent required by Montana law), and (c) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Covenants. For purposes of these provisions, a modification of the Covenants may include (i) the imposition of new covenants, or (ii) the termination of all or part of the existing Covenants.

F. THIRD PARTY BENEFICIARIES – EPA and MDEQ shall be third party beneficiaries of this Agreement to the extent provided in this Agreement.

EXHIBIT "3"

MONITORING AND MAINTENANCE PLAN

Property Maintenance

The response action for the Property involves the construction of a cover and site grading. Upon completion of response action construction activities by the Atlantic Richfield Company and its Contractors, Owner shall be responsible for monitoring and maintaining the gravel cover so as to minimize erosion or degradation Engineered Cover. Owner shall inspect the gravel cover semi annually and repair any damage or noticeably thin areas. Landowner shall repair any area of the cover disturbed by excavation as a result of the installation of utilities, for example. The disturbed area shall be repaired with the placement gravel material to provide of a minimum of 6 inches of compacted gravel.

To facilitate this cap maintenance, Atlantic Richfield shall stockpile on-site 120 cubic yards of gravel material for Owner to use in repair and maintenance of the cover. Owner shall use the stockpiled material solely to repair damage to the cover where: 1) the cover is less than six inches in depth; 2) the cover has become loose or unsealed on the surface; or 3) depressions have developed in the cover creating areas of ponded water. Any repaired thin patches in the cover should be sufficiently compacted under normal vehicle traffic.

Monitoring and maintenance of the existing ditch along the east property boundary will be the responsibility of Atlantic Richfield Company. Surface water drainage across the Property to the southeast into the existing ditch along the east property boundary is the responsibility of the landowner.

Owner shall dispose of any waste material encountered during future construction/development or maintenance activities in the Anaconda-Deer Lodge Waste Repository located in the B2.12 Sub-Cell of the Opportunity Ponds.

State of Montana.
County of Deer Lodge } SS
I hereby certify that the within instrument was filed for record in my office on the 7 day of June A.D. 2013 at 13 min. past 11 o'clock A m. and recorded on page _____ of Book _____ of _____ Records of Deer Lodge County Montana, fee $ 19.00
_____ County Recorder
By _____ Deputy

A:\stokan landowner agreement (3) MMP comments CLEAN1.DOC

191416

196762 BOOK: 335 RECORDS PAGE: 406 Pages: 9
STATE OF MONTANA ANACONDA-DEER LODGE COUNT
RECORDED: 12/21/2015 10:45 KOI: SW DEED
Joey Blodnick CLERK AND RECORDER
FEE: $73.00 BY: Jessica R. Gillespie Deputy
TO: ATLANTIC RICHFIELD COMPANY ATTN: ROB JOHNSON, 317 ANACONDA

After Recording, Return to:
Atlantic Richfield Company
317 Anaconda Road
Butte, Montana 59701
Attn: Rob Jordan

SPECIAL WARRANTY DEED

THIS DEED is made this 15th day of December, 2015, between Atlantic Richfield Company, a Delaware corporation ("Grantor"), duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701 and ARCO Environmental Remediation, L.L.C., a Delaware limited liability company ("Grantee"), duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701.

I. CONVEYANCE

Grantor, for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, by these presents does grant, bargain, sell and convey unto Grantee, its successors and assigns forever, all of Grantor's right, title and interest in the following described real property located in Township 5 North, Range 10 West, P.M.M., Deer Lodge County, Montana, to-wit ("Property"):

Tract A of Certificate of Survey No. 361-B, a tract of land located in the following sections:

Section 10, Section 11, Section 14, Section 15, Section 16, Section 20, Section 21, Section 22, Section 23, Section 26, Section 28 and Section 33.

Excluding Portions C, D and E of Certificate of Survey 420-A

Tax Parcel ID. No.: 507900

together with all right, title and interest of the Grantor in and to (i) all improvements and fixtures on the Property as of the date hereof (including, without limitation, existing barns, corrals, fences and related improvements and fixtures), (ii) all veins, lodes or mineral deposits (including without limitation hardrock minerals, coal, oil, gas, sand and gravel or other similar substances) underneath, extending into or contained in the Property, and the right to mine such interest in the same, (iii) all rights-of-way or easements of every kind and character appurtenant to, or for the benefit of the Property, or any part thereof, or owned or used in connection therewith and the right to use same, (iv) any adjoining or adjacent streets, roads, or rights-of-way and vacated alleys appurtenant to the Property, and (v) all and singular the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature. The foregoing grant, sale and conveyance of the Property shall be deemed to include the warranties set forth in Mont. Code Ann. § 70-20-304.

All improvements and fixtures on the Property are conveyed in their "AS IS" and "WHERE IS" condition. Grantor makes no representations or warranties of any nature concerning the physical condition of the improvements and fixtures.

4.2 Provisions of Subsequent Conveyance Instruments. Grantee hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation any grant of an easement burdening the Property or any grant of a lease of all or any part of the Property), the Grantee shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Deed and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the Covenants set forth in that certain Special Warranty Deed dated Dec. 15, 2015, and recorded on Dec. 21, 2015, at Book 335, Page 404-406 Reception No. 196762 in the real property records of the City and County of Anaconda-Deer Lodge (the "Covenant Deed"), and (ii) abide by and enforce the Covenants as the owner of the Property in accordance with the terms and conditions of the Covenant Deed.
>
> Grantee hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute a deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

4.3 Binding Effect. Notwithstanding the foregoing, any person or entity who acquires any right, title or interest in all or any part of the Property shall be conclusively deemed to have consented and agreed to the provisions of Section 4.2, whether or not any reference to this Deed or these provisions is contained in the deed or other conveyance instruments by which such person or entity acquires an interest in the Property.

V. MISCELLANEOUS

Neither this Deed nor any of the terms, recitals, provisions or statements contained herein shall be construed as an admission of liability by either party in any proceeding, action or dispute under any applicable laws. In addition, Grantor may assign its rights or delegate its duties with respect to the Covenants to any person or entity. Any such assignment or delegation shall be made in writing, shall refer to this provision and shall be recorded in the Anaconda-Deer Lodge County real property records.

Executed effective for all purposes as of the date first written above.

SIGNATURES ON FOLLOWING PAGE

II. COVENANTS

2.1 Covenants. The following covenants (the "Covenants") shall burden the Property.

2.1.1 Consent Decree. The Property is subject to the Streamside Tailings Operable Unit and Federal and Tribal Natural Resource Damages Consent Decree ("Consent Decree") that was entered on April 19, 1999 in the United States District Court for the District of Montana in Civil Action Nos. CV83-317-H-SEH and CV89-039-BU-SEH. This Consent Decree resolves certain liabilities of Grantor and Grantee under CERCLA, specifically, injury to trust resources under the Trusteeship of the United States, the State of Montana and The Confederated Salish and Kootenai Tribes of the Flathead Reservation.

2.1.2 Wildlife Management Area. The Property shall be held and managed by Grantee as a Wildlife Management Area in perpetuity where wildlife habitat conservation is of foremost importance. For purposes of this Deed Covenant, the term "Wildlife Management Area" shall mean wetland areas and other wildlife habitat areas in which all birds protected by the Migratory Bird Treaty Act, may breed and replenish.

2.1.3 Compliance with Dutchman Management Plan. The Property shall be managed in perpetuity by the Grantee in accordance with the Dutchman Management Plan dated _____, as that plan is amended from time to time (the "Dutchman Management Plan"). The Dutchman Management Plan is on file at Grantor's office located at 317 Anaconda Road, Butte, MT 59701 and at the offices of the United States Department of the Interior, Fish and Wildlife Service located at 585 Shepard Way, Helena, MT 59601-6287.

2.1.4 Prohibition on Diminishment of Wetlands Values. Grantee shall not engage in any activities that diminish the wetland values of the Property, including without limitation, altering the topography or other natural features by destroying the vegetative cover, draining or causing the draining of wetland areas or filling or causing the filling in with earth (except through natural processes) or other materials of the wetlands areas on the Property, as delineated on Exhibit A, except as authorized or permitted under the terms of the Dutchman Management Plan.

2.1.5 Prohibition on Development of the Property. Subdividing or de facto subdividing and/or developing of the Property for residential, commercial or industrial purposes is prohibited.

2.1.6 Prohibition on Structures. Erecting, constructing or placing any structures, buildings or improvement including trailers, mobile homes or other temporary living quarters is prohibited, except as authorized or permitted under the terms of the Dutchman Management Plan.

2.1.7 Prohibition on Mining. Exploration for, or development and extraction of any earthen materials (including, but not limited to minerals, hydrocarbons, sand, gravel, soil, peat or rock) by any surface or subsurface mining method is prohibited.

2.1.8 Prohibition on Game Farms. The use or development of the property for a game, fur, bird or fish farm, including the confinement, rearing, release and/or propagation of exotic or native game farm animals, birds, furbearers or fish as defined in Sections 87-2-101 and 87-4-406, Mont. Code Ann., or its successor statute is prohibited.

2.1.9 Prohibition on Commercial Feed Lots. Establishing or maintaining any commercial feedlot, defined for purposes of these Covenants as a facility used for the purpose of receiving, confining and feeding livestock for hire, is prohibited.

2.1.10 Prohibition on Dumping. Dumping or disposing of refuse and/or any material which is harmful to wildlife or considered to contaminate soil, groundwater, streams, lakes or wetlands is prohibited.

2.1.11 Prohibition on New Roads. Constructing any new roads or granting of road right-of-way easements is prohibited, except as authorized or permitted under the terms of the Dutchman Management Plan.

2.1.12 Prohibition of Energy Facilities. Erecting, constructing, developing or placing any commercial energy facility on the Property, or using the Property in support of a commercial energy facility or infrastructure is prohibited. Examples of such energy facility include, but are not limited to, wind, solar, geothermal, nuclear, and/or ethanol.

2.1.13 Prohibition on Groundwater Wells. Construction and installation of any new water wells on the Property is prohibited except as authorized or permitted under the terms of the Dutchman Management Plan.

2.2 Run With the Land. All of the foregoing covenants are covenants that run with the land that are binding on Grantee, Grantee's successors and assigns and any subsequent owners of all or any part of the Property. Atlantic Richfield Company and its respective successors and assigns are intended beneficiaries of the covenants and shall have the right to enforce the covenants to the fullest extent permitted under Montana law.

2.3 Covenants/Equitable Servitudes. All of the Covenants contained in Section 2.1 hereof are made for the direct, mutual, and reciprocal benefit of each and every portion of the Property and create an equitable servitude thereon. Each of the Covenants shall operate as a covenant running with the land for the benefit of each lot or parcel of the Property, and shall inure to the benefit of Grantee, Grantor, and any successors, assigns and any subsequent owners of the Property.

2.4 Modification of Covenants. Any proposed modification of the Covenants must be approved in writing by Grantor, Grantee, and the owner of the parcel burdened by the Covenant to be modified. In order to be effective, any modification of the Covenants must be dated after the date of this Deed and duly recorded in the Anaconda-Deer Lodge County real property records. Any modification that complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof. A modification of the Covenants may include the termination of any or all of the Covenants.

2.5 Designation of Rights. Grantor may designate any person or entity to exercise the approval rights granted under Section 2.4. Any such designation shall be in writing, shall refer to this provision and shall be recorded in the Anaconda-Deer Lodge County real property records.

III. ENFORCEMENT OF RIGHTS AND REMEDIES

3.1 Enforcement of Covenants. Grantor, the United States Fish and Wildlife Service and any successor bureaus, department or agencies (an "Enforcing Party") shall have the right to enforce the Covenants. Each Covenant shall be enforceable, in perpetuity, to the fullest extent permitted by Montana law.

3.2 Remedies.

3.2.1. Remedies. All remedies available at law, in equity or specifically provided in this Deed shall be available for the enforcement of the Covenants. The selection of remedies shall be within the sole discretion of the Enforcing Party.

3.2.2. Specific Performance. Grantee hereby specifically agrees that in addition to all other remedies available under this Deed, at law or in equity, the remedy of "specific performance" shall be available to the Enforcing Party. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights it may have to argue that specific performance is an inappropriate remedy.

3.2.3. Other Remedies. In the event that Grantee fails to comply with any of the Covenants, the Enforcing Party may notify Grantee in writing of the failure, which notice shall specify the item(s) of non-compliance. Grantee shall have 30 days following delivery of the notice to correct the items of non-compliance to the written satisfaction of the Enforcing Party that gave the notice. If Grantee does not cure the failure within 30 days following delivery of the notice, the Enforcing Party shall have the right, but not the obligation, to enter onto to cure the failure and to charge to Grantee the costs incurred by the Enforcing Party in taking any such actions. Grantee shall promptly reimburse Grantor for all such costs incurred. Further, Grantee shall indemnify, defend and hold harmless, the Enforcing Party, its agents, employees or contractors from and against all claims against the Enforcing Party, or liabilities incurred by the Enforcing Party, in taking such actions. Nothing in this Section 3.2.3 shall limit, qualify or abrogate the Enforcing Party's right to specific performance under Section 3.2.2.

3.2.4. Attorneys Fees. If the Enforcing Party is the prevailing party in any action brought by it, the Enforcing Party shall be entitled to reasonable attorneys' fees and costs incurred in bringing such action.

3.3 No Waiver. A delay or failure to enforce in any specific instance any Covenant or any violation of any Covenant shall not preclude or waive the right of any Enforcing Party to enforce such Covenant or the violation thereof in that or in any other instance.

3.4 Waiver. An Enforcing Party may waive, in a writing executed by the Enforcing Party, a violation of the Covenants. Such waiver shall relate only to the specific violation described in the waiver and shall not be effective to waive any other Covenants or any prior or subsequent violation, whether of the same or different nature. A waiver by one Enforcing Party shall not be effective against or constitute a waiver by any other Enforcing Party.

3.5 Designation of Rights. Grantor may designate any person or entity to exercise the enforcement and waiver rights granted under this Article III. Any such designation shall be in writing, shall refer to this provision and shall be recorded in the Anaconda-Deer Lodge County real property records.

IV. CONVEYANCE/SUBSEQUENCE OWNERS

4.1 General. The Covenants referenced in this Deed are covenants which run with the land and shall be binding upon all subsequent owners of all or any part of the Property as covenants or agreements made for the benefit of Atlantic Richfield Company.

196762

"GRANTOR":

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: James C. Barratt
Printed Name: JAMES C. BARRATT
Title: Vice - President

"GRANTEE":

ARCO ENVIRONMENTAL REMEDIATION, L.L.C., a Delaware limited liability company

By: James C Barratt
Printed Name: JAMES C. BARRATT
Title: Vice - President.

STATE OF TEXAS)
) ss.
COUNTY OF HARRIS)

The foregoing instrument was acknowledged before me the 15 day of DECEMBER, 2015, by James BARRATT, as VICE PRESIDENT of Atlantic Richfield Company, a Delaware corporation.

Witness my hand and official seal.

My commission expires: September 12, 2019

Patricia Barnard
Notary Public

PATRICIA BARNARD
Notary Public, State of Texas
My Commission Expires
September 12, 2019

196762

STATE OF TEXAS)
) ss.
COUNTY OF HARRIS)

The foregoing instrument was acknowledged before me the 15 day of DECEMBER, 2015, by JAMES BARRATT, as VICE PRESIDENT of ARCO Environmental Remediation, L.L.C., a Delaware limited liability company.

Witness my hand and official seal.

My commission expires: September 12, 2019

Patricia Barnard
Notary Public

PATRICIA BARNARD
Notary Public, State of Texas
My Commission Expires
September 12, 2019

EXHIBIT A

Map Depicting Wetlands Area

EXHIBIT A

DUTCHMAN WETLANDS AREAS

PIONEER TECHNICAL SERVICES, INC.
303 E. PARK AVE., SUITE 401
ANACONDA, MONTANA
(406) 563-8771

DATE 4/11/13

196762

DEED OF GIFT

Atlantic Richfield Company, a Pennsylvania Corporation, acting through its division, Anaconda Minerals Company, ("Donor"), hereby grants, conveys and assigns to the Anaconda-Deer Lodge County ("Donee"), an organization recognized under Section 170 of the Internal Revenue Code of 1954, as amended, the following described real property located in Deer Lodge County, Montana, to have and to hold the same absolutely except as hereafter provided:

A parcel of land lying principally in the Northwest Quarter of Section 6, Township 4 North, Range 10 West and in the Northeast Quarter of Section 1, Township 4 North, Range 11 West, P.M.M., Deer Lodge County, Montana, and shown on Certificate of Survey 82-A on file with the Clerk and Recorder of Anaconda-Deer Lodge County and more particularly described as follows:

Beginning at the southeast corner of Section 31, T5N, R10W, P.M.M., Deer Lodge County, Montana; thence S09°49'23"W a distance of 653.84 feet to a point on the west right-of-way line of F.A.S. 273 (Galen Road), the true point of beginning; thence along said right-of-way S07°52'57"W a distance of 263.60 feet; thence continuing along said right-of-way on a curve to the left an arc length of 582.86 feet; said curve having a chord bearing and distance of S04°05'42"W for 582.43 feet; thence continuing along said right-of-way S00°13'06"W a distance of 1002.41 feet to a point on the north right-of-way line of Montana 48 Highway; thence along said right-of-way S51°26'55"W a distance of 205.40 feet; thence continuing along said right-of-way on a curve to the right an arc length of 645.84 feet; said curve having a chord bearing and distance of S68°28'42"W for 636.37 feet; thence continuing along said right-of-way S85°30'55"W a distance of 471.86 feet to a point on the Northerly right-of-way line of U.S. Highway 10A; thence along said right-of-way on a curve to the left an arc length of 942.71 feet said curve having a chord bearing and distance of N85°52'44"W for 938.74 feet; thence continuing along said right-of-way S85°00'46"W a distance of 266.65 feet; thence leaving said right-of-way N04°59'14"W a distance of 1739.45 feet; thence N48°30'34"E a distance of 1222.77 feet; thence S88°54'25"E a distance of 991.28 feet; thence S66°33'35"E a distance of 818.28 feet to the true point of beginning and containing in all 134.643 acres, including all unrecorded and recorded easements and right-of-ways.

Donor hereby accepts said real property and all rights, duties, liabilities and responsibilities thereunto appertaining and shall use the same for a sewage treatment plant and for no other purpose and in the event said real property shall cease to be used for a sewage treatment plant, Donor shall have the right but not the obligation to re-enter and take said real property vesting fee title to the same in Donor absolutely.

The appraised value of said real property interest hereby donated is $194,643.00.

Donor makes this gift for the purpose of obtaining a charitable contribution deduction under Section 170 of the Internal Revenue Code of 1954, as amended.

Subject to all easements, recorded or unrecorded, and subject further to all prior conveyances or instruments, recorded or unrecorded, affecting the real property hereby conveyed.

Excepting and reserving, however, unto the Donor, its successors and assigns, all ores and minerals, including gas and oil and other hydrocarbon substances, beneath the surface of said real property, together with the right to explore or prospect for and mine and extract the same by whatsoever method or methods Donor may desire including, without limitation, the surface mining method.

IN WITNESS WHEREOF, this deed was duly executed as of _____, 1984.

ATLANTIC RICHFIELD COMPANY

Attest:

By _____
Senior Vice President
Anaconda Minerals Company, A Division of Atlantic Richfield Company

_____
Assistant Secretary
Atlantic Richfield Company

STATE OF COLORADO)
) ss
COUNTY OF DENVER)

On this _____ day of _____ in the year 19__, before me, _____, a Notary Public for the State of Colorado, personally appeared _____, known to me to be the Senior Vice President of Anaconda Minerals Company, a Division of Atlantic Richfield Company, the corporation that executed the within instrument and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

MARY R. MORGAN
NOTARY
PUBLIC

_____
Notary Public

Address: MARY R. MORGAN
555 17th STREET
DENVER, COLORADO 80202
My commission expires Aug. 3, 1986

My Commission expires _____, 19__

STATE OF MONTANA)
County of Deer Lodge) ss

I, hereby certify that the within instrument was filed in my office on the 12th day of May A.D. 1984 at 10 minutes past 2 o'clock P.M., and is recorded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

MARY C. CHOR
_____ _____ Fee $ 10.00
County Recorder Deputy

ACCESS AGREEMENT

This Access Agreement ("Agreement") is made and entered into this 5th day of May, 1994 among Anaconda-Deer Lodge County, a consolidated governmental entity organized under the constitution and laws of the State of Montana ("ADL"), Old Works Golf Course, Inc. a Montana nonprofit corporation ("Authority"), and Atlantic Richfield Company, a Delaware corporation ("ARCO").

RECITALS

A. ADL owns certain properties located in Anaconda-Deer Lodge County, in the State of Montana, which properties are more particularly described in Exhibits A-1 through A-9 attached hereto and incorporated herein by this reference as though fully set forth. The Properties subject to this Agreement are generally referred to as follows:

1. Old Works Trail System Parcel;
2. Golf Course Parcel;
3. Ballfields/Industrial Park Parcel;
4. Red Sands/Arbiter Parcel;
5. East Anaconda Yards Parcel;
6. Drag Strip Parcel;
7. Mill Creek Parcel;
8. Stucky Ridge Parcel; and
9. Lumber Yard Parcel.

B. ADL, the Authority and ARCO have entered into a Conveyance Agreement (as hereinafter defined) wherein ARCO is conveying the Properties to ADL. As a part of the consideration for the Conveyance Agreement, ADL and the Authority have agreed to grant to ARCO access to the Properties for various remedial purposes which are more particularly described herein.

C. ADL is the current owner of the Properties and desires to provide ARCO with the access rights more particularly described herein. The Authority has or will have certain rights to the Golf Course Parcel and desires to provide ARCO with the access rights more particularly described herein.

D. Access to the Properties is needed by ARCO to conduct the Remedial Action on the Properties, as a whole, and on individual Parcels with respect to certain required Remedial Actions.

E. ADL and the Authority have agreed to permit ARCO to conduct the Remedial Action on the Properties since the Remedial Action is in the mutual interest of ADL, the Authority and ARCO in furthering the protection of public health and the environment, including benefits to the Properties owned by ADL.

NOW, THEREFORE, for and in consideration of the recitals, the mutual covenants and obligations of ARCO and ADL contained herein and in the Conveyance Agreement and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ARCO and ADL hereby agree as follows:

DEFINED TERMS

For the purposes of this Agreement, including the Recitals above, the following terms shall have the meanings set forth below. Any capitalized terms found in this Agreement, but not more particularly defined below, shall have the meanings ascribed to such terms in the Conveyance Agreement.

"ADL" shall mean Anaconda-Deer Lodge County, its officials, representatives, successors and assigns.

"ARCO" shall mean the Atlantic Richfield Company, its successors and assigns.

"Agreement" shall mean this Access Agreement.

"Authority" shall mean The Old Works Golf Course Authority.

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. 99-499, 100 Stat. 9613 ("SARA"), and as hereafter amended.

"Completion of the Golf Course" shall mean the date upon which ARCO delivers to ADL a written notice stating that the construction of the Golf Course is complete.

"Completion of the Old Works Historic Trail System" shall mean the date upon which ARCO delivers to ADL a written notice stating that the construction of the Old Works Historic Trail System is complete.

"Conveyance Agreement" shall mean that certain Real Property Conveyance/Transfer Agreement between ARCO, ADL and The Old Works Golf Course Authority, a Montana nonprofit corporation dated May 5, 1994 and executed contemporaneously herewith, a memorandum of which was recorded on May 5, 1994 in Book 25 at Page 945 of the Deer Lodge real property records.

"EPA" shall mean the United States Environmental Protection Agency.

"Environmental Conditions" shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials or Mining Wastes; or 2) any mining, milling, smelting, processing, refining or other operations by ARCO or its predecessors.

"Environmental Laws" shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions or protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. §§ 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended (CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. § 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. § 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; any Applicable or Relevant and Appropriate Requirements (ARARs) for the OW/EADA Remedy; all as amended and as may change from time to time; and any provisions or theories of common law providing for any cause of action, remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

"Golf Course" shall mean the Jack Nicklaus Signature Golf Course that ARCO intends to construct on the Golf Course Parcel in accordance with the Conveyance Agreement.

"Hazardous Materials" shall mean any substance (i) the presence of which requires investigation of remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," "hazardous or deleterious substance," or pollutant or contaminant under any federal, state or

local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated biphenyls (PCBs), asbestos or urea formaldehyde foam insulation.

"Jack Nicklaus Golf Services™ Golf Course Agreement" shall mean that certain agreement entitled "Jack Nicklaus Golf Services™ Golf Course Agreement", a copy which is attached to the Conveyance Agreement.

"Mining Wastes" shall mean any solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, heap roast, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

OW/EADA Administrative Order shall mean the Administrative Order issued by EPA to ARCO on April 7, 1994, EPA Docket No. CERCLA VIII-94-08, and all attachments thereto and deliverables submitted thereunder, with respect to implementation of the OW/EADA Remedy.

"OW/EADA OU" shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL Site in or near Anaconda, Montana.

OW/EADA ROD or ROD shall mean the Record of Decision issued by EPA on March 8, 1994 with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

"OW/EADA Remedy" shall mean the remedy selected by EPA in the ROD issued March 8, 1994, as more specifically described in the OW/EADA Administrative Order and attachments thereto, including any operation and maintenance requirements of such remedy.

"Old Works Historic Trail System" shall mean the trail system to be constructed by ARCO on the Parcels or any portion thereof.

"Operation and Maintenance or O&M" shall mean those measures required to maintain the effectiveness of the OW/EADA Remedy or any other Remedial Action at or related to the OW/EADA OU.

"Properties" shall mean the properties described in Exhibits A-1 through A-9 to this Agreement.

"Release" shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever.

"Remedial Action" shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

"State" shall mean the State of Montana.

"Transferee" shall mean any person or entity receiving a transfer of all or any portion of the Properties from ADL or the Authority.

ARTICLE I

DESCRIPTION OF RIGHTS OF USE AND ACCESS GRANTED TO ALL PROPERTIES

1.1 Grant of Access. ADL and the Authority hereby grant to ARCO, its employees, agents, contractors, subcontractors, representatives and designees, and to all authorized representatives of EPA and the State a right of access to and use of any or all of the Properties for purposes of implementing or causing to be implemented any or all of the following:

a. The OW/EADA Remedy, including any O&M obligations pertaining to such OW/EADA Remedy;

b. Any Remedial Action directed, ordered or otherwise required under any Environmental Laws or by any federal, state or local governmental entity or by any court; or

c. Any other actions which ARCO deems necessary or advisable to address any Environmental Conditions on or relating to the Properties.

Notwithstanding the foregoing, ARCO shall use its best efforts to provide twenty-four (24) hour's notice prior to entering the properties for the purposes described in paragraph c. of this Section 1.1.

The rights of access and use described herein shall include, but shall not be limited to, the right to oversee all actions designed

to accomplish the purposes of the OW/EADA Remedy or any other Remedial Action on the Properties, the right to enter onto the Properties to excavate and remove soils, monitor and sample (or to receive split samples of) environmental media and to conduct other information gathering activities such as field investigations, data collection, installation of monitoring wells and soil borings, surface water and ground water sampling, surveys, testing and periodic monitoring.

1.2 Access for Maintenance, Repair and Other Obligations. In the event that ADL (or with respect to the Golf Course Parcel, ADL or the Authority) fails to perform any maintenance or repair requirements or other obligations required by the Conveyance Agreement, the ROD, or the OW/EADA Remedy with respect to any of the Properties in a timely manner, ARCO shall have and is hereby specifically granted the right, but not the obligation, to enter onto the affected Parcel(s) to perform any such required maintenance, repairs or other obligations and to charge to ADL (or in the case of the Golf Course Parcel, ADL or the Authority) the costs incurred by ARCO in taking any such actions.

1.3 Rights of Access and Use to be Deemed Irrevocable License. The rights of access and use granted herein shall be deemed to be and are coupled with an interest and shall be irrevocable by ADL and the Authority to the fullest extent permitted by Montana law until the expiration of this Agreement as more particularly set forth herein.

1.4 Term. The term of the rights of access and use set forth in this Article I of this Agreement shall commence upon the date of execution hereof by ARCO, ADL and the Authority and shall continue until terminated as more particularly described herein. Notwithstanding any other provision contained in this Agreement, this Agreement shall terminate upon the execution of a mutual written termination agreement by ADL, ARCO and the Authority.

1.5 Costs. All of the rights granted to ARCO under the terms and conditions of this Article I shall be at no additional cost to ARCO.

ARTICLE II
DESCRIPTION OF ADDITIONAL RIGHTS OF USE AND ACCESS - THE GOLF COURSE PARCEL AND OLD WORKS HISTORIC TRAIL PARCEL

2.1 Construction Access. Pursuant to the terms and conditions of the Conveyance Agreement, ARCO has agreed to construct the Golf Course on the Golf Course Parcel and the Old Works Historic Trail System on the Old Works Historic Trail Parcels. ADL and the Authority hereby grant to ARCO, its employees, agents, contractors, subcontractors, representatives and designees a right of access to and use of the Golf Course Parcel and the Old Works Historic Trail Parcel for purposes of

construction of the Golf Course and its appurtenant facilities, and the Old Works Historic Trail System, and any activities related to such construction, including without limitation mapping and surveying activities, and for the purposes of implementation of the OW/EADA Remedy or any other Remedial Action.

2.2 Construction on Golf Course Parcel. For the purposes of this Article II, the Golf Course shall include without limitation the Golf Course being designed and to be constructed pursuant to the OW/EADA Remedy and the Jack Nicklaus Golf Services™ Golf Course Agreement. The Golf Course appurtenant facilities shall include without limitation the parking lot, halfway house, shelter houses, sanitary facilities, potable water stations, maintenance facilities, storm drainage systems, irrigation systems, dams, bridges, cart paths and all other facilities incidental to the operation of the Golf Course required to be constructed by ARCO pursuant to the terms and conditions of the Conveyance Agreement. The right of access and use granted herein shall include without limitation the right to drill, construct, install, and maintain any wells (including monitoring wells), ditches, flumes and pipelines which ARCO deems appropriate for development of a water supply to the Golf Course.

2.3 Construction on Old Works Historic Trail Parcel. For purposes of this Article II, the Old Works Historic Trail System shall include without limitation the trail system and all appurtenant facilities as set forth in the OW/EADA Remedy and as ARCO may determine to be necessary or desirable in connection with the design and construction of the trail system.

2.4 Access to Other Properties. ADL and the Authority further grant to ARCO, its employees, agents, contractors, subcontractors, representatives and designees a right of access to and use of all necessary Properties for purposes of construction of the Golf Course and the Old Works Historic Trail System and their appurtenant facilities, and any activities related to such construction and for the purposes of implementation of the OW/EADA Remedy or any other Remedial Action.

2.5 Access for Inspection, Maintenance and Repair. ADL and the Authority hereby grant to ARCO, its employees, agents, contractors, subcontractors, representatives and designees a right of access to and use of the Golf Course Parcel and the Old Works Historic Trail Parcel for purposes of the inspection, maintenance and repair of all facilities constructed on the Golf Course Parcel and the Old Works Historic Trail Parcel.

2.6 Acknowledgment of Possible Exclusion From Parcels. ADL and the Authority hereby acknowledge that the rights of access and use granted in this Article II may completely exclude ADL and the Authority from use or enjoyment of all or portions of the Golf Course Parcel and the Old Works Historic Trail Parcel during ^

construction activities. ADL shall not be entitled to compensation or damages of any nature by reason of such exclusion.

2.7 Rights of Access and Use to be Deemed Irrevocable License. The rights of access and use granted herein shall be deemed to be and are coupled with an interest and shall be irrevocable by ADL and the Authority to the fullest extent permitted by Montana law until the expiration of this Agreement as more particularly set forth herein.

2.8 Term. The term of the rights of access and use set forth in this Article II of this Agreement shall commence upon the date of execution hereof by ARCO, ADL and the Authority and shall continue until terminated as more particularly described herein. Notwithstanding any other provision contained in this Agreement, (a) the rights of access and use set forth in this Article II for construction of the Golf Course shall terminate upon the Completion of the Golf Course or upon the mutual written agreement of ADL, the Authority and ARCO, whichever occurs first, and (b) the right of access and use set forth in the Article II for the Old Works Historic Trail Parcel shall terminate upon Completion of the Old Works Historic Trail System or upon the mutual written agreement of ADL and ARCO, whichever occurs first. Termination of the rights granted in this Article II pursuant to this Section 2.8 shall not in any way terminate, limit or otherwise impair the rights granted under Article I of this Agreement.

2.9 Costs. All of the rights granted to ARCO under the terms and conditions of this Article II shall be at no additional cost to ARCO.

ARTICLE III
REPRESENTATIONS, WARRANTIES AND COVENANTS OF ADL AND THE AUTHORITY

3.1 Acknowledgment of Use. ADL and Authority expressly acknowledge that they are fully aware and informed of the use to which ARCO will put the Parcels, specifically including the Golf Course Parcel, and the nature and extent of the activities to be conducted by ARCO thereon.

3.2 Authority to Execute Agreement and Title to Properties. ADL and the Authority represent and warrant to ARCO that they have the power and authority to execute and deliver this Agreement and to carry out and perform all of the covenants to be performed hereunder. ADL further represents and warrants to ARCO:

a. that it is currently in possession of the Properties;

b. that ADL shall not lease, sell or grant any other rights for the use of any part of the Properties (including any

rights to the Authority) unless such lease, sale, conveyance or grant is subject and subordinate to the rights of ARCO hereunder; and

c. at all times ARCO shall have unobstructed and adequate means of ingress and egress to the Properties from all abutting streets, roads and highways.

3.3 Noninterference. ADL and its successors and assigns, including without limitation any subsequent owner(s) of the Properties shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the construction of the Golf Course, the Old Works Historic Trail System and appurtenant facilities or the implementation of any of the OW/EADA Remedy or any other Remedial Action by ARCO on any of the Parcels, specifically including but not limited to the Golf Course Parcel.

3.4 Grant or Transfer of Title to the Properties. No grant, transfer or conveyance of title, easement or other interest in the Properties shall be made or effected by ADL or the Authority without including therein a provision allowing the access and use and containing the covenants not to sue and indemnities set forth in this Agreement. All such conveyances of title, grants of easements or other grants, transfers or conveyances of any interest in any or all of the Properties shall contain covenants providing for the use and access and the covenants and releases described herein. At least 45 days prior to any grant, transfer or conveyance of any interest in any or all of the Properties, the owner of such Property in which an interest is to be granted, transferred or conveyed shall notify ARCO by registered mail of the intent of the owner to grant, transfer or convey an interest in such Property and of provisions to be made to ensure that the Transferee of the Property will provide the use and access described in this Agreement to ARCO.

3.5 Reservations of Future Easements by ADL. Contemporaneously with the conveyance or other transfer of all or any portion of the Property to a Transferee by ADL, ADL shall obtain from such Transferee written easements sufficient to allow ARCO the access and uses granted to ARCO herein. Such easements shall be recorded in the appropriate real property records and shall, by their own terms, run with the land and be binding upon the Transferee and all successive owners of the Property (or any part thereof) being conveyed or transferred to such Transferee. The terms and conditions set forth in this Section 3.5 shall terminate twenty-one years after the death of the survivor of the persons named in Section 18.2(b) of the Conveyance Agreement (as set forth in paragraph 6.b. of the Memorandum of Conveyance Agreement).

3.6 Release and Covenant Not to Sue. ADL and the Authority hereby agree to release and covenant not to sue ARCO its affiliates, subsidiaries, officers, directors, agents, representatives, contractors and employees for any claims, causes of action, demands, damages liabilities losses, penalties, fines, costs and expenses (including attorneys' fees and other litigation expenses) damages arising out of or relating to the performance of any activities on the Properties within the scope of the rights of access and use described herein.

ARTICLE IV
MISCELLANEOUS

4.1 Governing Law. This Agreement and the performance hereof shall be governed, interpreted, construed and regulated by the laws of the State of Montana.

4.2 Partial Invalidity. If any term, covenant, condition or provision of this Agreement or the application thereof to any person or circumstance shall at any time or to any extent be invalid or unenforceable, the remainder of this Agreement or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby and each term, covenant, condition and provision of this Agreement shall be valid and be enforced to the fullest extent permitted by law.

4.3 Interpretation. Whenever herein the singular number is used the same shall include the plural and the masculine gender shall include the feminine and neuter genders and vice versa as the context shall require. The section and article headings used herein are for reference and convenience only and shall not enter into the interpretations hereof. The Recitals, however, are intended to be fully enforceable as a part of this Agreement.

4.4 Successors and Assigns. The covenants, conditions or agreements contained in this Agreement shall bind and inure to the benefit of ADL and ARCO and any Transferee.

4.5 Entire Agreement. No oral statement or prior written material shall have any force or effect. ARCO and ADL agree that they are not relying on any representations or agreements, other than those contained in this Agreement, the exhibits attached hereto and the Conveyance Agreement. This Agreement shall be construed as supplemental to the Conveyance Agreement. However, to the extent that the terms and conditions of the Conveyance Agreement are inconsistent with this Agreement with respect to the subject matter hereof, this Agreement shall control. This Agreement shall not be modified except in a writing subscribed by all of the parties hereto.

4.6 Construction. Each and every provision of this Agreement has been independently, separately and freely negotiated by the parties and their respective counsel. The parties, therefore, waive any statutory or common law presumptions which would serve to have this Agreement construed in favor of or against either party.

4.7 Sufficient Consideration. Each party agrees that the promises and covenants contained herein and in the Conveyance Agreement are good and sufficient consideration for the respective obligations required under this Agreement.

4.8 Waivers. Failure of ARCO, the Authority or ADL to complain of any act or omission on the part of any other party, no matter how long the same may continue, shall not be deemed to be a waiver by said party of any of its rights hereunder. No waiver by ARCO, the Authority or ADL at any time, express or implied, or any breach of any provision of this Agreement shall be deemed a waiver or breach of any other provision of this Agreement or a consent to any subsequent breach of the same or any other provision.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals on the day and year first above written.

ANACONDA-DEER LODGE COUNTY
a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: Jane Anderson
Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ____ day of May, 1994 by Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.

My commission expires: 3-18-98

JAMES A. GLOVER NOTARIAL SEAL STATE OF MONTANA

James A. Glover
Notary Public

ATLANTIC RICHFIELD COMPANY
a Delaware corporation

By: Sandra M. Stash
Sandra M. Stash
Attorney-in-Fact

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ____ day of May, 1994 by Sandra M. Stash as Attorney-in-Fact of Atlantic Richfield Company.

Witness my hand and official seal.

My commission expires: 3-18-98

James A. Glover
Notary Public

JAMES A. GLOVER NOTARIAL SEAL STATE OF MONTANA

OLD WORKS GOLF COURSE, INC.,
a Montana nonprofit corporation

By: William P. Finnegan
William P. Finnegan
President

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ____ day of May, 1994 by William P. Finnegan as the President of Old Works Golf Course, Inc.

Witness my hand and official seal.

My commission expires: 3-18-98

James A. Glover
Notary Public

JAMES A. GLOVER NOTARIAL SEAL STATE OF MONTANA

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EXHIBIT A-1

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel A - Old Works Trail System Parcel

That certain real property described in Certificate of Survey No. 98-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-2

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel B - Golf Course Parcel

That certain real property described in Certificate of Survey No. 98-C recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

Excepting and reserving for the Grantor all water rights and ditch easements arising out of or associated with Permit Number 83498-G76G.

EXHIBIT A-3

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel C - Ballfields/Industrial Parcel

That certain real property described in Plat No. 193-A recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-4

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel D - Red Sands Arbiter Parcel

That certain real property described in Certificate of Survey No. 98-D recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-5

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel E - East Anaconda Yards Parcel

That certain real property described in Certificate of Survey No. 99-A recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-6

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel F - Drag Strip Parcel

That certain real property described in Plat No. 194-A recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-7

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel G - Mill Creek Parcel

That certain real property described in Plat No. 193-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-8

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel H - Stuckey Ridge Parcel

That certain real property described in Certificate of Survey No. 99-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-2

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel I - Lumber Yard Parcel

That certain real property described in Plat No. 194-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

145001

STATE OF MONTANA)
County of Deer Lodge) ss

I, hereby certify that the within instrument was filed in my office on the 5th day of May, 1994 at 50 minutes past 2 o'clock P.M., and is recorded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

_____ County Recorder Peggy Davis Deputy Fee$ 126.00

QUIT CLAIM DEED

(Drag Strip Parcel)

THIS DEED is made effective as of May 5, 1994, between ATLANTIC RICHFIELD COMPANY ("Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, with offices at 555 Seventeenth Street, Denver, Colorado 80202, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, water and water rights, ditch and ditch rights, situated on or appurtenant to the Property , or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee pursuant to the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994, a Memorandum of which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Memorandum and in the Additional Provisions set forth below.

This Property is within a Superfund site. A permit must be obtained before any development or construction.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of

the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quit Claim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Conveyance Agreement shall mean that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among Grantor, Grantee and the Old Works Golf Course Authority.

Development Permit System shall mean the Anaconda-Deer Lodge Development Permit System adopted on December 2, 1992 by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources,

Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Memorandum of Conveyance Agreement shall mean that certain Memorandum of Real Property Transfer/Conveyance Agreement which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations,

including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures set forth in the O&M Plan for the Property.

O&M Plan shall mean the Operations and Maintenance plans and procedures described in Exhibits A-1 and A-2 to the Memorandum of Conveyance Agreement.

OW/EADA Administrative Order shall mean the Administrative Order issued by EPA to ARCO on April 7, 1994, EPA Docket No. CERCLA VIII-94-08, and all attachments thereto and deliverables submitted thereunder, with respect to implementation of the OW/EADA Remedy, a copy of which is attached as Exhibit B to the Memorandum of Conveyance Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL Site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the Record of Decision issued March 8, 1994, as more specifically described in the OW/EADA Administrative Order and attachments thereto, including any operation and maintenance requirements of such remedy.

Open Space shall have the meaning as set forth in the Development Permit System.

Operation and Maintenance or O&M shall mean those measures required to maintain the effectiveness of the OW/EADA Remedy and shall include without limitation those measures set forth in the O&M Plan for the Property.

Proposed Plan shall mean the Anaconda Smelter Superfund Site, Old Works/East Anaconda Development Area Operable Unit Proposed Plan issued by EPA in September 1993 and announcing a preferred alternative for the OW/EADA OU.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to (i) the Property, or any portion thereof, subsequent to the execution of this Quit Claim Deed, or (ii) any of the rights, duties and obligations arising under the Conveyance Agreement.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUIT CLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quit Claim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by ARCO relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter Site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter Site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter Site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy based upon the remedial alternatives evaluated in the remedial investigation/feasibility study conducted by Grantor at the OW/EADA OU, the Proposed Plan, public comments received on the Proposed Plan, and in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; and (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its

affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures."

E. RESTRICTIVE COVENANTS.

1. Purpose. The following Restrictive Covenants are made pursuant to and in accordance with the Conveyance Agreement.

2. Covenants Running With the Land. The following Restrictive Covenants shall burden the Property and are intended to be and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the O&M Plan for the Property;

c. All use, construction and/or drilling of water wells for potable water purposes shall be prohibited;

d. Residential development shall be prohibited on the Property;

e. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

f. The Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future

Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU under the OW/EADA Administrative Order as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

g. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited; and

h. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the Restrictive Covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator.

3. Benefitted Properties. The Restrictive Covenants shall be for the benefit of the properties described below, their current owners and their Successors in Interest and Assigns:

a. The adjacent real property described on Attachment 2 attached hereto which is presently owned by Grantor; and

b. All other real properties which are adjacent to the Property.

c. All other real property located in Anaconda-Deer Lodge County, Montana.

4. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the Benefitted Properties by reason of the Restrictive Covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property on, or in the vicinity of, the Benefitted Properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property

owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

If Grantee transfers or conveys all or any part of its interest in the Property or any interest in the Property to a third party, then Grantee shall be required to include in its transfer or conveyance documents to such third party the foregoing Restrictive Covenants, releases and covenants not to sue. Grantee shall strictly enforce against such third party each and every Restrictive Covenant release and covenant not to sue with respect to the property which has been transferred to such third party. No grant, transfer, lease or conveyance of title, easement or other form of conveyance or transfer of any interest in all or any portion of the Property shall be made or effected without a provision restricting the use of the Property set forth herein and all such conveyances of title, grants, leases, transfers or conveyance of any interest in all or any of the Property shall contain the restriction set forth in this section except that each subsequent transferee's name shall be substituted in each subsequent document as the person or entity to be charged with compliance herewith.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each Restrictive Covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the Restrictive Covenants set forth in this Quit Claim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor shall be entitled to enforce the provisions of the Restrictive Covenants against Grantee pursuant to the terms and conditions of this Quit Claim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Property Owners in ADL. All owners of real property located in Anaconda-Deer Lodge County, Montana shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to such property owners in such proceedings.

d. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The Restrictive Covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by ARCO, ADL and the owner of the Parcel burdened by the Restrictive Covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. If EPA and the State do not object to such modifications in writing within twenty-one (21) days of delivery of such notice, the modifications shall be deemed accepted by EPA and the State. Such written approval by ARCO, ADL and the parcel owner may be evidenced by execution of the instrument created to amend the Restrictive Covenants.

b. Recordation of Modification. In order to be effective, any modification of the Restrictive Covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Restrictive Covenants. For purposes of these provisions, a modification of the Restrictive Covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing Restrictive Covenants.

The parties have executed this Quit Claim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: Sandra M. Stash
Sandra M. Stash
Attorney-in-Fact

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: Jane Anderson
Jane Anderson
Chairwoman of Anaconda-Deer Lodge County Commission

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5th day of May, 1994 by Sandra M. Stash as Attorney-In-Fact of Atlantic Richfield Company.

Witness my hand and official seal.

My commission expires: 11-27-94

Jean R. Brasier
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5th day of May, 1994 by Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.

My commission expires: 11-27-94

Jean R. Brasier
Notary Public

ATTACHMENT 1

(to Quit Claim Deed)

PROPERTY DESCRIPTION
Parcel F - Drag Strip Parcel

That certain real property described in Plat No. 194-A recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

ATTACHMENT 2

(to Quit Claim Deed for Drag Strip Parcel)

(ARCO PROPERTY DESCRIPTION FOR ENFORCEMENT OF RESTRICTIVE COVENANTS - Parcels A, B, C, D, E, F, H and I)

Real property located in Deer Lodge County, Montana and more particularly described as follows:

Township 4 North, Range 11 West

Section 12: All, less and except that portion of Section 12 which is included in Certificate of Survey No. 99-A, filed of record in the real property records of Deer Lodge County, Montana on April 25, 1994 and less and except easements of record, if any.

145002

STATE OF MONTANA)
County of Deer Lodge) ss

I, hereby certify that the within instrument was filed in my office on the 5th day of May, 1994 at 62 minutes past 2 o'clock P. M., and is recorded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

_____ County Recorder Peggy Davis Deputy Fee$ 90.00

145003 96 182

QUIT CLAIM DEED

(Old Works Historic Trail Parcel)

THIS DEED is made effective as of May 5, 1994, between ATLANTIC RICHFIELD COMPANY ("Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, with offices at 555 Seventeenth Street, Denver, Colorado 80202, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, water and water rights, ditch and ditch rights, situated on or appurtenant to the Property , or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee pursuant to the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994, a Memorandum of which was recorded on May 5, 1994 in Book 6/45 at Page 6/45 of the Deer Lodge County real property records. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Memorandum and in the Additional Provisions set forth below.

This Property is within a Superfund site. A permit must be obtained before any development or construction.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the conveyance; and (iii)

Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quit Claim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Conveyance Agreement shall mean that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among Grantor, Grantee and the Old Works Golf Course Authority.

Development Permit System shall mean the Anaconda-Deer Lodge Development Permit System adopted on December 2, 1992 by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or

the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property, other than construction of the Old Works Historic Trail System on the Property by Grantor, which occurs after the Closing.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Memorandum of Conveyance Agreement shall mean that certain Memorandum of Real Property Transfer/Conveyance Agreement which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and

any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures set forth in the O&M Plan for the Property.

O&M Plan shall mean the Operation and Maintenance plans and procedures described in Exhibits A-1 and A-2 to the Memorandum of Conveyance Agreement.

OW/EADA Administrative Order shall mean the Administrative Order issued by EPA to ARCO on April 7, 1994, EPA Docket No. CERCLA VIII-94-08, and all attachments thereto and deliverables submitted thereunder, with respect to implementation of the OW/EADA Remedy, a copy of which is attached as Exhibit B to the Memorandum of Conveyance Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL Site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the Record of Decision issued March 8, 1994, as more specifically described in the OW/EADA Administrative Order and attachments thereto, including any operation and maintenance requirements of such remedy.

Old Works Historic Trail System shall mean the dedicated development identified in the OW/EADA ROD and located as shown in Attachment 2 hereto.

Open Space shall have the meaning as set forth in the Development Permit System.

Operation and Maintenance or O&M shall mean those measures required to maintain the effectiveness of the OW/EADA Remedy and shall include without limitation those measures set forth in the O&M Plan for the Property.

Proposed Plan shall mean the Anaconda Smelter Superfund Site, Old Works/East Anaconda Development Area Operable Unit Proposed Plan issued by EPA in September 1993 and announcing a preferred alternative for the OW/EADA OU.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to (i) the Property, or any portion thereof, subsequent to the execution of this Quit Claim Deed, or (ii) any of the rights, duties and obligations arising under the Conveyance Agreement.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUIT CLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quit Claim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by ARCO relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter Site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter Site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter Site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy based upon the remedial alternatives evaluated in the remedial investigation/feasibility study conducted by Grantor at the OW/EADA OU, the Proposed Plan, public comments received on the Proposed Plan, and in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or

related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property; and (3) ownership, use or operation of the Old Works Historic Trail System. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures."

E. RESTRICTIVE COVENANTS.

1. Purpose. The following Restrictive Covenants are made pursuant to and in accordance with the Conveyance Agreement.

2. Covenants Running With the Land. The following Restrictive Covenants shall burden the Property and are intended to be and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the O&M Plan for the Property;

c. No development shall be permitted on the Property, other than construction and maintenance of the Old Works Historic Trail System in accordance with the OW/EADA Remedy. Further, the Property may only be used for Open Space purposes;

d. Any fencing erected by Grantor in accordance with the requirements of the OW/EADA Remedy shall be maintained by the Property owner in good condition and repair in accordance with the O&M Plan for the Property;

e. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including without limitation EPA or the State)) shall be prohibited;

f. The Old Works Historic Trail System as constructed by Grantor shall be maintained by the Property owner in good condition and repair in accordance with the OW/EADA Remedy and as described in the O&M Plan for the Property;

g. Residential development shall be prohibited;

h. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws and other criteria specified in the O&M Plan for the Property;

i. The Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU under the OW/EADA Administrative Order as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

j. Except for the removal of "borrow materials" by Grantor pursuant to a Borrow Areas License Agreement dated May 5, 1994, exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited;

k. Access to structures along the Old Works Historic Trail System, including but not limited to historic flues and foundations, shall be prohibited. The Property owner shall take such measures as may be required by the OW/EADA Remedy to prohibit such access; and

1. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the Restrictive Covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator.

3. Benefitted Properties. The Restrictive Covenants shall be for the benefit of the properties described below, their current owners and their Successors in Interest and Assigns:

a. The adjacent real property described on Attachment 3 attached hereto which is presently owned by Grantor; and

b. All other real properties which are adjacent to the Property.

c. All other real property located in Anaconda-Deer Lodge County, Montana.

4. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the Benefitted Properties by reason of the Restrictive Covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property on, or in the vicinity of, the Benefitted Properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

If Grantee transfers or conveys all or any part of its interest in the Property or any interest in the Property to a third party, then Grantee shall be required to include in its transfer or conveyance documents to such third party the foregoing Restrictive Covenants, releases and covenants not to sue. Grantee shall strictly enforce against such third party each and every Restrictive Covenant release and covenant not to sue with respect to the property which has been transferred to such third party. No grant, transfer, lease or conveyance of title, easement or other form of conveyance or transfer of any interest in all or any

portion of the Property shall be made or effected without a provision restricting the use of the Property set forth herein and all such conveyances of title, grants, leases, transfers or conveyance of any interest in all or any of the Property shall contain the restriction set forth in this section except that each subsequent transferee's name shall be substituted in each subsequent document as the person or entity to be charged with compliance herewith.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each Restrictive Covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the Restrictive Covenants set forth in this Quit Claim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor shall be entitled to enforce the provisions of the Restrictive Covenants against Grantee pursuant to the terms and conditions of this Quit Claim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Property Owners in ADL. All owners of real property located in Anaconda-Deer Lodge County, Montana shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to such property owners in such proceedings.

d. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The Restrictive Covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by ARCO, ADL and the owner of the Parcel burdened by the Restrictive Covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. If EPA and the State do not object to such modifications in writing within twenty-one (21) days of delivery of such notice, the modifications shall be deemed accepted by EPA and the State. Such written approval by ARCO, ADL and the parcel owner may be evidenced by execution of the instrument created to amend the Restrictive Covenants.

b. Recordation of Modification. In order to be effective, any modification of the Restrictive Covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Restrictive Covenants. For purposes of these provisions, a modification of the Restrictive Covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing Restrictive Covenants.

The parties have executed this Quit Claim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: Sandra M. Stash
Sandra M. Stash
Attorney-in-Fact

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: Jane Anderson
Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5 day of May, 1994 by Sandra M. Stash as Attorney-In-Fact of Atlantic Richfield Company.

Witness my hand and official seal.

My commission expires: May 1, 1996

Helma L. Stone
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5 day of May, 1994 by Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.

My commission expires: May 1, 1996

Helma L. Stone
Notary Public

ATTACHMENT 1

(to Quit Claim Deed)

PROPERTY DESCRIPTION
Parcel A - Old Works Trail System Parcel

That certain real property described in Certificate of Survey No. 98-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

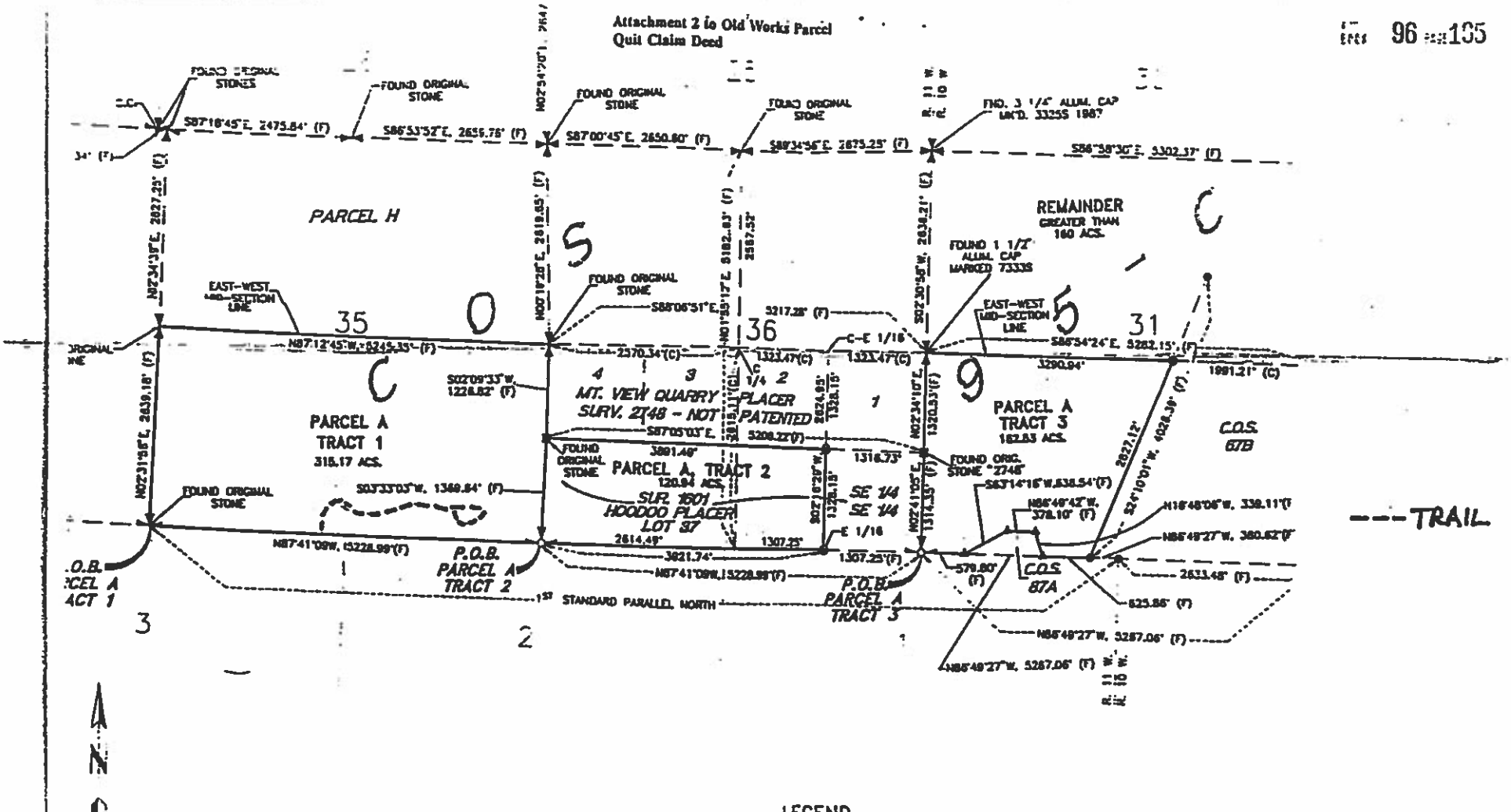
145003

STATE OF MONTANA)
County of Deer Lodge) ss

I, hereby certify that the within instrument was filed in my office on the 5th day May, 1994 at 55 minutes past 2 o'clock P.M., and is recorded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

_____ County Recorder Peggy Davis Deputy Fee$ 102.00

Attachment 2 to Old Works Parcel
Quit Claim Deed



ACREAGE SUMMARY

PARCEL A TRACT 1	=	315.17 ACRES
PARCEL A TRACT 2	=	120.94 ACRES
PARCEL A TRACT 3	=	162.83 ACRES
TOTAL	=	598.94 ACRES

LEGEND

- FOUND 5/8"x24" REBAR WITH 2 1/2" ALUM. CAP MARKED [illegible] 292725
- FOUND 5/8"x24" REBAR WITH 1 1/2" ALUM. CAP MARKED [illegible] 292725
- FOUND [illegible] MARKED HENDRICKS [illegible]27325
- FOUND [illegible] MARKED WALTER 349725

ATTACHMENT 3

(to Quit Claim Deed for Old Works Parcel)

(ARCO PROPERTY DESCRIPTION FOR ENFORCEMENT OF RESTRICTIVE COVENANTS - Parcels A, B, C, D, E, F, H and I)

Real property located in Deer Lodge County, Montana and more particularly described as follows:

Township 4 North, Range 11 West

Section 12: All, less and except that portion of Section 12 which is included in Certificate of Survey No. 99-A, filed of record in the real property records of Deer Lodge County, Montana on April 25, 1994 and less and except easements of record, if any.

QUIT CLAIM DEED

(Golf Course Parcel)

THIS DEED is made effective as of May 5, 1994, between ATLANTIC RICHFIELD COMPANY ("Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, with offices at 555 Seventeenth Street, Denver, Colorado 80202, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, water and water rights, ditch and ditch rights, situated on or appurtenant to the Property , or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee pursuant to the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994, a Memorandum of which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Memorandum and in the Additional Provisions set forth below.

This Property is within a Superfund site. A permit must be obtained before any development or construction.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a

material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quit Claim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Conveyance Agreement shall mean that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among Grantor, Grantee and the Old Works Golf Course Authority.

Development Permit System shall mean the Anaconda-Deer Lodge Development Permit System adopted on December 2, 1992 by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources,

Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property, other than construction of the Golf Course and Old Works Historic Trail System on the Property by Grantor, which occurs after the Closing.

Golf Course shall mean the dedicated development identified in the OW/EADA ROD and located as shown in Attachment 2 hereto.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Memorandum of Conveyance Agreement shall mean that certain Memorandum of Real Property Transfer/Conveyance Agreement which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures set forth in the O&M Plan for the Property.

O&M Plan shall mean the Operations and Maintenance plans and procedures described in Exhibits A-1 and A-2 to the Memorandum of Conveyance Agreement.

OW/EADA Administrative Order shall mean the Administrative Order issued by EPA to ARCO on April 7, 1994, EPA Docket No. CERCLA and all attachments thereto and deliverables submitted thereunder, with respect to implementation of the OW/EADA Remedy, a copy of which is attached as Exhibit B to the Memorandum of Conveyance Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL Site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the Record of Decision issued March 8, 1994, as more specifically described in the OW/EADA Administrative Order and attachments thereto, including any operation and maintenance requirements of such remedy.

Old Works Historic Trail System shall mean the dedicated development identified in the OW/EADA ROD and located as shown in Attachment 3 hereto.

Open Space shall have the meaning as set forth in the Development Permit System.

Operation and Maintenance or O&M shall mean those measures required to maintain the effectiveness of the OW/EADA Remedy and shall include without limitation those measures set forth in the O&M Plan for the Property.

Proposed Plan shall mean the Anaconda Smelter Superfund Site, Old Works/East Anaconda Development Area Operable Unit Proposed

Plan issued by EPA in September 1993 and announcing a preferred alternative for the OW/EADA OU.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to (i) the Property, or any portion thereof, subsequent to the execution of this Quit Claim Deed, or (ii) any of the rights, duties and obligations arising under the Conveyance Agreement.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUIT CLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quit Claim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by ARCO relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter Site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter Site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter Site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy based upon the remedial alternatives evaluated in the remedial investigation/feasibility study conducted by Grantor at the OW/EADA OU, the Proposed Plan, public comments received on the Proposed Plan, and in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or

related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property, and (3) ownership, use or operations of the Golf Course. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures."

E. RESTRICTIVE COVENANTS.

1. Purpose. The following Restrictive Covenants are made pursuant to and in accordance with the Conveyance Agreement.

2. Covenants Running With the Land. The following Restrictive Covenants shall burden the Property and are intended to be and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the O&M Plan for the Property;

c. The Property may only be used for golf, park or other Open Space purposes;

d. Any fencing erected by Grantor in accordance with the requirements of the OW/EADA Remedy shall be maintained by the Property owner in good condition and repair as described more specifically on the O&M Plan for the Property;

e. The Property owner shall maintain the Golf Course and all facilities and improvements related thereto in accordance

with the terms and conditions of the Conveyance Agreement as described in the O&M Plan for the Property.

f. All use, construction and/or drilling of water wells for potable water purposes shall be prohibited;

g. The Golf Course as constructed by Grantor shall be maintained by the Property owner in good condition and repair in accordance with the OW/EADA Remedy;

h. As a part of the OW/EADA Remedy, Grantor will construct a soil cap over those areas identified in the final design report required by the OW/EADA Administrative Order. Such areas are anticipated to be the same as the location of the Golf Course as shown in Attachment 2. Except for required inspection and maintenance of golf improvements and systems, the Property owner shall not disturb the cap in any manner, whether by excavation or otherwise, without the prior written consent of Grantor. If the Property owner disturbs the cap for inspection and maintenance, the Property owner shall promptly restore the cap to substantially the same or better condition;

i. The Property owner shall maintain all caps, drainage control structures and pond systems or water courses installed by Grantor or its agents on the Property in good condition and repair and shall not interfere with their operation as described more specifically in the O&M Plan for the Property;

j. The Property owner shall not encumber all or any portion of the Property without the prior written consent of Grantor which consent may be withheld with or without cause;

k. The Property owner shall not convey the Property to anyone other than a "Qualified Transferee" as such term is defined in the Memorandum of Conveyance Agreement;

l. Residential development shall be prohibited;

m. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

n. The Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional

remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU under the OW/EADA Administrative Order as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

o. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited;

p. Any and all irrigation of those portions of the Property other than the Golf Course (as shown on Attachment 2) shall be prohibited. Irrigation of the Golf Course only shall be permitted so long as such irrigation (i) is permitted by the OW/EADA Remedy, (ii) is in compliance with the O&M Plan, and (iii) does not exacerbate the existing Environmental Conditions on the Property;

q. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the Restrictive Covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator;

r. The Old Works Trail System as constructed by Grantor shall be maintained by the Property owner in good condition and repair in accordance with the OW/EADA Remedy as described more specifically in the O&M Plan for the Property; and

s. Access to structures along the Old Works Historic Trail System, including but not limited to historic flues and foundations, shall be prohibited. The Property owner shall take such measures as may be required by the OW/EADA Remedy to prohibit such access.

3. <u>Benefitted Properties</u>. The Restrictive Covenants shall be for the benefit of the properties described below, their current owners and their Successors in Interest and Assigns:

a. The adjacent real property described on Attachment 4 attached hereto which is presently owned by Grantor; and

b. All other real properties which are adjacent to the Property.

c. All other real property located in Anaconda-Deer Lodge County, Montana.

4. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the Benefitted Properties by reason of the Restrictive Covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property on, or in the vicinity of, the Benefitted Properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

If Grantee transfers or conveys all or any part of its interest in the Property or any interest in the Property to a third party, then Grantee shall be required to include in its transfer or conveyance documents to such third party the foregoing Restrictive Covenants, releases and covenants not to sue. Grantee shall strictly enforce against such third party each and every Restrictive Covenant release and covenant not to sue with respect to the property which has been transferred to such third party. No grant, transfer, lease or conveyance of title, easement or other form of conveyance or transfer of any interest in all or any portion of the Property shall be made or effected without a provision restricting the use of the Property set forth herein and all such conveyances of title, grants, leases, transfers or conveyance of any interest in all or any of the Property shall contain the restriction set forth in this section except that each subsequent transferee's name shall be substituted in each subsequent document as the person or entity to be charged with compliance herewith.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each Restrictive Covenant set forth above is intended to and shall be a covenant running with the land

binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the Restrictive Covenants set forth in this Quit Claim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor shall be entitled to enforce the provisions of the Restrictive Covenants against Grantee pursuant to the terms and conditions of this Quit Claim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Property Owners in ADL. All owners of real property located in Anaconda-Deer Lodge County, Montana shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to such property owners in such proceedings.

d. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The Restrictive Covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by ARCO, ADL and the owner of the Parcel burdened by the Restrictive Covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. If EPA and the State do not object to such modifications in writing within twenty-one (21) days of delivery of such notice, the modifications shall be deemed accepted by EPA and the State. Such written approval by ARCO, ADL and the parcel owner may be evidenced by execution of the instrument created to amend the Restrictive Covenants.

b. Recordation of Modification. In order to be effective, any modification of the Restrictive Covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Restrictive Covenants. For purposes of these provisions, a modification of the Restrictive Covenants may include (i) the imposition of new restrictive covanants, or (ii) the termination of all or part of the existing Restrictive Covenants.

The parties have executed this Quit Claim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: Sandra M. Stash
Sandra M. Stash
Attorney-in-Fact

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: Jane Anderson
Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5th day of May, 1994 by Sandra M. Stash as Attorney-In-Fact of Atlantic Richfield Company.

Witness my hand and official seal.

My commission expires: 10-11-94

Carol L. Gilluly
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5th day of May, 1994 by Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.

My commission expires: 10-11-94

Carol L. Gilluly
Notary Public

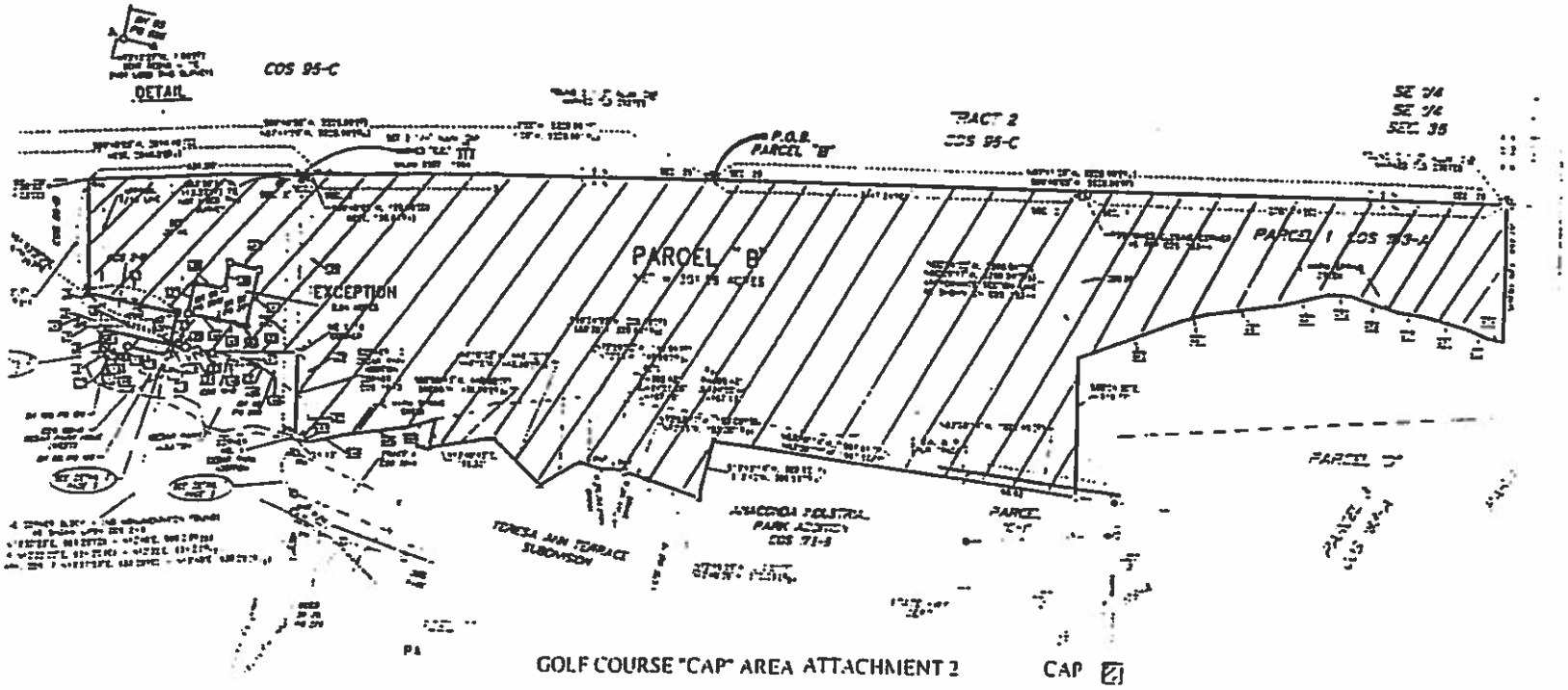
ATTACHMENT 1

(to Quit Claim Deed)

PROPERTY DESCRIPTION
Parcel B - Golf Course Parcel

That certain real property described in Certificate of Survey No. 98-C recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

Excepting and reserving for the Grantor all water rights and ditch easements arising out of or associated with Permit Number 83498-G76G.



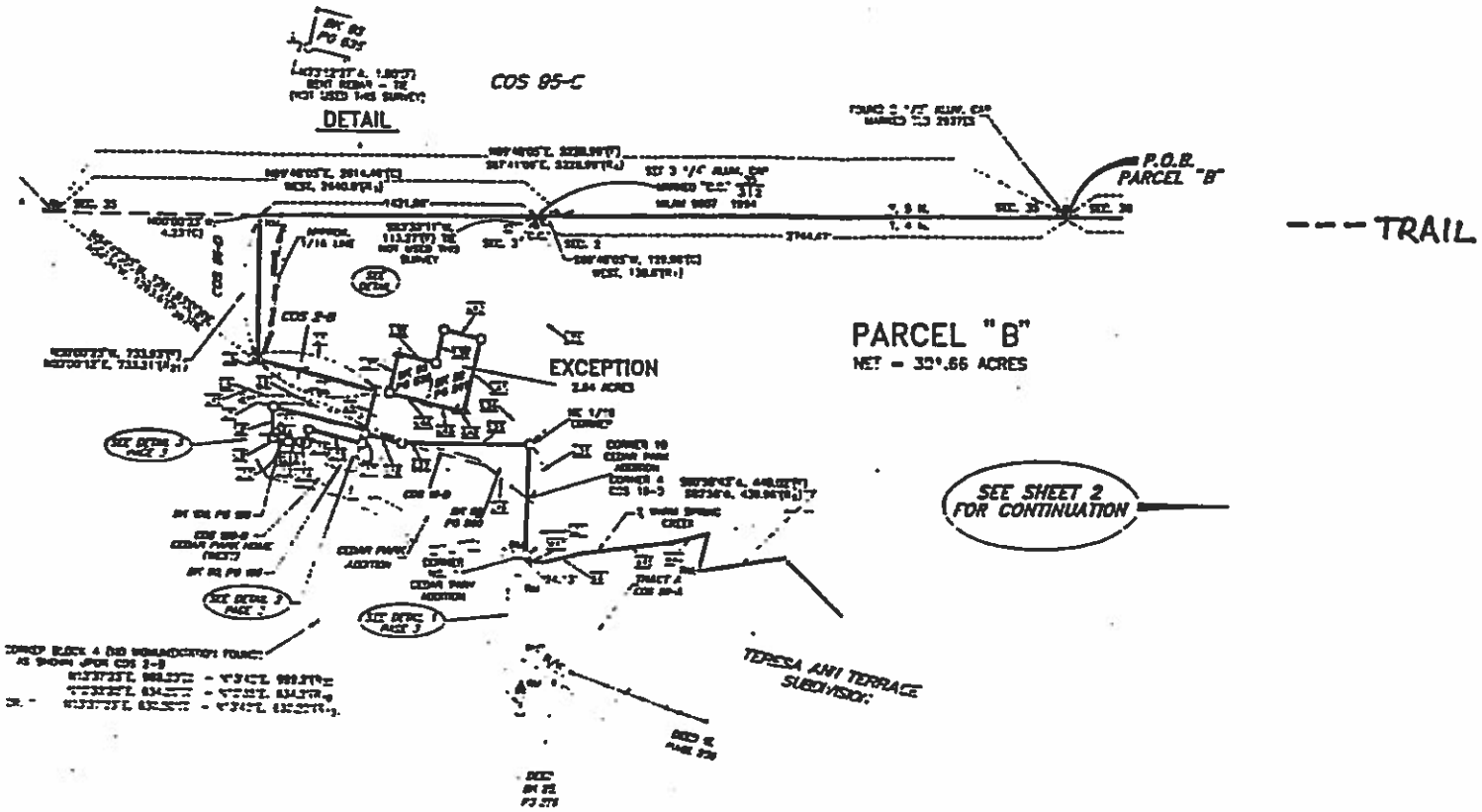
GOLF COURSE "CAP" AREA ATTACHMENT 2 CAP 2

CERTIFICATE OF SURVEY

PARCEL B - GOLF COURSE PARCEL

Attachment 3 to Golf Course
Parcel Quit Claim Deed

96 - 2



ATTACHMENT 4

(to Quit Claim Deed for Golf Course Parcel)

(ARCO PROPERTY DESCRIPTION FOR ENFORCEMENT OF RESTRICTIVE COVENANTS - Parcels A, B, C, D, E, F, H and I)

Real property located in Deer Lodge County, Montana and more particularly described as follows:

Township 4 North, Range 11 West

Section 12: All, less and except that portion of Section 12 which is included in Certificate of Survey No. 99-A, filed of record in the real property records of Deer Lodge County, Montana on April 25, 1994 and less and except easements of record, if any.

145004

STATE OF MONTANA)
County of Deer Lodge) ss

I, hereby certify that the within instrument was filed in my office on the 5th day of May, 1994 at 58 minutes past 2 o'clock P.M., and is recorded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

_____ County Recorder Peggy Davis Deputy Fee$ 114.00

145006 96 230

QUIT CLAIM DEED

(Red Sands/Arbiter Parcel)

THIS DEED is made effective as of May 5, 1994, between ATLANTIC RICHFIELD COMPANY ("Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, with offices at 555 Seventeenth Street, Denver, Colorado 80202, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, water and water rights, ditch and ditch rights, situated on or appurtenant to the Property , or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee pursuant to the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994, a Memorandum of which was recorded on May 5, 1994 in Book 45 at Page 945 of the Deer Lodge County real property records. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Memorandum and in the Additional Provisions set forth below.

This Property is within a Superfund site. A permit must be obtained before any development or construction.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a

material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quit Claim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Conveyance Agreement shall mean that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among Grantor, Grantee and the Old Works Golf Course Authority.

Development Permit System shall mean the Anaconda-Deer Lodge Development Permit System adopted on December 2, 1992 by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources,

Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property, other than construction of the Old Works Historic Trail System on the Property by Grantor, which occurs after the Closing.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Memorandum of Conveyance Agreement shall mean that certain Memorandum of Real Property Transfer/Conveyance Agreement which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to

mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures set forth in the O&M Plan for the Property.

O&M Plan shall mean the Operations and Maintenance plans and procedures described in Exhibits A-1 and A-2 to the Memorandum of Conveyance Agreement.

OW/EADA Administrative Order shall mean the Administrative Order issued by EPA to ARCO on April 7, 1994, EPA Docket No. CERCLA VIII-94-08, and all attachments thereto and deliverables submitted thereunder, with respect to implementation of the OW/EADA Remedy, a copy of which is attached as Exhibit B to the Memorandum of Conveyance Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL Site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the Record of Decision issued March 8, 1994, as more specifically described in the OW/EADA Administrative Order and attachments thereto, including any operation and maintenance requirements of such remedy.

Old Works Historic Trail System shall mean the dedicated development identified in the OW/EADA ROD and located as shown in Attachment 2 hereto.

Open Space shall have the meaning as set forth in the Development Permit System.

Operation and Maintenance or O&M shall mean those measures required to maintain the effectiveness of the OW/EADA Remedy and shall include without limitation those measures set forth in the O&M Plan for the Property.

Proposed Plan shall mean the Anaconda Smelter Superfund Site, Old Works/East Anaconda Development Area Operable Unit Proposed Plan issued by EPA in September 1993 and announcing a preferred alternative for the OW/EADA OU.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to (i) the Property, or any portion thereof, subsequent to the execution of this Quit Claim Deed, or (ii) any of the rights, duties and obligations arising under the Conveyance Agreement.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUIT CLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials at, to, or from the Property into the environment; and

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quit Claim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by ARCO relating to the title to the Property, including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter Site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter Site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter Site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy based upon the remedial alternatives evaluated in the remedial investigation/feasibility study conducted by Grantor at the OW/EADA OU, the Proposed Plan, public comments received on the Proposed Plan, and in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or

related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property and (3) ownership, use or operation of the Old Works Historic Trail System. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures."

E. RESTRICTIVE COVENANTS.

1. Purpose. The following Restrictive Covenants are made pursuant to and in accordance with the Conveyance Agreement.

2. Covenants Running With the Land. The following Restrictive Covenants shall burden the Property and are intended to be and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the O&M Plan for the Property;

c. Residential development shall be prohibited on the Property;

d. The Property may only be used for the Old Works Historic Trail System and development for Commercial, Industrial or Light Industrial purposes, as such terms are defined in the Development Permit System, including but not limited to development of a Class III landfill;

e. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or

monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including without limitation EPA and the State)) shall be prohibited;

f. The Old Works Historic Trail System as constructed by Grantor shall be maintained by the Property owner in good condition and repair in accordance with the OW/EADA Remedy as described more specifically in the O&M Plan for the Property;

g. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

h. The Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU under the OW/EADA Administrative Order as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

i. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited;

j. Access to structures along the Old Works Historic Trail System, including but not limited to historic flues and foundations, shall be prohibited. The Property owner shall take such measures as may be required by the OW/EADA Remedy to prohibit such access;

k. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the Restrictive Covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be

prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator and

1. Owners shall maintain all caps and drainage control structures installed by Grantor or its agents on this Parcel in good condition and repair and shall not interfere with their operations, as described more specifically in the O&M Plans.

3. Benefitted Properties. The Restrictive Covenants shall be for the benefit of the properties described below, their current owners and their Successors in Interest and Assigns:

a. The adjacent real property described on Attachment 3 attached hereto which is presently owned by Grantor; and

b. All other real properties which are adjacent to the Property.

c. All other real property located in Anaconda-Deer Lodge County, Montana.

4. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the Benefitted Properties by reason of the Restrictive Covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property on, or in the vicinity of, the Benefitted Properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

If Grantee transfers or conveys all or any part of its interest in the Property or any interest in the Property to a third party, then Grantee shall be required to include in its transfer or conveyance documents to such third party the foregoing Restrictive Covenants, releases and covenants not to sue. Grantee shall strictly enforce against such third party each and every Restrictive Covenant release and covenant not to sue with respect to the property which has been transferred to such third party. No grant, transfer, lease or conveyance of title, easement or other form of conveyance or transfer of any interest in all or any

portion of the Property shall be made or effected without a provision restricting the use of the Property set forth herein and all such conveyances of title, grants, leases, transfers or conveyance of any interest in all or any of the Property shall contain the restriction set forth in this section except that each subsequent transferee's name shall be substituted in each subsequent document as the person or entity to be charged with compliance herewith.

G. ENFORCEMENT RIGHTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each Restrictive Covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the Restrictive Covenants set forth in this Quit Claim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor shall be entitled to enforce the provisions of the Restrictive Covenants against Grantee pursuant to the terms and conditions of this Quit Claim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Property Owners in ADL. All owners of real property located in Anaconda-Deer Lodge County, Montana shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to such property owners in such proceedings.

d. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The Restrictive Covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by ARCO, ADL and the owner of the Parcel burdened by the Restrictive Covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. If EPA and the State do not object to such modifications in writing within twenty-one (21) days of delivery of such notice, the modifications shall be deemed accepted by EPA and the State. Such written approval by ARCO, ADL and the parcel owner may be evidenced by execution of the instrument created to amend the Restrictive Covenants.

b. Recordation of Modification. In order to be effective, any modification of the Restrictive Covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Restrictive Covenants. For purposes of these provisions, a modification of the Restrictive Covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing Restrictive Covenants.

The parties have executed this Quit Claim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: Sandra M. Stash
Sandra M. Stash
Attorney-in-Fact

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: Jane Anderson
Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5th day of May, 1994 by Sandra M. Stash as Attorney-In-Fact of Atlantic Richfield Company.

Witness my hand and official seal.

My commission expires: May 1, 1996

Thelma Z. Stone
Notary Public

THELMA Z. STONE NOTARIAL SEAL STATE OF MONTANA

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5th day of May, 1994 by Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.

My commission expires: May 1, 1996

Thelma Z. Stone
Notary Public

THELMA Z. STONE NOTARIAL SEAL STATE OF MONTANA

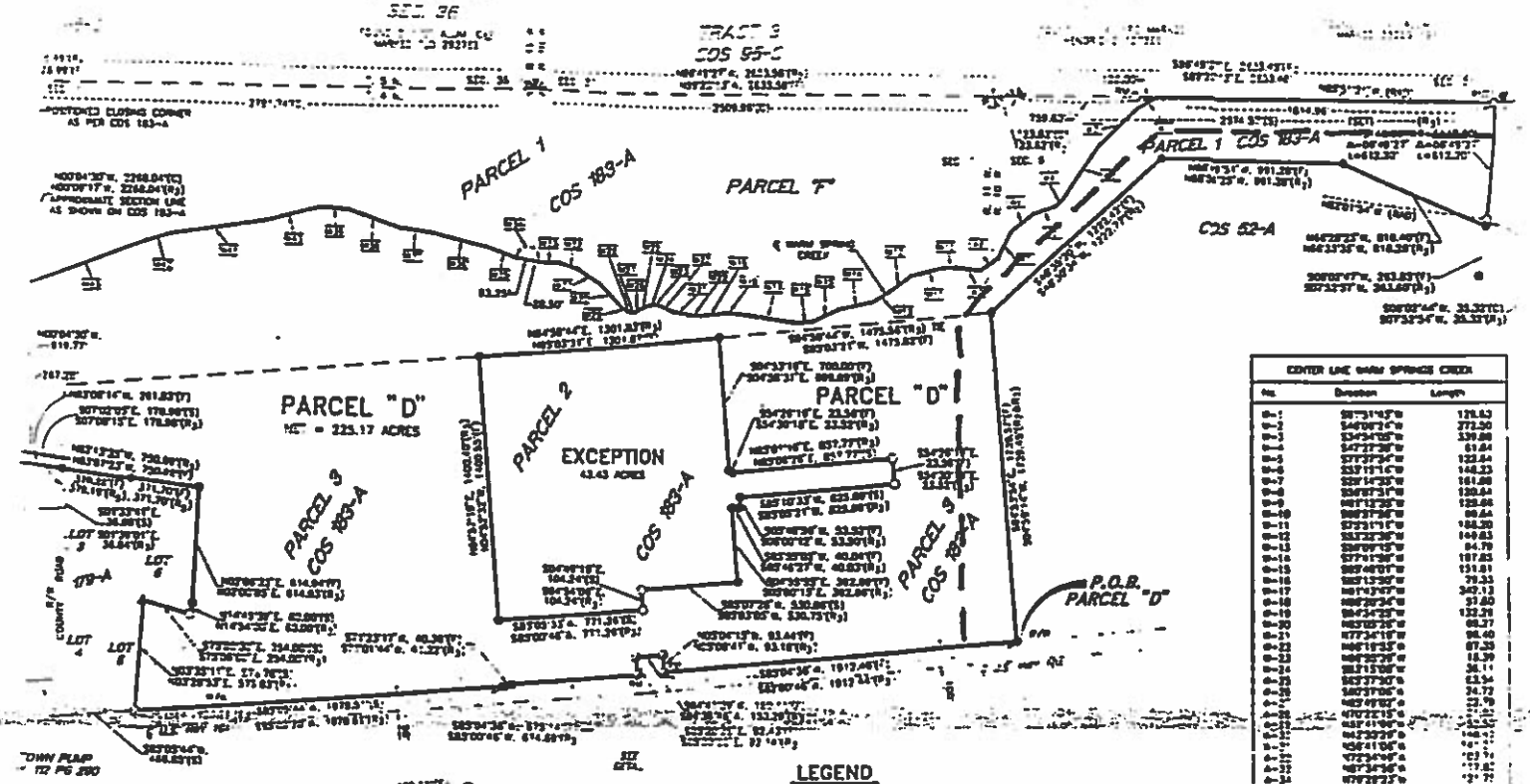
ATTACHMENT 1

(to Quit Claim Deed)

PROPERTY DESCRIPTION
Parcel D - Red Sands Arbiter Parcel

That certain real property described in Certificate of Survey No. 98-D recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

RED SANDS ARBITER PARCEL



CENTER LINE WARM SPRINGS CREEK		
No.	Direction	Length
0-1	S87°31'45"W	128.63
0-2	S46°07'14"W	272.50
0-3	S34°34'58"W	339.88
0-4	S47°27'38"W	61.84
0-5	S37°37'34"W	122.64
0-6	S33°11'16"W	148.23
0-7	S25°14'35"W	161.88
0-8	S36°07'31"W	120.64
0-9	N81°12'28"W	125.66
0-10	S82°37'36"W	90.64
0-11	S72°31'11"W	188.20
0-12	S53°32'38"W	149.63
0-13	S60°07'15"W	84.79
0-14	S77°11'38"W	107.83
0-15	S85°40'01"W	131.81
0-16	S85°13'38"W	79.35
0-17	N87°17'07"W	340.13
0-18	N86°28'34"W	37.60
0-19	S84°42'28"W	132.29
0-20	N65°05'26"W	66.37
0-21	N77°34'18"W	88.40
0-22	N46°11'23"W	87.35
0-23	N48°32'28"W	18.39
0-24	S82°15'08"W	36.11
0-25	S62°37'30"W	63.94
0-26	S40°37'06"W	34.72
0-27	N60°07'07"W	52.79
0-28	N70°22'15"W	44.42
0-29	N87°11'06"W	53.35
0-30	N56°41'06"W	40.17
0-31	N72°34'46"W	62.71
0-32	N72°34'46"W	117.61
0-33	N87°34'46"W	121.71
0-34	N70°23'23"W	137.05
0-35	N70°10'16"W	204.12
0-36	N70°11'34"W	177.09
0-37	N67°42'20"W	295.34
0-38	N67°22'04"W	158.75
0-39	S73°04'43"W	328.29
0-40	S82°[illegible]'37"W	111.77
0-41	S72°41'30"W	146.81
0-42	S81°[illegible]'03"W	139.[illegible]

LEGEND

DETAIL

VICINITY MAP

Attachment 2 to Red Sands/Arbiter Parcel Quit Claim Deed

96 : 2

ATTACHMENT 3

(to Quit Claim Deed for Red Sands/Arbiter Parcel)

(ARCO PROPERTY DESCRIPTION FOR ENFORCEMENT OF RESTRICTIVE COVENANTS - Parcels A, B, C, D, E, F, H and I)

Real property located in Deer Lodge County, Montana and more particularly described as follows:

Township 4 North, Range 11 West

Section 12: All, less and except that portion of Section 12 which is included in Certificate of Survey No. 99-A, filed of record in the real property records of Deer Lodge County, Montana on April 25, 1994 and less and except easements of record, if any.

145006

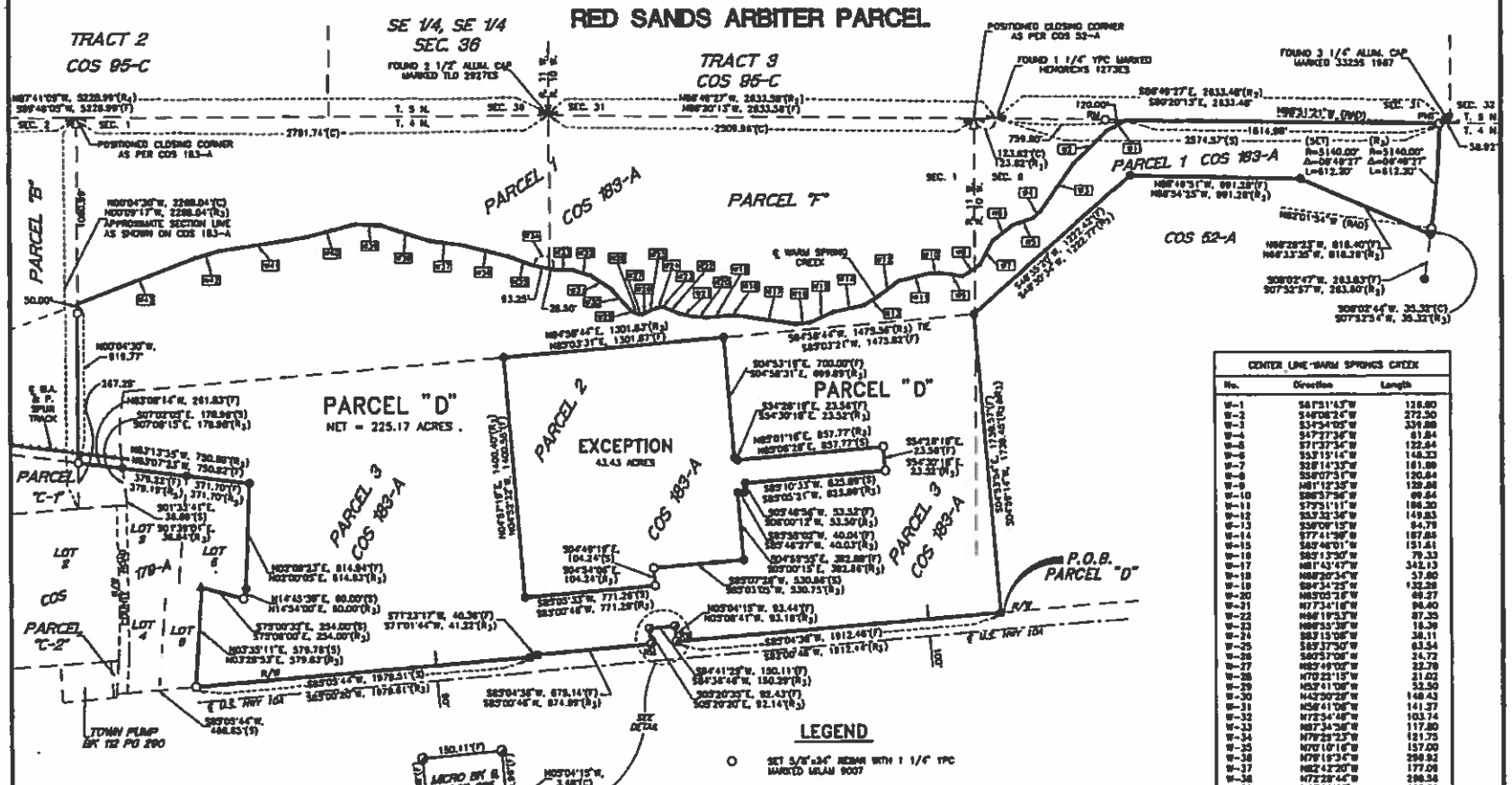
STATE OF MONTANA)
County of Deer Lodge) ss

I, hereby certify that the within instrument was filed in my office on the 5th day May, 1994 at 03 minutes past 3 o'clock P.M., and is re-corded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

_____ County Recorder Peggy Davis Deputy Fees 10.00

CERTIFICATE OF SURVEY

RED SANDS ARBITER PARCEL

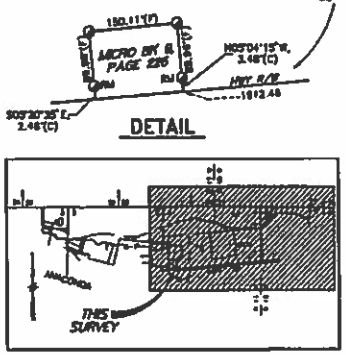


CENTER LINE-WARM SPRINGS CREEK		
No.	Direction	Length
W-1	S61°31'43"W	128.80
W-2	S49°08'24"W	272.30
W-3	S34°41'05"W	339.88
W-4	S47°37'36"W	61.84
W-5	S71°37'36"W	122.64
W-6	S33°15'14"W	148.23
W-7	S25°14'33"W	161.89
W-8	S34°07'51"W	120.64
W-9	N81°12'35"W	139.86
W-10	S86°57'56"W	99.64
W-11	S75°51'11"W	186.20
W-12	S53°32'38"W	149.83
W-13	S34°06'15"W	64.79
W-14	S77°41'38"W	187.85
W-15	S62°46'01"W	151.61
W-16	S65°13'30"W	79.33
W-17	N81°43'47"W	343.13
W-18	N88°20'34"W	37.80
W-19	S84°34'25"W	132.28
W-20	N83°05'26"W	49.27
W-21	N77°34'18"W	94.40
W-22	N86°19'53"W	87.35
W-23	N86°33'38"W	18.39
W-24	S83°15'08"W	38.11
W-25	S83°37'30"W	63.54
W-26	S80°37'08"W	34.72
W-27	N85°49'02"W	32.78
W-28	N70°22'15"W	21.62
W-29	N52°41'08"W	52.30
W-30	N43°30'28"W	148.43
W-31	N56°41'08"W	141.37
W-32	N72°34'48"W	103.14
W-33	N87°34'38"W	117.80
W-34	N79°23'23"W	121.75
W-35	N70°10'16"W	157.00
W-36	N79°19'36"W	298.82
W-37	N82°42'28"W	177.08
W-38	N72°28'44"W	288.34
W-39	N87°29'22"W	158.29
W-40	S75°49'43"W	308.09
W-41	S81°02'23"W	311.05
W-42	S73°27'30"W	146.82
W-43	S86°16'37"W	738.41

LEGEND

- ○ SET 5/8"x24" REBAR WITH 1 1/4" TPC MARKED MLAM 9007
- ● FOUND 1" TPC MARKED 73335 MONT.
- ⊙ FOUND CORNER OF CHAINLINK FENCE (COS 183-A)
- ■ FOUND CONCRETE R/W MONUMENT
- ▲ FOUND 5/8" REBAR, NO CAP
- R/W RIGHT-OF-WAY
- C.C. CLOSING CORNER
- (RAD) RADIAL BEARING
- (PNT) POINT OF NON-TANGENCY
- (S) SET
- (C) CALCULATED POSITION NO MONUMENT SET
- (F) FOUND
- (R_1) RECORD, OLD
- (R_2) RECORD, COS 52-A
- (R_3) RECORD, COS 183-A
- (R_4) RECORD, COS 95-C
- (R_5) RECORD, COS 179-A

DETAIL



VICINITY MAP

NO SCALE

0 400' 600'

SCALE IN FEET
BASIS OF BEARING
TRUE NORTH (GPS)

OWNER OF RECORD

ATLANTIC RICHFIELD COMPANY

1/4	SEC.	T.	R.	
⊞	6	4 N.	10 W.	
⊞	1	4 N.	11 W.	SHEET 1 OF 2
⊞				
⊞				
PRINCIPAL MERIDIAN, MONTANA				DEER LODGE COUNTY, MONTANA

CERTIFICATE OF SURVEY NO. 980

PREPARED BY:

DRUYVESTEIN, JOHNSON & ANDERSON

145007 BOOK 96 PAGE 246

QUIT CLAIM DEED

(East Anaconda Yards Parcel)

THIS DEED is made effective as of May 5, 1994, between ATLANTIC RICHFIELD COMPANY ("Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, with offices at 555 Seventeenth Street, Denver, Colorado 80202, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, water and water rights, ditch and ditch rights, situated on or appurtenant to the Property , or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee pursuant to the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994, a Memorandum of which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Memorandum and in the Additional Provisions set forth below.

This Property is within a Superfund site. A permit must be obtained before any development or construction.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a

material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quit Claim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Conveyance Agreement shall mean that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among Grantor, Grantee and the Old Works Golf Course Authority.

Development Permit System shall mean the Anaconda-Deer Lodge Development Permit System adopted on December 2, 1992 by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources,

Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Memorandum of Conveyance Agreement shall mean that certain Memorandum of Real Property Transfer/Conveyance Agreement which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations,

including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures set forth in the O&M Plan for the Property.

O&M Plan shall mean the Operations and Maintenance plans and procedures described in Exhibits A-1 and A-2 to the Memorandum of Conveyance Agreement.

OW/EADA Administrative Order shall mean the Administrative Order issued by EPA to ARCO on April 7, 1994, EPA Docket No. CERCLA VIII-94-08, and all attachments thereto and deliverables submitted thereunder, with respect to implementation of the OW/EADA Remedy, a copy of which is attached as Exhibit B to the Memorandum of Conveyance Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL Site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the Record of Decision issued March 8, 1994, as more specifically described in the OW/EADA Administrative Order and attachments thereto, including any operation and maintenance requirements of such remedy.

Open Space shall have the meaning as set forth in the Development Permit System.

Operation and Maintenance or O&M shall mean those measures required to maintain the effectiveness of the OW/EADA Remedy and shall include without limitation those measures set forth in the O&M Plan for the Property.

Proposed Plan shall mean the Anaconda Smelter Superfund Site, Old Works/East Anaconda Development Area Operable Unit Proposed Plan issued by EPA in September 1993 and announcing a preferred alternative for the OW/EADA OU.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to (i) the Property, or any portion thereof, subsequent to the execution of this Quit Claim Deed, or (ii) any of the rights, duties and obligations arising under the Conveyance Agreement.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUIT CLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quit Claim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by ARCO relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter Site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter Site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter Site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy based upon the remedial alternatives evaluated in the remedial investigation/feasibility study conducted by Grantor at the OW/EADA OU, the Proposed Plan, public comments received on the Proposed Plan, and in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; and (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its

affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures."

E. RESTRICTIVE COVENANTS.

1. Purpose. The following Restrictive Covenants are made pursuant to and in accordance with the Conveyance Agreement.

2. Covenants Running With the Land. The following Restrictive Covenants shall burden the Property and are intended to be and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the O&M Plan for the Property;

c. The Property may only be used for development for Commercial, or Light Industrial purposes, as such terms are defined in the Development Permit System, and for those Open Space uses associated with Benny Goodman Park;

d. Any fencing erected by Grantor in accordance with the requirements of the OW/EADA Remedy shall be maintained by the Property owner in good condition and repair as described more specifically in the O&M Plan for the Property;

e. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including without limitation EPA and the State)) shall be prohibited;

f. The Property owner shall maintain all caps and drainage control structures installed by Grantor or its agents on the Property in good condition and repair and shall not interfere with their operation as described more specifically in the O&M Plan for the Property;

g. Residential development shall be prohibited on the Property;

h. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

i. The Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU under the OW/EADA Administrative Order as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

j. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited;

k. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the Restrictive Covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator. Notwithstanding the foregoing, this section "k" shall <u>not</u> be applicable to those areas of the Property identified on Attachment 2 attached hereto and incorporated herein; and

l. Irrigation shall be permitted only on those portions of the Property shown on the map attached hereto as

Attachment 2 indicating permissible irrigation areas. Irrigation of such areas shall be permitted so long as such irrigation (i) is permitted by the OW/EADA Remedy, (ii) is in compliance with the O&M Plan, and (iii) does not exacerbate the existing Environmental Conditions on the Property.

3. Benefitted Properties. The Restrictive Covenants shall be for the benefit of the properties described below, their current owners and their Successors in Interest and Assigns:

a. The adjacent real property described on Attachment 3 attached hereto which is presently owned by Grantor; and

b. All other real properties which are adjacent to the Property.

c. All other real property located in Anaconda-Deer Lodge County, Montana.

4. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the Benefitted Properties by reason of the Restrictive Covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property on, or in the vicinity of, the Benefitted Properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

If Grantee transfers or conveys all or any part of its interest in the Property or any interest in the Property to a third party, then Grantee shall be required to include in its transfer or conveyance documents to such third party the foregoing Restrictive Covenants, releases and covenants not to sue. Grantee shall strictly enforce against such third party each and every Restrictive Covenant release and covenant not to sue with respect to the property which has been transferred to such third party. No grant, transfer, lease or conveyance of title, easement or other form of conveyance or transfer of any interest in all or any portion of the Property shall be made or effected without a provision restricting the use of the Property set forth herein and all such conveyances of title, grants, leases, transfers or

conveyance of any interest in all or any of the Property shall contain the restriction set forth in this section except that each subsequent transferee's name shall be substituted in each subsequent document as the person or entity to be charged with compliance herewith.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each Restrictive Covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the Restrictive Covenants set forth in this Quit Claim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor shall be entitled to enforce the provisions of the Restrictive Covenants against Grantee pursuant to the terms and conditions of this Quit Claim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Property Owners in ADL. All owners of real property located in Anaconda-Deer Lodge County, Montana shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to such property owners in such proceedings.

d. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The Restrictive Covenant may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by ARCO, ADL and the owner of the Parcel burdened by the Restrictive Covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. If EPA and the State do not object to such modifications in writing within twenty-one (21) days of delivery of such notice, the modifications shall be deemed accepted by EPA and the State. Such written approval by ARCO, ADL and the parcel owner may be evidenced by execution of the instrument created to amend the Restrictive Covenants.

b. Recordation of Modification. In order to be effective, any modification of the Restrictive Covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Restrictive Covenants. For purposes of these provisions, a modification of the Restrictive Covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing Restrictive Covenants.

The parties have executed this Quit Claim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: Sandra M. Stash
Sandra M. Stash
Attorney-in-Fact

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: Jane Anderson
Jane Anderson
Chairwoman of Anaconda-Deer Lodge County Commission

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5th day of May, 1994 by Sandra M. Stash as Attorney-In-Fact of Atlantic Richfield Company.

Witness my hand and official seal.

My commission expires: 11-27-94

JEAN R. BRASIER NOTARIAL SEAL STATE OF MONTANA

Jean R. Brasier
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5th day of May, 1994 by Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.

My commission expires: 11-27-94

JEAN R. BRASIER NOTARIAL SEAL STATE OF MONTANA

Jean R. Brasier
Notary Public

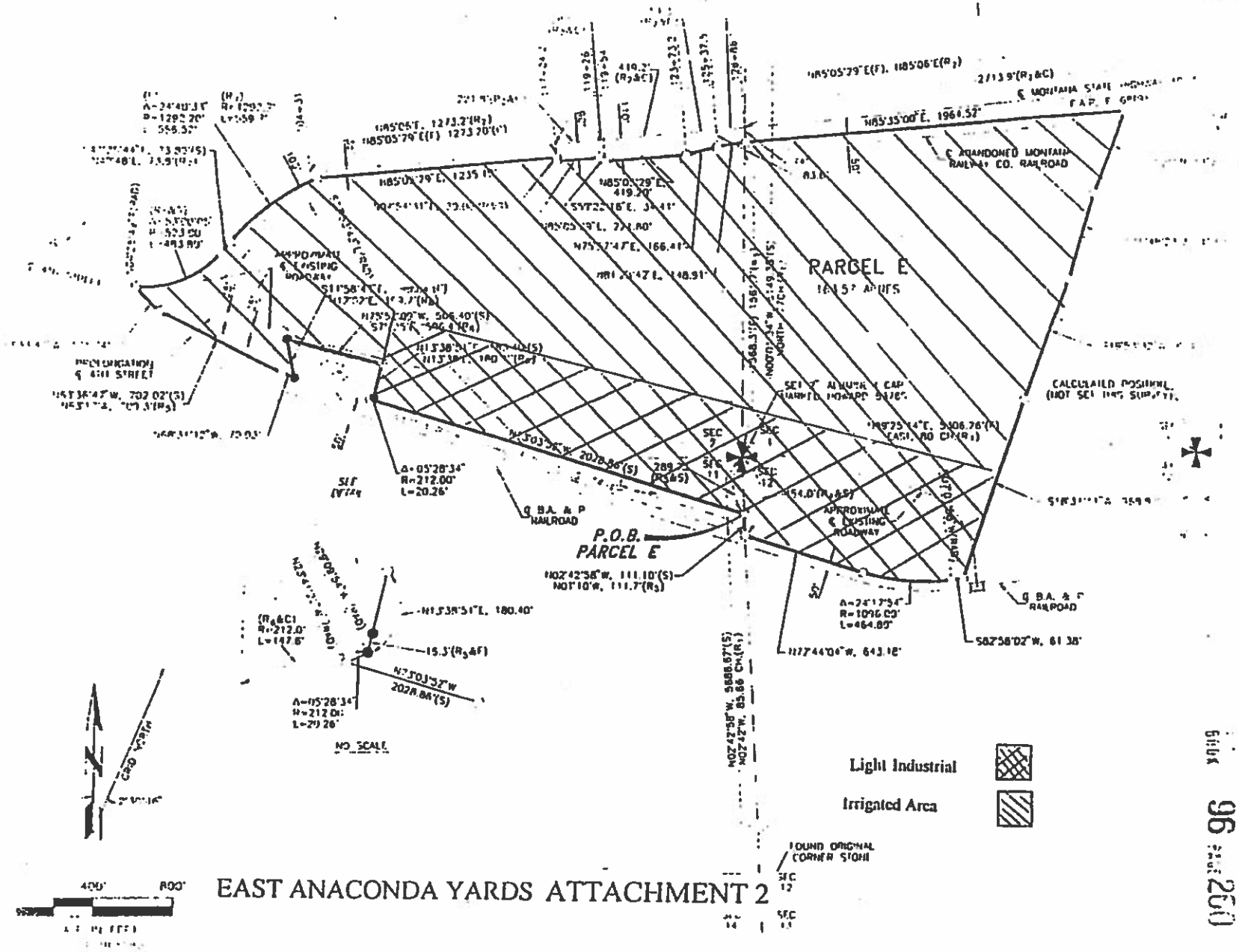
(f:\clients\1498.4b\nmpquitclaim.EA1)

ATTACHMENT 1

(to Quit Claim Deed)

PROPERTY DESCRIPTION
Parcel E - East Anaconda Yards Parcel

That certain real property described in Certificate of Survey No. 99-A recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.



EAST ANACONDA YARDS ATTACHMENT 2

Book 96 Page 2601

ATTACHMENT 3

(to Quit Claim Deed for East Anaconda Yards Parcel)

(ARCO PROPERTY DESCRIPTION FOR ENFORCEMENT OF RESTRICTIVE COVENANTS - Parcels A, B, C, D, E, F, H and I)

Real property located in Deer Lodge County, Montana and more particularly described as follows:

Township 4 North, Range 11 West

Section 12: All, less and except that portion of Section 12 which is included in Certificate of Survey No. 99-A, filed of record in the real property records of Deer Lodge County, Montana on April 25, 1994 and less and except easements of record, if any.

145007

STATE OF MONTANA) ss
County of Deer Lodge)

I, hereby certify that the within instrument was filed in my office on the 5th day May, 1994 at 05 minutes past 3 o'clock P.M., and is recorded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

_____ County Recorder Peggy Davis Deputy Fee$ 96.00

145291

96 921

QUIT CLAIM DEED

(Lumber Yard Parcel)

THIS DEED is made effective as of May 5, 1994, between ATLANTIC RICHFIELD COMPANY ("Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, with offices at 555 Seventeenth Street, Denver, Colorado 80202, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, water and water rights, ditch and ditch rights, situated on or appurtenant to the Property , or any thereof, or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee pursuant to the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994, a Memorandum of which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Memorandum and in the Additional Provisions set forth below.

This Property is within a Superfund site. A permit must be obtained before any development or construction.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained

for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quit Claim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Conveyance Agreement shall mean that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among Grantor, Grantee and the Old Works Golf Course Authority.

Development Permit System shall mean the Anaconda-Deer Lodge Development Permit System adopted on December 2, 1992 by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits,

approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. SS 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. SS 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. SS 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. SS 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. S 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. SS 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. SS 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. SS 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. SS 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. SS 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Memorandum of Conveyance Agreement shall mean that certain Memorandum of Real Property Transfer/Conveyance Agreement which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and

any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures set forth in the O&M Plan for the Property.

O&M Plan shall mean the Operations and Maintenance plans and procedures described in Exhibits A-1 and A-2 to the Memorandum of Conveyance Agreement.

OW/EADA Administrative Order shall mean the Administrative Order issued by EPA to ARCO on April 7, 1994, EPA Docket No. CERCLA VIII-94-08, and all attachments thereto and deliverables submitted thereunder, with respect to implementation of the OW/EADA Remedy, a copy of which is attached as Exhibit B to the Memorandum of Conveyance Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL Site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the Record of Decision issued March 8, 1994, as more specifically described in the OW/EADA Administrative Order and attachments thereto, including any operation and maintenance requirements of such remedy.

Open Space shall have the meaning as set forth in the Development Permit System.

Operation and Maintenance or O&M shall mean those measures required to maintain the effectiveness of the OW/EADA Remedy and shall include without limitation those measures set forth in the O&M Plan for the Property.

Proposed Plan shall mean the Anaconda Smelter Superfund Site, Old Works/East Anaconda Development Area Operable Unit Proposed Plan issued by EPA in September 1993 and announcing a preferred alternative for the OW/EADA OU.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to (i) the Property, or any portion thereof, subsequent to the execution of this Quit Claim Deed, or (ii) any of the rights, duties and obligations arising under the Conveyance Agreement.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUIT CLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quit Claim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by ARCO relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter Site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter Site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter Site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy based upon the remedial alternatives evaluated in the remedial investigation/feasibility study conducted by Grantor at the OW/EADA OU, the Proposed Plan, public comments received on the Proposed Plan, and in accordance with the requirements of CERCLA and the National Contingency Plan 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; and (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its

affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures."

E. RESTRICTIVE COVENANTS.

1. Purpose. The following Restrictive Covenants are made pursuant to and in accordance with the Conveyance Agreement.

2. Covenants Running With the Land. The following Restrictive Covenants shall burden the Property and are intended to be and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the O&M Plan for the Property;

c. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including without limitation EPA and the State)) shall be prohibited;

d. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

e. The Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For

purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU under the OW/EADA Administrative Order as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

f. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited; and

g. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the Restrictive Covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator.

3. Benefitted Properties. The Restrictive Covenants shall be for the benefit of the properties described below, their current owners and their Successors in Interest and Assigns:

a. The adjacent real property described on Attachment 2 attached hereto which is presently owned by Grantor; and

b. All other real properties which are adjacent to the Property.

c. All other real property located in Anaconda-Deer Lodge County, Montana.

4. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the Benefitted Properties by reason of the Restrictive Covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property on, or in the vicinity of, the Benefitted Properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

If Grantee transfers or conveys all or any part of its interest in the Property or any interest in the Property to a third party, then Grantee shall be required to include in its transfer or conveyance documents to such third party the foregoing Restrictive Covenants, releases and covenants not to sue. Grantee shall strictly enforce against such third party each and every Restrictive Covenant release and covenant not to sue with respect to the property which has been transferred to such third party. No grant, transfer, lease or conveyance of title, easement or other form of conveyance or transfer of any interest in all or any portion of the Property shall be made or effected without a provision restricting the use of the Property set forth herein and all such conveyances of title, grants, leases, transfers or conveyance of any interest in all or any of the Property shall contain the restriction set forth in this section except that each subsequent transferee's name shall be substituted in each subsequent document as the person or entity to be charged with compliance herewith.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each Restrictive Covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the Restrictive Covenants set forth in this Quit Claim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor shall be entitled to enforce the provisions of the Restrictive Covenants against Grantee pursuant to the terms and conditions of this Quit Claim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee

hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Property Owners in ADL. All owners of real property located in Anaconda-Deer Lodge County, Montana shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to such property owners in such proceedings.

d. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The Restrictive Covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by ARCO, ADL and the owner of the Parcel burdened by the Restrictive Covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. If EPA and the State do not object to such modifications in writing within twenty-one (21) days of delivery of such notice, the modifications shall be deemed accepted by EPA and the State. Such written approval by ARCO, ADL and the parcel owner may be evidenced by execution of the instrument created to amend the Restrictive Covenants.

b. Recordation of Modification. In order to be effective, any modification of the Restrictive Covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Restrictive Covenants. For purposes of these provisions, a modification of the Restrictive Covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing Restrictive Covenants.

The parties have executed this Quit Claim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: Sandra M. Stash
Sandra M. Stash
Attorney-in-Fact

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: Jane Anderson
Jane Anderson
Chairwoman of Anaconda-Deer Lodge County Commission

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5th day of May, 1994 by Sandra M. Stash as Attorney-In-Fact of Atlantic Richfield Company.

Witness my hand and official seal.

My commission expires: 11-27-94

Jean R. Grasier
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5th day of May, 1994 by Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.

My commission expires: 11-27-96

JEAN R BRASIER NOTARIAL SEAL STATE OF MONTANA

Jean R. Brasier
Notary Public

(f:\clients\1499.42\rmpquitclaim.fyc)

ATTACHMENT 1

(to Quit Claim Deed

PROPERTY DESCRIPTION
Parcel I - Lumber Yard Parcel

That certain real property described in Plat No. 194-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

ATTACHMENT 2

(to Quit Claim Deed for Lumber Yard Parcel)

(ARCO PROPERTY DESCRIPTION FOR ENFORCEMENT OF RESTRICTIVE COVENANTS - Parcels A, B, C, D, E, F, H and I)

Real property located in Deer Lodge County, Montana and more particularly described as follows:

Township 4 North, Range 11 West

Section 12: All, less and except that portion of Section 12 which is included in Certificate of Survey No. 99-A, filed of record in the real property records of Deer Lodge County, Montana on April 25, 1994 and less and except easements of record, if any.

STATE OF MONTANA)
County of Deer Lodge) ss

I, hereby certify that the within instrument was filed in my office on the 16 day of June, 1994 at 0 minutes past 9 o'clock A.M., and is recorded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

Tracey Sweeney County Recorder _____ Deputy Fee $90.00

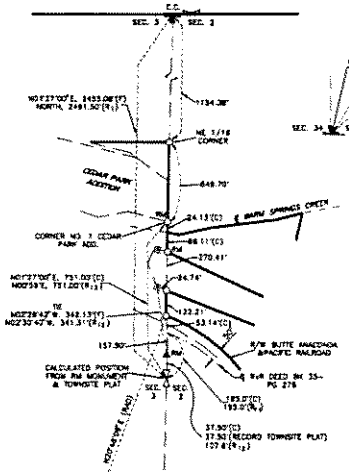
194B

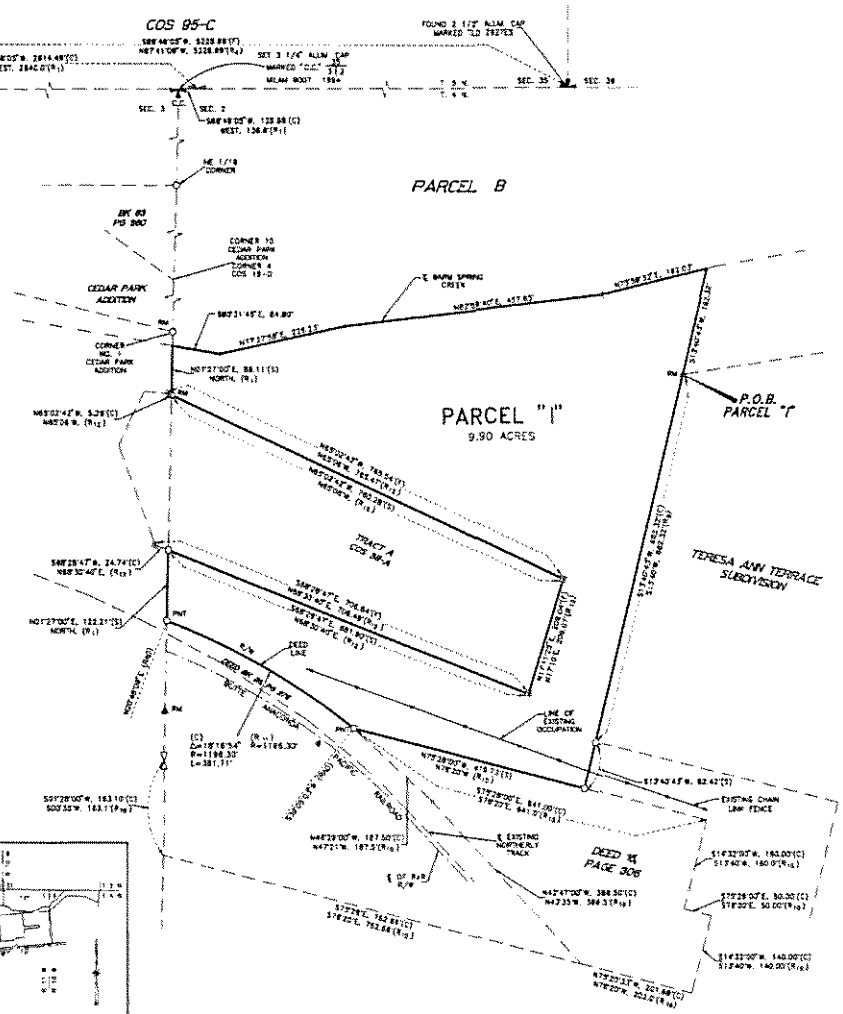
PARCEL "I" MINOR SUBDIVISION

PARCEL I - LUMBER YARD PARCEL

NW 1/4 SECTION 2, T. 4 N., R. 11 W., P.M.M.
ANACONDA – DEER LODGE COUNTY, MONTANA

DETAIL

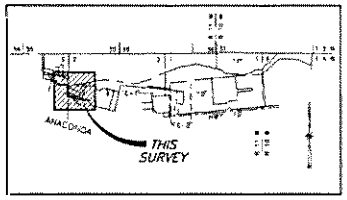




LEGEND

- ○ SET 5/8"x24" REBAR WITH 1 1/4" YPC MARKED MLAM ROOT
- ▲ FOUND 5/8" REBAR, NO CAP
- ⊠ FOUND 1" YPC MARKED EVERLY 1442ES
- R/W RIGHT-OF-WAY
- C.C. CLOSING CORNER
- (RAD) RADIAL BEARING
- (PNT) POINT OF NON-TANGENCY
- (S) SET
- (C) CALCULATED POSITION NO MONUMENT SET
- (F) FOUND
- (R_1) RECORD, GLO
- (R_2) RECORD, TERESA ANN TERRACE SUB.
- (R_{16}) RECORD, DEED BOOK 16, PAGE 306 (1978)
- (R_{17}) RECORD, DEED BOOK 35, PAGE 276 (1899)
- (R_{19}) RECORD, COS 38-A
- (R_{21}) RECORD, CEDAR PARK ADDITION

SCALE IN FEET
BASIS OF BEARING
TRUE NORTH (GPS)



VICINITY MAP
NO SCALE

OWNERS
ATLANTIC RICHFIELD COMPANY

APRIL 1994

PREPARED BY :

DJ&A DRUYVESTEIN JOHNSON & ANDERSON
CONSULTING ENGINEERS & LAND SURVEYORS
3201 RUSSELL ST. MISSOULA, MONTANA

CERTIFICATE OF DEDICATION

I (WE), THE UNDERSIGNED PROPERTY OWNER(S), DO HEREBY CERTIFY THAT WE HAVE CAUSE TO BE SURVEYED, SUBDIVIDED AND PLATTED INTO PARCEL "I", AS SHOWN BY THE PLAT HEREIN AND IT IS TO BE KNOWN AND DESIGNATED AS "PARCEL "I" MINOR SUBDIVISION".

A PARCEL OF LAND LOCATED IN THE NORTHWEST ONE-QUARTER OF SECTION TWO TOWNSHIP 4 NORTH, RANGE 11 WEST, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

"PARCEL I"

BEGINNING AT THE NORTHWEST CORNER OF TERESA ANN TERRACE SUBDIVISION; THENCE S13°40'43"W, 662.32 FEET, UPON THE WESTERLY BOUNDARY OF SAID SUBDIVISION, TO THE SOUTHWEST CORNER OF SAID SUBDIVISION; THENCE S18°40'43"W, 38.46 FEET, TO THE NORTHERLY BOUNDARY OF A TRACT OF LAND DESCRIBED IN BOOK 16 PAGE 306; THENCE N79°38'50"W, 416.73 FEET, UPON SAID NORTHERLY BOUNDARY, TO THE NORTHERLY RIGHT-OF-WAY OF THE BUTTE ANACONDA & PACIFIC RAILROAD, AS DESCRIBED IN BOOK 35 PAGE 276, BEING A POINT OF NON-TANGENCY, THE RADIUS OF WHICH BEARS S88°20'23"W; THENCE UPON SAID CURVE IN A NORTHWESTERLY DIRECTION, 381.71 FEET, HAVING A RADIUS OF 1196.30 FEET AND A CENTRAL ANGLE OF 18°16'34", BEING CONCAVE TO THE SOUTHWEST, TO THE SECTION LINE COMMON TO SECTIONS TWO AND THREE, TOWNSHIP 4 NORTH, RANGE 11 WEST; THENCE N01°27'00"E, 122.21 FEET, TO THE SOUTHERLY BOUNDARY OF CERTIFICATE OF SURVEY NUMBER 38-A; THENCE THE FOLLOWING THREE COURSES UPON THE EXTERIOR BOUNDARY OF SAID COS 38-A, S88°38'47"E, 261.26 FEET; THENCE N17°11'26"E, 308.04 FEET; THENCE N88°32'40"E, 708.88 FEET, TO THE SAID SECTION LINE; THENCE N01°27'00"E, 88.11 FEET, UPON SAID SECTION LINE, TO THE CENTER LINE OF WARM SPRINGS CREEK; THENCE THE FOLLOWING FOUR COURSES UPON SAID CREEK CENTER LINE, S85°51'46"E, 94.86 FEET; THENCE N17°57'18"E, 580.23 FEET; THENCE N88°58'40"E, 457.63 FEET; THENCE N79°38'50"E, 198.86 FEET; THENCE S13°40'43"W, 188.33 FEET, TO THE POINT OF BEGINNING. CONTAINING 9.90 ACRES, SUBJECT TO ALL EASEMENTS AND/OR DEDICATIONS, EXISTING, SHOWN OR OF RECORD.

SS _____
(ATLANTIC RICHFIELD COMPANY)

TITLE _____

STATE OF MONTANA
COUNTY OF MISSOULA

ON THIS 26th DAY OF April IN THE YEAR 1994, BEFORE ME A NOTARY PUBLIC IN AND FOR THE STATE OF MONTANA, PERSONALLY APPEARED _____ KNOWN TO ME TO BE THE _____ OF ARCO, THE COMPANY THAT EXECUTED THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT SUCH CORPORATION EXECUTED THE SAME.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARY SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

_____
NOTARY PUBLIC FOR THE STATE OF MONTANA
RESIDING AT _____, MONTANA
MY COMMISSION EXPIRES _____

STATEMENT OF SURVEYOR

I HEREBY STATE THAT THIS CERTIFICATE OF SURVEY IS A REPRESENTATION OF A SURVEY PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION, DURING THE MONTH OF JANUARY - APRIL, 1994.

Ronald D. Milam — APR 25 1994
RONALD D. MILAM, P.L.S. 8007 S

CERTIFICATE OF FINAL PLAT APPROVAL

THE CITY COUNTY COMMISSION OF ANACONDA-DEER LODGE COUNTY AND HAVING FOUND THE SAME TO CONFORM TO LAW, APPROVES THIS MINOR SUBDIVISION PLAT, THIS 27th DAY OF April, 1994.

_____
(COUNTY COMMISSION)

I HEREBY CERTIFY, THAT PURSUANT TO SECTION 76-3-207(3), M.C.A., THAT NO REAL PROPERTY TAXES OR SPECIAL ASSESSMENTS, ASSESSED AND LEVIED ON THE LAND TO BE SUBDIVIDED ARE DELINQUENT.

DATED THIS _____ DAY OF _____, 1994.

_____
(TREASURER, ANACONDA-DEER LODGE COUNTY)

CERTIFICATE OF FILING 144923

STATE OF MONTANA
COUNTY OF ANACONDA-DEER LODGE

FILED ON THE 25 DAY OF April, 1994.

AT 4:42 O'CLOCK P.M.

1/4	SEC.	T.	R.
NE	2	4 N.	11 W.

SHEET OF

PRINCIPAL MERIDIAN, MONTANA

145292

96 : 936

QUIT CLAIM DEED

(Ballfields/Industrial Park Parcel)

THIS DEED is made effective as of May 5, 1994, between ATLANTIC RICHFIELD COMPANY ("Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, with offices at 555 Seventeenth Street, Denver, Colorado 80202, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("Grantee"), whose address is 800 South Main, Anaconda MT 57111.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, water and water rights, ditch and ditch rights, situated on or appurtenant to the Property , or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee pursuant to the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5 1994, a Memorandum of which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Memorandum and in the Additional Provisions set forth below.

This Property is within a Superfund site. A permit must be obtained before any development or construction.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the

conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quit Claim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Conveyance Agreement shall mean that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among Grantor, Grantee and the Old Works Golf Course Authority.

Development Permit System shall mean the Anaconda-Deer Lodge Development Permit System adopted on December 2, 1992 by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or

the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise which occurs after the Closing.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Memorandum of Conveyance Agreement shall mean that certain Memorandum of Real Property Transfer/Conveyance Agreement which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and

their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures set forth in the O&M Plan for the Property.

O&M Plan shall mean the Operations and Maintenance plans and procedures described in Exhibits A-1 and A-2 to the Memorandum of Conveyance Agreement.

OW/EADA Administrative Order shall mean the Administrative Order issued by EPA to ARCO on April 7, 1994, EPA, Docket No. CERCLA VIII-94-08, and all attachments thereto and deliverables submitted thereunder, with respect to implementation of the OW/EADA Remedy, a copy of which is attached as Exhibit B to the Memorandum of Conveyance Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL Site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the Record of Decision issued March 8, 1994, as more specifically described in the OW/EADA Administrative Order and attachments thereto, including any operation and maintenance requirements of such remedy.

Open Space shall have the meaning as set forth in the Development Permit System.

Operation and Maintenance or O&M shall mean those measures required to maintain the effectiveness of the OW/EADA Remedy and shall include without limitation those measures set forth in the O&M Plan for the Property.

Proposed Plan shall mean the Anaconda Smelter Superfund Site, Old Works/East Anaconda Development Area Operable Unit Proposed Plan issued by EPA in September 1993 and announcing a preferred alternative for the OW/EADA OU.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to (i) the Property, or any portion thereof, subsequent to the execution of this Quit Claim Deed, or (ii) any of the rights, duties and obligations arising under the Conveyance Agreement.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUIT CLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quit Claim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by ARCO relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter Site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter Site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter Site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy based upon the remedial alternatives evaluated in the remedial investigation/feasibility study conducted by Grantor at the OW/EADA OU, the Proposed Plan, public comments received on the Proposed Plan, and in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters: The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property; and (3) ownership, use or operations of the Old Works Historic Trail System. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and

irrevocably releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures."

E. RESTRICTIVE COVENANTS.

1. Purpose. The following Restrictive Covenants are made pursuant to and in accordance with the Conveyance Agreement.

2. Covenants Running With the Land. The following Restrictive Covenants shall burden the Property and are intended to be and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the O&M Plan for the Property;

c. Residential development shall be prohibited on the Property;

d. The Property may be used for recreational uses in conjunction with the anticipated golf course, the existing ballfields and trails, and development for Commercial, Industrial or Light Industrial purposes, as such terms are defined in the Development Permit System;

e. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including without limitation EPA and the State)) shall be prohibited;

f. The cap and ballfields on the Property shall be maintained by the Property owner in good condition and repair in accordance with the OW/EADA Remedy and the O&M Plan;

g. Irrigation of the Parcel only shall be permitted in the areas of the Parcel shown on the map attached hereto as Attachment 2. Further, such irrigation only shall be permitted so long as the irrigation (i) is permitted by the OW/EADA Remedy, (ii) is in compliance with the O&M Plan, and (iii) does not exacerbate the existing Environmental Conditions on the Property.

h. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

i. The Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU under the OW/EADA Administrative Order as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

j. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited;

k. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the Restrictive Covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator; and

1. Owners shall maintain all caps and drainage control structures installed by ARCO or its agents on this Parcel in good condition and repair and shall not interfere with their operation as described more specifically in the O&M Plans.

3. Benefitted Properties. The Restrictive Covenants shall be for the benefit of the properties described below, their current owners and their Successors in Interest and Assigns:

a. The adjacent real property described on Attachment 3 attached hereto which is presently owned by Grantor; and

b. All other real properties which are adjacent to the Property.

c. All other real property located in Anaconda-Deer Lodge County, Montana.

4. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the Benefitted Properties by reason of the Restrictive Covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property on, or in the vicinity of, the Benefitted Properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

If Grantee transfers or conveys all or any part of its interest in the Property or any interest in the Property to a third party, then Grantee shall be required to include in its transfer or conveyance documents to such third party the foregoing Restrictive Covenants, releases and covenants not to sue. Grantee shall strictly enforce against such third party each and every Restrictive Covenant release and covenant not to sue with respect to the property which has been transferred to such third party. No grant, transfer, lease or conveyance of title, easement or other form of conveyance or transfer of any interest in all or any portion of the Property shall be made or effected without a provision restricting the use of the Property set forth herein and all such conveyances of title, grants, leases, transfers or conveyance of any interest in all or any of the Property shall

contain the restriction set forth in this section except that each subsequent transferee's name shall be substituted in each subsequent document as the person or entity to be charged with compliance herewith.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each Restrictive Covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the Restrictive Covenants set forth in this Quit Claim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor shall be entitled to enforce the provisions of the Restrictive Covenants against Grantee pursuant to the terms and conditions of this Quit Claim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Property Owners in ADL. All owners of real property located in Anaconda-Deer Lodge County, Montana shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to such property owners in such proceedings.

d. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The Restrictive Covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by ARCO, ADL and the owner of the Parcel burdened by the Restrictive Covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. If EPA and the State do not object to such modifications in writing within twenty-one (21) days of delivery of such notice, the modifications shall be deemed accepted by EPA and the State. Such written approval by ARCO, ADL and the parcel owner may be evidenced by execution of the instrument created to amend the Restrictive Covenants.

b. Recordation of Modification. In order to be effective, any modification of the Restrictive Covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Restrictive Covenants. For purposes of these provisions, a modification of the Restrictive Covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing Restrictive Covenants.

The parties have executed this Quit Claim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: Sandra M. Stash
Sandra M. Stash
Attorney-in-Fact

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: Jane Anderson
Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5th day of May, 1994 by Sandra M. Stash as Attorney-In-Fact of Atlantic Richfield Company.

Witness my hand and official seal.

My commission expires: 11-27-94

Jon R. Brasin
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5th day of May, 1994 by Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.

My commission expires: 11-27-94

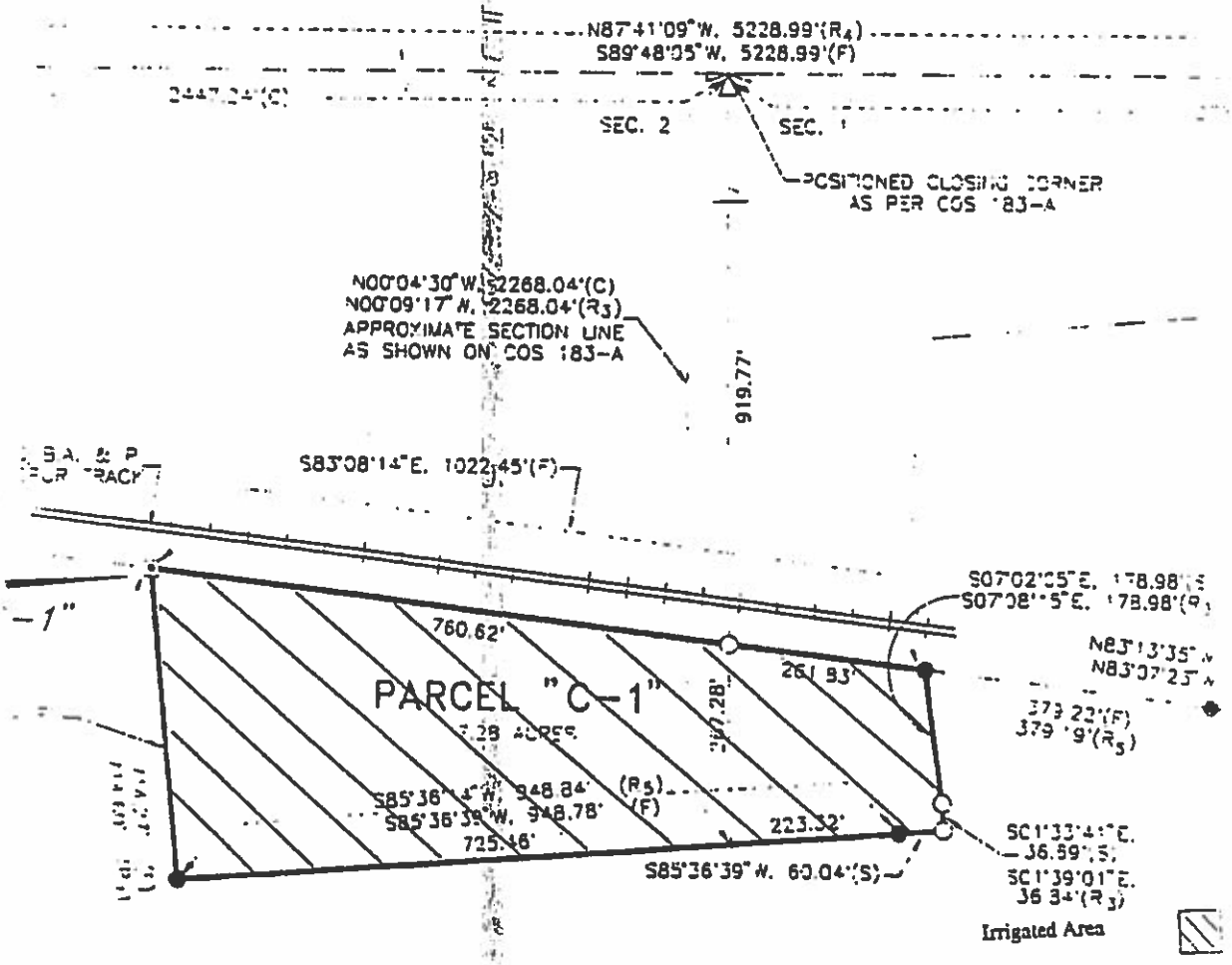
Jon R. Brasin
Notary Public

ATTACHMENT 1

(to Quit Claim Deed)

PROPERTY DESCRIPTION
Parcel C - Ballfields/Industrial Parcel

That certain real property described in Plat No. 193-A recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.



BALLFIELDS/INDUSTRIAL PARK ATTACHMENT 2

96 951

ATTACHMENT 3

(to Quit Claim Deed for Ballfields/Industrial Park Parcel)

(ARCO PROPERTY DESCRIPTION FOR ENFORCEMENT OF RESTRICTIVE COVENANTS - Parcels A, B, C, D, E, F, H and I)

Real property located in Deer Lodge County, Montana and more particularly described as follows:

Township 4 North, Range 11 West

Section 12: All, less and except that portion of Section 12 which is included in Certificate of Survey No. 99-A, filed of record in the real property records of Deer Lodge County, Montana on April 25, 1994 and less and except easements of record, if any.

STATE OF MONTANA)
County of Deer Lodge) ss

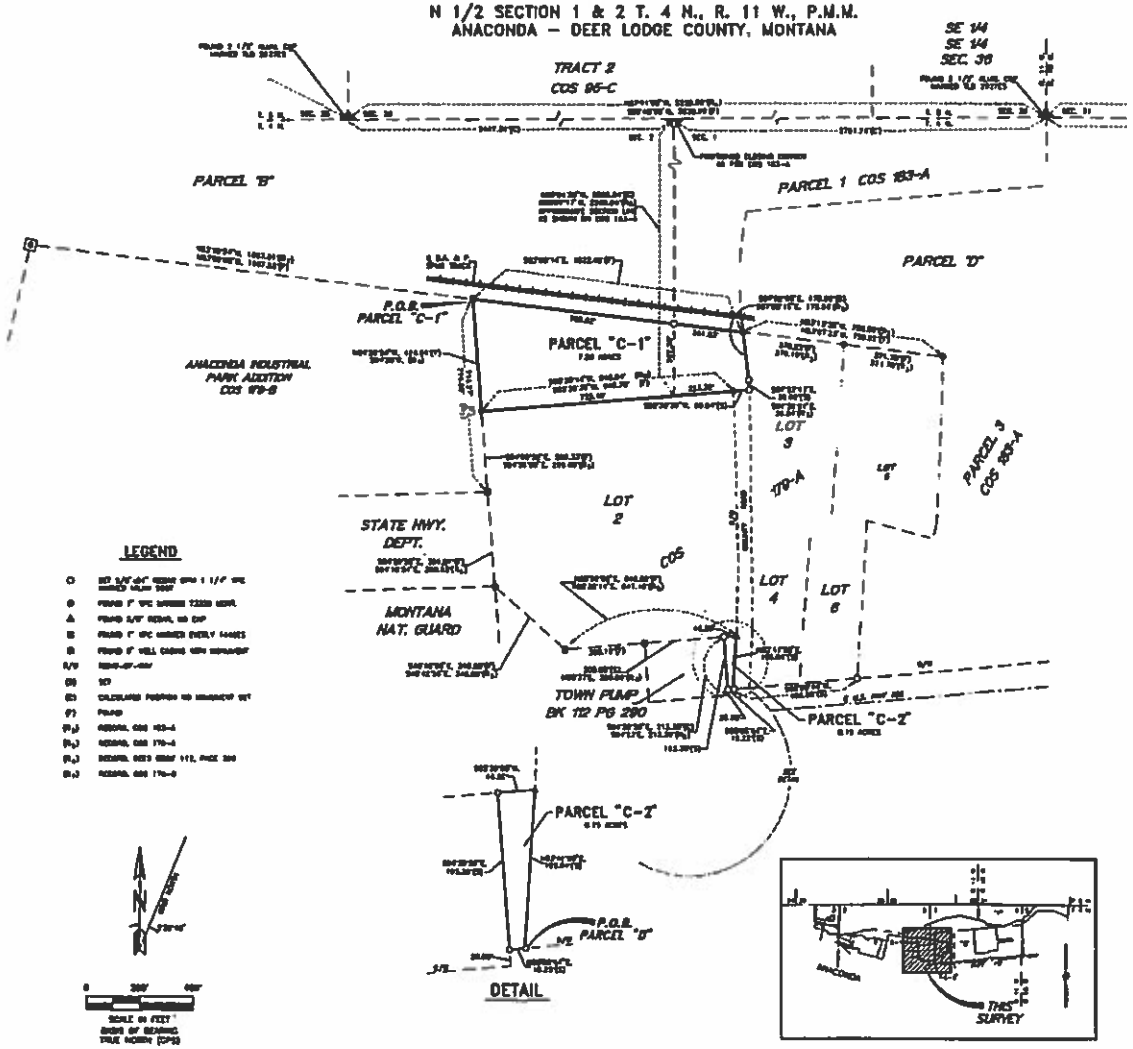
I, hereby certify that the within instrument was filed in my office on the 16 day of June, 1994 at 5 minutes past 9 o'clock A.M., and is recorded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

Tracey Sweeney County Recorder _____ Deputy Fee$ 96

PARCEL "C" MINOR SUBDIVISION

PARCEL C - BALLFIELDS / INDUSTRIAL PARK PARCELL

N 1/2 SECTION 1 & 2 T. 4 N., R. 11 W., P.M.M.
ANACONDA – DEER LODGE COUNTY, MONTANA



VICINITY MAP
NO SCALE

PREPARED BY :
DRUYVESTEIN JOHNSON & ANDERSON
CONSULTING ENGINEERS & LAND SURVEYORS
2004 RUSSELL ST. MISSOULA, MONTANA

OWNER
ATLANTIC RICHFIELD COMPANY

APRIL 1994

This survey has been examined in accordance with the Standards in Sub-Division Act, R.C.M. 76-3-3 1983 — § 11-1900 Subdivision.
Lab Date Surveyor

CERTIFICATE OF DEDICATION

I (WE), THE UNDERSIGNED PROPERTY OWNER(S), DO HEREBY CERTIFY THAT WE HAVE CAUSE TO BE SURVEYED, SUBDIVIDED AND PLATTED INTO PARCEL "C", AS SHOWN BY THE PLAT HEREIN AND IT IS TO BE KNOWN AND DESIGNATED AS "PARCEL "C" MINOR SUBDIVISION".

TWO PARCELS OF LAND LOCATED IN THE NORTH HALF OF SECTION ONE AND TWO TOWNSHIP 4 NORTH, RANGE 11 WEST, BEING A PORTION OF PARCEL 1 AS SHOWN UPON CERTIFICATE OF SURVEY NUMBER 183-A AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

PARCEL C-1:

BEGINNING AT THE NORTHEAST CORNER OF CERTIFICATE OF SURVEY NUMBER 179-B; THENCE S89°30'14"E, 663.46 FEET, UPON THE SOUTHERLY RIGHT-OF-WAY OF THE BUTTE ANACONDA & PACIFIC RAILROAD SPUR, TO THE NORTHWEST CORNER OF LOT 3, AS SHOWN UPON CERTIFICATE OF SURVEY NUMBER 179-A; THENCE THE FOLLOWING FOUR COURSES UPON THE EXTERIOR BOUNDARY OF SAID CERTIFICATE OF SURVEY NUMBER 179-A, S00°00'01"E, 175.00 FEET, ALSO BEING UPON THE EASTERLY RIGHT-OF-WAY OF A COUNTY ROADWAY; THENCE S01°30'11"E, 55.00 FEET, ALSO UPON SAID RIGHT-OF-WAY; THENCE S00°00'01"W, 69.01 FEET, TO THE WESTERLY RIGHT-OF-WAY OF SAID COUNTY ROADWAY, BEING THE NORTHEAST CORNER OF LOT 5, OF SAID COS 179-A; THENCE S00°00'01"W, 335.55 FEET, UPON THE WESTERLY BOUNDARY OF SAID LOT 5 TO THE SOUTHWEST CORNER OF A PARCEL OF LAND DESCRIBED AS PARCEL NUMBER 1 AS SHOWN UPON COS 183-A; THENCE CONTINUING S00°00'01"W, 165.00 FEET, UPON THE WESTERLY BOUNDARY OF SAID LOT 5, TO THE NORTHWEST CORNER OF SAID LOT 3, BEING UPON THE EASTERLY BOUNDARY OF SAID COS 179-A; THENCE N00°00'01"W, 414.04 FEET, UPON SAID EASTERLY BOUNDARY, TO THE POINT OF BEGINNING. CONTAINING 7.30 ACRES, SUBJECT TO ALL EASEMENTS AND/OR DEDICATIONS, EXISTING, SHOWN OR OF RECORD.

PARCEL C-2:

COMMENCING AT THE SOUTHWEST CORNER OF PARCEL NUMBER 1 AS SHOWN UPON CERTIFICATE OF SURVEY NUMBER 183-A; THENCE S00°00'01"W, 165.00 FEET, TO THE POINT OF BEGINNING, BEING UPON THE NORTHERLY RIGHT-OF-WAY OF U.S. HIGHWAY 10A, TO THE WESTERLY RIGHT-OF-WAY OF A COUNTY ROADWAY; THENCE N01°45'30"E, 195.04 FEET, UPON THE WESTERLY RIGHT-OF-WAY OF SAID COUNTY ROADWAY, TO THE SOUTHEAST CORNER OF LOT 3 AS SHOWN UPON CERTIFICATE OF SURVEY NUMBER 179-A; THENCE S00°00'01"W, 46.00 FEET, UPON THE SOUTHERLY BOUNDARY OF SAID LOT 3, TO THE NORTHEAST CORNER OF A TRACT OF LAND DESCRIBED IN BOOK 118 PAGE 500; THENCE S00°00'01"E, 195.00 FEET, UPON THE EASTERLY BOUNDARY OF SAID TRACT, TO THE SAID NORTHERLY RIGHT-OF-WAY OF U.S. HIGHWAY 10A; THENCE N00°00'01"E, 15.00 FEET, TO THE POINT OF BEGINNING. CONTAINING 0.15 ACRES, SUBJECT TO ALL EASEMENTS AND/OR DEDICATIONS, EXISTING, SHOWN OR OF RECORD.

BY: [signature]
(ATLANTIC RICHFIELD COMPANY)

TITLE: Construction Manager

STATE OF MONTANA
COUNTY OF MISSOULA

ON THIS 25th DAY OF April, IN THE YEAR 1994, BEFORE ME A NOTARY PUBLIC IN AND FOR THE STATE OF MONTANA, PERSONALLY APPEARED [illegible] KNOWN TO ME TO BE THE Construction Manager OF ARCO, THE COMPANY THAT EXECUTED THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT SUCH CORPORATION EXECUTED THE SAME.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY NOTARY SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

[signature]
NOTARY PUBLIC FOR THE STATE OF MONTANA
RESIDING AT Butte, MONTANA
MY COMMISSION EXPIRES [illegible]

STATEMENT OF SURVEYOR

I HEREBY STATE THAT THIS CERTIFICATE OF SURVEY IS A REPRESENTATION OF A SURVEY PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION, DURING THE MONTH OF JANUARY - APRIL, 1994.

APR 25 1994

BY: RONALD D. MILAM, P.L.S. NO# 8

CERTIFICATE OF FINAL PLAT APPROVAL

THE CITY-COUNTY COMMISSION OF ANACONDA-DEER LODGE COUNTY, AND HAVING FOUND THE SAME TO CONFORM TO LAW, APPROVES THIS MINOR SUBDIVISION PLAT, THIS 25th DAY OF April, 1994

[signature]
(COUNTY COMMISSION)

CERTIFICATE OF COUNTY TREASURER

I HEREBY CERTIFY, THAT PURSUANT TO SECTION 76-3-611(3), M.C.A., THAT NO REAL PROPERTY TAXES OR SPECIAL ASSESSMENTS, ASSESSED AND LEVIED ON THE LAND TO BE SUBDIVIDED ARE DELINQUENT.

DATED THIS 25th DAY OF April, 1994

[signature]
(TREASURER, ANACONDA-DEER LODGE COUNTY)

CERTIFICATE OF FILING

144923F

STATE OF MONTANA
COUNTY OF ANACONDA-DEER LODGE

FILED ON THE 25 DAY OF April, 1994,
AT 4:42 O'CLOCK P.M.

[signature]

T/R	SEC.	T.	R.
1	4 N.	11 W.
2	4 N.	11 W.

SHEET 1 OF 1

PARCEL, MONTANA

145921

BOOK 98 PAGE 232

QUIT CLAIM DEED

(Mill Creek Parcel)

THIS DEED is made effective as of May 5, 1994, between ATLANTIC RICHFIELD COMPANY ("Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, with offices at 555 Seventeenth Street, Denver, Colorado 80202, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, water and water rights, ditch and ditch rights, situated on or appurtenant to the Property or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee pursuant to the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994, a Memorandum of which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Memorandum and in the Additional Provisions set forth below.

This Property is within a Superfund site. A permit must be obtained before any development or construction.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the

conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quit Claim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, Operable Unit #1, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Conveyance Agreement shall mean that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among Grantor, Grantee and the Old Works Golf Course Authority.

Development Permit System shall mean the Anaconda-Deer Lodge Development Permit System adopted on December 2, 1992 by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or

the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated biphenyols (PCBs), asbestos or urea formaldehyde foam insulation.

Memorandum of Conveyance Agreement shall mean that certain Memorandum of Real Property Transfer/Conveyance Agreement which was recorded on May 5, 1994 in Book 95 at Page 945 of the Deer Lodge County real property records.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and

their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures set forth in the O&M Plan for the Property.

O&M Plan shall mean the Operations and Maintenance plans and procedures described in Exhibits A-1 and A-2 to the Memorandum of Conveyance Agreement.

OW/EADA Administrative Order shall mean the Administrative Order issued by EPA to ARCO on April 7, 1994, EPA Docket No. CERCLA VIII-94-08, and all attachments thereto and deliverables submitted thereunder, with respect to implementation of the OW/EADA Remedy, a copy of which is attached as Exhibit B to the Memorandum of Conveyance Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL Site in or near Anaconda, Montana. For the purposes of this Deed the term OW/EADA OU shall also refer to and be deemed to include Operable Unit #1 of the Anaconda Smelter Site, which is within the area encompassed by the OW/EADA OU.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto. For the purposes of this Deed, the term OW/EADA ROD shall also refer to and be deemed to include that certain Record of Decision issued by EPA on October 2, 1987 which selected a remedial action for Operable Unit #1 of the Anaconda Smelter Site pertaining to the community of Mill Creek, Montana; which such remedial action was conducted within the area encompassed by the OW/EADA OU.

OW/EADA Remedy shall mean the remedy selected by EPA in the Record of Decision issued March 8, 1994, as more specifically described in the OW/EADA Administrative Order and attachments thereto, including any operation and maintenance requirements of such remedy. For the purposes of this Deed, the term of OW/EADA Remedy shall also refer to and be deemed to include the remedial action/response action evidenced by the Partial Consent Decree entered into on September 14, 1988 between Grantor and the State of Montana concerning Operable Unit #1 of the Anaconda Smelter Site.

Open Space shall have the meaning as set forth in the Development Permit System.

Operation and Maintenance or O&M shall mean those measures required to maintain the effectiveness of the OW/EADA Remedy and

shall include without limitation those measures set forth in the O&M Plan for the Property.

Proposed Plan shall mean the Anaconda Smelter Superfund Site, Old Works/East Anaconda Development Area Operable Unit Proposed Plan issued by EPA in September 1993 and announcing a preferred alternative for the OW/EADA OU.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to (i) the Property, or any portion thereof, subsequent to the execution of this Quit Claim Deed, or (ii) any of the rights, duties and obligations arising under the Conveyance Agreement.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUIT CLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR

FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quit Claim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by ARCO relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter Site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter Site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter Site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy based upon the remedial alternatives evaluated in the remedial investigation/feasibility study conducted by Grantor at the OW/EADA OU, the Proposed Plan, public comments received on the Proposed Plan, and in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; and (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures."

E. RESTRICTIVE COVENANTS.

1. Purpose. The following Restrictive Covenants are made pursuant to and in accordance with the Conveyance Agreement.

2. Covenants Running With the Land. The following Restrictive Covenants shall burden the Property and are intended to be and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the O&M Plan for the Property;

c. Except for that portion of the Property described on Attachment 2 attached hereto and incorporated herein (the "Industrial Areas") the Property may only be used for Open Space, Commercial or Light Industrial development,

as such terms are defined herein or in the Development Permit System, including but not limited to a junk vehicle storage and processing yard in accordance with Environmental Laws, the Development Permit System and other Applicable Laws. In the "Industrial Areas", all Industrial uses shall be permitted so long as they comply with the OW/EADA Remedy, the Environmental Laws, the Development Permit System and all other Applicable Laws;

d. All use, construction and/or drilling of water wells for potable water purposes shall be prohibited except that new water wells, or use of existing water wells, shall be permitted if such well is approved and a Certificate of Compliance is issued, by Anaconda-Deer Lodge County pursuant to the Development Permit System;

e. Residential development shall be prohibited on the Property;

f. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

g. The Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU under the OW/EADA Administrative Order as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

h. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited; and

i. Except for the areas described in Attachment attached hereto and incorporated herein 2 (the Industrial Areas), any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the Restrictive Covenants set

forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator.

3. Benefitted Properties. The Restrictive Covenants shall be for the benefit of the properties described below, their current owners and their Successors in Interest and Assigns:

a. The adjacent real property described on Attachment 3 attached hereto which is presently owned by Grantor; and

b. All other real properties which are adjacent to the Property.

c. All other real property located in Anaconda-Deer Lodge County, Montana.

4. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the Benefitted Properties by reason of the Restrictive Covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment from the release of hazardous substances from the Property on, or in the vicinity of, the Benefitted Properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

If Grantee transfers or conveys all or any part of its interest in the Property or any interest in the Property to a third party, then Grantee shall be required to include in its transfer or conveyance documents to such third party the foregoing Restrictive Covenants, releases and covenants not to sue. Grantee shall strictly enforce against such third party each and every Restrictive Covenant release and covenant not to sue with respect to the property which has been transferred to such third party. No grant, transfer, lease or conveyance of title, easement or other form of conveyance or transfer of any interest in all or any portion of the Property shall be made or effected without a provision restricting the use of the Property set forth herein and all such conveyances of title, grants, leases, transfers or

conveyance of any interest in all or any of the Property shall contain the restriction set forth in this section except that each subsequent transferee's name shall be substituted in each subsequent document as the person or entity to be charged with compliance herewith.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each Restrictive Covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the Restrictive Covenants set forth in this Quit Claim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor shall be entitled to enforce the provisions of the Restrictive Covenants against Grantee pursuant to the terms and conditions of this Quit Claim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Property Owners in ADL. All owners of real property located in Anaconda-Deer Lodge County, Montana shall be entitled to enforce the Restrictive Covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to such property owners in such proceedings.

d. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The Restrictive Covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by ARCO, ADL and the owner of the Parcel burdened by the Restrictive Covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. If EPA and the State do not object in writing to such modifications within 21 days of such notice, the modifications shall be deemed accepted by EPA and the State. Such written approval by ARCO, ADL and the parcel owner may be evidenced by execution of the instrument created to amend the Restrictive Covenants.

b. Recordation of Modification. In order to be effective, any modification of the Restrictive Covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original Restrictive Covenants. For purposes of these provisions, a modification of the Restrictive Covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing Restrictive Covenants.

The parties have executed this Quit Claim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: Sandra M Stash
Sandra M. Stash
Attorney-in-Fact

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: Jane Anderson
Jane Anderson
Chairwoman of Anaconda-Deer Lodge County Commission

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5 day of May, 1994 by Sandra M. Stash as Attorney-In-Fact of Atlantic Richfield Company.

Witness my hand and official seal.

My commission expires: 10-11-94

Carol L. Gilley
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this 5 day of May, 1994 by Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.

My commission expires: 10-11-94

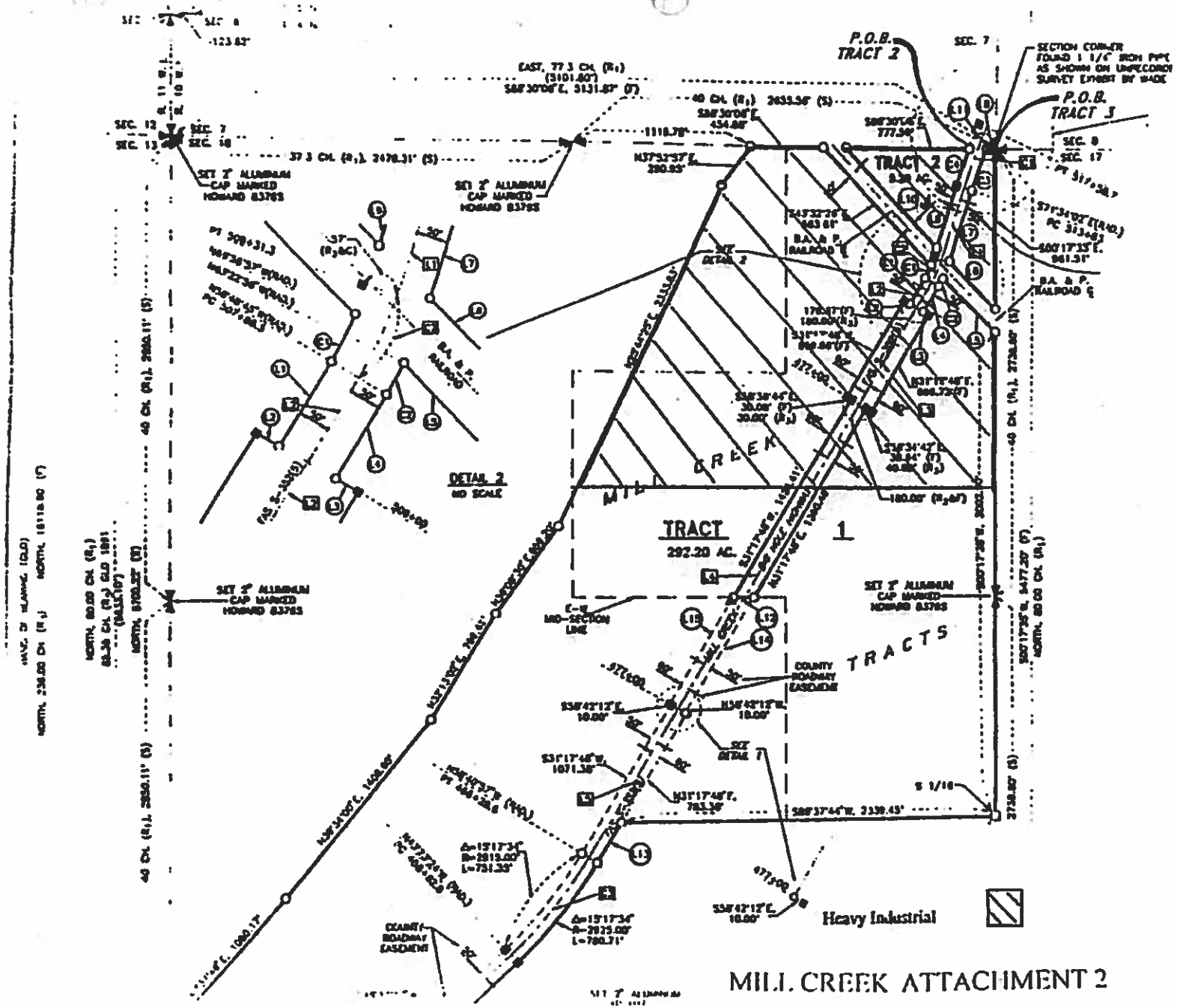
Carol L. Gilley
Notary Public

ATTACHMENT 1

(to Quit Claim Deed)

PROPERTY DESCRIPTION
Parcel G - Mill Creek Parcel

That certain real property described in Plat No. 193-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.



MILL CREEK ATTACHMENT 2

BOOK 98 PAGE 247

ATTACHMENT 3

(to Quit Claim Deed for Mill Creek Parcel)

(ARCO PROPERTY DESCRIPTION FOR ENFORCEMENT OF RESTRICTIVE COVENANTS - Parcel G)

Real property located in Deer Lodge County, Montana and more particularly described as follows:

Township 4 North, Range 10 West

Section 18: All, less and except that portion of Section 18 which is included in Plat 193-B, filed of record in the real property records of Deer Lodge County, Montana on April 25, 1994 and less and except easements of record, if any.

STATE OF MONTANA) ss
County of Deer Lodge)

145921

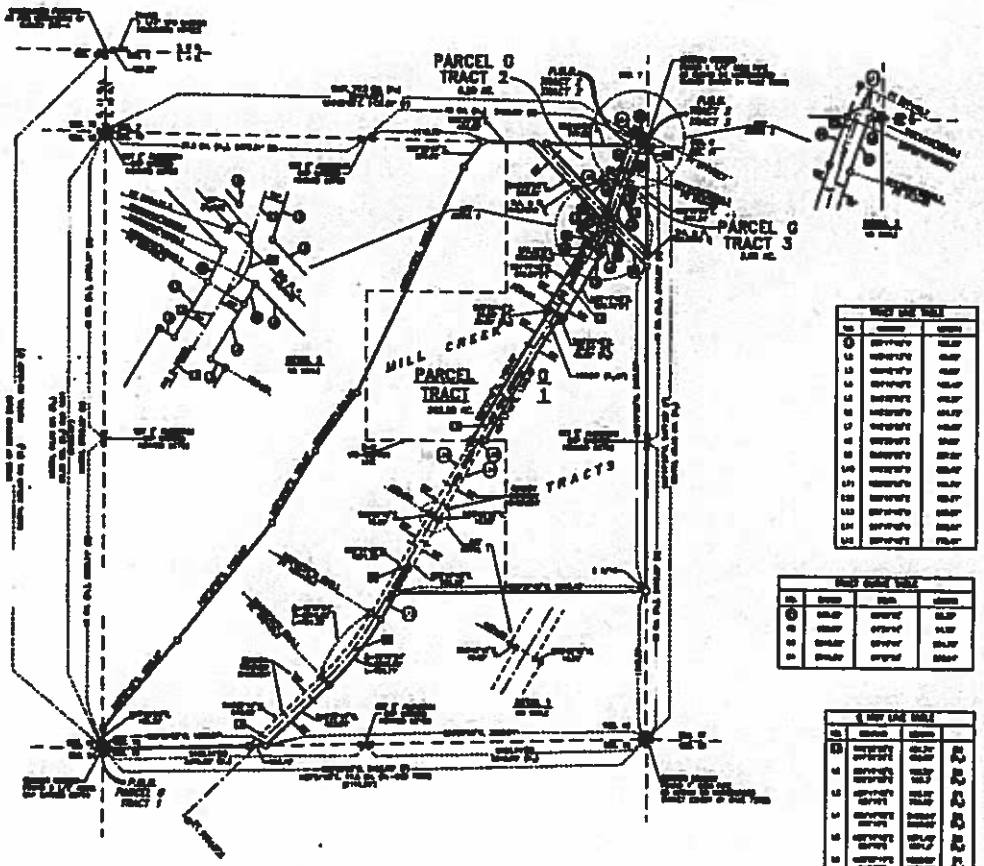
I, hereby certify that the within instrument was filed in my office on the 24 day August, 1994 at 15 minutes past 3 o'clock P.M., and is recorded on Page 5 of Book of Records of Deer Lodge County, State of Montana.

TRACEY SWEENEY, County Recorder Marianne Stubbs Deputy Fee: 9.00

PARCEL "G" MINOR SUBDIVISION

PARCEL G - MILL CREEK PARCEL

SECTION 18 T. 4 N., R. 10 W., P.M.M.
ANACONDA – DEER LODGE COUNTY, MONTANA



LEGEND

OWNERS

ATLANTIC RICHFIELD COMPANY

ACREAGE

PREPARED BY :

APRIL 1994

APPENDIX D
(Community Protective Measures Program Plan)

Anaconda-Deer Lodge County

Community Protective Measures Program Plan

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Attachment B -- CPMP Intake Form and Access Agreement
Attachment C -- Soil Swap Plan
Attachment D – Compilation of CPMP ROD References

1.0 Introduction

The town of Anaconda was the site of ore milling and copper smelting activities for most of the 20th century. This activity dispersed tailings, waste, smelter emissions, and dust into the environment, resulting in elevated concentrations of contaminants of concern (CoCs) in soil, dust, and water in Anaconda-Deer Lodge County (County). The United States Environmental Protection Agency (EPA) has identified arsenic and lead as the primary CoCs in soil and dust within the Superfund Overlay (**Figure 1**)[1] and arsenic as the primary CoC in domestic well water within the Superfund Domestic Well Overlay (**Figure 2**).

These CoCs, and the potential risks associated with them, have been the subject of study and remediation by EPA under its Superfund Program since the 1980s. EPA has established remedial action cleanup levels[2] for (i) arsenic and lead in soils and dust in residential areas, (ii) arsenic in soils in commercial and open space/recreational areas, and (iii) arsenic in domestic wells. Other sources of arsenic and lead may contribute to elevated CoCs in the community.

As a result of the potential risks associated with elevated CoCs, remedial actions may have already been implemented at a property or may be necessary or recommended in the future, either in conjunction with residential or commercial development or based upon remedial sample results. The purpose of the remediation is to protect human health and the

[1] The Superfund Overlay has been referenced in various Superfund documents as the "Superfund Planning Area Overlay District" or "SPAOD" and the "Superfund Planning District" or "SPD". The County's amended Development Permit System references the area as the Superfund Overlay, which will be the term used in all future documents.

[2] Applicable action levels for soils and dust are shown below:

Land Use	Arsenic	Lead
Residential	250 mg/kg	400 mg/kg
Commercial	500 mg/kg	NA
Open Space/Recreational	1000 mg/kg	NA

Applicable action levels for ground water are shown below:

Parameter	Action Level
Arsenic	10 µg/L
Beryllium	4 µg/L
Cadmium	5 µg/L
Copper	1000 µg/L
Lead	15 µg/L

environment primarily through reduction of exposure to arsenic and lead to below the established remedial action cleanup levels for the specified use.

The Record of Decision for the Anaconda Regional Water, Waste and Soils Operable Unit (ARWW&S OU ROD), the Record of Decision for the Community Soils Operable Unit (CS OU ROD) and the Record of Decision Amendment for the CS OU ROD identify a Community Protective Measures Program (CPMP) as an institutional control (IC) component of the selected remedy for the Anaconda Smelter National Priorities List Site (Site).[3] Coordination, implementation and management of the CPMP will be a shared responsibility of Atlantic Richfield Company (AR) and the County with periodic review by EPA.

This CPMP Plan sets forth the County's specific responsibilities with respect to the coordination, implementation and management of the CPMP within the Site and is intended to operate in conjunction with the Institutional Controls Implementation and Assurance Plan for the Site (ICIAP) as well as that certain Institutional Controls Agreement between AR and the County dated June 30, 2016 (ICA) and that certain Agreement and Covenant Not to Sue (EPA Docket No. CERCLA 94-12) between the County, EPA, the State of Montana (State), and the Old Works Golf Course Authority, Inc. (Authority) dated April 29, 1994, as amended by that certain Amendment to Agreement and Covenant Not to Sue (EPA Docket No. CERCLA _____), dated June 30, 2016 (CNSA).

2.0 CPMP Components

The County's CPMP responsibilities are comprised of the following components each of which is overseen and managed by the County's CPMP Administrator:

- Community Outreach
- Community Awareness and Education
- Public Inquiries
- Interior Dust

[3] A compilation of the requirements relating to the CPMP set forth in the referenced RODs is included in Attachment D.

- Soil Swap
- GIS

Each of the above CPMP components as well as the County's specific responsibilities and obligations with respect to each are addressed below and shown on the organizational chart attached as **Figure 3**.

2.1 Community Outreach

The primary purpose of the CPMP is to provide community outreach and education to residents within the Superfund Overlay and the Superfund Domestic Well Overlay on how to reduce the risks of exposure to residual waste. The CPMP's outreach will include a multi-media effort to connect with residents of all ages and demographics. This effort will include the use of print media, flyers, radio spots, presentations at group meetings, booths at civic events, social media, and website notifications among other methods. Target populations include:

- Homeowners
- Families with Young Children
- Realtors
- Medical Professionals
- Daycares
- Contractors
- Renovators
- Schools
- Lenders
- Civic Groups

2.2 Community Awareness and Education

While the Public Outreach component of the CPMP provides the access to residents, the Community Awareness and Education component provides the education and information needed to ensure that citizens make good decisions in regard to their interaction with residual waste. The CPMP will provide information regarding existing environmental sampling results, remedial actions taken or planned, protectiveness rationale of remedies and action levels, information and referrals regarding applicable permit requirements, strategies to limit hand to mouth activity, and information

regarding methods for reducing exposure including best practices for personal/home hygiene and diet, for renovation and demolition, and for food gardens and play areas.

The awareness and education information will be provided in the form of fact sheets, pamphlets, digital media and newsletters from the CPMP as well as external resources such as published articles. The existing education and awareness materials are attached as Attachment A and are titled as follows:

- Soil Sampling and Cleanup Activities
- Interior/Attic Dust Sampling and Cleanup Activities
- Demolition and Remodeling
- Superfund Overlay Requirements
- Superfund Domestic Well Overlay Requirements
- Where Can I Get More Information?
- Developer's Information Package

The awareness and education materials will be available at the County Court House, on the County's website, , the County's Superfund Office and at the Hearst Library. With assistance and input from AR, EPA and the State, the existing awareness and education materials will be updated and new materials created, as necessary.

2.3 Public Inquiries

Through the Public Inquiries component, the CPMP will respond to questions or other inquiries from residents within the Superfund Overlay or the Superfund Domestic Well Overlay concerning environmental conditions or concerns using a case management strategy, where the resident is asked to complete a series of questions on an intake form and, if appropriate, an access agreement. The current intake and access agreement forms that will be utilized by the CPMP are attached as Attachment B. Following completion of the intake form, the CPMP will coordinate information gathering and respond to the resident's questions or other inquiries. Once the questions or other inquiries are addressed, the case will be closed out and any data generated uploaded to the GIS database. The case management process will allow the CPMP to individualize how concerns and questions are addressed and customize issue resolution to the individual resident. The CPMP case management process may include providing information and

guidance on residual wastes, property assessments related to soil, dust, and/or domestic well conditions; referral to additional resources, referral to AR for sampling and potential remediation, providing for a soil swap, or induction into other CPMP activities.

2.4 Interior Dust

Through the Interior Dust component, the CPMP will provide certain services to eligible residents engaged in home renovation, remodeling or demolition activities. In order to be eligible for the services, the home must be located within the Superfund Overlay and the home must have been constructed before 1980. The services provided to eligible residents by the CPMP include the provision of a Home Renovation Kit, which will include a plastic drop cloth and dust mask with instructions on proper use of these tools to confine dust when renovating and proper cleanup and disposal of materials when the work is done. The CPMP will also provide for the use of a HEPA vacuum to eligible residents engaged in home renovation, remodeling or demolition activities for dust removal after the project is completed but before the area is returned to normal habitation. The CPMP will also make appropriate referrals for any permits that may be required for these activities. In addition, referrals to AR will be made for any activities that may involve opening of attic spaces, so that sampling and any necessary remedial measures can be performed prior to the renovation work.

2.5 Soil Swap

Through the Soil Swap component, the CPMP will provide clean soil for existing or proposed vegetable gardens, designated play areas, or disturbance areas less than one (1) cubic yard. The Soil Swap component will be administered by the CPMP in accordance with Soil Swap Plan attached as Attachment C.

2.6 GIS

The Geographic Information System (“GIS”) component of the CPMP is a computer-based tool that will have both geographic information functionality and institutional controls management functionality. The geographic information functionality will utilize spatial data for mapping, analyzing and storing data for properties within the Site (e.g., aerial photos and information regarding property ownership, restrictive covenants, remedial actions, environmental sampling data and "as built" details). The data available through the geographic information functionality will be

updated and maintained by the County and AR in accordance with Institutional Controls Management System Plan attached as Appendix __ to the Institutional Controls Implementation and Assurance Plan. The institutional controls management functionality will include various web-based tools designed to facilitate compliance with and implementation and enforcement of ICs. The web-based tools will also serve to facilitate the County's implementation of this CPMP Plan by making certain Site information available to members of the public through the County's website. [This section may be revised/updated once the Institutional Controls Management System Plan is complete.]

3.0 Reporting

The County will provide an annual report to AR, EPA, and DEQ regarding all CPMP activities. This report will be in the form of a copy of the program tracking spreadsheet, and a narrative that details significant information from the tracking spreadsheet and related activities.

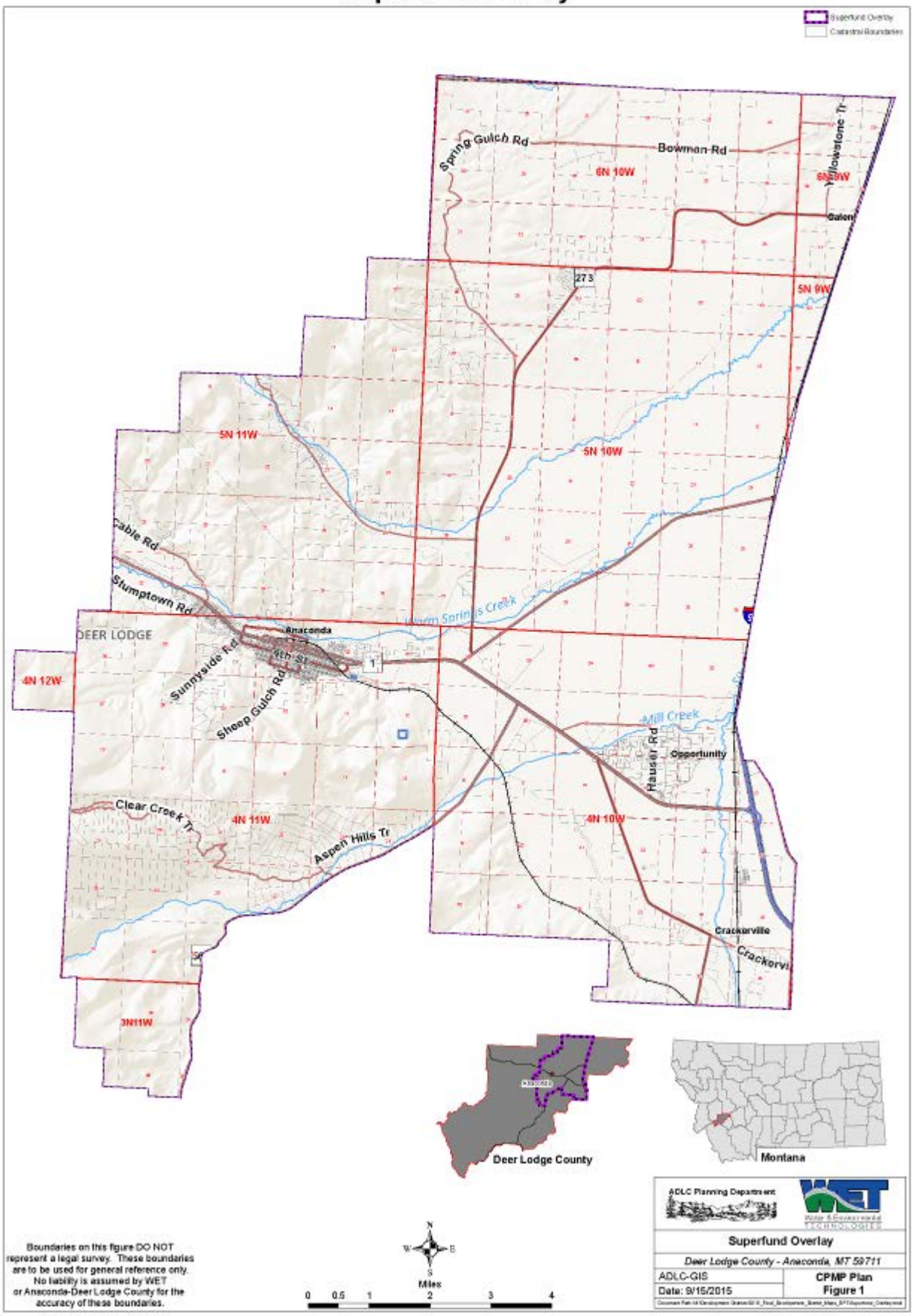
The report will include information regarding the nature and location of inquiries and concerns, response actions and related referrals and coordination, education and awareness events and activities, program budget actuals and expenses, and GIS updates.

This report will coordinate with the annual Institutional Controls report.

CPMP Plan Figure 1

Superfund Overlay Map

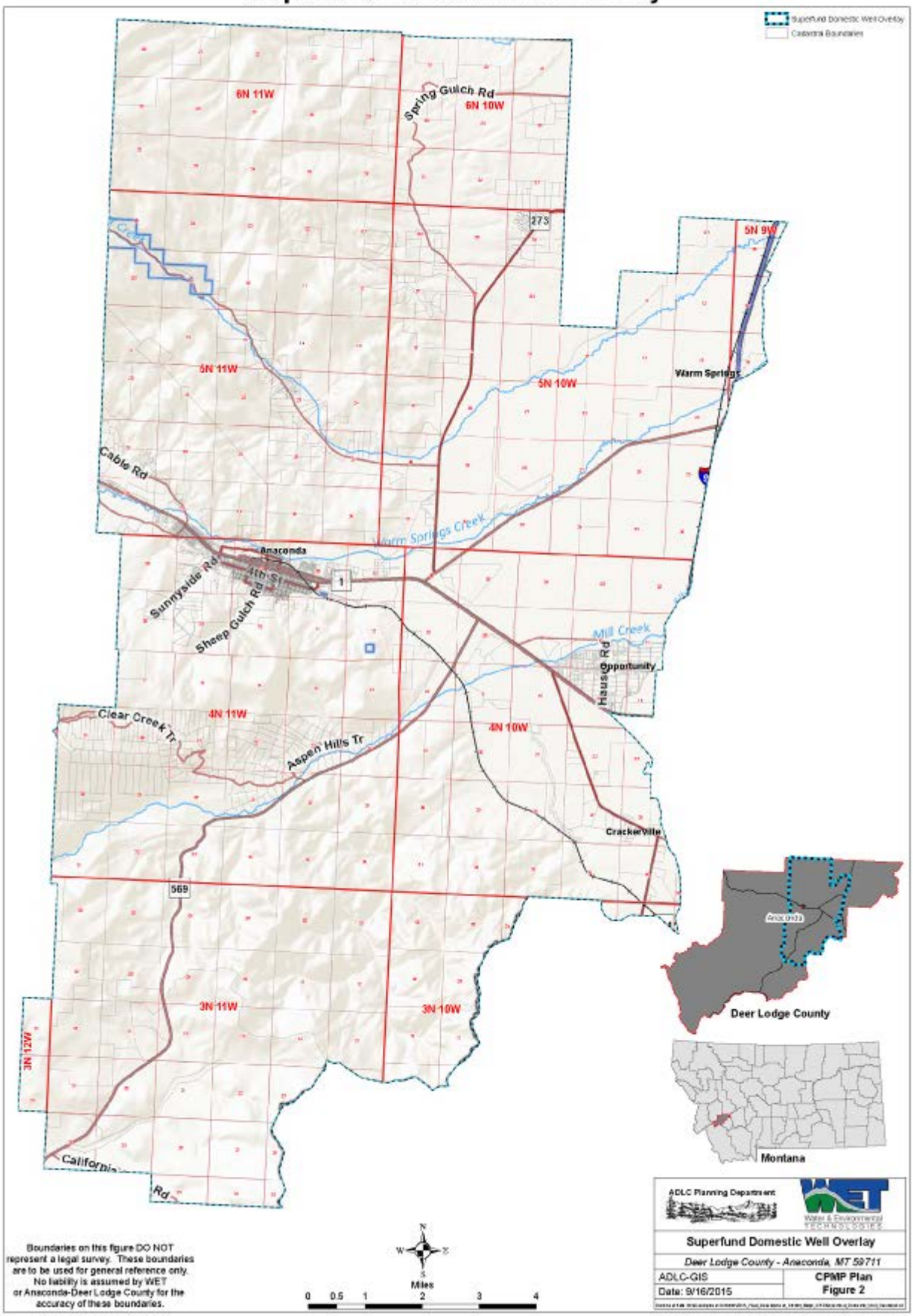
Superfund Overlay



CPMP Plan Figure 2

Superfund Domestic Well Overlay Map

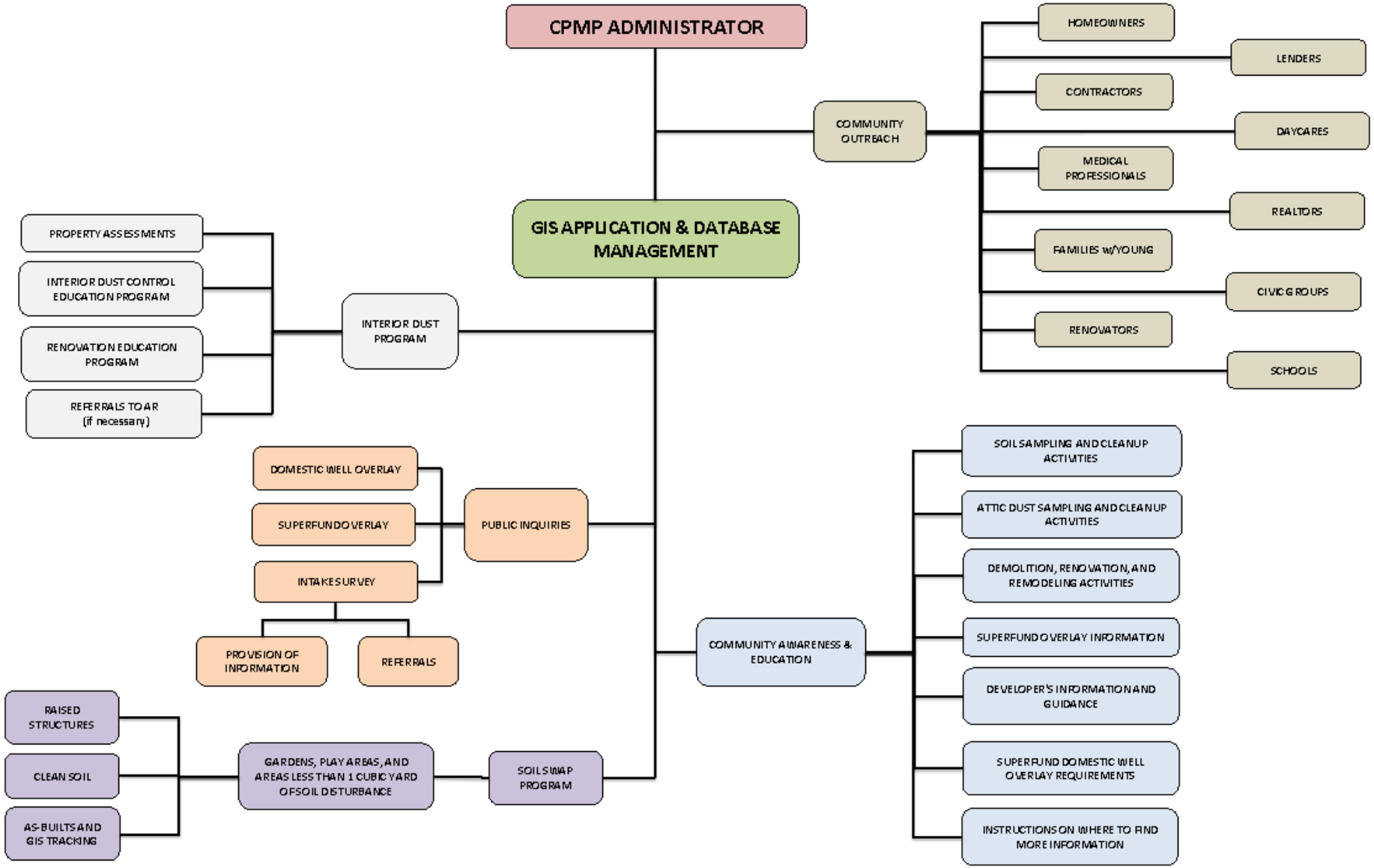
Superfund Domestic Well Overlay



CPMP Plan Figure 3

CPMP Organization Chart

COMMUNITY PROTECTIVE MEASURES PROGRAM



CPMP Plan Attachment A

Existing CPMP Fact Sheets

SOIL SAMPLING AND CLEANUP ACTIVITIES

As you may be aware, the Atlantic Richfield Company, Anaconda-Deer Lodge County (ADLC), United States Environmental Protection Agency (EPA) and the Montana Department of Environmental Quality (MDEQ) have been working actively in the Anaconda community and surrounding areas to ensure that soil arsenic and or lead concentrations are below applicable action levels. This fact sheet is intended to provide you with information about the action levels and associated soil sampling and cleanup activities in and around Anaconda.

The EPA developed action levels for Anaconda and the surrounding areas to identify when remedial action is necessary. The EPA applicable action levels for arsenic in soils for residential land use is 250 mg/kg, for industrial/commercial land use is 500 mg/kg, and for open space is 1,000 mg/kg. The EPA applicable action level for lead in soils for residential land use is 400 mg/kg. The action levels are based on detailed site-specific health studies in Anaconda and surrounding areas and EPA has determined the action levels are protective of human health.

Whether or not your property has been cleaned up, ADLC's Development Permit System requires a permit if you plan to disturb more than one cubic yard of soil. As part of the permitting process, ADLC will ensure that any remaining contaminated soil is managed properly. Please contact ADLC if you plan to disturb soil in your yard.

If you are unsure if your property has been sampled, contact ADLC's Superfund Program at 563-7476. If you need to leave a voicemail, include your name, address and contact information. If your property has been sampled, results can be provided for your property upon request. If your property has not been sampled or your property has been sampled and certain eligibility requirements are met, Atlantic Richfield Company will collect soil samples on your property upon request. You will be asked to sign an access agreement to authorize the sampling. If sample results show that the applicable arsenic/lead action levels are exceeded, a cleanup plan will be developed and cleanup will be completed. In general, cleanup activities include treatment or removal of impacted soils, and revegetation.

It is not too late!

Any landowner within Anaconda or the surrounding area wishing to have their property sampled may contact the ADLC Superfund Program by phone at 563-7476 or by e-mail at _____.

RESIDENTIAL ATTIC DUST SAMPLING AND CLEANUP ACTIVITIES

As you may be aware, the Atlantic Richfield Company, Anaconda-Deer Lodge County (ADLC), United States Environmental Protection Agency (EPA) and the Montana Department of Environmental Quality (MDEQ) have been working actively in the Anaconda community and surrounding areas to ensure that arsenic and or lead concentrations in interior living space and attic dust are below EPA applicable action levels. This fact sheet is intended to provide you with information about the action levels and associated dust sampling and cleanup activities in and around Anaconda.

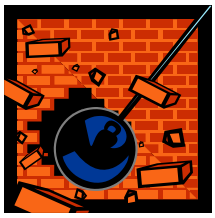
The EPA developed action levels for Anaconda and the surrounding areas to identify when remedial action is necessary. The EPA determined that interior living space dust does not require remedial action but established applicable action levels for arsenic and lead in attic dust of 250 mg/kg and 400 mg/kg, respectively. The action levels are based on detailed site-specific health studies in Anaconda and surrounding areas and EPA has determined that action levels are considered protective of human health.

Subject to certain eligibility requirements, sampling of attic dust will be initiated upon request from the landowner.

If you are unsure if your attic has been sampled or if your attic meets the eligibility requirements, contact ADLC's Superfund Program at 563-7476. If you need to leave a voicemail, include your name, address and contact information. You will be asked to sign an access agreement to authorize the sampling. If your attic has been sampled, results can be provided for your property upon request. If your attic dust is sampled and sample results show that the applicable arsenic/lead action levels are exceeded, a cleanup plan will be developed and cleanup will be completed.

It is not too late!

Any landowner within Anaconda or the surrounding area wishing to have their dust sampled may contact the ADLC Superfund Program by phone at 563-7476 or by e-mail at _____.



DEMOLITION AND REMODELING

ADLC requires a demolition permit for demolition and a building permit for certain remodeling activities. When workers are demolishing or remodeling buildings within the Superfund Overlay, there is a potential for exposure to arsenic or lead above the applicable action levels particularly if the renovation impacts attics. As part of the demolition or remodeling process, existing sample results can be obtained from ADLC Superfund Program.

To mitigate the potential exposure to arsenic or lead during demolition or remodeling, the following Best Management Practices can be employed.

Recommended Demolition Best Management Practices

- Wear masks to reduce or filter inhalation of dust.
- Wear coveralls and hats to reduce skin and hair contact.
- Remove and leave coveralls and hats before leaving demolition area.
- Wash hands before eating or drinking.
- Conduct demolition only in calm or light wind conditions to prevent dust dispersal.
- Where practicable wet-down structures before, during and after demolition, and wet-down debris when loading for transport away from the site.
- Cover loads leaving the site.

Recommended Remodeling Best Management Practices

- Wear masks to reduce or filter inhalation of dust.
- Wear coveralls and hats to reduce skin and hair contact.
- Remove and leave coveralls and hats before leaving remodeling area.
- Wash hands before eating or drinking.
- Remove area rugs and furniture from affected rooms before remodeling.
- Completely cover wall to wall carpeting with protective sheeting or plastic.
- Cover doors, vents, and cabinets with plastic sheeting to prevent migration.

To assist you in employing the above Best Mangement Practices while engaged in demolition or remodeling activities, a Home Renovation Kit consisting of a plastic drop cloth and dust mask with instructions on their proper use can be obtained from the ADLC Superfund Propgram free of charge. The ADLC Superfund program will also provide the

use of a HEPA vacuum to eligible residents engaged in home demolition or remodeling activities.

If you have concerns or questions regarding demolition or remodeling activities, you can contact the ADLC Superfund Program by phone at 563-7476 or by e-mail at _____. If you need to leave a voicemail, include your name, address and contact information.

SUPERFUND OVERLAY REQUIREMENTS

The Development Permit System (DPS) is administered by Anaconda-Deer Lodge County (ADLC). The DPS requires that a prospective developer or property owner within the Superfund Overlay apply for and obtain a development permit for any excavation exceeding one cubic yard[1] or any excavation within a Waste Management Area. The Superfund Overlay portion of the DPS includes specific regulations to ensure that development in these areas is conducted in a manner consistent with United States Environmental Protection Agency (EPA) applicable arsenic and lead action levels and therefore is protective of human health and the environment. The Superfund Overlay also ensures that existing Superfund protective covers and stormwater engineered controls such as ditches and catch basins are preserved and applicable action levels are met post-development. A project requiring a permit within the Superfund Overlay can only begin after the development permit is approved. The Superfund Overlay is shown on **Figure 1**.

The penalties for failure to secure a development permit or to comply with development permit conditions are set forth in the DPS and can include legal proceedings to compel compliance as well as a fine not exceeding $500 or imprisonment in the county jail not exceeding six months or both.

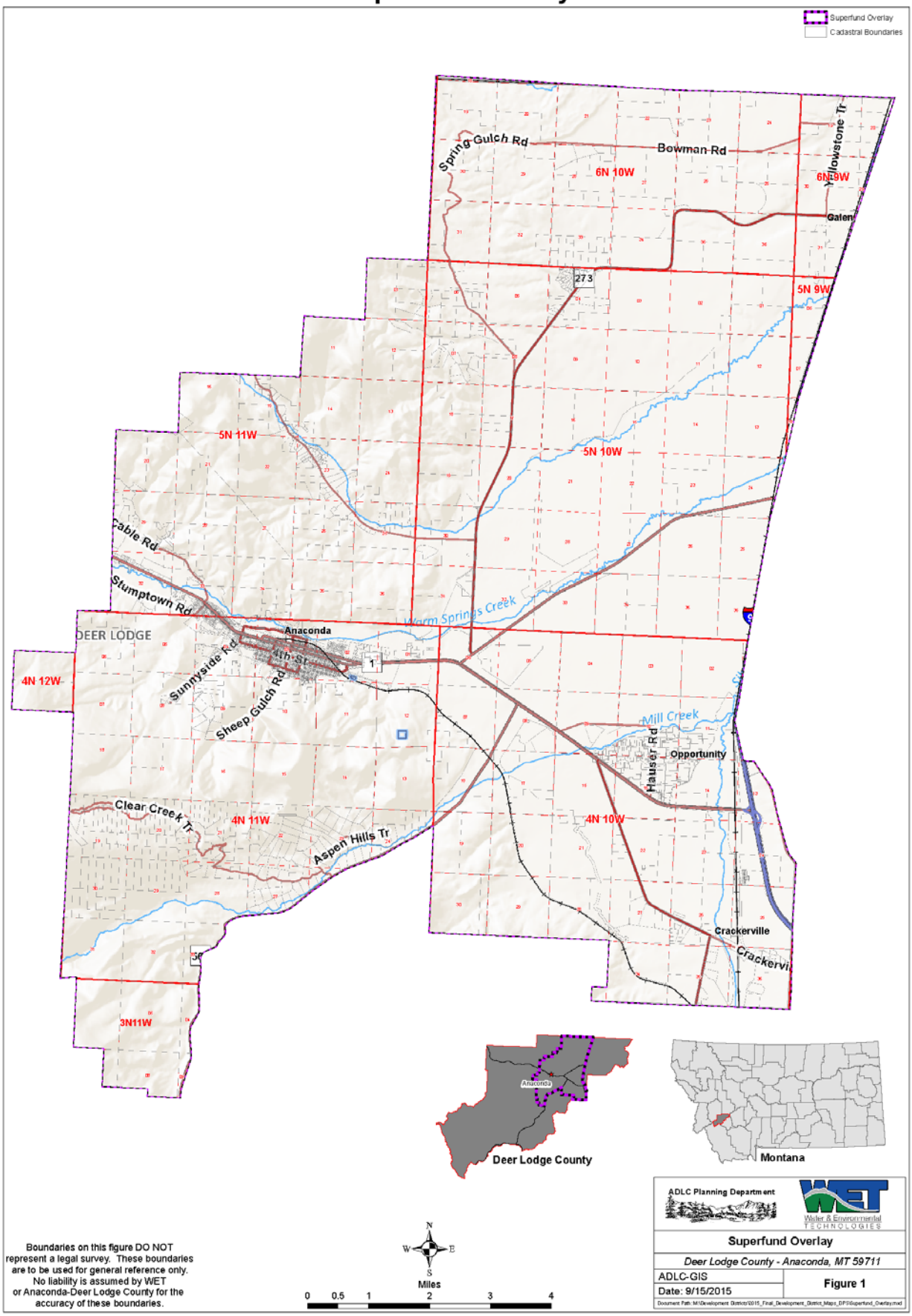
If you have questions regarding development within the Superfund Overlay, contact the ADLC Superfund Program by phone at 563-7476 or by e-mail at _____. If you need to leave a voicemail, include your name, address and contact information.

[1] For projects less than one cubic yard of soil it is still recommended that you contact ADLC for Best Management Practices for handling the soil.

Figure 1

Superfund Overlay Map

Superfund Overlay



SUPERFUND DOMESTIC WELL OVERLAY REQUIREMENTS

(Subject to change with the final GWMP)

The Anaconda Superfund Site domestic well requirements include two components:

1. Sampling and, if necessary, treatment of water from existing wells; and

2. Permitting, testing and design requirements for new wells.

Existing Wells: Sampling and Treatment Requirements

Domestic well monitoring and replacement of impacted drinking water has been ongoing within the Anaconda Smelter Superfund Site since 2004. Currently, Atlantic Richfield Company through its contractor is currently implementing the well monitoring program. The program covers all existing or new domestic wells within the Superfund Domestic Well Overlay boundary shown on Figure 1. Initially, all domestic wells within the Superfund Domestic Well Overlay, where access is granted, will be sampled and analyzed for arsenic concentrations. If sample results obtained show that the arsenic concentration is between 5.0 µg/L and 10.0 µg/L, water from the well will be sampled annually by Atlantic Richfield Company or its contractor in accordance with the EPA approved Domestic Well Sampling and Analysis Plan. Annual sampling of these wells will be discontinued if concentrations drop below 5.0 ug/L for three years or remain below 10 ug/L for ten years. If sample results from any sampling show that the arsenic concentration is greater than 10.0 µg/L, Atlantic Richfield Company or its contractor will implement an appropriate EPA approved response action and will provide alternate potable water for use by the resident until the response action is completed.

New Wells: Permitting, Design and Sampling Requirements

An Anaconda-Deer Lodge County (ADLC) development permit is required to install a new domestic well. Within the ADLC's Superfund Overlay soils handling requirements must be met. In addition, within the Superfund Domestic Well Overlay boundary the well must meet applicable construction and water quality requirements described below. The intent of the requirement to obtain a well permit is to prevent the consumption of water containing arsenic at concentrations greater than the human health standard identified in the ARWW&S OU ROD Amendment (EPA, 2011). The well permit process is as follows:

1. Determine through ADLC whether any restrictive covenants are in place that limit or prohibit well installation, and if so obtain documentation confirming that well installation on the property can be legally and properly permitted.

2. Secure an Administrative Development Permit from the ADLC Planning Department and a Well Permit from the Tri-County Sanitarian's office before installing a new well.

3. Complete the new well consistent with permit and State law requirements.

4. After installation, wells will be sampled by Atlantic Richfield Company or its contractor for arsenic concentration prior to use. The results of the tests shall be submitted to ADLC's Superfund Coordinator. The Superfund Coordinator will issue a Certificate of Compliance for a well only if the test results show the quality from the well water meets the 10 ug/L arsenic standard.

5. As appropriate, permitted new domestic wells will be added to the periodic sampling program described above for existing wells.

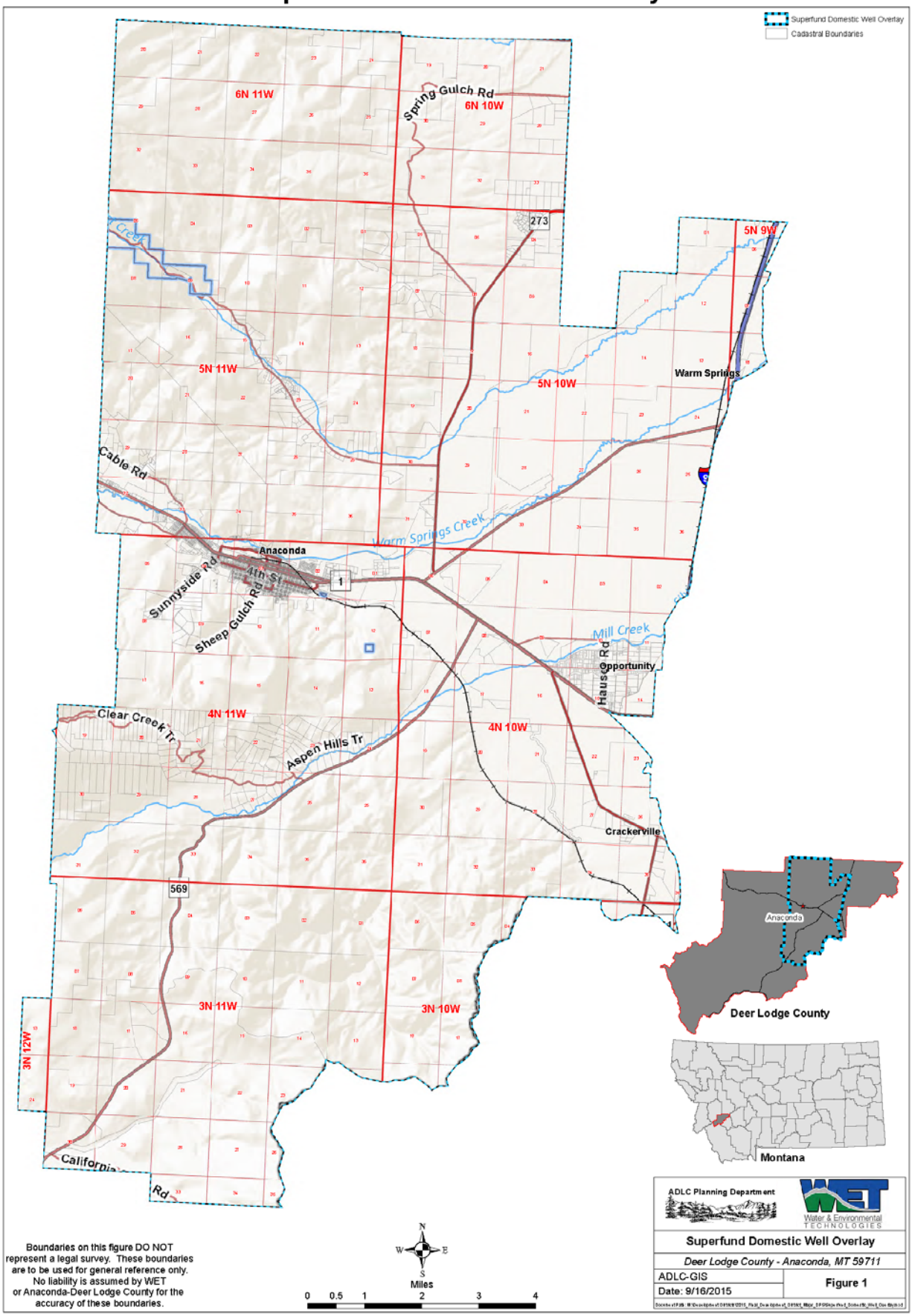
The Superfund Domestic Well Overlay boundary is shown on Figure 1.

The penalties for failure to secure a development permit or to comply with development permit conditions are set forth in the DPS and can include legal proceedings to compel compliance as well as a fine not exceeding $500 or imprisonment in the county jail not exceeding six months or both.

If you have questions regarding development within the Superfund Overlay, contact the ADLC Superfund Program by phone at 563-7476 or by e-mail at _____. If you need to leave a voicemail, include your name, address and contact information.

Figure 1
Superfund Domestic Well Overlay Map

Superfund Domestic Well Overlay



SUPERFUND?

- Anaconda-Deer Lodge County (ADLC) Superfund Program, 118 E. 7th Street, Anaconda MT 59711, 563-7476, www.anacondadeerlodge.mt.gov, (406) 563-7476;

- U.S. Geological Survey (USGS), 3162 Bozeman Avenue, Helena, MT, 59601, (406) 457-5900;

- Atlantic Richfield Company (AR), 317 Anaconda Road, Butte, MT 59701, (406) 782-9964;

- United States Environmental Protection Agency (EPA), 10 West 15th Street, Suite 3200, Helena, MT 59626, (406) 457-5000;

- Montana Department of Environmental Quality (MDEQ), 1100 N. Last Chance Gulch, Helena, MT 59620-0901, (406) 841-5000;

- Hearst Free Library, 401 Main Street, Anaconda, (406) 563-6932;

- The Arrowhead Foundation, 118 E. 7th Street, Anaconda, (406) 563-5538.

DEVELOPER'S INFORMATION PACKAGE

1. OVERVIEW OF DEVELOPMENT PERMIT SYSTEM

The Development Permit System (**DPS**[1]) implements the Anaconda-Deer Lodge City-County government's (**County**) zoning and subdivision regulations under its Growth Policy by requiring a **Development Permit** for standard development. Standard **Development** includes any subdivision of land, clearing, grading, excavation, construction, reconstruction, or any land development or building activity except as specifically exempted by Chapter II of the DPS. **Development** also includes changes in existing property land use (e.g., from agricultural to residential) as well as construction of new buildings and/or infrastructure including buried utilities. **Development** also includes the installation of new domestic wells within certain areas of the County. A **Development Permit** is required for any **Development** within the **County** unless such **Development** is specifically exempted.

The **DPS** creates several **Development Districts** within the County, each with its own set of development requirements. The DPS also creates "overlays" for some of the **Development Districts**. Overlays set forth additional development requirements for the underlying **Development District** to reflect conditions or issues that do not prevail at all locations in that **Development District**. The **Superfund Overlay** and the **Superfund Domestic Well Overlay** are examples of these overlays. (See Figure 1 and 2.) Details on ADLC's **Development Districts** and overlays are provided in the DPS. Within the **Superfund Overlay**, a **Development Permit** is required for any **Excavation** exceeding one cubic yard[2] or any excavation within a **Waste Management Area**. Within the **Superfund Domestic Well Overlay**, a **Development Permit** is required for any installation of a new domestic well.

2. OVERVIEW OF SUPERFUND OVERLAY REQUIREMENTS

An individual or entity applying for a **Development Permit** (**Applicant**) within the **Superfund Overlay** will be required to provide to the **County** a completed development permit application form and the following:

- A **Site Plan** showing the locations of all existing and proposed developments and new construction and all existing **Protective Covers** and **Storm Water Controls** associated with the proposed **Development** parcel.

- A detailed grading plan showing the depth of all proposed **Excavation**/fill areas and the volume of soil to be moved on-site and/or relocated off-site.

[1] All terms which are capitalized and bolded are specifically defined in Chapter XXXIV of the DPS.

[2] For projects less than one cubic yard of soil it is still recommended that you contact ADLC for Best Management Practices for handling the soil.

- An **Erosion and Surface Runoff Control Plan** to **Minimize** the negative effects or impacts on the **Development** parcel and on water quality. This plan shall show final storm water drainage, control features and supporting calculations (if available) and the location and type of **Best Management Practices** (BMPs) to manage and control surface water runoff, and other measures to avoid collection and movement of **Contaminated Material** into the drainage systems.

Development within the **Superfund Overlay** may encounter soil-containing arsenic and/or lead in excess of applicable levels for the post-**Development** land use due to past mining and smelting activities. Applicable arsenic and lead action levels by land use are listed below.

	Arsenic	**Lead**
Residential	250 mg/kg	400 mg/kg
Commercial/Industrial	500 mg/kg	NA
Open Space/Recreational/Agricultural	1,000 mg/kg	NA

The purpose of the **Superfund Overlay** is to ensure that **Development** within the **Superfund Overlay** is protective of human health and the environment. This purpose will be accomplished by:

- Ensuring that current and permitted future land use in **the Superfund Overlay** is protective of human health.
- Providing for the preservation of **Protective Covers** and **Storm Water Controls**.
- Requiring that future **Development** in the **Superfund Overlay** employs construction practices that are consistent with the protection of human health and the environment as determined by **Superfund**.
- Providing for soil arsenic and/or lead sampling in the **Superfund Overlay** to assure that post development surficial soil arsenic and/or lead concentrations are consistent with protection of human health and the environment for the post-development land use.
- Enforcing land use restrictions on properties within the **Superfund Overlay**.

Development in areas with existing **Protective Covers** and/or **Storm Water Controls** must comply with the requirements of **DPS** Chapter XXX.F4 and the development guidance set forth in Attachment A. Development in areas without existing **Protective Covers** or **Storm Water Controls** must comply with the requirements of **DPS** Chapter XXVI.F4 and the development guidance set forth in Attachment B.

The **County** has available a geographic information system (**GIS**) database for properties within the **Superfund Overlay**. The **GIS** database provides available soil arsenic and lead data for properties within the **Superfund Overlay** as well as information regarding the United States Environmental Protection Agency (EPA) approved **Protective Covers** and **Storm Water Controls**, including the presence of any **Protective Covers** or **Storm Water Controls** and whether there are any restrictions on the use or development of such properties, including groundwater use. Upon verification that the applicable **DPS** requirements have been achieved, a

Certificate of Compliance will be issued and the **County** personnel will prepare an "as-built" of the developed property to show the sample locations as well as the locations of key site features such as **Protective Covers** and **Storm Water Controls**, paved areas, buildings, etc. The as-built will be incorporated into the GIS database for future reference.

3. OVERVIEW OF DOMESTIC WELL OVERLAY REQUIREMENTS

An individual or entity installing a new domestic well within the **Superfund Domestic Well Overlay** boundary must obtain a D**evelopment Permit** and must meet the applicable construction and water quality requirements described below. The purpose of the construction and water quality requirement is to prevent the consumption of water containing arsenic at concentrations greater than the human health standard identified in the ARWW&S OU ROD Amendment (EPA, 2011). The well permit process is as follows:

1. Determine through the **County** whether any restrictive covenants are in place that limit or prohibit well installation, and if so obtain documentation confirming that well installation on the property can be legally and properly permitted.

2. Secure a **Development Permit** from the **County** and a Well Permit from the Tri-County Sanitarian's office before installing a new well.

3. Complete the new well consistent with the permit requirements.

4. After installation, wells will be sampled by Atlantic Richfield Company or another party on behalf of Atlantic Richfield Company for water quality prior to use. The results of the tests shall be submitted to the **County**'s **Superfund Coordinator**. The **Superfund Coordinator** will issue a **Certificate of Compliance** for a well only if the design requirements listed in paragraph 3 above are met and test results show the quality from the well water meets the ARWW&S OU ROD amendment arsenic standard.

5. As appropriate, permitted new domestic wells will be added to the periodic sampling program.

The **Superfund Domestic Well Overlay** boundary is shown on Figure 2.

FIGURES

Figure 1

Superfund Overlay Map

Superfund Overlay

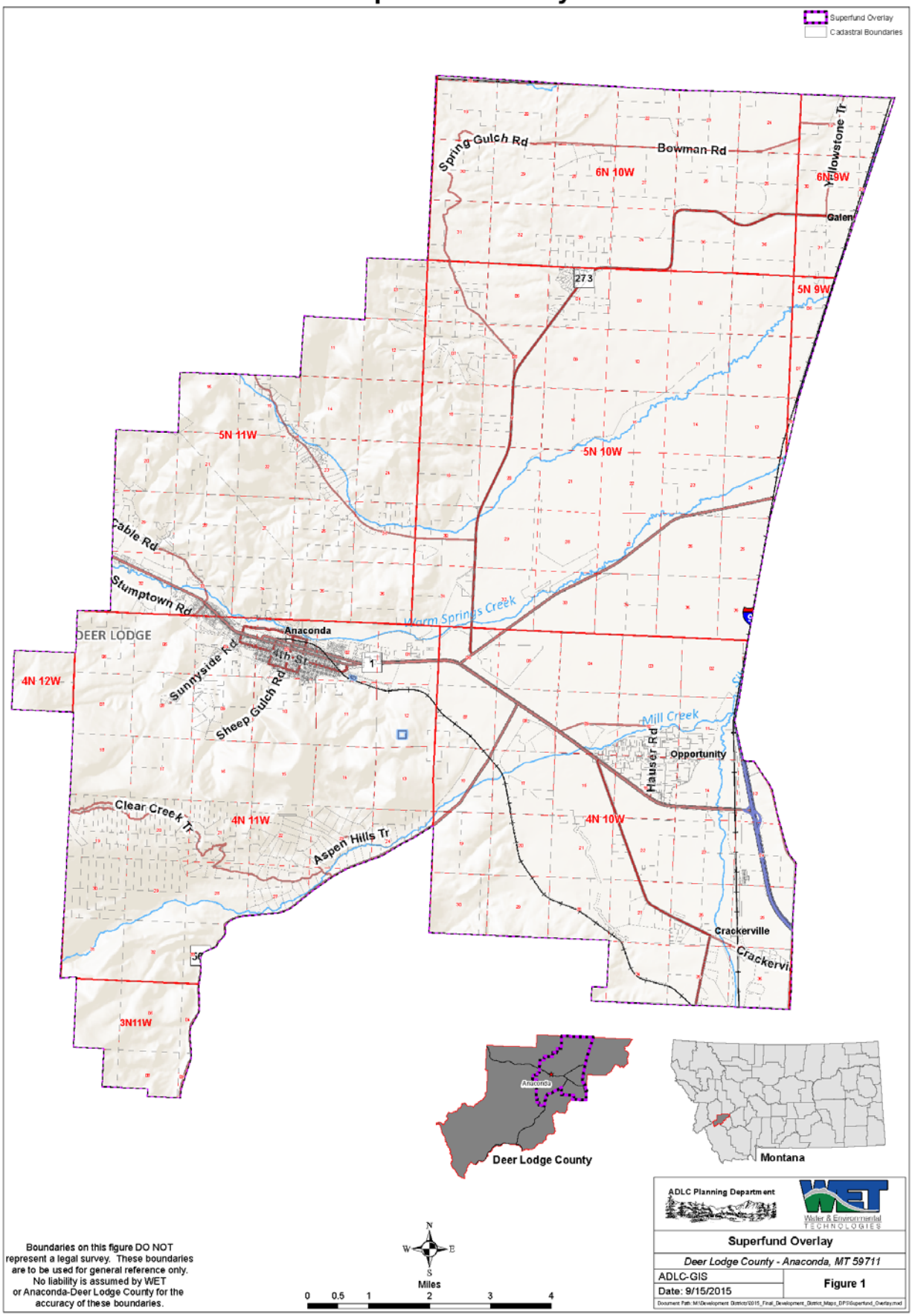
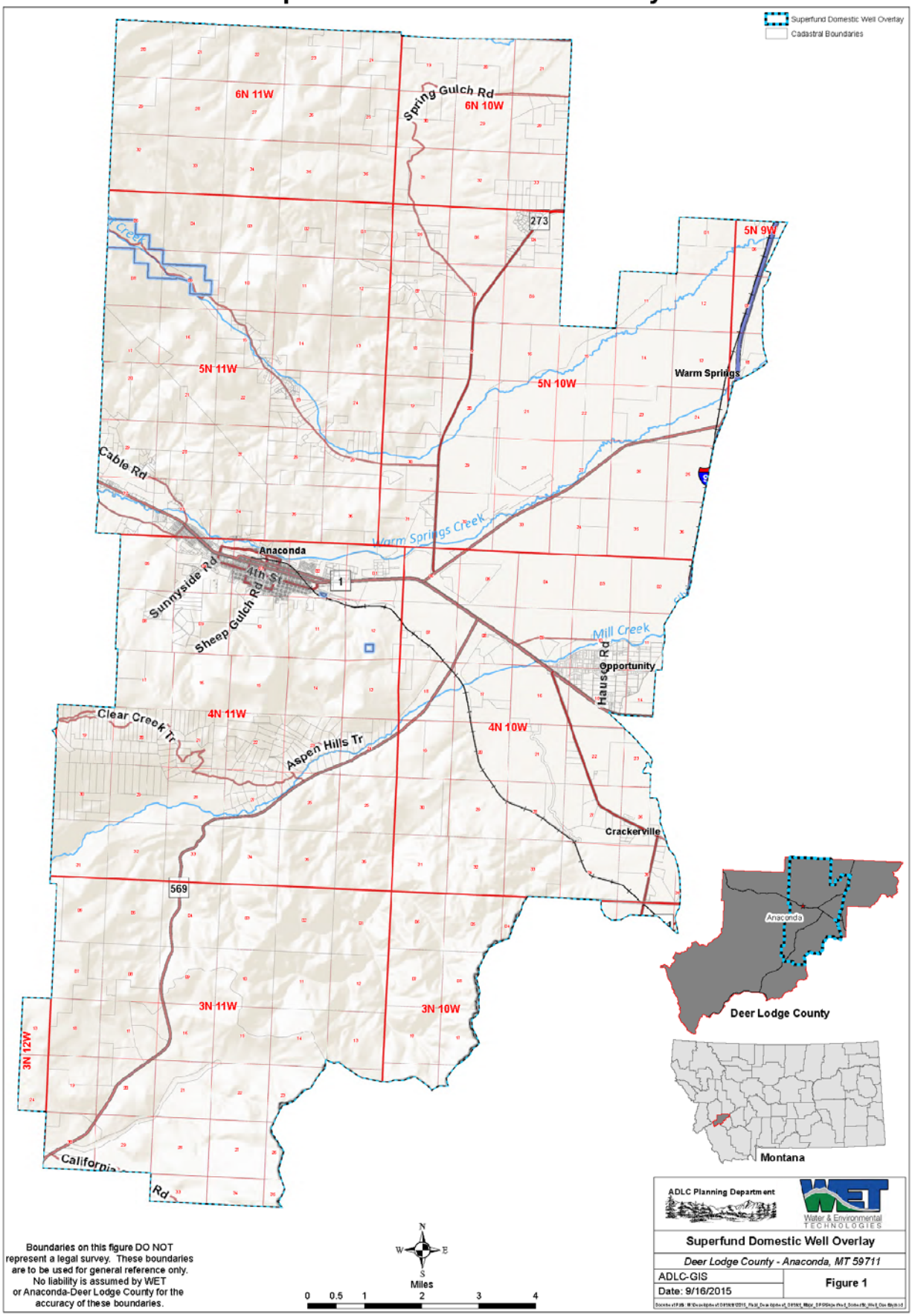


Figure 2

Superfund Domestic Well Overlay Map

Superfund Domestic Well Overlay



ATTACHMENTS

Attachment A

Guidance for Developments with Existing Protective Covers or Storm Water Controls

FOR DEVELOPMENTS WITH EXISTING PROTECTIVE COVERS OR STORM WATER CONTROLS

Any ***Development***[1] within the ***Superfund Overlay*** that will affect an existing ***Protective Cover*** must maintain or improve upon the function of the ***Protective Cover***. In addition, engineered ***Storm Water Controls*** (channels, sedimentation basins, etc.) exist in some locations. The function of existing engineered ***Storm Water Controls*** constructed pursuant to ***Superfund*** must be maintained or improved by any ***Development***. Modifications to the original design of ***Storm Water Controls*** must meet or exceed the original design criteria and be certified by a professional engineer.

If it is necessary to breach an existing ***Protective Cover*** as part of a ***Development***, the ***Superfund Coordinator*** will develop an ***ICWP*** to guide the developer in the proper soils handling required for the ***Development***. Any ***Protective Cover*** material must be segregated from the underlying material and stockpiled in such a way that the ***Protective Cover*** material can be reused to reconstruct the ***Protective Cover*** to its full depth.

Contaminated Material removed from the ***Excavation*** may be used as backfill up to the depth of the pre-existing ***Protective Cover***.

To the extent **Contaminated Materials** removed from the ***Excavation*** cannot be used for backfill within the ***Excavation,*** the ***Contaminated Material*** will be segregated from other soil removed from the ***Excavation*** and disposed of at the Anaconda Smelter Development Repository at the Opportunity Ponds or an alternative temporary location designated by the ***Superfund Coordinator***. Appropriate measures must be taken to ensure that ***Excavated*** material is not spilled on roadways during transport.

Any ***Contaminated Material*** exposed as a result of the ***Excavation*** must be capped with the same ***Protective Cover*** that was breached by the ***Development*** or, if approved in the ***ICWP***, with an alternate asphalt cover, concrete cover or ***Structure*** meeting EPA-approved specifications prescribed in Appendix J.

Any segregated ***Protective Cover*** material not re-used to reconstruct the ***Protective Cover*** may be used elsewhere on the land as part of a ***Protective Cover*** or other land ***Development***.

As a condition of the ***Development Permit***, the applicant will be required to allow soil samples to be collected and analyzed by the ***County*** in accordance with the ***Soils Sampling and Analysis Plan***. Upon verification that the requirements of the ***Development Permit*** have been met, ***County*** personnel will issue a ***Certificate of Compliance*** and prepare an "as-built" of the developed land to show the sample locations as well as the locations of key site features such as ***Protective Covers, Storm Water Controls***, ***Buildings***, paved areas, etc. The as-built will be incorporated into the ***GIS*** database for future reference.

The ***Superfund Coordinator*** will consult with the Atlantic Richfield Company in connection with any proposed ***Superfund Change in Use,*** any proposed residential ***Subdivision*** or any

[1] All terms which are capitalized, italicized and bolded are defined in Chapter XXXIV of the ***DPS Regulations***.

proposed commercial/industrial ***Developments*** within the ***Superfund Overlay*** to determine if a ***Response Action*** by Atlantic Richfield Company will occur within the proposed ***Development*** area. If a ***Response Action*** by Atlantic Richfield Company is performed within the proposed ***Development*** area, Atlantic Richfield Company or its designee will perform the ***Response Actions*** within the proposed ***Development*** area either prior to, in conjunction with, or following the applicant's performance of the work identified in the applicant's ***Development Permit***. Any ***Response Actions*** to be performed by Atlantic Richfield Company will be taken into account in the ***Development Permit***.

Even if a ***Development Permit*** is not required, **it is recommended** that the soil be addressed by one of the methods described above.

Attachment B

Guidance for Developments without Existing Protective Covers or Storm Water Controls

GUIDANCE FOR DEVELOPMENTS WITHOUT EXISTING PROTECTIVE COVERS OR STORM WATER CONTROLS

Any ***Development***[8] within the ***Superfund Overlay*** that will not affect an existing ***Protective Cover or Storm Water Controls*** must be conducted in a manner that results in the proper on-site management and/or off-site disposal of ***Excavated Contaminated Material***.

If and to the extent materials removed from the ***Excavation*** have been verified to contain ***Contaminated Material,*** the ***Contaminated Material*** may be used as backfill within the footprint of the ***Excavation*** from the bottom of the ***Excavation*** up to the depth of 12 inches (24 inches in residential gardens) below final surface grade of the ***Excavation***. To the extent ***Contaminated Material*** removed from the ***Excavation*** cannot be used as backfill within the ***Excavation***, the ***Contaminated Material*** will be segregated from other soil removed from the ***Excavation*** and disposed of at the Anaconda Smelter Development Repository at the Opportunity Ponds or an alternative temporary location designated by the ***Superfund Coordinator***. Appropriate measures must be taken to ensure that excavated material is not spilled on roadways during transport.

If the final surface grade of the ***Development*** is soil and ***Contaminated Material*** has been used as backfill, the top 12 inches (24 inches in residential gardens) within the footprint of the ***Excavation*** shall consist of soil which has been verified to meet the applicable ***Superfund*** action level.

If the ***Development*** consists of a ***Structure***, a concrete cover or an asphalt cover within the footprint of the ***Excavation***, backfilling in the ***Excavation*** with ***Contaminated Material*** may occur up to the level of the base material or bedding material for the ***Structure***, concrete cover or asphalt cover, provided that the ***Structure***, concrete cover or asphalt cover is constructed to meet the EPA approved specifications prescribed in Appendix I, which will be incorporated by the ***Superfund Coordinator*** into the ***ICWP***.

As a condition of the ***Development Permit***, the applicant will be required to allow soil samples to be collected and analyzed by the ***County*** in accordance with the ***Soils Sampling and Analysis Plan***. Upon verification that the requirements of the ***Development Permit*** have been met, ***County*** personnel will issue a ***Certificate of Compliance*** and prepare an "as-built" of the developed land to show the sample locations as well as the locations of key site features such as, ***Buildings***, paved areas, etc. The as-built will be incorporated into the ***GIS*** database for future reference.

The ***Superfund Coordinator*** will consult with the Atlantic Richfield Company in connection with any proposed ***Superfund Change in Use,*** any proposed residential ***Subdivision*** or any proposed commercial/industrial ***Developments*** within the ***Superfund Overlay*** to determine if a ***Response Action*** by Atlantic Richfield Company will occur within the proposed ***Development*** area. If a ***Response Action*** by Atlantic Richfield Company is performed within the proposed ***Development*** area, Atlantic Richfield Company or its designee will perform the ***Response Actions*** within the proposed ***Development*** area either prior to, in conjunction with, or following the applicant's performance of the work identified in the applicant's ***Development Permit***. Any ***Response Actions*** to be performed by Atlantic Richfield Company will be taken into account in the ***Development Permit***.

---

[8] All terms which are capitalized, italicized and bolded are defined in Chapter XXXIV of the ***DPS Regulations***.

Even if a ***Development Permit*** is not required, **it is recommended** that the soil be addressed by one of the methods described above.

CPMP Plan Attachment B

CPMP Intake Form and Access Agreement

ANACONDA-DEER LODGE COUNTY

Community Protective Measures Programs

118 E. 7th Street/3rd Floor
Anaconda, MT 59711

Intake Form

CPMP #:_____

ADMINISTRATIVE REVIEW	
Today's Date:	Property Address:
Name of Residents:	
Residents Contact Information:	Home: Cell:
email:	
Name of Property Owner (if different from resident):	
City:	State: Zip Code:
Property Owner's Contact Info:	Home: Cell:
email:	
East of Sycamore Street.	☐ Yes ☐ No
Age of home:	Type of Home (circle one): Single Family / Multi-Unit
Well Testing Data Available:	☐ Yes ☐ No
Soil Results - AWA As:	Lead Data (circle one): Screening / Remedial
Eligible for Weed Reimbursement:	☐ Yes ☐ No
Eligible for Soil Swap:	☐ Yes ☐ No

Please check the boxes below if you would like more information on additional CPMP Programs. Some programs do require paperwork additional work, but the CPMP Administrator will walk you through the requirements.

☐ Soil Swap Program ☐ Attic Dust Sampling ☐ HEPA Vacuum Loaner Program

☐ Renovation Program ☐ Weed Reimbursement Program ☐ Domestic Well Program

- How long have you lived in this home? _____
- Number of occupants in the home: _____How many children live in home? _____
- Have any of the children been tested for lead? Yes _____ No _____
  - If yes, are test results available? _____ Date of the test(s): _____
- Are there pregnant or nursing women in the home? Yes_____ No_____
- Has there been recent remodeling/renovation of the home where paint has been sanded/scraped? Y / N

Please explain:_____

ANACONDA-DEER LODGE COUNTY
Community Protective Measures Programs
118 E. 7th Street/3rd Floor
Anaconda, MT 59711

Access Agreement
Institutional Control Program

As part of Anaconda-Deer Lodge County's (ADLC) Institutional Controls Program, ADLC requests your consent to access your property. Please fill out the information below and return as soon as possible.

I, _____ (printed name), owner of the property at _____, in Anaconda, Montana give my consent for employees and/or representatives of ADLC to access my property as part of the Institutional Control Program.

_____	_____	_____
Signature	Date	Telephone No.

ANACONDA-DEER LODGE COUNTY
Community Protective Measures Programs
118 E. 7th Street/3rd Floor
Anaconda, MT 59711

Atlantic Richfield Data Summary Sheet

CSOU Remedy Summary

Remedy Status:_____

Sample Depth	ARCO Yard Components (ppm)									
	As	Pb	As	Pb	As	Pb	As	Pb	As	Pb
0-2 inches										
2-6 inches										
6-12 inches										
Weighted Average										

Remediation Status

Yard Components	ARCO Yard Components (ppm)			
	Remedy Depth	Remedy Description	Remedy Year	Comments

Domestic Well Data

Is Well Data Available? Yes_____ No_____

Well ID:	
Sample ID:	
Property Address:	Property Geocode:
Legal Description:	
Latitude:	Longitude:
Total Recoverable Arsenic (ppb or µg/L)	

CPMP Plan Attachment C

Soil Swap Plan

SOIL SWAP PLAN

Introduction

This Soil Swap Plan (Plan) provides Anaconda-Deer Lodge County (ADLC) residents within the Superfund Overlay a mechanism for obtaining replacement soil in eligible excavation areas less than one (1) cubic yard, vegetable gardens and designated play areas and excavation areas. For purposes of this Plan, vegetable gardens are defined as areas for growing food plants for human consumption and designated play areas are defined as locations designed specifically for children to play or dig. Excavation areas less than one (1) cubic yard, vegetable gardens, and designated play areas are collectively referred to herein as Development Areas (DA).

Soil Swap Eligibility Requirements

The eligibility requirements for participation in the soil swap provided for under this Plan are as follows:

1. Vegetable Gardens: All existing and proposed vegetable gardens within the Superfund Overlay which are less than seven (7) cubic yards are eligible for soil swap UNLESS: (a) the yard component was addressed as a vegetable garden pursuant to the 2015 Community Soils Operable Unit (CSOU) Remedial Action Work Plan (CSOU RAWP); or (b) the yard qualified for response under the CSOU RAWP, but the resident declined access to perform sampling. If the proposed vegetable garden location received soil removal and replacement pursuant to the CSOU RAWP, but not as a vegetable garden (i.e., soil was not replaced to 24”), the proposed vegetable garden location is eligible for soil delivery and a raised structure but any excavated CSOU replacement soil is not eligible for disposal in the Superfund Repository. If the garden location was sampled above the action level but not replaced due to area weighted averaging, then the soil may be hauled to the Superfund Repository and 24 inches of replacement soil will be provided.

2. Designated Play Areas: All existing and proposed designated play areas within the Superfund Overlay which are less than seven (7) cubic yards are eligible for soil swap and one (1) raised structure UNLESS: (a) the yard was subject to soil replacement to 12” pursuant to the CSOU RAWP; or (b) the yard qualified for response under the CSOU RAWP, but the resident declined access to perform sampling.

3. Excavations less than one (1) cubic yard: All excavations less than one (1) cubic yard within the Superfund Overlay are eligible for soil swap UNLESS: (a) the yard was addressed pursuant to the CSOU RAWP and the excavation is less than 12 inches; or (b) the yard qualified for response under the CSOU RAWP, but the resident declined access to perform sampling.

Soil Swap Procedures

The property owner may initiate a request to participate in a Soil Swap by providing the Superfund Program with a completed CPMP intake form and access agreement. Upon submission of the request to participate, the Superfund Coordinator will perform an internal review, cross referencing the property with the GIS Database, to determine whether the DA is eligible for soil swap under this Plan. If the DA is determined to be eligible, the Superfund Coordinator will conduct a site visit to verify the size, location, and soil quantities stated on the property owner's site map.

Soil Swap Responsibilities

Once all the Soil Swap eligibility and procedural requirements are met, the soil swap will be implemented within the DA.

- The property owner will be responsible for removing the existing soil if necessary, loading the soil into the provided trailer, and placing the replacement soil into the excavation.
- The Superfund Coordinator will be responsible for providing the trailer, hauling excavated soil to the Superfund Repository, and delivering the necessary replacement soil to the property owner to a maximum of seven (7) cubic yards.
- All replacement soil delivered to property owners will meet the CSOU specifications for cover soil.
- Property owners will be allowed a maximum of two (2) raised structures for vegetable gardens and one (1) raised structure for a play area, per property based on the size of the proposed/existing DAs. A raised structure, for the purpose of this Plan, is defined as a 4-foot wide by 8-foot long by 12-inch tall wooden box constructed of 2x6 redwood, with a 2x4 ledge constructed along the top. Due to the constraints of the program, the size of the raised structure cannot be modified.
- Replacement soil provided to the property owner must only be used for the purpose and at the location identified in the property owner's completed application.
- The DA must be conducted within seven (7) days of the delivery of the trailer.

Closeout Response

Once the soil swap is complete, an as-built drawing will be created by the Superfund Coordinator showing the final location and dimensions of the DA. This as-built drawing will be provided to Atlantic Richfield by the Superfund Coordinator so the DA will not be included in future sampling pursuant to the CSOU RAWP. The location and dimensions of the DA will also be entered into ADLC's GIS Database. A copy of the as-built will also be provided to the property owner by the Superfund Coordinator with a close out letter.

CPMP Plan Attachment A

Compilation of CPMP ROD References

Below is compilation of references to the CPMP included in the RODs and other decision documents for the Site:

In 1996, EPA issued the Community Soils Operable Unit ("CSOU") Record of Decision ("ROD"). The CSOU ROD identified the following institutional controls ("ICs") as part of the selected remedy:

- *Develop a CPMP, to be managed by ADLC, to provide educational information to residents within the ADLC Superfund Planning Area Overlay District describing risks and recommendations to reduce exposure to residual contaminants (>250 ppm) in soils (i.e., the importance of maintaining a healthy lawn or other protective cover).*

- *Information on soil arsenic concentrations and locations will be maintained in an ADLC database for public access. All sampling results and pertinent changes in soils and condition of existing covers will be recorded for use by regulators, prospective home buyers, lenders, contractors, and other interested parties.*

In 1998, EPA issued the Anaconda Regional Water, Waste and Soil Operable Unit ("ARWW&S OU") ROD. The CPMP requirements as outlined in the ARWW&S ROD are as follows:

- *Efforts to provide better public information about risks from contamination are a form of institutional control. These include private property transactions, deed notices, or other land recording systems that would alert anyone searching the records to important information about the property. Other means of alerting the public to the presence of contamination can be developed that focus less on giving notice to purchasers and more on informing the general public. These include setting up records on contaminated property, easily identifiable by locality, at a local office (or local government), and their existence generally publicized so that community members, or potential purchasers, will know how to find them.*

- *The Community Protective Measures Program (CPMP) is an element of the selected remedy for the Community Soils OU and is applicable to the ARWW&S OU. The CPMP is intended to provide regulatory and*

educational support to residents within the Superfund Study Area. Educational materials will discuss the potential risks associated with exposure to elevated arsenic levels in the environment and suggest methods for reducing exposure. The administrator in charge of the CPMP will be responsible for responding to residents who are concerned about arsenic exposure on their property. In accordance with defined procedures and upon request from a property owner or resident, the CPMP administrator will perform sampling and provide assistance, including remediation as necessary, to reduce unacceptable exposure. As part of this program, information regarding the current status of exposure (i.e., arsenic levels, cleanup status, and future requirements) will be maintained on a Geographical Informational System, which will display information for specific locations and be made available to the public. The program may develop other types of informational material, such as maintenance of remedies (e.g., protection of caps) and a developers' package.

In 2013, EPA issued Community Soils Operable Unit ROD Amendment which served to expand the CPMP as follows:

Residential Soils

Expand the CPMP to reduce exposure to remaining (residual) lead contaminants.

- *Provide for a health education program to inform residents within the Superfund Planning District of the potential risks to lead and recommendations for reducing exposure to lead in their environment.*
- *Track information and data on lead concentrations/locations in the ADLC data base/GIS for public access to be used by regulators, prospective home buyers, lenders, contractors, and other interested parties.*
- *Prior to soil remediation, coordinate with ADL and landowners to address deteriorating exterior lead paint from homes/garages/fences that may have the potential to recontaminate remediated soil areas.*
- *Provide for a "soil swap" program to provide clean soil to residents for gardens and play areas.*

Interior Dust

Expand the CPMP to reduce exposure to remaining (residual) interior dust contamination within the Superfund Planning District.

- *Provide for sampling and/or other assessments of properties to determine if residual arsenic and lead contamination is present and the need for remedial action, where necessary.*
- *Provide dust control and removal services as requested by home owners planning a remodeling effort that could cause dust in the seldom-accessed living areas to be released to the regularly used portions of the home.*

APPENDIX E
(Atlantic Richfield's Institutional Controls Management System Plan)

Atlantic Richfield Company's Institutional Controls Management System Plan

Draft 6/2/2016

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1. INTRODUCTION

1.1. Purpose

This Plan identifies Atlantic Richfield's (AR) Institutional Controls Management System (AR's ICMS) that will be built and maintained by AR to support and facilitate Anaconda Deer Lodge County's (ADLC) performance and implementation of ADLC's Institutional Controls (ICs) obligations required pursuant to the Institutional Controls Implementation and Assurance Plan (ICIAP). Implementation of this plan will provide the following benefits:

- Automation of current manual processes for the tracking of IC's and activities on the property.
- Improved visibility into the activity taking place within the Superfund area.
- Controlled methods for the collection and reporting of data.

1.2. Project Background

The Anaconda Smelter NPL Site (Site) was placed on the NPL in September 1983. The Site covers approximately 300 square miles in the southern Deer Lodge Valley and the surrounding foothills area and includes the communities of Anaconda, Opportunity, Crackerville and Lost Creek. The area consists of agricultural, pasture, rangeland, forests, and riparian and wetland areas which contain large volumes of wastes, slag, tailings, debris, and contaminated soil, groundwater, and surface water from copper milling, smelting, and refining operations conducted on site from approximately 1884 to 1980.

Because the Site covers such a wide area and a variety of media, it was divided into numerous Operable Units (OUs), a number of which cover the same lands but address different media and land uses. The Site currently includes five OUs: the Mill Creek OU ("Mill Creek OU"), the Flue Dust OU ("Flue Dust OU"), the Old Works/East Anaconda Development Area OU ("OW/EADA OU"), the Community Soils OU ("CS OU"), and the Anaconda Regional Water, Waste and Soils OU ("ARWW&S OU"). The OUs and the RAs to be undertaken with respect to each OU were prioritized based on their potential risk to human health and the environment. The RAs addressed the principal concern for each OU: the potential risk to human health (Mill Creek OU and the Flue Dust OU), the commercial/industrial and recreational requirements (OW/EADA OU), and the potential exposure of residents to elevated arsenic and lead concentrations in soil (CS OU).

A description of the data management system requirements to meet the Institutional Controls (IC) objectives set forth in the OW/EADA OU, CS OU and ARWW&S OU Record of Decisions (ROD) are listed below.

- *Information on soil arsenic concentrations and locations will be maintained in an ADLC database for public access. All sampling results and pertinent changes in soils and conditions of existing covers will be recorded for use by regulators, prospective home buyers, lenders, contactors, and other interested parties. (CS OU ROD at § 9.1.3.)*
- *The Community Protective Measures Program (CPMP) is an element of the selected remedy for the Community Soils OU and is applicable to the ARWW&S OU. The CPMP is intended to provide regulatory and educational support to residents within the Superfund Study area. Educational materials will discuss the potential risks associated with exposure to elevated arsenic levels in the environment and suggest methods for reducing exposure. As part of this program, information regarding the current status of exposure (i.e., arsenic levels, clean-up status, future requirements) will be maintained on a Geographical Informational System, which will display information for specific locations and be made available to the public. The program may' develop other types of informational material, such as maintenance of remedies (e.g., protection of caps) and a developers' package. (ARWW&S OU ROD at § 9.7.4.)*
- *Track information and data on lead concentrations/locations in ADLC data base/GIS for public access to be used by regulators, prospective home buyers, lenders, contactors and other interested parties. (CS OU ROD Amendment at § 6.1.3.)*

1.3. Plan Scope

The Plan scope is to describe how data will be updated, maintained and stored in AR's ICMS and how such data will interface with ADLC's ICMS. AR's ICMS is a computer-based tool that is used for creating, documenting,

saving, editing, analyzing, sharing, and displaying spatial data (data that is linked to a location). AR's ICMS will provide an easy to use, quick, and efficient mechanism for querying data. The server aspect of the AR's ICMS allows the data to be stored as a single database at a single location, but the data contained is available to identified users with an internet connection and valid access credentials.

The data that will be maintained in AR's ICMS include:

- Superfund Boundaries (Waste Management Areas, High Arsenic Areas, Vegetation Management Areas, PRLU's, RDU's, etc.)
- Proprietary controls, including restrictive covenant
- Analytical Laboratory Data pursuant to the ROD
- 3rd Party data such as property ownership and land usage data, Montana 811 data, 911 system data, MBMG Ground Water Information Center (GWIC) groundwater analytical data
- Site Decision documents including ROD's, Administrative Orders, Final design reports and work plans, Construction Completion Reports, Remedial Action Completion Reports

AR's ICMS will interface with ADLC's ICMS and data systems managed by third parties and will include the following IC's management functionalities:

- Geographic Information
- Notifications from the Montana 811 system
- Information from ADLC's e-911 system
- Access to the State's Cadastral system
- Integration with the analytical data system
- Information on AR's proprietary controls
- Information from ADLC's ICMS regarding Development Permit System and CPMP activities.

2. CURRENT SITUATION

2.1. ADLC Use of AR Data

ADLC currently uses manual processes and multiple systems for managing and tracking development permit requests within the Site. For Geospatial reference, ADLC has their own GIS system. The data within this platform is obtained from various ADLC departments as well as from AR's GIS system. The data downloaded from AR includes, but is not limited to, shapefiles with information related to completed remedies, properties with restrictive covenants, and analytical data.

The risk with ADLC's current processes is that ADLC will not have current information regarding remedies that are in place and thus, may not provide the correct information to property owners. An additional risk includes the potential for inadvertent manipulation or incidental misrepresentation of the shapefiles by ADLC after they are downloaded.

2.2. AR Use of ADLC Data

AR does not currently have an automated system for obtaining information regarding ADLC's performance and implementation of its ICs obligations.

3. PROPOSED ICMS OVERVIEW

The AR ICMS and the ADLC ICMS systems will be independent of each other and will rely on the availability of a data interface between the systems to ensure each party has relevant information to implement and perform their respective ICs obligations. The specific data available via the interface will include what is described in Section 1.3 of this plan and the corresponding section of the ADLC ICMS Plan. A benefit associated with the interfaced systems is that it provides a level of redundancy in the event of a failure of either single system.

When managing information in the systems, AR and ADLC will ensure an official owner is defined for each data set and will outline a process for the transfer of ownership between entities if applicable. The identified owner for each data set will be responsible for all reporting and accuracy assurance related to that information. AR and ADLC will not be held accountable for the accuracy of data obtained from third parties for use in the AR and ADLC ICMS systems.

3.1. GIS Data

AR will make available a GIS platform suitable for the storage of all geospatial data required to implement and perform the ICs obligations. The data stored, updated and maintained by AR will include but will not be limited to superfund boundaries (Waste Management Areas, High Arsenic Areas, Vegetation Management Areas, PRLU's and RDU's), proprietary controls (including restrictive covenants), field data, and as-built engineering figures.

3.2. Analytical Laboratory Data

AR will make available an Analytical Laboratory Data platform suitable for the storage and analysis of chemistry data from laboratories.

3.3. Montana 811

Montana has a program in place called Montana 811 which allows a person to request information on utility locations with respect to a property prior to beginning any type of excavation.

ADLC and AR will each independently obtain and monitor this third party information from the Montana 811 system (as able). Information collected by this program will be used to monitor excavation activities within the Site.

3.4. Ownership and Land Usage

The Montana Cadastral system maintains information regarding individual parcels of real property including information regarding location, geocode, ownership, and land usage.

AR and ADLC will obtain and monitor this third party information from the Cadastral system to assist with the implementation and performance of their respective ICs obligations. Both AR and ADLC reserve the right to obtain ownership and land usage information from systems other than Cadastral in the future.

3.5. ADLC CPMP and DPS Data

Information associated with ADLC's implementation of the Community Protective Measures Program Plan and Development Permit System Ordinance will be shared with and available in the AR's ICMS.

3.6. Supporting Documentation

AR will make available a repository for the storage of documents related to the Site including but not limited to Site decision documents, ROD's, Administrative Orders, Final design reports and work plans, Construction Completion Reports and Remedial Action Completion Reports which are maintained in the Site Register.

3.7. System Reporting

AR's ICMS may include capabilities to facilitate the generation of annual reports required under the ICIAP.

3.8. Security and Access

AR's ICMS will be built to conform to industry best practices regarding data management and security. Access to information interfaced from the AR's ICMS to ADLC's ICMS will be allowed through ADLC's ICMS.

3.9. Backups

AR's ICMS will be appropriately backed up to mitigate the risk of data loss due to hardware or other system failure. The backup schedule and backup types will be aligned with best practices for the software on which the system is built.

4. SCHEDULE

4.1. Implementation Process and Timeline

AR will follow the process described below for the development and implementation of AR's ICMS.

To begin, AR will compile requirements to accommodate the features and data required for AR's ICMS. **This step has already begun and the remaining effort to complete this is expected to span approximately 1-3 months.**

Once the system requirements are documented, AR will assemble a Conceptual Design. During the Conceptual Design process, AR will develop wireframes, process flows, and other project documents to ensure alignment with ADLC's ICMS. ADLC and Agency participation will be anticipated during these efforts. AR intends to accommodate existing data interface expectations and formats where able and appropriate. **This step will take approximately 3-6 months.**

Following the completion of the Conceptual Design process, AR will build the components of AR's ICMS. During the build process, users from both AR and ADLC will be involved to test data exchange and functionality of the systems prior to go-live. **Based upon the current understanding, it is anticipated that building the system will take approximately 6-12 months.**

Once built, AR will provide assistance to ADLC during the first 3 months of operations to ensure data interfaces are functioning as anticipated.

Due to the continual evolution and improvement of technology, AR anticipates that AR's ICMS will be upgraded in an iterative manner. During these upgrades, AR will coordinate closely with ADLC to ensure continuity in the flow of all data is maintained. Likewise, AR expects ADLC's ICMS will also be upgraded and continually improved – in these cases, data format for interfaces is expected to remain static. In the event that the data format of an interface will change due to a system enhancement, a notice of 3 months will be expected from either party.

The schedule set forth herein is dependent upon the availability of data from third parties including the testing and resolution of identified issues with these interfaces; agency reviews at the various stages taking place in a timely manner; and coordination with ADLC for the development and implementation of both ICMS systems.

AR expects that ADLC will develop their respective ICMS system within a similar process and timeline as outlined above and to conform to the information in Section 3.

Any issue encountered by AR with the dependencies listed above will result in delays. AR will not be held accountable for any such delays.

4. SCHEDULE

4.1. Implementation Process and Timeline

AR will follow the process described below for the development and implementation of AR's ICMS.

To begin, AR will compile requirements to accommodate the features and data required for AR's ICMS. **This step has already begun and the remaining effort to complete this is expected to span approximately 1-3 months.**

Once the system requirements are documented, AR will assemble a Conceptual Design. During the Conceptual Design process, AR will develop wireframes, process flows, and other project documents to ensure alignment with ADLC's ICMS. ADLC and Agency participation will be anticipated during these efforts. AR intends to accommodate existing data interface expectations and formats where able and appropriate. **This step will take approximately 3-6 months.**

Following the completion of the Conceptual Design process, AR will build the components of AR's ICMS. During the build process, users from both AR and ADLC will be involved to test data exchange and functionality of the systems prior to go-live. **Based upon the current understanding, it is anticipated that building the system will take approximately 6-12 months.**

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The schedule set forth herein is dependent upon the availability of data from third parties including the testing and resolution of identified issues with these interfaces; agency reviews at the various stages taking place in a timely manner; and coordination with ADLC for the development and implementation of both ICMS systems.

AR expects that ADLC will develop their respective ICMS system within a similar process and timeline as outlined above and to conform to the information in Section 3.

Any issue encountered by AR with the dependencies listed above will result in delays. AR will not be held accountable for any such delays.

APPENDIX F
(Anaconda-Deer Lodge County's Institutional Controls Management System Plan)

Institutional Controls Management System Plan

Anaconda-Deer Lodge County

Superfund IC Program

Anaconda Smelter NPL Site

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Background and Current Management System 6
Benefits Moving Forward 7
Future Vision 7
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Personnel Requirements 10
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Purpose

This plan describes the Anaconda-Deer Lodge County (ADLC & County) Institutional Controls Management System (ADLC's ICMS). ADLC's ICMS will be developed and maintained by the County to aid in the implementation of the Institutional Controls (ICs) obligations. It will be managed and used in conjunction with Atlantic Richfield's (AR) ICMS, which will be built and maintained by AR in accordance with the Data Management Plan for the Anaconda Smelter Superfund Site. Both systems will work in tandem as detailed in the Institutional Controls Implementation and Assurance Plan (ICIAP). Development of these ICMS plans is required as described in the Records of Decision (ROD) for the site listed below.

2013 Community Soils Operable Unit (CSOU) ROD Amendment:

Track information and data on lead concentrations/locations in the ADLC data base/GIS for public access to be used by regulators, prospective home buyers, lenders, contractors, and other interested parties.

1998 Anaconda Regional Water, Waste and Soil Operable Unit (ARWW&S OU) ROD

- *Efforts to provide better public information about risks from contamination are a form of institutional control. These include private property transactions, deed notices, or other land recording systems that would alert anyone searching the records to important information about the property. Other means of alerting the public to the presence of contamination can be developed that focus less on giving notice to purchasers and more on informing the general public. These include setting up records on contaminated property, easily identifiable by locality, at a local office (or local government), and their existence generally publicized so that community members, or potential purchasers, will know how to find them.*

- *The Community Protective Measures Program (CPMP) is an element of the selected remedy for the Community Soils OU and is applicable to the ARWW&S OU. The CPMP is intended to provide regulatory and educational support to residents within the Superfund Study Area. Educational materials will discuss the potential risks associated with exposure to elevated arsenic levels in the environment and suggest methods for reducing exposure. The administrator in charge of the CPMP will be responsible for responding to residents who are concerned about arsenic exposure on their property. In accordance with defined procedures and upon request from a property owner or resident, the CPMP administrator will perform sampling and provide assistance, including remediation as necessary, to reduce unacceptable exposure. As part of this program, information regarding the current status of exposure (i.e., arsenic levels, cleanup status, and future requirements) will be maintained on a Geographical Informational System, which will display information for specific locations and be made available to the public. The program may develop other types of informational material, such as maintenance of remedies (e.g., protection of caps) and a developers' package.*

1996 Community Soils Operable Unit (CSOU) Record of Decision

- *Information on soil arsenic concentrations and locations will be maintained in an ADLC database for public access. All sampling results and pertinent changes in soils and condition of existing covers will be recorded for use by regulators, prospective home buyers, lenders, contractors, and other interested parties.*

Goals and Objectives

The ICMS is fundamental to ADLC's ability to meet its IC responsibilities in an efficient and cost effective manner. With the current rate of technological advancement in computer systems, this plan is written with flexibility for upgrades in technology that will occur over time. However, the core goals of the system will remain the same and are detailed below:

- Provide up-to-date, easy access to remedial data and Superfund activities to help promote proactive development within the County, while also protecting Superfund remedies.
- Allow the IC Program to supply data and information to County residents and prospective property owners regarding remedial activities for all media (soil, water and dust) that have been performed on their property, both to ensure the integrity of the remedy and assure the protectiveness of human health.
- Provide an online portal for public access to Superfund data and remedial activities performed on privately owned properties and access to a repository of Superfund documents.
- Provide up-to-date information to AR about development permits and soil management activities within the County, including future development as-built information.
- Provide notification to AR about activities on properties with restrictive covenants.
- Provide a tracking system for Institutional Controls that is accessible, current, and reduces the time and effort required for reporting activities to AR, MDEQ and EPA.

Current Management System

Currently reports, documents, and field forms are maintained as paper copies with the use of email and fax as the primary form of communicating information between ADLC departments. Permit tracking relies heavily on MS Excel spreadsheets with minimal database optimization and automation.

The County uses AR data by extracting shapefiles from a GeoCortex Viewer powered by Silverlight. The current datasets, made available via GeoCortex, are static shapefiles and do not contain the most recent AR sampling or remedial datasets. Not all the information contained within the GeoCortex datasets can be extracted, therefore, only a subset of AR data is currently available for download and use in an ESRI environment. The County currently extracts and downloads available GeoCortex data quarterly for use in ArcGIS desktop.

At this time, the County does not provide a website portal to the public for Superfund related inquires as required and there is no on-line permitting assistance. Past County websites contained a basic interactive mapping tool to assist the public, however, that tool is no longer supported and is not available within the County's current website.

Tabular permitting data is currently entered into MS Excel by permit technicians. Paper copies of permits and any associated documentation are kept in project binders and are associated with a geospatial location through an ESRI ArcGIS geodatabase containing several permitting feature classes. The current permit tracking process has many redundancies between departments and lacks overall efficiency. **Attachment 1** details the current process and highlights how the County currently coordinates with both AR and other internal departments involved in the local permitting process.

The County, with assistance from the Arrowhead Foundation, currently maintains a paper-based Superfund library that contains many of the recent work plans, construction completion reports, and related supporting documents. It is apparent the library contains an incomplete source of Superfund documents, and searching through paper documents is inefficient especially considering the technology available today to aid in document searches. Recent efforts have been made by AR to create a digital archive of the majority of Superfund documents. Access to this digital document repository will greatly increase the effectiveness and efficiency of the IC's program.

ADLC's ICMS will allow for the development of an updated mapping tool that will also contain permit submittal options, it will link to an associated tabular database for tracking purposes, and will provide access to Superfund documents to aid the public and ensure better Development Permit System (DPS) administration.

Benefits Moving Forward

A database-driven permitting tracking system with on-line public interface options increases both the efficiency and effectiveness of the ICs Program in ADLC. This data management system helps eliminate data redundancy and creates a digital work environment, thus minimizing the use of paper-based filing systems. It also reduces time spent on data entry and minimizes the associated human error. Through automation of the permitting process, quality assurance measures will be available to ensure permit and locate tracking are accurately recorded and other IC's programs are being implemented effectively.

Future Vision

ADLC's ICMS will consist of five (5) major components:

1) a geospatial based platform with access to Atlantic Richfield's (AR) spatial datasets;

2) a public website portal that provides information for general Superfund related inquires and the ability to complete and submit required permits electronically;

3) a tabular permit database that is linked to spatial locations and track the status of local permits and provide tools such as data queries to meet AR, EPA and MDEQ reporting requirements;

4) a database tracking component that is associated with non-permit related program requirements (i.e., monitoring and enforcement of ordinances, monitoring and maintenance

requirements on County conveyed properties including storm water and noxious weed control, and restrictive covenant referrals); and

5) a document repository consisting of, but not limited to, all pertinent work plans, construction completion reports, and other supporting documentation.

The County is developing a permitting database tracking system that will allow the public to apply for local permits on-line through the use a joint application process. Several departments will be included in the joint application process, including but not limited to, the Superfund Department, Planning Department, Environmental Health Department, Roads Department, Cemetery Department, and Weed Department. The permit application system will allow the public to geospatially reference their proposed development, while providing mapping options that could be utilized in their specific permit application. Utilizing a joint application permit with background database functionality will allow the County to streamline permitting requirements, promote interdepartmental coordination, and limit data redundancies, which will increase public support. The on-line public portal will allow residents to inquire about Superfund related questions through coordination with the Community Protective Measures Program (CPMP). This public portal will also serve as an interface to allow residents to research information concerning the Site through the document repository. Creating several "user stories" data models will also help the IC Program understand how the public, county staff, and contractors will utilize this permitting tool.

Technical Solutions

The following describes current plans that may evolve and change over time with technology and software developments. The system is expected to change over time to utilize technology advances to meet the objectives in an efficient manner.

Utilizing SharePoint and Office 365 file storage capabilities, permit folder creation will be standardized with a cloud-based central file share platform that will contain all applicable interdepartmental information located in one folder. By moving towards an interdepartmental file-share system, the County will standardize file naming conventions, permit subfolders, and streamline workflow. Every department will be equipped to access files from the office or remote sites with internet access. This will limit the need to email and fax documents between departments, and will unify permit file structure and overall departmental organization.

Projects will have a geospatial location assigned to them and this location will be associated with the permit file share platform. Individual point data will be cross-referenced with AR's ICMS remedy data, including but not limited to, Superfund Overlay, previous remediated areas, remedial structures (storm water, etc.) vegetation management areas, restrictive covenants, contaminated soils, and yard component soils data. This spatial intersection and the associated report will be generated using ArcGIS data models and when AR's ICMS data is intersected that information will be provided to AR for further analysis.

Utilizing a web based database environment, a public permit portal is under development to assist citizens with Superfund research and the opportunity to coordinate with the CPMP on issues regarding Superfund. The permit portal will provide residents with mapping options designed to help with the permitting process. This portal will also provide guidance and a structured process to apply for multiple County permits associated with the DPS. On-line applications will generate tabular data that will

seamlessly be introduced into the permit database. Paper application will require manual data entry that will follow quality control measures detailed in ADLC's Quality Management Plan. **Attachment 2** details the work flow expected following ADLC's ICMS implementation.

Data Interface

This section details how data will be consumed by ADLC's ICMS from both AR's ICMS and third party data providers. ADLC's ICMS requests from AR's ICMS will provide a seamless ArcGIS queryable data service that will provide an easy to use, quick, and efficient mechanism for querying and downloading data.

The datasets that will be maintained in ADLC's ICMS and shared with the AR ICMS system will include the following

- Development Districts
- Municipal Utilities
- ADLC's e-911 datasets, structures, roads, etc.
- County Right-of-Ways
- 811 Locate Information
- Permit Tracking Points
- CPMP Tracking Points
- ICWP Locations
- Field Inspections & Repository Forms
- Soil Swap As-built Records
- New Residential Location within CSOU
- IC's as-built polygons
- Soil Routing Locations & Additional Information

The datasets that will be available through the ADLC's ICMS by way of interface with AR's ICMS datasets, will include the following:

- Superfund Boundaries
- ARWW&S Remediated Areas
- ARWW&S PRLUs, RDUs, OUs, WMAs
- Storm Water Structures Site Wide
- Vegetation Management Areas
- Restrictive Covenants
- CSOU – Remedy Summary, Access Request/Denial Status, Yard Soil and Attic Dust Sample Results , and As-built polygons
- Access to the Document Repository

Note: The above information should be a consumable service with standardized attributes that can be queried through a REST- or SOAP-based interface. Metadata is required, and attribute fields will need to be consistent site wide with no temporal inconsistencies.

Data systems managed by third parties that will be available include:

- Montana Cadastral Data

- Environmental Information – i.e. FEMA floodplains, MTNHP Wetlands, NHD Hydrology, etc.
- Groundwater/Domestic Well Data (via link to MBMG's GWIC)
- Surface Water Data (via link to USGS's website)
- Basemap data

Future Management

ADLC intends to build a web-based system that is updated regularly as technology changes. Using cloud-based tools will ensure that the latest deployment of the software and hardware platforms are being utilized. As technology evolves, ADLC will coordinate with AR to insure that any impending updates, improvements or upgrades are compatible with AR systems. ADLC will also implement a disaster recovery plan, and ensure that all documents and data are backed up both on- and off-site at regular intervals that are consistent with AR's data management plan.

Hardware/Software Requirements

ADLC intends to leverage ESRI and Microsoft cloud-based services to manage spatial and tabular data, and the document repository. This will require the County to pay annual maintenance fees on these products. For disaster recovery purposes data will be backed up at regular intervals to an offsite location as needed. The backup schedule and backup types will be aligned with best practices for the software on which the platform is built.

Security

The ADLC ICMS will be built to conform to industry best practices regarding data management and security.

Personnel Requirements

ADLC willoperate, maintain, and update the permit management system in order to comply with Superfund obligations. Additionally, coordination with AR's ICMS will be required periodically. This will require staffing the IC's Program with a full-time professional with database knowledge, GIS skills, and website design experience, or utilizing a third-party consultant to ensure the system is working efficiently and effectively.

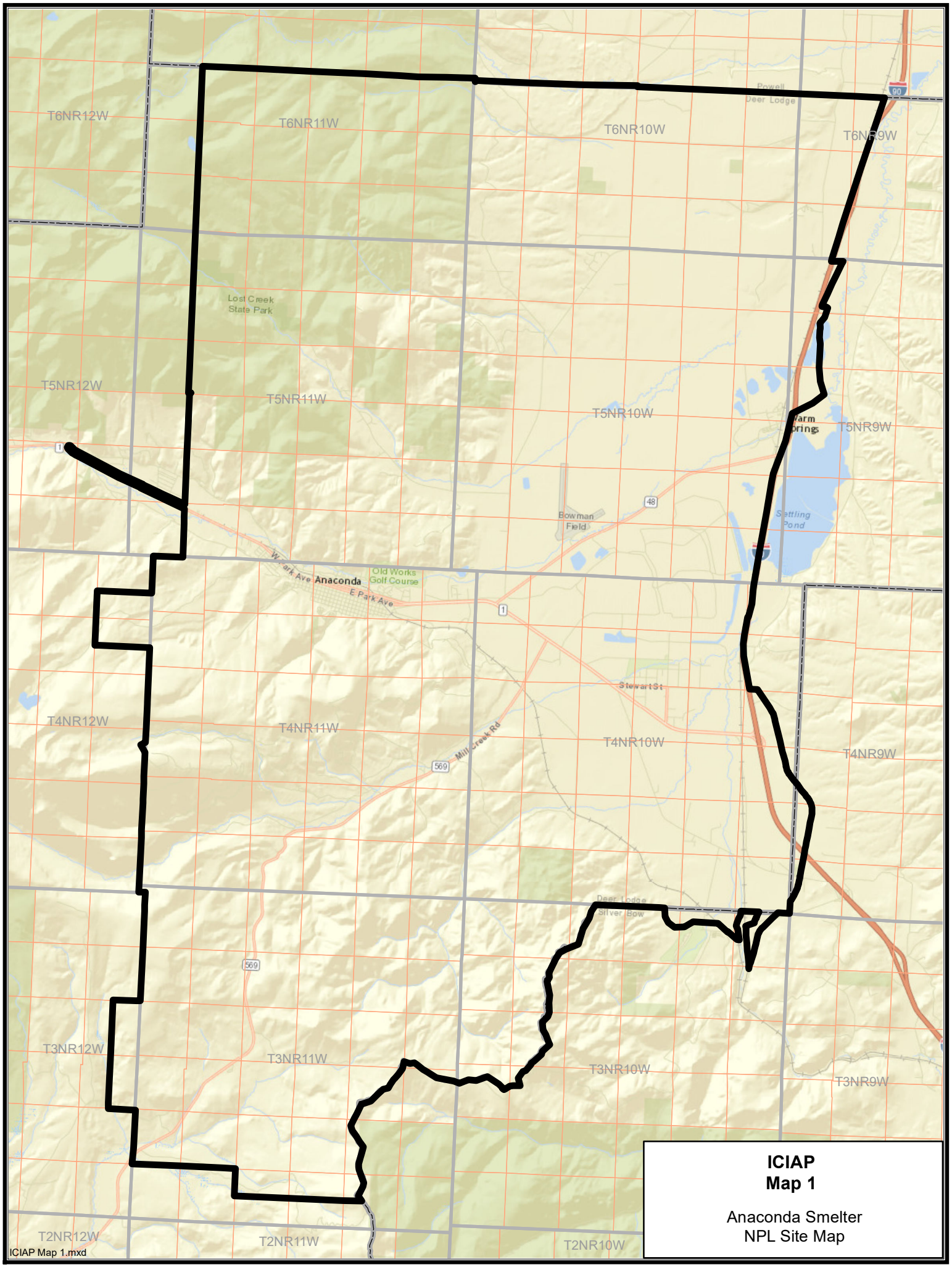
Quality Management Plan

Computer hardware, and hardware/software configurations used in support of ADLC's ICMS will be installed, tested, used, and maintained as detailed in the program Quality Management Plan (QMP) and Data Management Quality Assurance Program Plan (QAPP). Hardware/software configurations will be tested, and any issues resolved prior to use. Changes to hardware/software configurations will be assessed by the GIS Project Manager prior to implementation, and any changes will be documented to evaluate the impact of the change to the management system. ADLC will coordinate with AR to ensure that data flow and consistency will be maintained prior to adopting any proposed hardware/software configuration changes as described in the aforementioned plans.

System Reporting

The ADLC ICMS platform will provide reporting capabilities to facilitate permit tracking implementation and enforcement of ICs and preparation of the ICIAP Annual Report.

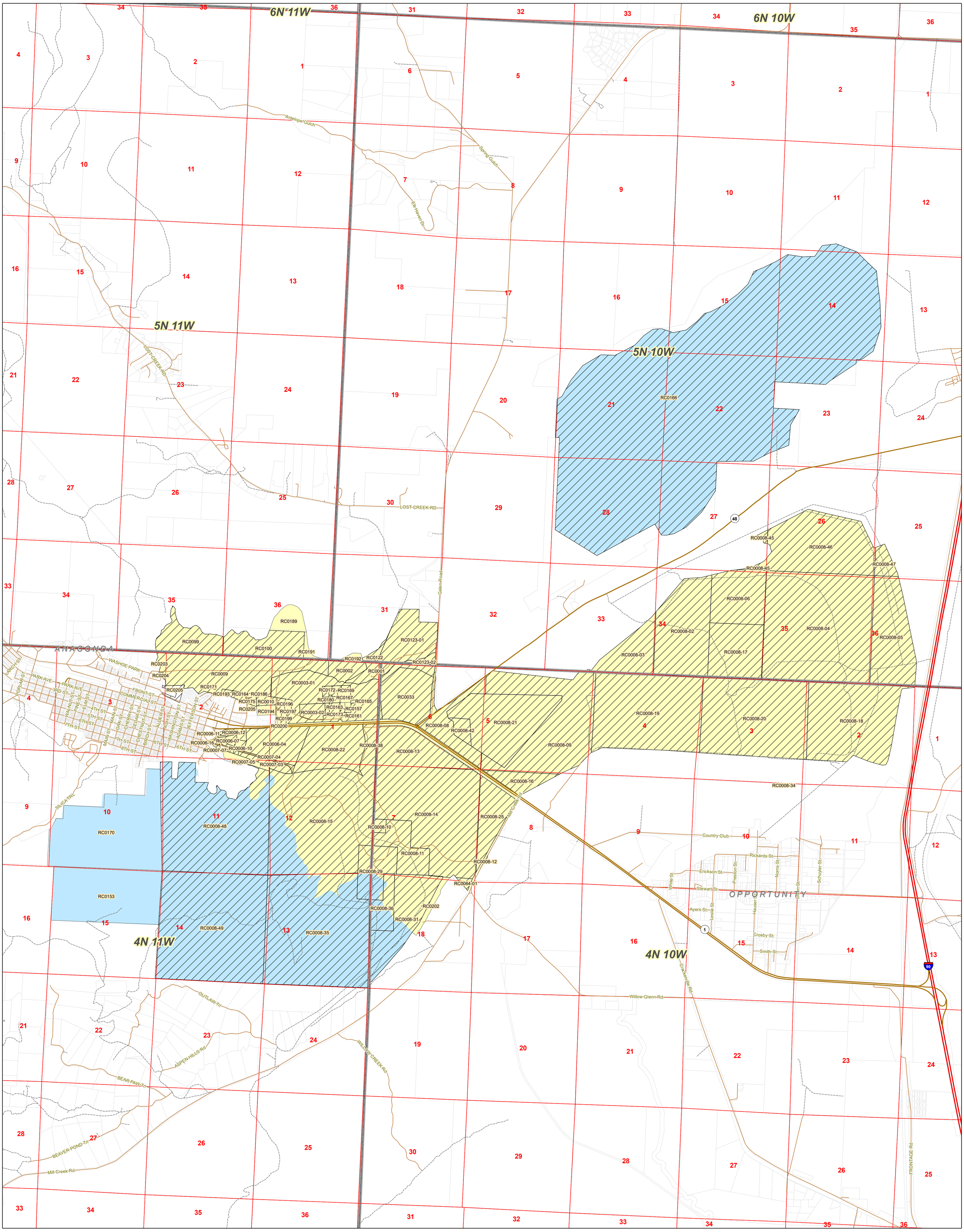
MAP 1
(Map of Anaconda Smelter NPL Site)



ICIAP
Map 1

Anaconda Smelter
NPL Site Map

MAP 2
(Map of Waste Management Areas and High Arsenic Areas)



Legend

- Properties with Restrictive Covenants
- Ownership Boundaries
- Category 5 High Arsenic Area
- Category 6 Waste Management Area

*Parcel categories, depicted by the colors identified in the legend, represent the highest restrictive use on a given parcel. This does not necessarily imply that the highest restriction applies to the entire parcel.

- Hydrologic Features
- Interstate
- State Highway
- Street or Road
- 4WD Road
- Section
- Township

N

0 0.25 0.5 1 1.5 2 Miles

TREC, Inc.

Atlantic Richfield Company
a BP affiliated company

PRELIMINARY DRAFT

ICIAP
Anaconda Smelter NPL Site
Anaconda, Montana

Drawn: DDD
Checked:
Approved:

MAP 2.1

Rev. #	Description	Date
0	Preliminary Draft	11/27/2012
1	Revised Restrictions	11/13/2013
2	Revised Restrictions	08/08/2016

SMPMonitoringAreas_Restrictions_2016.mxd

Legend

- Properties with Restrictive Covenants
- Category 5 High Arsenic Area
- Category 6 Waste Management Area
- Ownership Boundaries
- Hydrologic Features
- Interstate
- State Highway
- Street or Road
- 4WD Road
- Section
- Township

*Parcel categories, depicted by the colors identified in the legend, represent the highest restrictive use on a given parcel. This does not necessarily imply that the highest restriction applies to the entire parcel.

N

2,000 1,000 0 2,000

Feet

PRELIMINARY DRAFT

TREC, Inc.

Atlantic Richfield Company
a BP affiliated company

ICIAP
Anaconda Smelter NPL Site
Anaconda, Montana

Drawn: DDD
Checked:
Approved:

MAP 2.2

Rev. #	Description	Date
0	Preliminary Draft	4/15/2013
1	Restrictions revision	11/13/2013

SMPMonitoringAreas_Restrictions_2016b.mxd

Exhibit 3
(Institutional Controls Program Annual Performance Evaluation Report Form)

Anaconda Smelter NPL Site
Institutional Controls Program
Annual Performance Evaluation Report
(Reporting Period 20__ to 20__)

1.0 Governmental Controls

1.1. Did ADLC fully implement, comply with and enforce the DPS Ordinance?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies
Corrective Actions
Corrective Actions Completed by ADLC
Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

2.0 Proprietary controls

2.1. Did ADLC provide timely notice to AR and EPA of proposed Developments on properties with Restrictive Covenants?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies

Corrective Actions
Corrective Actions Completed by ADLC
Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

3.0 Informational Devices

3.1. CPMP Plan

3.1.1. Did ADLC fully implement the Community Outreach component of the CPMP Plan?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies
Corrective Actions
Corrective Actions Completed by ADLC
Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

3.1.2. Did ADLC fully implement the Community Awareness and Education component of the CPMP Plan?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies
Corrective Actions
Corrective Actions Completed by ADLC
Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

3.1.3. Did ADLC fully implement the Public Inquiries component of the CPMP Plan?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies

Corrective Actions
Corrective Actions Completed by ADLC
Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

3.1.4. Did ADLC fully implement the Interior Dust component of the CPMP Plan?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies
Corrective Actions
Corrective Actions Completed by ADLC
Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

3.1.5. Did ADLC fully implement the Soil Swap component of the CPMP Plan?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies
Corrective Actions
Corrective Actions Completed by ADLC
Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

3.1.6. Did ADLC fully implement the GIS component of the CPMP Plan?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies
Corrective Actions
Corrective Actions Completed by ADLC

Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

4.0 Did ADLC comply with all reporting requirements under the Institutional Controls Implementation and Assurance Plan?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies
Corrective Actions
Corrective Actions Completed by ADLC
Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

☐ **All Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____
Annual Review Completed By:
Reviewer: Signature: _____ Date:_____

Exhibit 4
(Institutional Controls Program Initial Budget)

ADLC FY2017 Superfund Program Budget

BARS Object Code	Expenditure Category	BUDGET
100-129	**a. PERSONNEL**	
	Superfund Coordinator	56,255.00
	a. Total Personnel Cost	**56,255.00**
	b. FRINGE BENEFITS	
130-149	Base (Gross Salaries) x Rate (33%)	18,564.00
	b. Total Estimated Fringe Benefits Cost	**18,564.00**
	TOTAL PERSONNEL PLUS FRINGE BENEFITS	**74,819.00**
	c. TRAVEL	
	In-State Travel	
371	Employee Automobile Allowance	-
372	Employee Travel/Meeting Expenses	1,195.00
	Out of State Travel	
371	Employee Automobile Allowance	-
372	Employee Travel/Meeting Expenses	-
	c. Total Travel	**1,195.00**
	d. CAPITAL EQUIPMENT ($5,000 or more, useful life 1 year or more)	
940	Machinery & Equipment	
	d. Total Capital Equipment	-
	e. SUPPLIES	
210	Office Supplies	3,000.00
211	Non Capital Equipment (Copier, GPS Unit, Sampling Equipment)	4000.00
220	Computer Supplies and Software	1,000.00
311	Postage	
320	Copying and Printing Supplies	
	e. Total Supplies	**8,000.00**
	f. CONTRACTUAL PLANNED (Subject to Procurement Regulation)	
398	Non-consultant contracts:	
	DPS Standards/Redevelopment	
	ICP Technical Assistance	417,575.00
	Superfund Technical Assistance	25,000.00
	Analytical Services	3,500.00
	ICA/CD Technical & Legal Assistance ($300,000)	500,000.00
	• GIS Assistance ($200,000)	
	Historical Preservation Support	10,000.00
356	Consulting Contracts (Consultant salaries are limited to GS18 level)	-
	f. Total Contractual Planned	**956,075.00**
	g. CONSTRUCTION	
950	Construction	-
	g. Total Construction	-
	h. OTHER	
	h.1 - Operating Costs	
211	XRF Upgrades	
230	Repairs/Maintenance Supplies	4,000.00
231	Gas/Oil	2,700.00
332	Subscriptions	6,000.00
333	Training Registration Fees	4,000.00
337	Advertising	1000.00
345	Telephone	3,300.00
350	PXRF QA/QC Support	5,000.00
350	Computer Support	2,000.00
360	Repairs & Maintenance Service	775.00
364	ICP Implementation Reimbursement/Raised Structures	40,000.00
530	ICP Office Rent	14,000.00
530	Prep Lab Lease	6,000.00
534	Equipment Rental/Lease	23,000.00
	h.1 Subtotal Operating Costs	**111,775.00**
	h.2 - Pass Through Costs	
		-
	h.2 Subtotal Pass Through Costs	**-**
	h.3 Sub Grants	
		-
	h.3 Subtotal Sub Grants	**-**
	h. Total Other	**111,775.00**
	i. TOTAL DIRECT COSTS (a through h)	**1,151,864.00**
	j. INDIRECT COSTS	
	General & Administrative Costs (5%)	**31,343.00**
	k. TOTAL COSTS	**1,183,207.00**

FY2015 Carry-over	22,493.00
Amount Due	**1,160,714.00**

Exhibit 5
(ADLC Parcels Superfund O&M Plan)

317 Anaconda Road
Butte, MT 59701
Main: (406) 782-9964

Atlantic Richfield Company

August 1, 2016

Emailed

Mr. Charlie Coleman
U.S. EPA, Region VIII
Federal Building, 10 West 15th Street
Helena, MT 59626-0096

Mr. Joel Chavez
DEQ
Remediation Division
P.O. Box 200901
Helena, MT 59620-0901

RE: ***Draft Final Anaconda-Deer Lodge County (ADLC) Superfund Inspection and Maintenance (I&M) Plan***

Dear Charlie and Joel:

On behalf of the Atlantic Richfield Company, enclosed for your review and approval please find the *Draft Final Anaconda-Deer Lodge County (ADLC) Superfund Inspection and Maintenance (I&M) Plan*. This I&M Plan has been reviewed with Anaconda-Deer Lodge County (ADLC) and incorporates comments received during ADLC review of the I&M Plan. For your reference, a copy of the current draft of the provisions of the Institutional Controls Agreement which correspond to the I&M Plan is also enclosed. If you have questions or concerns, please do not hesitate to call me at (406) 723-1813.

Sincerely,

Shannon Dunlap
Operations Project Manager
Remediation Management Services Company
An affiliate of Atlantic Richfield Company

cc: Andy Lensink/EPA
Jonathon Morgan/DEQ
Connie Ternes-Daniels/ADLC
Carl Nyman/ADLC
Dan Manson/ML
Rob Jordan/Atlantic Richfield
Cord Harris/Atlantic Richfield)
Jean Martin/Atlantic Richfield
Gunner Emilsson/CDM

Kevin Bethke/TREC
Duane Logan/Pioneer
Don Booth/Booth Consulting
John Davis/PRRL

File: 72.03.110.1
MiningSharePoint@bp.com

Institutional Controls Agreement
(ADLC Parcels Superfund O&M Provisions)

ARTICLE I.

DEFINITIONS AND EXHIBITS

Section 1.1. **Definitions**. Unless otherwise expressly provided herein, terms used in this Agreement which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Agreement or in the exhibits attached hereto and incorporated hereunder, the following definitions shall apply:

___. "**ADLC Parcels Superfund O&M Obligations**" shall mean the obligations that ADLC is required to implement and perform pursuant to Sections 4.1 and 4.2 hereof. The term shall not include any obligations that AR is required to perform with respect to ADLC Parcels Superfund Remedial Structures pursuant to Section 4.2 hereof.

___. "**ADLC Parcels Superfund O&M Plan**" shall mean the Anaconda-Deer Lodge County Owned Properties Inspection and Maintenance (I&M) Plan attached as Exhibit __ hereto and any amendments thereto agreed to by AR, ADLC, EPA and the State.

___. "**ADLC Parcels Superfund Remedial Structures**" shall mean all vegetative covers, engineered storm water controls and access controls which are now or which may hereafter be located on the ADLC Parcels pursuant to the requirements of the RODs.

ARTICLE IV.

ADLC PARCELS SUPERFUND O&M OBLIGATIONS

Section 4.1. **ADLC Parcels Superfund O&M**. Except as otherwise provided in Section 4.2 hereof, during the term of this Agreement, ADLC shall fully implement and perform all actions required under the ADLC Parcels Superfund O&M Plan and any other Superfund O&M Activities which may be required pursuant to the RODs with respect to the ADLC Parcels. All actions required by ADLC pursuant to this Section 4.1 shall be implemented and performed by ADLC pursuant to the schedules set forth in the ADLC Parcels Superfund O&M Plan.

Section 4.2. **ADLC Parcels Superfund Remedial Structures**. Notwithstanding any other term or condition of the ADLC Parcels Superfund O&M Plan, the Conveyance Agreement Amended Parcels Quitclaim Deeds or the C-Hill Parcel Re-conveyance Quitclaim Deed, in the

event that any ADLC Parcels Superfund Remedial Structure or any component thereof requires corrective measures (including required repairs or replacements) after the Effective Date and the required corrective measures did not result or arise from ADLC's failure to exercise due care in performing any of ADLC's obligations under Section 4.1 hereof, ADLC shall propose an increase to the applicable ADLC Parcels Superfund O&M Budget in accordance with Section 9.4 hereof in an amount appropriate to pay the estimated charges, expenses, fees and other costs which may be reasonably incurred by ADLC to perform the corrective measures. In the event and to the extent that AR approves the proposed increase to the applicable ADLC Parcels Superfund O&M Budget, the required corrective measures shall become an ADLC Parcels Superfund O&M Obligation and shall be performed by ADLC. In the event and to the extent that AR does not approve the proposed increase to the applicable ADLC Parcels Superfund O&M Budget, AR, at AR's expense, shall perform the required corrective measures. ADLC, at ADLC's expense, from sources separate and independent from the funds provided by AR under this Agreement, shall perform any corrective measures that may be required with respect to any ADLC Parcels Superfund Remedial Structure or any component thereof that results or arises from ADLC's failure to exercise due care in performing any of ADLC's obligations under Section 4.1 hereof.

ANACONDA SMELTER NPL SITE

Draft Final

Anaconda-Deer Lodge County (ADLC) Superfund Inspection and Maintenance (I&M) Plan

Atlantic Richfield Company

August 1, 2016

ANACONDA SMELTER NPL SITE

Draft Final

Anaconda-Deer Lodge County (ADLC) Superfund Inspection and Maintenance (I&M) Plan

Prepared for:

Atlantic Richfield Company
317 Anaconda Road
Butte, Montana59701

Prepared by:

Pioneer Technical Services
P.O. Box 3445
Butte, Montana59702

August 1, 2016

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1.0 INTRODUCTION

1.1 Purpose and Scope of the Inspection and Maintenance Plan

This Inspection and Maintenance (I&M) Plan has been prepared to describe and specify the Long-Term Inspection and Maintenance (LTIM) requirements within the Anaconda-Deer Lodge County (ADLC) parcels shown on Figure 1. Figure 1 shows parcels of property owned by ADLC, of which only portions of these parcels require LTIM. The I&M activities described in this I&M Plan outline the specific requirements to be conducted in support of the Superfund remedies. The yearly monitoring schedule is provided in Table 1.

The general objectives of this I&M Plan include:

- Maintaining the function and integrity of the engineered and vegetative covers;
- Maintaining storm water conveyance structures (i.e., sedimentation basins, check dams, ditches, riprap, etc.);
- Maintaining site security (i.e., access control and access restrictions); and
- Performing reporting requirements.

The *Final Engineered Controls Inspection and Maintenance (I&M) Plan Revision 1* (Atlantic Richfield Company, 2013a) and the *Final Vegetation Management Plan (*VMP) *Revision 1* (Atlantic Richfield Company, 2013b) provide the specific inspection, monitoring, maintenance, recordkeeping, and reporting procedures that will be performed to accomplish the above objectives. Groundwater and surface water monitoring will be addressed by others under the Anaconda Regional Water, Waste and Soils Operable Unit (ARWW&S OU).

The following attachments are included as part of this I&M Plan:

- Attachment 1: Engineered Controls Inspection and Maintenance Information;
- Attachment 2: Vegetation Management Information; and
- Attachment 3: Access Inspections Forms.

1.2 Old Works/East Anaconda Development Area Remedial Action

The *Old Works/East Anaconda Development Area (OW/EADA) Operable Unit Record of Decision* (OW/EADA ROD) (EPA, 1994) specifies remedial action (RA) for the Old Works/East Anaconda Development Area (OW/EADA) Operable Unit (OU). The OW/EADA OU ROD initially divided the OU into six subareas as follows: Subarea 1 – southern portion of Stucky Ridge; Subarea 2 – Old Works Golf Course; Subarea 3 – Ball Fields and Industrial Park; Subarea 4 – Red Sands and Arbiter Plant; Subarea 5 – East Anaconda Yard and Benny Goodman Park; and Subarea 6 – Drag Strip. The Aspen Hills and Mill Creek additions were added as part of the *1995 Explanation of Significant Differences (ESD)* (EPA, 1995).

1.3 Anaconda Regional Water, Waste and Soils Remedial Action

The *Anaconda Regional Water, Waste and Soils (ARWW&S) Operable Unit (OU) Record of Decision* (ARWW&S ROD) (EPA, 1998) specifies RA for the ARWW&S OU. The ARWW&S OU ROD initially divided the OU into six subareas; however, Remedial Design Units (RDUs) were then developed to divide the OU into smaller, logical units for design development. The RDU boundaries were determined using several factors including areas that contain similar remediation techniques, design approaches, Land Reclamation Evaluation System (LRES) boundary designations, optimization of resources, storm water management boundaries, and waste or media to be remediated. The RDU areas within the OU are as follows: RDU 1 – Stucky Ridge; RDU 2 – Lost Creek; RDU 3 – Smelter Hill Uplands; RDU 4 – Anaconda Ponds; RDU 5 – Blue Lagoon/Active Railroad; RDU 6 – South Opportunity; RDU 7 – North Opportunity; RDU 8 – Opportunity Ponds; RDU 9 – Fluvial Tailings; RDU 10 – Warm Springs Creek; RDU 11 – Cashman Concentrate; RDU 12 – Slag; RDU 13 – Old Works Groundwater; RDU 14 – Smelter Hill Facilities Area; RDU 15 – Mount Haggin; and the West Galen and Dutchman Creek Expansion Areas.

Details of the design criteria and approach for the OW/EADA and ARWW&S OUs RA, as well as the construction and as-built information for the completed remedies will be provided in the Anaconda Smelter NPL Site – Site Management Plan. The Anaconda Smelter NPL Site – Site Management Plan will be updated annually to reflect current site remedy implementation and I&M status.

2.0 STORM WATER CONVEYANCE SYSTEM

The objectives of the *Final Engineered Controls Inspection and Maintenance (I&M) Plan* (Atlantic Richfield Company, 2013a) include:

- Minimizing contaminated runoff from degrading the existing water quality of Warm Springs and Mill Creeks;
- Minimizing the migration of contaminated soils and infiltration; and
- Minimizing erosion of waste material from the channel of Warm Springs Creek.

Inspections and maintenance of the ADLC Parcels storm water system engineered controls will be conducted under this I&M Plan and will begin when the RA surrounding the storm water system engineered controls have met the long-term vegetation criteria described in Section 3.0. Inspection and maintenance of storm water system engineered controls located at the Old Works Golf Course will be conducted under the *Final Old Works Golf Course Operation and Management (O&M) Plan* (Atlantic Richfield Company, 2016).

2.1 Storm Water Conveyance System Description

The primary purpose of the storm water conveyance system components located on the ADLC Parcels is to minimize erosion and sediment transport to Warm Springs Creek and Mill Creek by managing storm water runoff. The existing storm water conveyance system components consist of the engineered controls shown on Figures 2 through 6 and consists of approximately 67,000

linear feet (12.7 miles) of storm water channels and 11 sedimentation ponds as shown on Figures 2 through 6. The storm water conveyance system contains multiple erosion protection components including channels lined with grass, riprap, grouted riprap, and concrete. In addition to the storm water channels and sedimentation ponds, various streambank erosion components have been installed along Warms Springs Creek and Mill Creek consisting of gabion baskets and riprap armoring at an elevation equal to the 100-year flood elevation. Inspection, maintenance and corrective measures for the storm water conveyance system are discussed in the following sections below.

2.2 Inspections

Inspections of the existing components of the storm water conveyance system located on the ADLC Parcels (as well as components which may be added in the future) will be performed on an annual and quarterly schedule and as triggered by certain events. Regularly scheduled annual inspections will be performed to document conditions of the engineered control structures in order to determine if maintenance action or corrective measures are needed. Regularly scheduled quarterly inspections will be performed to document conditions of only storm water ponds. These inspections will be performed each quarter to determine if maintenance action or corrective measures are needed.

Monitoring sediment depth will be conducted once per year during the annual inspection by resurveying the base elevation survey points to determine the current sediment surface elevation. Short, intense or above normal precipitation events are more likely to cause erosion-related maintenance activities; therefore, follow-up inspections may be warranted. Monitoring during these storm events provides the opportunity to view the storm water system engineered control structures under flow conditions, which may provide insight and knowledge regarding preventative maintenance.

Event triggered inspections will occur on an irregular basis and will be a function of precipitation events and higher than normal runoff-generating conditions. These monitoring periods and follow-up inspections will be conducted to observe flow conditions and post-flow conditions. Local weather forecasts predicting a high probability of precipitation should be monitored as a guide. Additional inspections should be conducted after significant high intensity storm events. A checklist format inspection form along with a sample form are provided in Attachment 1.

2.3 Maintenance and Corrective Measures

The storm water system engineered controls located on the ADLC Parcels will be maintained in a condition consistent with the original design plan and construction specifications, and any relevant As-Built Drawings. Observations from either regular or event-based inspections may lead to maintenance activities or corrective measures. The most critical period for any storm water conveyance system is expected to be within the first three years of operation. The most commonly anticipated maintenance will involve spraying for noxious weeds and removing trash, debris, or sediment from the conveyance structures and/or storm water ponds. Occasionally, corrective measures may be warranted, such as repairing conveyance structures and/or storm water ponds, revegetating eroded areas, and minor regrading. Guidelines for maintenance are

outlined in Attachment 1 and reporting requirements for maintenance activities are addressed in Section 6.0.

2.4 Storm Water System Engineered Controls

This section addresses operational concerns, inspection guidelines, and maintenance procedures for the individual components of the storm water system engineered controls.

2.4.1 Armored Channels

The armored channels located on the ADLC Parcels are shown on Figures 2 through 6. Armored channels include grouted riprap and riprap-lined drainage channels. Cross-sectional dimensions vary depending on anticipated flows and grades. The armored channels are designed and constructed to minimize erosion within, and adjacent to, the channels. Armor enhances the durability of the drainage channel. The condition of the armored channels must be observed to assess the effectiveness of the components and to determine if maintenance or corrective measures are required. The intent of the armored channels is to convey storm water and related sediment without promoting erosion adjacent to the channels.

Grouted riprap and riprap-lined channels may accumulate sediment when channel slopes are moderate to gentle. Most channels are designed to be self-cleaning with respect to the normal flows and sediment size anticipated. However, sedimentation within the channels may occur due to over-sized material, damage to the channels, or flows less than designed. Sedimentation may also occur where flow conditions change, such as at entrances to culverts, which are inlet-controlled. Significant damage to the armored channels may promote progressive erosion and continual damage to the channel. Loss or excessive redistribution of rock is the major concern with riprap channels. Damage to grouted riprap channels may occur as a result of cracking, displacement, or anything that would disrupt the flow-line and grade of the channel. An inspection form for armored channels along with a sample form are provided in Attachment 1.

2.4.2 Earthen Channels

The earthen channels located on the ADLC Parcels are shown on Figures 2 through 6. The cross-sections for earthen channels vary depending on anticipated flows and grades. The earthen channels are designed and constructed to convey storm water and to minimize erosion in areas adjacent to the channels. The earthen channels including any culverts, trash racks, and terraces within the channel will be inspected for erosion, sediment accumulation, and obstructions/debris. Some channels are designed to allow accumulation of sediments. Sediment and other debris will be removed according to the allowable design depths, or when capacity of the channel is significantly reduced. Removed sediments will be placed in an EPA-approved location or the Anaconda Smelter Development Repository (ASDR) (B2.12 Subcell/Opportunity Ponds). Inspection forms for earthen channels along with a sample form are provided in Attachment 1.

2.4.3 Gabion Basket Structures

The Gabion basket structures located on the ADLC Parcels are shown on Figures 2 through 6. Gabion basket structures are constructed for erosion protection along stream channels and drop structures in various storm water conveyance channels. The condition of the Gabion basket structures will be assessed to determine if maintenance or corrective measures are required. Inspection of the Gabion basket structures will be conducted once per year or during and after significant, high-intensity, storm events. Inspection forms for gabion basket structures along with a sample form are provided in Attachment 1.

2.4.4 Storm Water Ponds

The storm water ponds located on the ADLC Parcels are shown on Figures 2 through 6. Storm water ponds are designed to accumulate sediments from the storm water conveyance system. The storm water ponds serve as either detention ponds, sediment ponds, or retention ponds. Detention ponds meter flows in the conveyance system and remove sediment from the water column, sediment ponds collect eroded soils transported by the conveyance system, and retention ponds prevent storm water and sediments from moving downstream of the pond. Upstream runoff will be carried in channels into these storm water ponds. Successful sediment removal is based on influent volume, sediment size, specific gravity, and the area of the storm water pond. Guidelines for storm water pond inspections are presented in Attachment 1.

Sedimentation survey points are placed throughout each of the storm water ponds. Each survey point's position and base elevation is recorded in the monitoring and maintenance (M&M) portion of the site-wide database. When sediment levels approach the maximum design sediment elevation, sediment removal activities should be initiated with the sediment being removed and disposed of as necessary, at an EPA-approved location or the ASDR (B2.12 Subcell/Opportunity Ponds). Monitoring sediment depth will be conducted once per year during the annual inspection by resurveying the base elevation survey point to determine the current sediment surface elevation. Survey information will be used to establish a history of the sediment deposition rate and provide a basis for projecting the sediment removal schedule.

The original construction specifications and the As-Built Drawings for each storm water pond will show the approximate sediment storage elevation or capacity for each pond. Upon removing sediment, the storm water ponds will be regraded to their respective initial contours provided on the As-Built Drawings. The edges of the regraded pond floors will be reseeded, as necessary, according to the original construction specifications.

Storm events greater than the design storm should discharge from the pond control structures without flowing over the emergency spillway. The 100-year storm will either be retained in the pond or will flow over the emergency spillway. All ponds significantly reduce peak rates of runoff, while optimizing storage and sedimentation. Specific storm water design flow information is provided in the engineered controls checklists (Attachment 1).

Generally, the inspection and condition of the storm water ponds involves several components, some of which were discussed previously. The remedial design drawings specify "approximate elevation" as a conservative sediment accumulation elevation for a cleanout level. No adverse effects upon the system are anticipated at this elevation. Inspection forms for storm water ponds along with a sample form are provided in Attachment 1.

2.4.5 Trash/Security Racks

The trash/security racks located on the ADLC Parcels are shown on Figures 2 through 6. Trash/security rack designs include pre-fabricated and shop-fabricated steel-welded units. During runoff events, debris may collect on the racks. The racks prevent unwarranted access to box structures and culverts within storm water ponds while allowing overflow and visual inspection. The condition of the trash racks will be assessed to determine if maintenance is required. Inspection of the trash/security racks will be conducted once per year. Inspections for trash/security racks are incorporated into the storm water pond inspection form provided in Attachment 1.

2.4.6 Outlet Structures, Drop Inlets, and Culverts

The outlet structures, drop inlets, and culverts located on the ADLC Parcels are shown on Figures 2 through 6. Outlet structures, drop inlets, and culverts are used at various locations throughout the storm water conveyance system and storm water pond embankments. The condition of the outlet structures, drop inlets, and culverts will be assessed to determine if maintenance is required. Inspection of the outlet structures, drop inlets, and culverts will be conducted once per year or during and after significant, high-intensity storm events. Inspection forms for outlet structures, drop inlets, and culverts, along with sample inspection forms, are provided in Attachment 1.

2.4.7 Industrial Engineered Cover Areas

The industrial engineered covers areas located on the ADLC Parcels are shown on Figure 7. The industrial engineered cover areas will be maintained in a condition consistent with the *Final Old Works –Industrial Area Remedial Action Work Plan/Final Design Report (RAWP/FDR) Volume IV Addendum D, Report I – Industrial Area* (Atlantic Richfield Company, 2002), so as to minimize erosion or degradation of the cover. The industrial engineered covers areas will be inspected annually and any damage or noticeable thin areas repaired. Covered areas disturbed by excavation to install utilities, etc. must have a minimum of 6 inches of compacted gravel. Type B1 gravel material will be used to repair the industrial engineered cover areas where the cover wears to a depth less than 6 inches, the cover has become loose or unsealed on the surface, or depressions have developed in the cover creating areas of ponded water.

3.0 VEGETATIVE COVERS

The *Final Vegetation Management Plan (*VMP) *Revision 1* (Atlantic Richfield Company, 2013b) describes the requirements that EPA and Montana DEQ have established for evaluating vegetation performance on remediated properties. These requirements are pursuant to the

revegetation/site stability goals and objectives set forth in the (ARWW&S ROD) (EPA, 1998) and *Anaconda Regional Water, Waste and Soils Operable Unit Record of Decision Amendment* (2011 ARWW&S ROD Amendment) (EPA/DEQ, 2011). Specifically, the VMP describes the vegetation management process and identifies the performance targets and quantitative standards used to determine when a remediated property has achieved compliance. Furthermore, it identifies the requirements for conducting monitoring and maintenance (M&M) activities, and for performing site inspections and evaluations.

Following RA construction, sites are monitored to demonstrate that they are stable (no excess erosion) and that the vegetation is on schedule to meet RA goals, applicable or relevant and appropriate requirements (ARARs), and performance standards. Site evaluations are performed at four stages: 1) during Operational and Functional (O&F) assessments shortly after the construction (reclamation) is implemented; 2) during the short-term monitoring and maintenance phase; 3) at the compliance determination step; and 4) as part of long-term inspection and maintenance (I&M). Based on the wide range of post-RA soil contaminant concentration levels, land ownership, and land uses, properties have been divided into six categories for I&M, and determining institutional controls and compliance. Long-term I&M is required for all Category 5 High Arsenic Areas (Category 5 properties) and all Category 6 Waste Management Areas (Category 6 properties).

3.1 Category 5 Properties - High Arsenic Areas

The Category 5 properties located within the ADLC Parcels are shown on Figures 8 through 11. Category 5 properties have moderate to high post-RA total metals index (TMI) and are required to pass an LRES compliance performance standard of 115 points twice over a 10 year period prior to advancing to the long-term I&M stage. In addition, Category 5 properties require defined long-term management practices via Land Management Plans to ensure vegetation sustainability and protectiveness. The Category 5 properties located within the ADLC Parcels will be inspected annually to ensure that the integrity of the remedies have not been compromised resulting in a reduction of protectiveness using the VEG-1, ERO-1 and BMP-1 qualitative forms (Attachment 2). Although the inspection approach varies from that used in the short-term performance monitoring phase, the objective is still to identify areas of inadequate performance and implement corrective action, as necessary. Data and information generated during these and all other evaluations performed or under the direction of Atlantic Richfield Company will be provided to the Agencies in the annual monitoring report described in Section 6.0.

3.2 Category 6 Properties - Waste Management Areas

The Category 6 properties located within the ADLC Parcels are shown on Figures 9 through 11. Before advancing to the long-term I&M stage, Category 6 properties must achieve the following criteria twice over a 10-year period:

- Vegetation Cover – A minimum value of 30% mean canopy cover.
- Barren Areas – Total bare areas must be <10% of the evaluation area and no single bare area may be >1,000 square feet, areas with less than 10% cover are considered bare.

- Landscape Stability (erodibility) – BLM-modified method score of less than or equal to 45 points.
- Weeds – Noxious weeds must be widely spaced and infrequently observed, with the goal that they contribute <5% of the total live vegetation cover within the monitoring area.

These long term I&M activities required with respect to the ADLC Parcels, include controlling noxious weeds, removing refuse, and using best management practices (BMPs). Additionally, specific institutional controls for the OW/EADA and ARWW&S OUs, such as ADLC DPS and restrictive covenants apply to the WMAs. Similar to that for HAAs, annual inspections of WMAs will be in accordance with this I&M Plan using the VEG-1, ERO-1 and BMP-1 qualitative forms (Attachment 2) to identify areas of inadequate performance and implement corrective action, as necessary. Data and information generated during these and all other evaluations performed or under the direction of Atlantic Richfield Company will be provided to the Agencies in the annual monitoring report described in Section 6.0.

3.3 Long-Term Inspections

Following transition to the long-term I&M stage, ADLC will be notified by Atlantic Richfield Company and regularly scheduled annual inspections will be performed to document conditions of the vegetative covers and BMPs within the Category 5 and 6 properties located within the ADLC Parcels in order to determine if maintenance action or corrective measures are needed. Information obtained during the annual inspections of the Category 5 and 6 properties will be documented using the VEG-1, ERO-1 and BMP-1 qualitative forms provided in Attachment 2.

3.4 Maintenance and Corrective Maintenance

The vegetative covers on the category 5 and 6 properties located within the ADLC Parcels will be maintained in a condition consistent with the original design plan and construction specifications, and any relevant As-Built Drawings. Observations from annual inspections may lead to maintenance activities or corrective measures. The most commonly anticipated maintenance will involve spraying for noxious weeds. Occasionally, corrective measures may be warranted, such as repairing and re-vegetating eroded areas and minor re-grading. Guidelines for maintenance are outlined in Attachment 2 and reporting requirements for maintenance activities are addressed in Section 6.0.

4.0 ACCESS CONTROLS

All existing and currently anticipated access controls on the ADLC Parcels are shown on Figures 12 through 14. The access controls will restrict access to exposed waste sources and historical features within the ADLC Parcel. All existing and future perimeter fences, signs and gates will be inspected semi-annually unless the area is being used for commercial uses, in which case perimeter fencing will be inspected at the discretion of the landowner. Inspections will take place in April and October or as soon thereafter as weather conditions allow. During inspections, evidence of un-authorized access, vandalism and other site observations will be noted.

All roads and trails requiring inspection pursuant to this I&M Plan are also shown on Figures 12 through 14. Inspections of the roads and trails will be conducted semi-annually each year during the perimeter fence inspections. The inspection will include evidence of rutting, significant erosion on road surfaces, undercutting or erosion of culvert crossings, vandalism of signage, and weed control requirements. Access control inspection forms are provided in Attachment 3.

The access controls will be maintained in a condition consistent with the original design plan and construction specifications, and any relevant As-Built Drawings. Observations from annual inspections may lead to maintenance activities or corrective measures. The most commonly anticipated maintenance will involve minor repairs of perimeter fences, signs and gates. Occasionally, corrective measures may be warranted, such as significant repairs or replacements of the perimeter fences, signs and gates. In some instances, additional corrective measures including construction of new barriers and/or additional fencing may be required if inspections identify persistent problems with undesirable access or trespass issues. Access control inspection forms are provided in Attachment 3 and reporting requirements for maintenance activities are addressed in Section 6.0.

5.0 GROUNDWATER AND SURFACE WATER MONITORING

5.1 Groundwater Monitoring

The ADLC Parcels overlay groundwater with elevated constituents of concern (COCs). Compliance monitoring is required to ensure that the performance standards are being met at the point of compliance groundwater wells. Additionally, institutional controls restrict groundwater development within WMAs and domestic well Areas of Concern. Monitoring groundwater will be performed by Atlantic Richfield Company or its designee pursuant to the *Draft Anaconda Smelter NPL Site Ground Water Management Plan* (EPA, 2015).

5.2 Surface Water Monitoring

The ADLC Parcels have two primary streams running through them that are anticipated to be monitored under the forthcoming ARWW&S OU Surface Water Management Plan (SWMP). The SWMP is being developed to act as the guiding document for all future activities for surface water management within the Anaconda NPL Site. The SWMP presents a comprehensive monitoring program to provide data needed to evaluate the performance, effectiveness, and protectiveness of the selected remedy for surface water identified in the ARWW&S ROD (EPA, 1998) and subsequent ARWW&S ROD Amendment (EPA, 2011). Surface water monitoring will be performed by Atlantic Richfield Company or its designee under the forthcoming ARWW&S OU Surface Water Management Plan (SWMP).

6.0 ANNUAL I&M REPORT

The annual I&M Report will contain general description of the inspections, maintenance and corrective measure activities completed, the completed inspections forms, engineered controls checklist, and repair As-Built Drawings. As required, the annual I&M Report will be submitted to Atlantic Richfield Company, the Montana DEQ, and the EPA. The annual I&M Report will be submitted no later than the 180 days following the completion of the reporting period. The

inspection forms provided in the attachments will be used to document the results of all annual and quarterly inspections, as well as conditional and opportunistic monitoring events. The EPA will be notified prior to performing the annual inspections and the conditional or opportunistic monitoring events will be completed on an as needed basis. Future superfund structures meeting the long-term I&M criteria will be added to this I&M Plan in the annual status updates to the Site Management Plan.

7.0 REFERENCES

Atlantic Richfield Company, 2016. Anaconda Smelter NPL Site, Final Old Works Golf Course Operation and Management (O&M) Plan. April 2016.

Atlantic Richfield Company, 2013a. Anaconda Smelter NPL Site, Final Engineered Controls Inspection and Maintenance (I&M) Plan Revision 1. February 2013.

Atlantic Richfield Company, 2013b. Anaconda Smelter NPL Site, Final Vegetation Management Plan (VMP) Revision 1. May 2013.

Atlantic Richfield Company, 2002. Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit, Industrial Area Remedial Action Work Plan/Final Design Report, Volume IV, Addendum D, Report I – Industrial Area. August 2002.

EPA 2015. Draft Anaconda Smelter NPL Site Ground Water Management Plan.

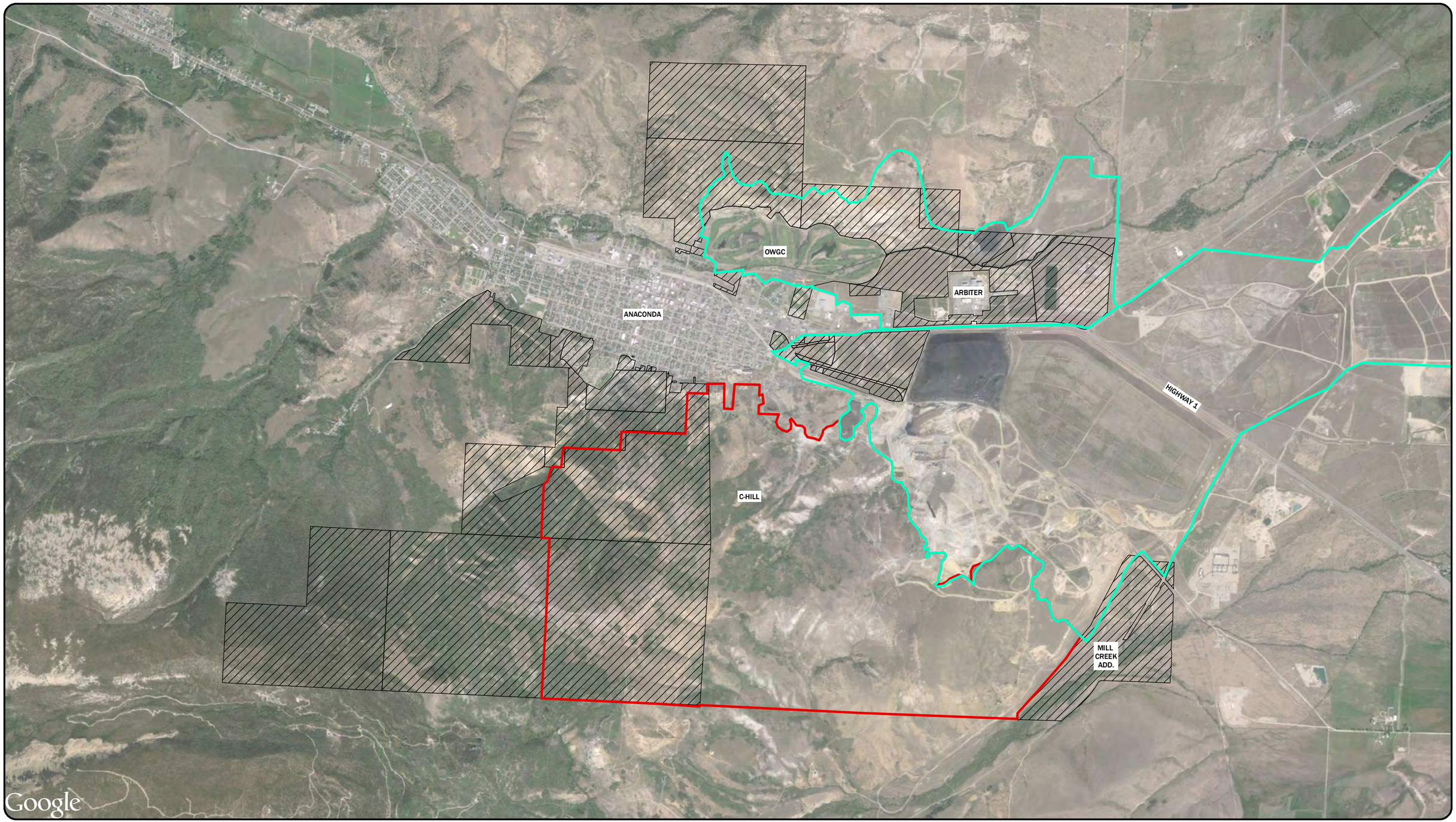
EPA, 1998. Record of Decision, Anaconda Regional Water, Waste and Soils Operable Unit, Anaconda Smelter NPL Site, Anaconda, Montana. September 1998.

EPA, 1995. 1995 Explanation of Significant Differences (ESD).

EPA, 1994. Old Works/East Anaconda Development Area (OW/EADA) Operable Unit Record of Decision (ROD).

EPA/DEQ, 2011. Anaconda Regional Water, Waste and Soils Operable Unit Record of Decision Amendment. September 2011.

FIGURES



LEGEND

- ADLC SUPERFUND PARCEL
- HIGH ARSENIC BOUNDARY
- WASTE MANAGMENT BOUNDARY

N

DISPLAYED AS:
PROJECTION/ZONE: MONTANA STATE PLANE
DATUM: NAD 1983
UNITS: INT'L FEET
SOURCE: GOOGLE/PIONEER

0 1,500 3,000 6,000
Feet

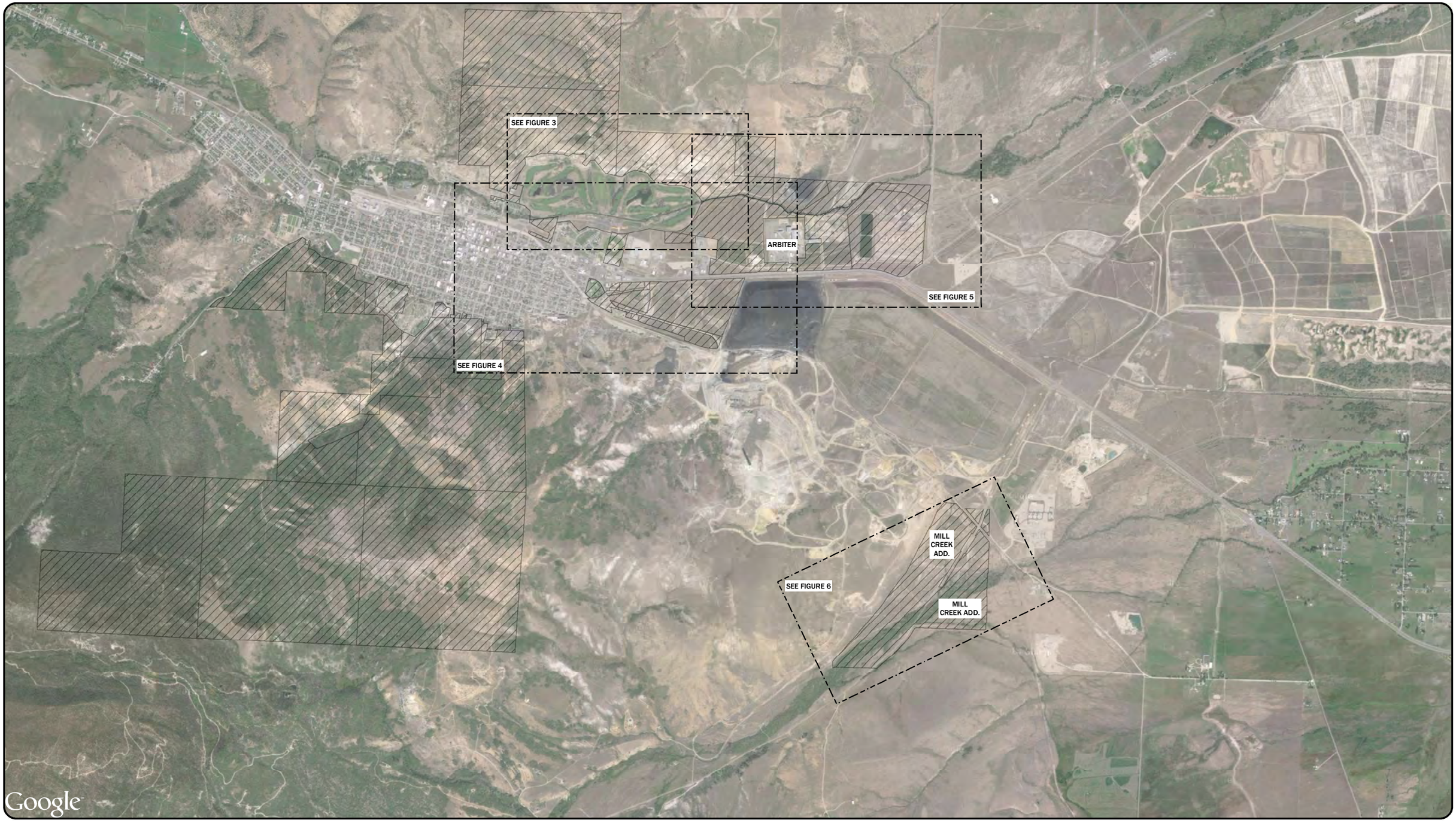
FIGURE 1

PIONEER TECHNICAL SERVICES, INC.

ADLC SUPERFUND
I&M PLAN
OVERVIEW

DATE: 7/28/2016

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-043-16.mxd



LEGEND:

ADLC SUPERFUND PARCEL

N

DISPLAYED AS:
PROJECTION/ZONE: MSP
DATUM: NAD 83
UNITS: FEET
SOURCE: PIONEER

0 1,500 3,000 6,000
Feet

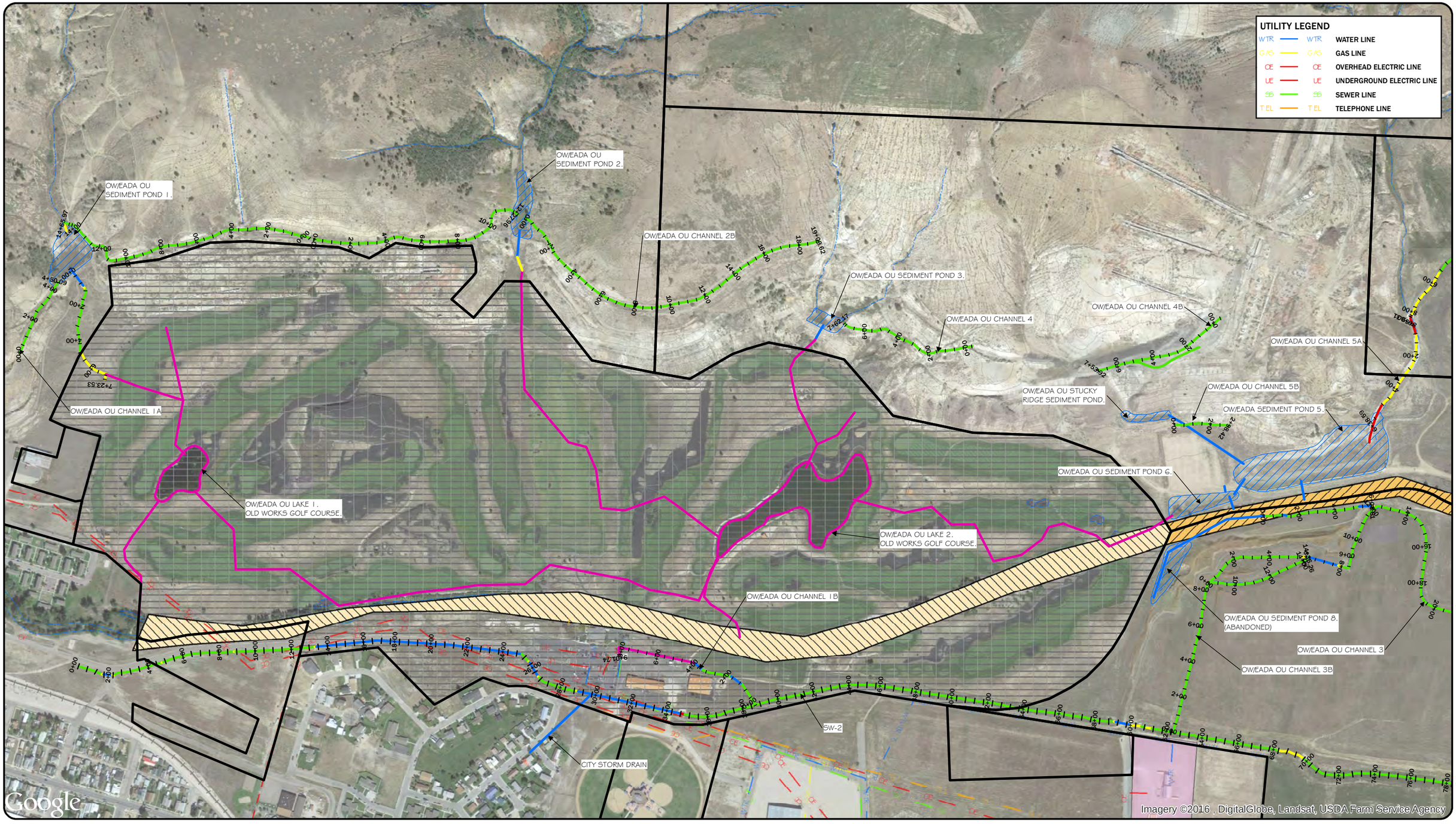
FIGURE 2

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/28/2016

ADLC SUPERFUND
I&M PLAN
ENG. CONTROLS
OVERVIEW

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-017-16.mxd



LEGEND:

- CULVERT-EXISTING
- CULVERT-DESIGN
- CULVERT-CONCEPTUAL
- GRASS LINED CHANNEL
- GROUTED RIPRAP CHANNEL
- RIPRAP LINED CHANNEL
- CONCRETE LINED GRASS CHANNEL
- UNDER OTHER SOW
- RIPRAP ENERGY DISSAPATOR
- GRAVEL LINED CHANNEL
- CHANNEL-CONCEPTUAL
- SLAG/GRASS LINED CHANNEL
- EXISTING CHANNELS
- STRUCTURE
- HYDROLOGY
- RAILROAD
- POND-BUILT
- POND OTHER SOW
- ADLC SUPERFUND PARCEL
- WCS 100 YR. EROSION CONTROL PROTECTION
- WCS 100 YR. EROSION CONTROL PROTECTION (by OWGC)
- OLD WORKS GOLF COURSE BOUNDARY (by OWGC)
- INDUSTRIAL COVER (OTHER SOW)
- INDUSTRIAL COVER (ADLC)

N

DISPLAYED AS:
PROJECTION/ZONE: MSP
DATUM: NAD 83
UNITS: FEET
SOURCE: PIONEER

0 250 500 1,000
Feet

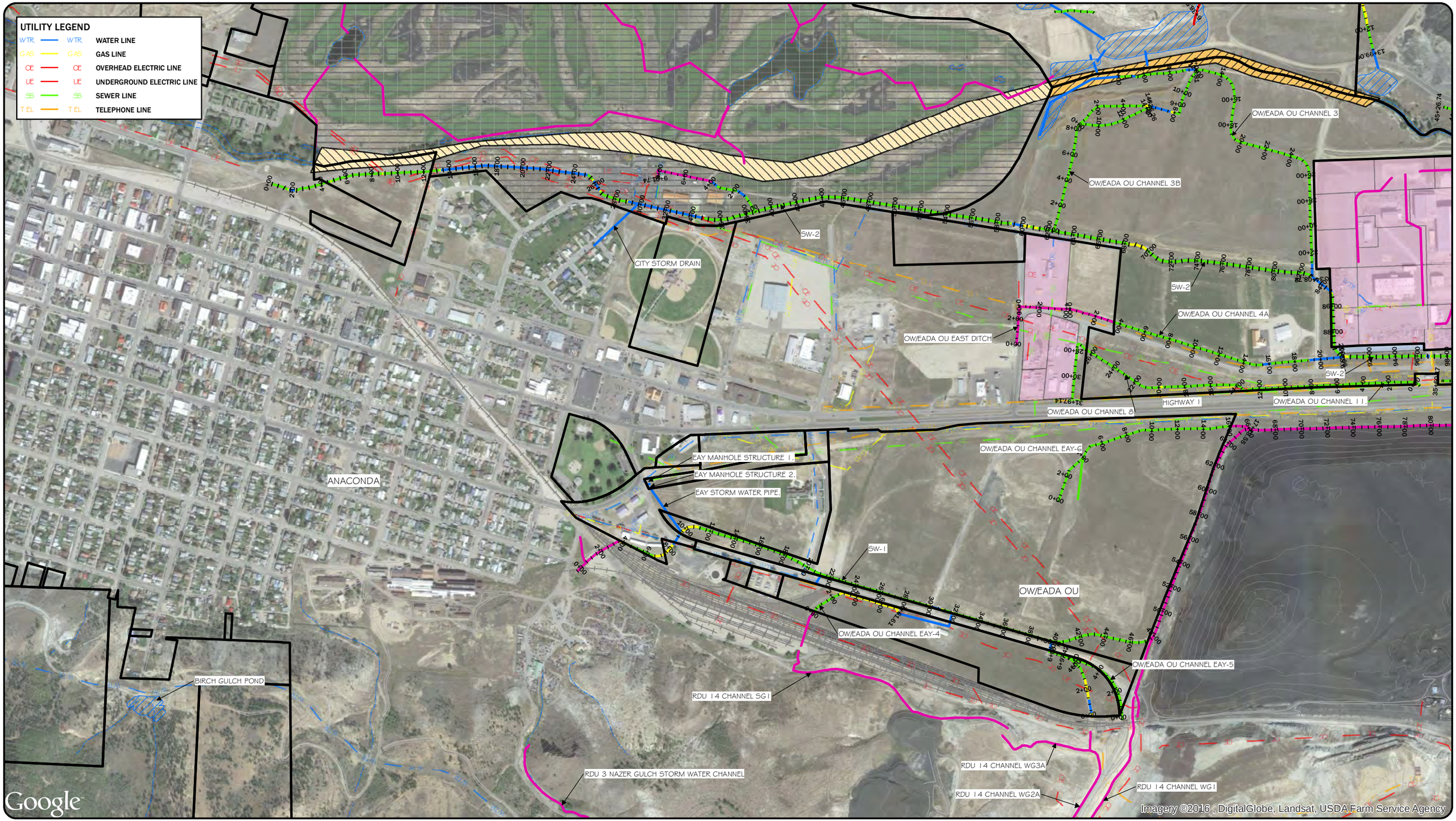
FIGURE 3

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/25/2016

ADLC SUPERFUND
I&M PLAN
ENGINEERED
CONTROLS

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-001-16.mxd



LEGEND:

- CULVERT-EXISTING
- CULVERT-DESIGN
- CULVERT-CONCEPTUAL
- GRASS LINED CHANNEL
- GROUTED RIPRAP CHANNEL
- RIPRAP LINED CHANNEL
- CONCRETE LINED GRASS CHANNEL
- UNDER OTHER SOW
- RIPRAP ENERGY DISSAPATOR
- GRAVEL LINED CHANNEL
- CHANNEL-CONCEPTUAL
- SLAG/GRASS LINED CHANNEL
- EXISTING CHANNELS
- STRUCTURE
- HYDROLOGY
- RAILROAD
- POND-BUILT
- POND OTHER SOW
- ADLC SUPERFUND PARCEL
- WCS 100 YR. EROSION CONTROL PROTECTION
- WCS 100 YR. EROSION CONTROL PROTECTION (by OWGC)
- OLD WORKS GOLF COURSE BOUNDARY (by OWGC)
- INDUSTRIAL COVER (OTHER SOW)
- INDUSTRIAL COVER (ADLC)

N

DISPLAYED AS:
PROJECTION/ZONE: MSP
DATUM: NAD 83
UNITS: FEET
SOURCE: PIONEER

0 350 700 1,400
Feet

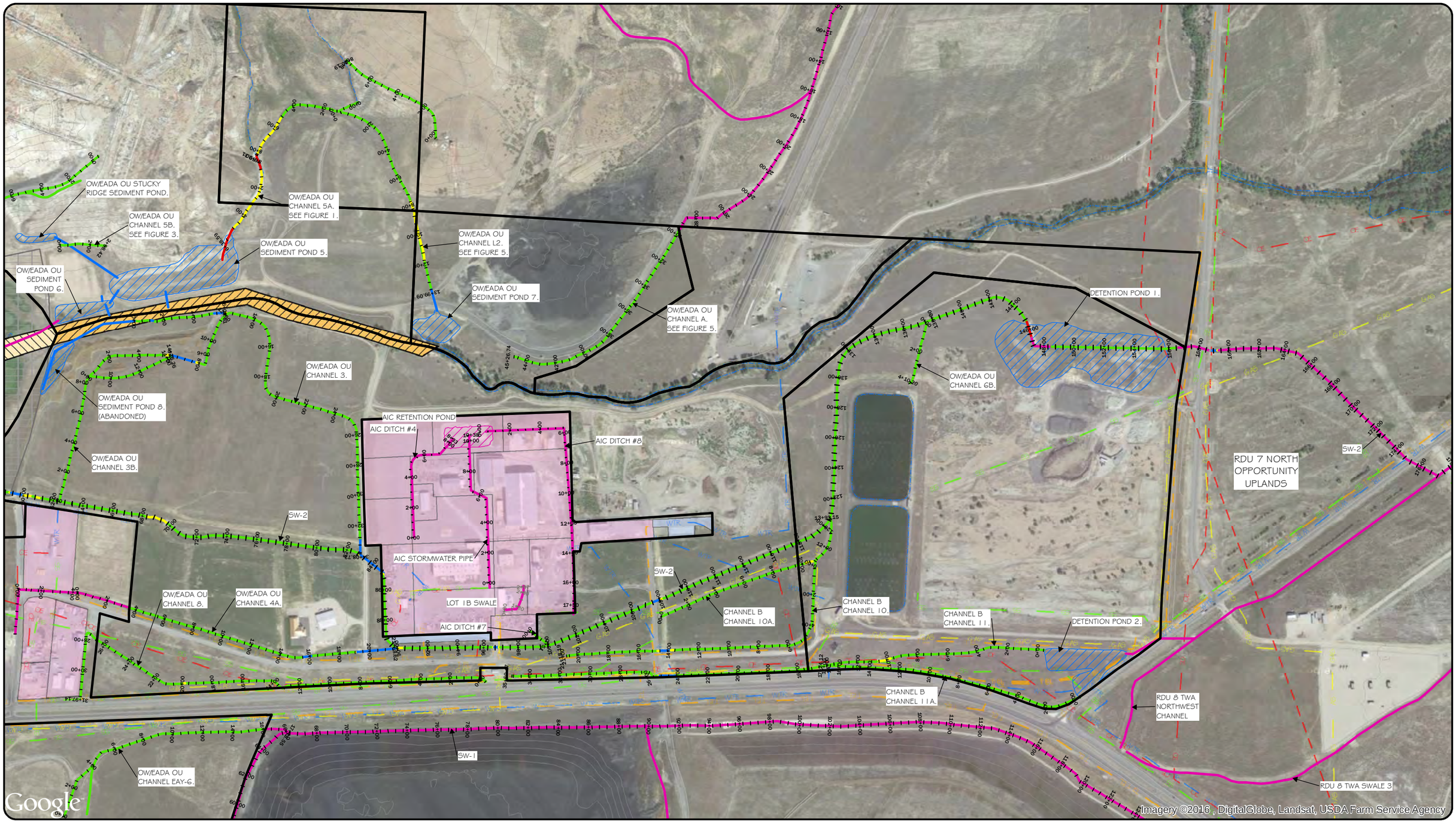
FIGURE 4

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/25/2016

ADLC SUPERFUND
I&M PLAN
ENGINEERED
CONTROLS

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-002-16.mxd



LEGEND:

- CULVERT-EXISTING
- CULVERT-DESIGN
- CULVERT-CONCEPTUAL
- GRASS LINED CHANNEL
- GROUTED RIPRAP CHANNEL
- RIPRAP LINED CHANNEL
- CONCRETE LINED GRASS CHANNEL
- UNDER OTHER SOW
- RIPRAP ENERGY DISSAPATOR
- GRAVEL LINED CHANNEL
- CHANNEL-CONCEPTUAL
- SLAG/GRASS LINED CHANNEL
- EXISTING CHANNELS
- STRUCTURE
- HYDROLOGY
- RAILROAD
- POND-BUILT
- POND OTHER SOW
- ADLC SUPERFUND PARCEL
- WCS 100 YR. EROSION CONTROL PROTECTION
- WCS 100 YR. EROSION CONTROL PROTECTION (by OWGC)
- OLD WORKS GOLF COURSE BOUNDARY (by OWGC)
- INDUSTRIAL COVER (OTHER SOW)
- INDUSTRIAL COVER (ADLC)

N

DISPLAYED AS:
PROJECTION/ZONE: MSP
DATUM: NAD 83
UNITS: FEET
SOURCE: PIONEER

0 250 500 1,000
Feet

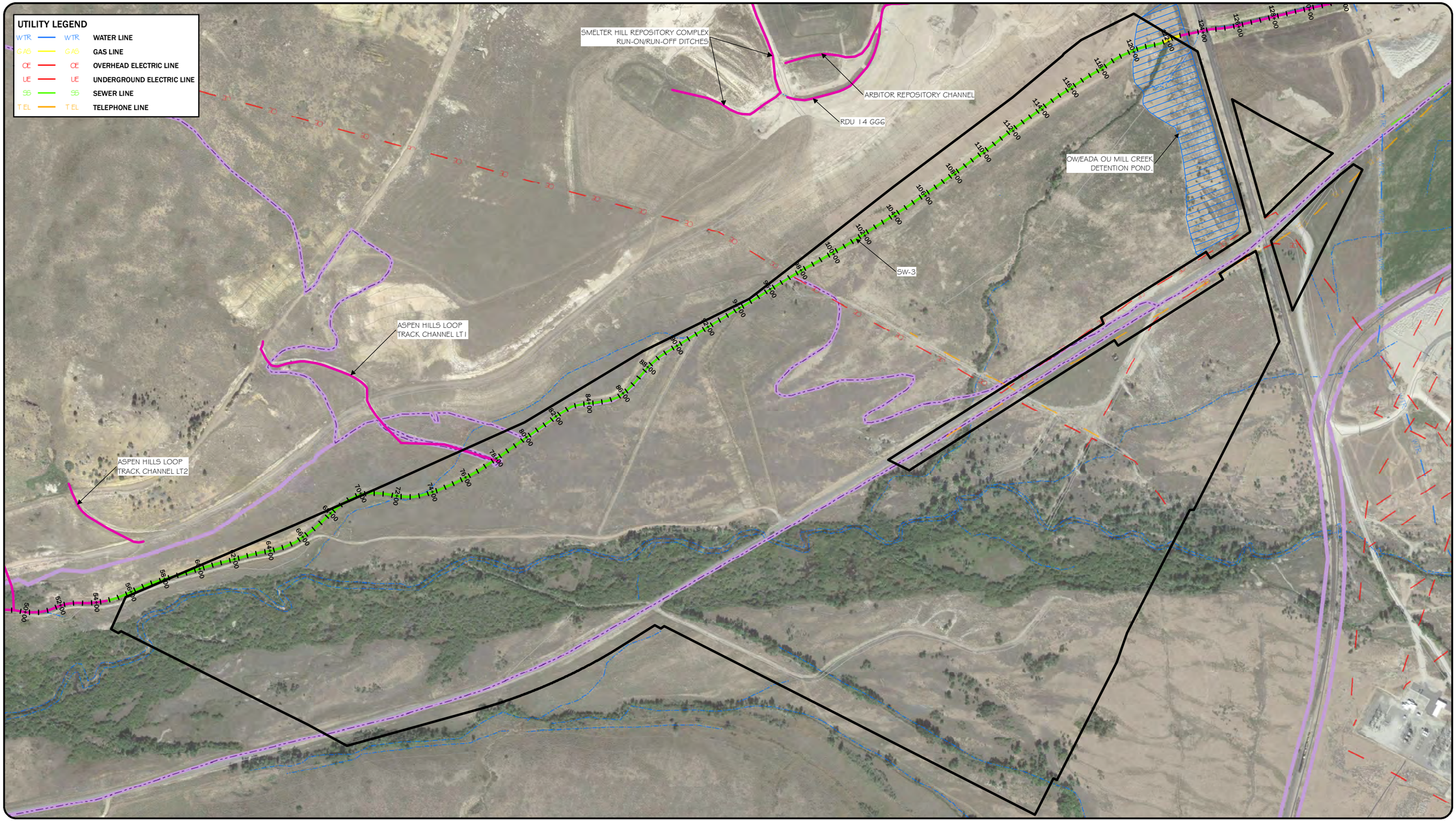
FIGURE 5

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/25/2016

ADLC SUPERFUND
I&M PLAN
ENGINEERED
CONTROLS

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-004-16.mxd



LEGEND:

- CULVERT-EXISTING
- CULVERT-DESIGN
- CULVERT-CONCEPTUAL
- GRASS LINED CHANNEL
- GROUTED RIPRAP CHANNEL
- RIPRAP LINED CHANNEL
- CONCRETE LINED GRASS CHANNEL
- UNDER OTHER SOW
- RIPRAP ENERGY DISSAPATOR
- GRAVEL LINED CHANNEL
- CHANNEL-CONCEPTUAL
- SLAG/GRASS LINED CHANNEL
- EXISTING CHANNELS
- STRUCTURE
- HYDROLOGY
- RAILROAD
- POND-BUILT
- POND OTHER SOW
- ADLC SUPERFUND PARCEL
- WCS 100 YR. EROSION CONTROL PROTECTION
- WCS 100 YR. EROSION CONTROL PROTECTION (by OWGC)
- OLD WORKS GOLF COURSE BOUNDARY (by OWGC)
- INDUSTRIAL COVER (OTHER SOW)
- INDUSTRIAL COVER (ADLC)

N

DISPLAYED AS:
PROJECTION/ZONE: MSP
DATUM: NAD 83
UNITS: FEET
SOURCE: PIONEER

0 250 500 1,000
Feet

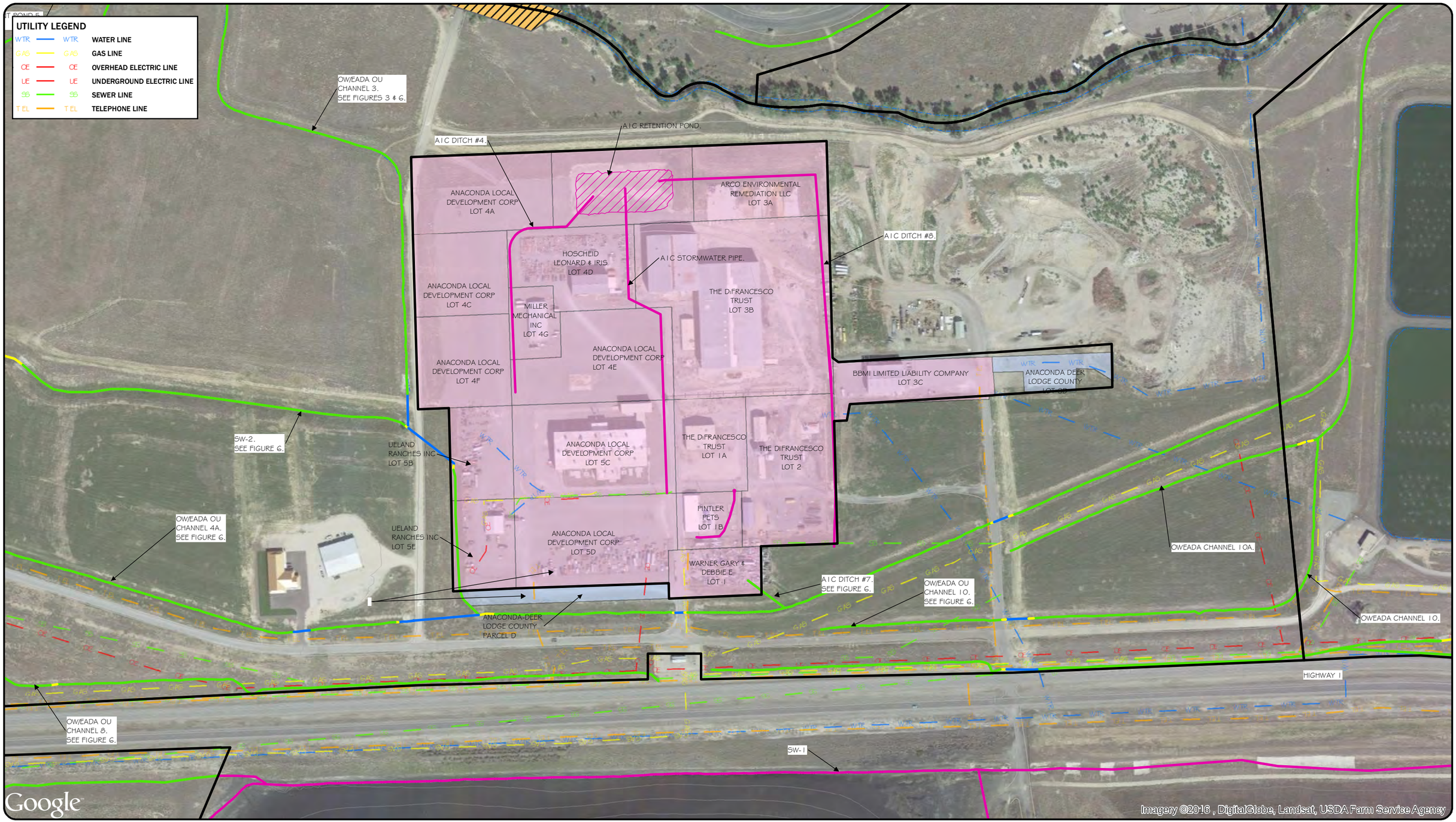
FIGURE 6

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/25/2016

ADLC SUPERFUND
I&M PLAN
ENGINEERED
CONTROLS

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-005-16.mxd



LEGEND:

- CULVERT-EXISTING
- CULVERT-DESIGN
- CULVERT-CONCEPTUAL
- GRASS LINED CHANNEL
- GROUTED RIPRAP CHANNEL
- RIPRAP LINED CHANNEL
- CONCRETE LINED GRASS CHANNEL
- UNDER OTHER SOW
- RIPRAP ENERGY DISSAPATOR
- GRAVEL LINED CHANNEL
- CHANNEL-CONCEPTUAL
- SLAG/GRASS LINED CHANNEL
- EXISTING CHANNELS
- STRUCTURE
- HYDROLOGY
- RAILROAD
- POND-BUILT
- POND OTHER SOW
- ADLC SUPERFUND PARCEL
- WCS 100 YR. EROSION CONTROL PROTECTION
- WCS 100 YR. EROSION CONTROL PROTECTION (by OWGC)
- OLD WORKS GOLF COURSE BOUNDARY (by OWGC)
- INDUSTRIAL COVER (OTHER SOW)
- INDUSTRIAL COVER (ADLC)

N

DISPLAYED AS:
PROJECTION/ZONE: MSP
DATUM: NAD 83
UNITS: FEET
SOURCE: PIONEER

0 150 300 600
Feet

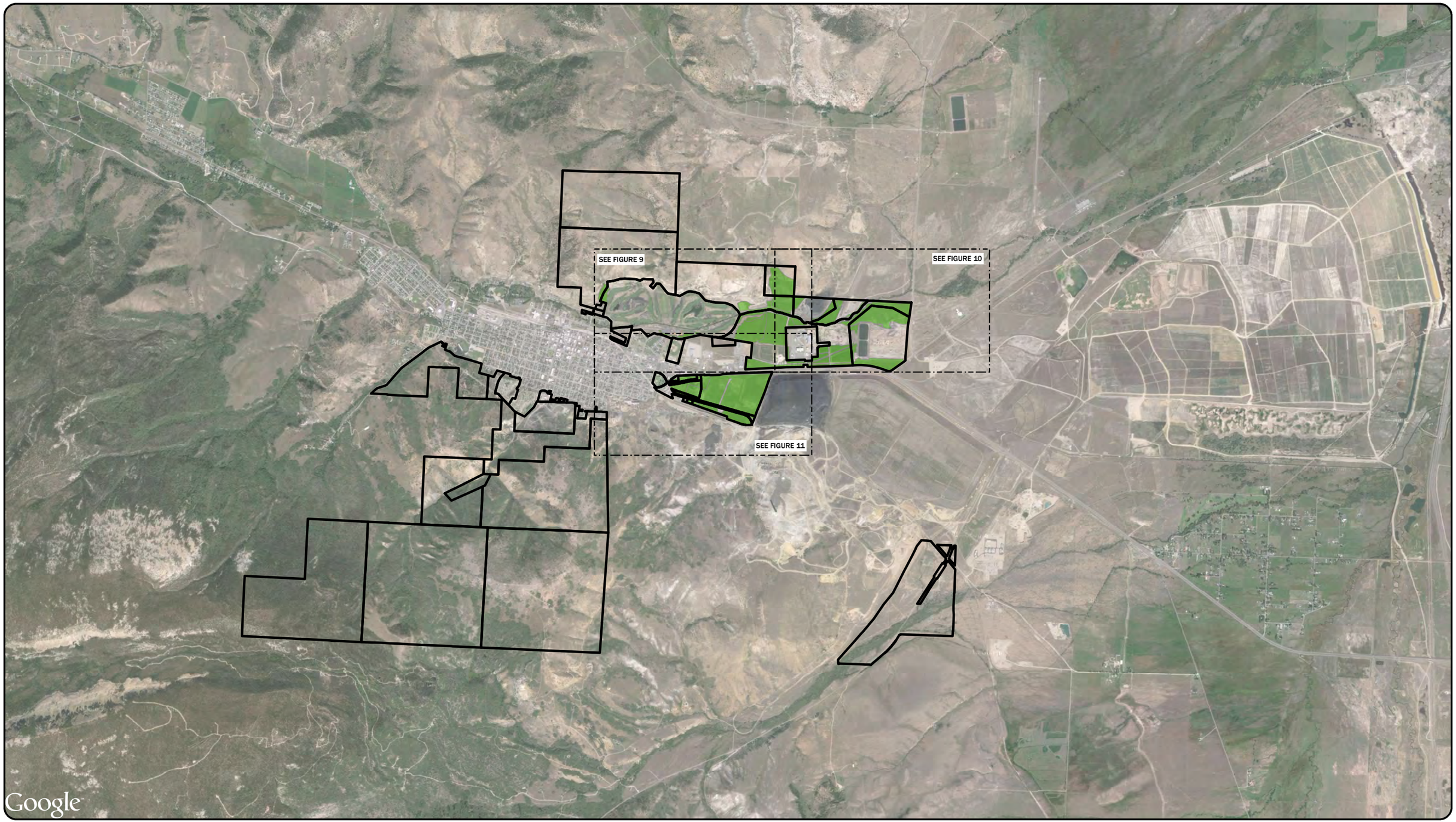
FIGURE 7

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/25/2016

ADLC SUPERFUND
I&M PLAN
ENGINEERED
COVERS

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-016-16.mxd



LEGEND

- ADLC SUPERFUND PARCEL
- LTIM

N

DISPLAYED AS:
PROJECTION/ZONE: MONTANA STATE PLANE
DATUM: NAD 1983
UNITS: INT'L FEET
SOURCE: GOOGLE/PIONEER

0 2,000 4,000 8,000
Feet

FIGURE 8

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/28/2016

ADLC SUPERFUND
I&M PLAN
VEGETATION
COVERS

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-034-16.mxd

Legend

LTIM (CATEGORY 5 & 6)

OWSR-029 POLYGON ID (TYP)

N

DISPLAYED AS:
PROJECTION/ZONE: MONTANA STATE PLANE
DATUM: NAD 1983
UNITS: INT'L FEET
SOURCE: GOOGLE/PIONEER

0 250 500 1,000
Feet

FIGURE 9

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/25/2016

ADLC SUPERFUND
I&M PLAN
VEGETATION
COVERS

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-027-16.mxd

Legend

LTIM (CATEGORY 5 & 6)

OWSR-029 POLYGON ID (TYP)

N

DISPLAYED AS:
PROJECTION/ZONE: MONTANA STATE PLANE
DATUM: NAD 1983
UNITS: INT'L FEET
SOURCE: GOOGLE/PIONEER

0 300 600 1,200
Feet

FIGURE 10

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/25/2016

ADLC SUPERFUND
I&M PLAN
VEGETATION
COVERS

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-028-16.mxd

Legend

LTIM (CATEGORY 5 & 6)

OWSR-029 POLYGON ID (TYP)

N

DISPLAYED AS:
PROJECTION/ZONE: MONTANA STATE PLANE
DATUM: NAD 1983
UNITS: INT'L FEET
SOURCE: GOOGLE/PIONEER

0 300 600 1,200
Feet

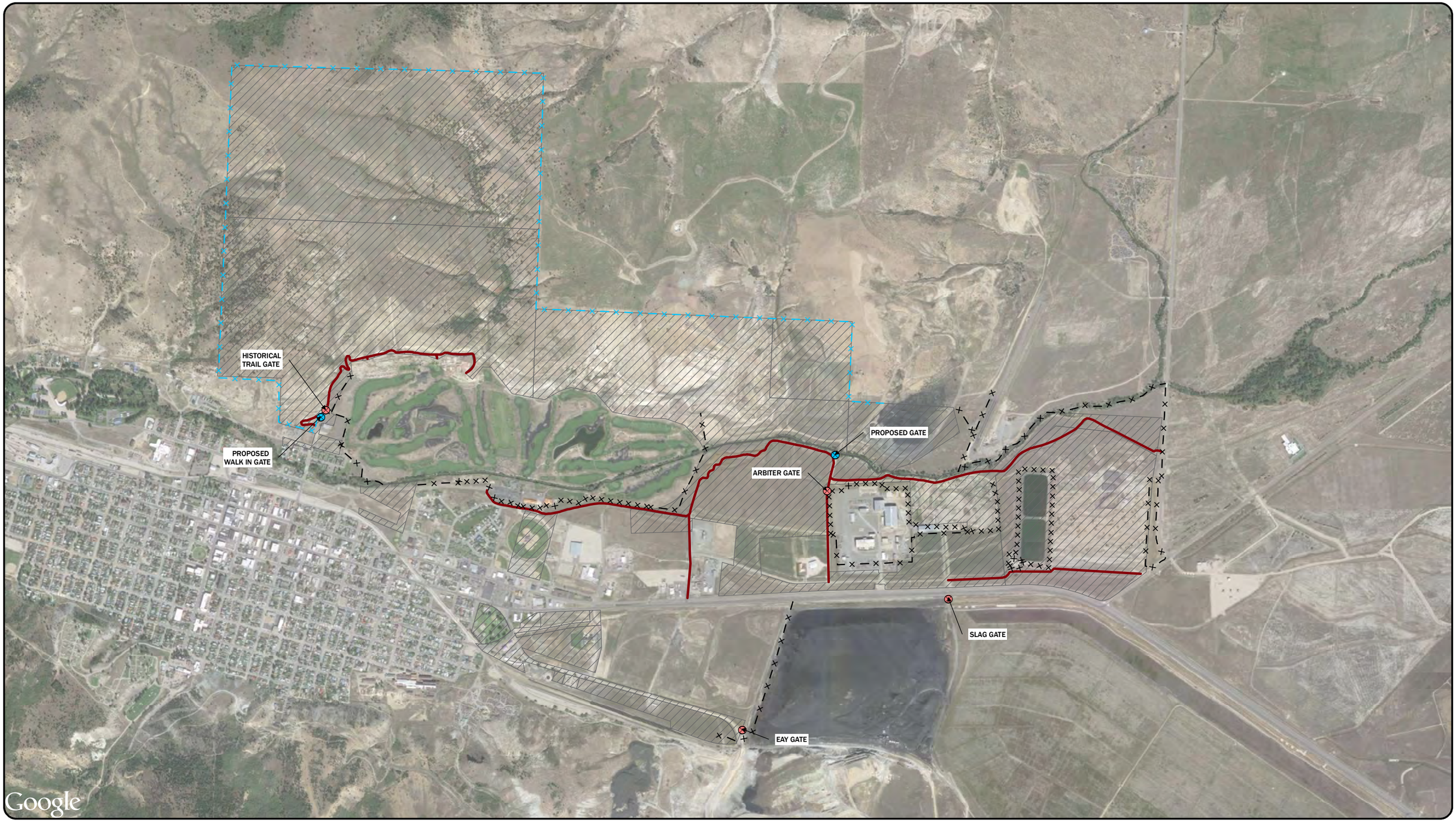
FIGURE 11

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/25/2016

ADLC SUPERFUND
I&M PLAN
VEGETATION
COVERS

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-029-16.mxd



LEGEND:

- GATES
- PROPOSED GATE
- FENCE
- PROPOSED FENCE
- HISTORIC TRAIL AND ROAD INSPECTED UNDER THIS O&M PLAN
- ANACONDA-DEER LODGE COUNTY PROPERTY

N

DISPLAYED AS:
PROJECTION/ZONE: MSP
DATUM: NAD 83
UNITS: FEET
SOURCE: PIONEER

0 750 1,500 3,000
Feet

FIGURE 12

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/28/2016

ADLC SUPERFUND
I&M PLAN
OW/EADA OU
ACCESS LOCATIONS

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-039-16.mxd

LEGEND:

- GATES
- FENCE
- ANACONDA-DEER LODGE COUNTY PROPERTY

N

DISPLAYED AS:
PROJECTION/ZONE: MSP
DATUM: NAD 83
UNITS: FEET
SOURCE: PIONEER

0 750 1,500 3,000
Feet

FIGURE 13

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/28/2016

ADLC SUPERFUND
I&M PLAN
OW/EADA OU
ACCESS LOCATIONS

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-040-16.mxd

LEGEND:

- GATES
- FENCE
- ANACONDA-DEER LODGE COUNTY PROPERTY

N

DISPLAYED AS:
PROJECTION/ZONE: MSP
DATUM: NAD 83
UNITS: FEET
SOURCE: PIONEER

0 750 1,500 3,000
Feet

FIGURE 14

PIONEER TECHNICAL SERVICES, INC.

DATE: 7/28/2016

ADLC SUPERFUND
I&M PLAN
C-HILL
ACCESS LOCATIONS

Path: N:\AR\ARWWS\Site Wide Documents\Draft ADLC O&M Plan 6-2016\Draft\Figures\DWGs\7-18-16\ADLC_O&M-FG-PLN-041-16.mxd

TABLES

TABLE 1: Yearly Monitoring Schedule

EVENT	January - March	April - June	July – September	October - December
Access				
Fence and Gate Inspections		Inspect Access Point and Signage		Inspect Access Point and Signage
Vegetation				
Noxious Weed Survey	Meet with County Weed District	Survey weed with annual qualitative vegetation monitoring and treat when applicable.		
Vegetation Monitoring		Annual qualitative inspections and report, and 5-year review inspection and report.		
Photo Documentation		Complete with vegetation monitoring.		
Erosion Control				
Erosion and BMP Inspection		Annual qualitative inspections and report, and 5-year review inspection and report.		
Engineered Storm Water Controls				
Channels and Piping Inspections	During significant storm or runoff event.	During significant storm or runoff event and complete annual inspection.		During significant storm or runoff event.
Storm Water Control Ponds Inspections	One per quarter and/or during significant storm or runoff event.	One per quarter and/or during significant storm or run off event.	Complete annual inspection and during significant storm or runoff event.	One per quarter and/or during significant storm or runoff event.
Warm Springs Creek 100-year Erosion Protection		Complete annual inspection.		

TABLE 1: Yearly Monitoring Schedule

Engineered Non Vegetative Covers			
Roads and Trails		Complete annual inspection and report, and 5-year review inspection and report.	
Industrial Gravel Covers		Complete annual inspection and report, and 5-year review inspection and report.	

ATTACHMENT 1

ENGINEERED CONTROLS INSPECTION AND MAINTENANCE INFORMATION

TABLE 1
EVALUATION AND CORRECTIVE ACTIONS FOR ENGINEERED CONTROLS

EVALUATION OF ENGINEERED COVER	
Inspection/Observation	**Corrective Measure**
Evidence of Engineered Cover erosion.	Determine source of erosion - repair, regrade, and replace cover with material meeting the original design specifications.
Evidence of Engineered Cover wear.	Replace cover with material meeting the original design specifications.
Evidence of Engineered Cover settlement.	Determine cause of settlement - repair, regrade, and replace cover with material meeting the original design specifications.
EVALUATION OF EARTHEN CHANNELS	
Inspection/Observation	**Corrective Measure**
Evidence of trash/debris.	Remove and dispose of trash and debris.
Evidence of sedimentation.	Remove and dispose when sedimentation is impeding vegetation growth, sediments are contaminated, or sediments are impacting flow capacity of the channel. Assess source and cause of sediment accumulation. Remove and dispose of sediments in the ADLC Waste Repository (B2.12 Sub-Cell/Opportunity Ponds) or other EPA-approved location.
Evidence of Erosion	Assess cause and depending of severity of erosion, repair as follows: • Less than 1 inch, monitor for changes; • 1 to 2-inch depth, hand rake and reseed; • 2 to 6-inch depth, fill with soil, reseed, and install BMPs (if required); and • Greater than 6-inch depth, evaluate source of erosion, evaluate the need to make modifications to the upstream storm water control structures, fill with soil, reseed, and install BMPs (if required).
Condition of Vegetative Cover in Channels and adjacent areas.	Assess the vegetative cover for overall condition and the presents of noxious weeds. Determine cause of poor vegetative cover and complete reseeding, fertilizing and weed spraying as appropriate.

EVALUATION OF ARMORED CHANNELS	
Inspection/Observation	**Corrective Measure**
Evidence of trash/debris.	Remove and dispose of trash and debris.
Evidence of sedimentation.	Remove and dispose when sedimentation is impacting flow capacity of the channel or sediments are contaminated. Assess source and cause of sediment accumulation. Remove and dispose of sediments in the ADLC Waste Repository (B2.12 Sub-Cell/Opportunity Ponds) or other EPA-approved location.
EVALUATION OF ARMORED CHANNELS	
Inspection/Observation	**Corrective Measure**
Adjacent or collateral erosion.	Assess cause and depending on severity of erosion, repair as follows: • Less than 1 inch, monitor for changes; • 1 to 2-inch depth, hand rake and reseed; • 2 to 6-inch depth, fill with soil, reseed, and install BMPs (if required); and • Greater than 6-inch depth, evaluate source of erosion, fill with soil, reseed, and install BMPs (if required).
Cracking or spalling of grouted riprap sections.	Assess cause and repair area to prevent further damage from freeze/thaw action: • Patch spalling areas as necessary with a bonding agent; and • Repair cracks (1/2 inch or greater) with an adhesive or epoxy injection.
Displacement of grouted riprap sections.	Assess cause and repair or replace section as necessary.
Erosion or displacement of riprap.	Assess cause (excessive velocities or vandalism), repair/replace damaged filter fabric (as needed), regrade, and/or replace riprap material as necessary.
EVALUATION OF GABION BASKET STRUCTURES	
Inspection/Observations	**Corrective Measure**
Erosion, displacement, and undercutting	Assess cause – repair as necessary.
Damage to wire cages or galvanized coating	Assess cause – repair per manufacturer's recommendations.

EVALUATION OF SEDIMENTATION AND DETENTION PONDS	
Inspection/Observations	**Corrective Measure**
Erosion and Condition of Vegetative Cover.	Assess cause and depending of severity of erosion, repair as follows: • Less than 1 inch, monitor for changes; • 1 to 2-inch depth, hand rake and reseed; • 2 to 6-inch depth, fill with soil, reseed, and install BMPs (if required); and • Greater than 6-inch depth, evaluate source of erosion, evaluate need to make modifications to the upstream storm water control structures, fill with soil, reseed, and install BMPs (if required).
Evidence of trash and debris.	Determine source of trash/debris - remove and dispose of as necessary.
Trash Racks and Open Grates.	See Evaluation of Trash Racks.
EVALUATION OF SEDIMENTATION AND DETENTION PONDS	
Inspection/Observations	**Corrective Measure**
Outlet Structures, Drop Inlets and Culverts.	See Evaluation of Outlet Structures, Drop Inlets, and Culverts.
Emergency Spillway.	See Evaluation of Outlet Structures, Drop Inlets, and Culverts, Earthen Channels, or Armored Channels.
Stability and Condition of Impoundment Embankment.	Evaluate and repair Impoundment Embankment in accordance with Guidelines for Sediment Pond Inspections (Appendix D).
Measure Sediment Accumulation.	Remove sediment when sediment accumulation has reached 90% of designed sediment capacity of the sediment pond. Remove and dispose of sediments in the ADLC Waste Repository (B2.12 Sub-Cell/Opportunity Ponds) or other EPA-approved location.
EVALUATION OF TRASH RACKS	
Inspection/Observation	**Corrective Measure**
Evidence of trash and debris.	Determine source of trash/debris - remove and dispose of as necessary.
Evidence of damage to bars, grates, and connections to concrete structure.	Determine cause (vandalism or incidental) - repair or replace per original drawings and specifications.
Evidence of corrosion.	Repair and repaint components per original drawings and specifications.

EVALUATION OF OUTLET STRUCTURES, DROP INLETS, AND CULVERTS	
Inspection/Observation	**Corrective Measure**
Evidence of trash/debris and sedimentation.	Determine source of trash/debris and sedimentation - remove and dispose of as necessary. Schedule for removal of trash/debris and sedimentation removal will be based on potential for damage if storm water runoff overtops the structure.
Displacement/deformation of drop inlet, outlet structure or culvert.	Determine cause displacement/deformation of the structure or surrounding area (i.e., settlement of subgrade or piping along the culvert) and repair as necessary. Schedule for repairs will be based on potential for failure of the structure.
Evidence of corrosion.	Repair components per original drawings and specifications.

Engineered Controls Checklist
Site-Wide Storm Water Channels
Inspection Year _____

SITE-WIDE ENGINEERED STORM WATER CONTROLS

Site-Wide Storm Water Channel 1 (SW-1)

Channel SW-1 from Station 0+00 to Station 90+75 consists of the existing Old Works/East Anaconda Development Area (OW/EADA) Operable Unit (OU) channel East Anaconda Yards (EAY)-1 and EAY-2. This section of Channel SW-1 was completed under the *OW/EADA OU Remedial Action Work Plan/Final Design Report (RAWP/FDR), Volume IV - Addendums E and F Aspen Hills and East Anaconda Yards* (ESA, August 1998); As-Built information is provided in the *Final OW/EADA OU Remedial Action Construction Completion Report (RACCR) Subarea 5 (East Anaconda Yards/Benny Goodman Park)* (AERL, April 2001). The 25-year, 24-hour storm design flow is 171 cubic feet per second (cfs) at the upper end (channel flow depth ~ 2.5 feet), 200 cfs below Station 40+34 (channel flow depth ~ 3.5 feet), and 303 cfs on the lower end (channel flow depth ~ 3.5 feet).

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
4+75 to 6+95	**Grass Lined**		NR			
6+95 to 8+81	**Riprap Lined (bottom and outside of curve)**		NR			
8+81 to 9+83	**Culvert 2 (3' x 6' Concrete Box Culvert)**		NR			
9+83 to 11+28	**Riprap Lined (bottom and outside of curve)**		NR			
11+28 to 30+20	**Grass Lined**		NR			
30+20 to 30+36	**Riprap Lined**		NR			
30+36 to 31+08	**Culvert 3 (3' x 6' Concrete Box Culvert)**		NR			
31+08 to 31+40	**Riprap Lined**		NR			
31+40 to 32+00	**Grass Lined**		NR			
32+00 to 32+25	**Riprap Lined**		NR			
32+25 to 39+50	**Grass Lined**		NR			
39+50 to 39+75	**Riprap Lined**		NR			
39+75 to 47+25	**Grass Lined**		NR			

Note:
NR =Inspection not required
NC = Not Constructed

Engineered Controls Checklist
Site-Wide Storm Water Channels
Inspection Year _____

SITE-WIDE ENGINEERED STORM WATER CONTROLS

Site-Wide Storm Water Channel 2 (SW-2)

Channel SW-2 from Station 0+00 to Station 158+17 consists of the existing Old Works/East Anaconda Development Area (OW/EADA) Operable Unit (OU) Ditch 1A (Subarea 3), Ditch 1(Subarea 3), Ditch 2 (Subarea 4), Ditch 4 (Subarea 4), Ditch 5 (Subarea 4), and Ditch 6 (Subarea 4). This section of SW-2 was completed under the *Draft OW/EADA OU Remedial Action Work Plan/Final Design Report Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit Volume III - Addenda* (ESA, August 1996) and As-Built information is provided in the *Draft Final OW/EADA OU Remedial Action Construction Completion Report Subarea 3 (Ball Fields/Industrial Park) and Portion of Subarea 4 (Industrial Park/Red Sands)* (AERL, October 2000). The 25-year, 24-hour storm design flow is 9 cubic feet per second (cfs) in the channel (channel flow depth ~ 1 feet) above the Anaconda-Deer Lodge County (ADLC) storm drain outlet and 125 cfs below the ADLC storm drain outlet (channel flow depth ~ 2 feet).

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 1+35	**Grass Lined**		NR			
1+35 to 1+45	**Riprap Lined**		NR			
1+45	**Storm Drain Inlet**		NR			
1+45 to 1+94	**Culvert (12" PVC)**		NR			
1+94	**Storm Drain Inlet**		NR			
1+94 to 2+10	**Riprap Lined**		NR			
2+10 to 4+76	**Grass Lined**		NR			
4+76 to 4+86	**Riprap Lined**		NR			
4+86 to 4+91	**Grass Lined**		NR			
4+91	**Storm Drain Inlet**		NR			
4+91 to 8+81	**Grass Lined**		NR			
8+81 to 8+86	**Riprap Lined**		NR			
8+86	**Storm Drain Inlet**		NR			
8+86 to 8+91	**Riprap Lined**		NR			
8+91 to 12+87	**Grass Lined**		NR			
12+87	**Storm Drain Inlet**		NR			
12+87 to 13+27	**Grass Lined**		NR			
13+27 to 13+37	**Riprap Lined**		NR			
13+37 to 24+76	**Culvert (12" PVC)**		NR			
16+76	**Storm Drain Inlet**		NR			
20+76	**Storm Drain Inlet**		NR			
24+77	**Storm Drain Inlet**		NR			
24+76 to 25+30	**Grass Lined**		NR			
25+30 to 25+40	**Riprap Lined**		NR			
25+40 to 26+30	**Culvert (18" CMP)**		NR			
26+30 to 26+40	**Riprap Lined**		NR			
26+40 to 28+60	**Grass Lined**		NR			
26+70	**Storm Drain Inlet**		NR			
28+60 to 28+70	**Riprap Lined**		NR			
28+70 to 30+46	**Culvert (18" CMP)**		NR			
30+46 to 34+52	**Culvert (54" CMP)**		NR			

Engineered Controls Checklist
Site-Wide Storm Water Channels
Inspection Year _____

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
34+52 to 34+72	Grouted Riprap Lined		NR			
34+72 to 58+76	Grass Lined		NR			
58+76 to 58+86	Riprap Lined		NR			
58+86 to 59+70	Culvert (Dual 48" CMPs)		NR			
59+70	Riprap Drop Structure		NR			
59+70 to 60+30	Riprap Lined		NR			
60+30 to 60+60	Grass Lined		NR			
60+60 to 60+90	Riprap Lined		NR			
60+90 to 68+00	Grass Lined		NR			
68+00 to 69+50	Riprap Lined		NR			
69+50	Riprap Drop Structure		NR			
69+50 to 82+60	Grass Lined		NR			
82+60 to 82+70	Riprap Lined		NR			
82+70 to 84+68	Culvert (Dual 48" CMPs)		NR			
84+68 to 84+82	Riprap Lined		NR			
84+82 to 89+90	Grass Lined		NR			
89+90 to 90+42	Riprap Lined		NR			
90+42 to 96+32	Grass Lined		NR			
96+32 to 96+40	Riprap Lined		NR			
96+40 to 96+70	Culvert		NR			
96+70 to 96+80	Riprap Lined		NR			
96+80 to 107+44	Grass Lined		NR			
107+44 to 107+54	Riprap Lined		NR			
107+54 to 108+06	Culvert (Dual 48" CMPs)		NR			
108+06 to 108+26	Riprap Lined		NR			
108+26 to 145+15	Grass Lined		NR			
124+00	Riprap Drop Structure		NR			
145+15 to 146+27	Grouted Riprap Lined		NR			
146+27 to 146+29	Riprap Energy Dissipator		NR			
146+29 to 148+00	Designed Channel		NR			
148+00 to 156+60	Grass Lined (Detention Basin 1)		NR			

Note:
NR = Inspection not required
NC = Not Constructed

Engineered Controls Checklist
Site-Wide Storm Water Channels
Inspection Year _____

SITE-WIDE ENGINEERED STORM WATER CONTROLS

Site-Wide Storm Water Channel 3 (SW-3)

Channel SW-3 from Station 50+34 to 124+60 consists of the existing OW/EADA OU Mill Creek Ditch and Mill Creek Detention Pond. This section of SW-3 was completed under the F*inal OW/EADA OU Remedial Action Work Plan/Final Design Report (RAWP/FDR) Volume IV Addendum G, Mill Creek Subarea* (ESA, July 1998); As-Built information is provided in the *Final OW/EADA OU Remedial Action Construction Completion Report (RACCR) Subarea 6, Mill Creek Addition* (AERL, March 2001). The 25-year, 24-hour storm design flow is 81 cfs and would result in channel flow depth of approximately 1 foot.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
54+85 to 122+00	**Grass Lined**		NR			
122+00 to 123+00	**Riprap Lined**		NR			

Note:
NC = Not Constructed

Engineered Controls Checklist
RDU 3 Storm Water Controls
Inspection Year _____

SMELTER HILL UPLANDS RDU 3 ENGINEERED STORM WATER CONTROLS

The Smelter Hill Uplands Remedial Design Unit (RDU) 3 Birch Gulch Sediment Pond was designed under the *Draft Final Smelter Hill Uplands Remedial Design Unit (RDU) 3 Final Design Report (FDR), Appendix B.5 - ESWCP Addendum 2 Birch Gulch and Affco Gulch Sediment Pond Relocation* (Atlantic Richfield Company, April, 2016).

Birch Gulch Sediment Pond

The Birch Gulch Sediment Pond was designed with sufficent capacity for retaining the 2-year, 24-hour storm event with sufficient surface area to significantly settle out sediment in the medium silt-size particle range during the 25-year, 24-hour storm event. The 25-year, 24-hour storm event would result in a storm water depth of approximately 4 feet in the pond.

Pond Feature	Annual Inspection	Quarterly Insepections	Event Inspection	Repair Required	Repair Completed
Emergency Spillway					
Principal Spillway (12" CMP)					
Outlet Works/Riser Pipe					
Trash Rack					
Dike					

Note:
NR = Inspection not required
NC = Not Constructed

Engineered Controls Checklist
OW/EADA OU Subarea 1 Storm Water Controls
Inspection Year _____

OW/EADA SUBAREA 1 ENGINEERED STORM WATER CONTROLS

The storm water controls within Subarea 1 were completed under the *Final Old Works Remedial Action Work Plan/Final Design Report (RAWP/FDR) Volumes I & II* (ESA, August 1994); As-Built information is provided in the *Final Remedial Action Completion Report, Old Works/East Anaconda Development Area Operable Unit, Subareas 1 and 2* (AERL, April 1, 1998).

Old Works Subarea 1 Channel 1A

The 10-year, 24-hour storm design flow is 1 cubic feet per second (cfs) and would result in channel flow depth of approximately 0.50 feet.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 4+50	**Grass-Lined**		NR			

Old Works Subarea 1 Channel 1B

The 10-year, 24-hour storm design flow is 2 cfs and would result in channel flow depth of approximately 0.75 feet.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 14+66	**Grass-Lined**		NR			

Old Works Subarea 1 Sediment Pond 1 Overflow Channel

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 5+05	**Grass-Lined**		NR			
5+05 to 7+24	**Riprap-Lined**		NR			

Engineered Controls Checklist
OW/EADA OU Subarea 1 Storm Water Controls
Inspection Year _____

Old Works Subarea 1 Channel 2A

The 10-year, 24-hour storm design flow is 1 cfs and would result in channel flow depth of approximately .5 feet.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 12+27	**Grass-Lined**		NR			

Old Works Subarea 1 Channel 2B

The 10-year, 24-hour storm design flow is 1 cfs and would result in channel flow depth of approximately 0.50 feet.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 19+09	**Grass-Lined**		NR			

Old Works Subarea 1 Channel 4A

The 10-year, 24-hour storm design flow is 2 cfs and would result in channel flow depth of approximately 0.50 feet.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 7+62	**Grass-Lined**		NR			

Old Works Subarea 1 Channel 4B

The 10-year, 24-hour storm design flow is 5 cfs and would result in channel flow depth of approximately 1 foot.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 7+54	**Grass-Lined**		NR			

Engineered Controls Checklist
OW/EADA OU Subarea 1 Storm Water Controls
Inspection Year _____

Old Works Subarea 1 Channel 5A

The 25-year, 24-hour storm design flow is 52 cfs and would result in a depth of approximately 0.75 feet in the grouted riprap-lined sections and 1.5 feet in the riprap-lined sections.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 1+00	**Grouted Riprap Lined**		NR			
1+00 to 5+60	**Riprap lined**		NR			
5+60 to 6+38	**Grouted Riprap Lined**		NR			

Old Works Subarea 1 Channel 5B

The 10-year, 24-hour storm design flow is 1 cfs and would result in channel flow depth of approximately 0.75 feet.

Station	Channel Type	Annual Inspection	Quarterly Inpsections	Event Inspection	Repair Required	Repair Completed
0+00 to 2+98	**Grass-Lined**		NR			

Sediment Pond 1

Sediment Pond 1 is designed to contain the runoff from the 10-year, 24-hour storm event. This would result in a depth of approximately 8 feet in the pond.

Pond Feature	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
Emergency Spillway					
Principal Spillway/Outlet Works Riser Pipe (48" CMP)					
Trash Rack					
Dike					
Inlet Channel					

Engineered Controls Checklist
OW/EADA OU Subarea 1 Storm Water Controls
Inspection Year _____

Sediment Pond 2

Sediment Pond 2 is designed to contain the runoff from the 10-year, 24-hour storm event without overtopping the dike crest. This would result in a depth of approximately 8 feet in the pond.

Pond Feature	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
Emergency Spillway					
Principal Spillway/Outlet Works Riser Pipe (60" CMP)					
Trash Rack					
Dike					

Sediment Pond 3

The Sediment Pond 3 is designed to contain the runoff from the 10-year, 24-hour storm event. This would result in a depth of approximately 4 feet for the 10-year storm.

Pond Feature	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
Emergency Spillway					
Principal Spillway/Outlet Works Riser Pipe (36" CMP)					
Trash Rack					
Dike					

Sediment Pond 6

Sediment Pond 6 is designed to contain the runoff from the 10-year, 24-hour storm event without overtopping the dike crest. This would result in a depth of approximately 5 feet for the 10-year storm.

Pond Feature	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
Emergency Spillway					
Principal Spillway/Outlet Works Riser Pipe (30" CMP)					
Outlet Pipe to Sediment Pond 5 (18" PVC)					
Trash Rack					
Dike					
Inlet pipe (24" PVC)					

Engineered Controls Checklist
OW/EADA OU Subarea 1 Storm Water Controls
Inspection Year _____

Sediment Pond 7

Sediment Pond 7 is designed to contain the runoff from the 100-year, 24-hour storm event without overtopping the dike crest. This would result in a depth of approximately 10 feet in the pond.

Pond Feature	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
Dike					
Inlet Pipe from Ditch L2 (24" Steel)					

The landfill channels within Subarea 1 were completed under the *Anaconda Landfill Closure, Anaconda, Montana, Deer Lodge County* (Robert Peccia & Associates, March 29, 1996).

Old Works Subarea 1 Channel L1

No design flow data were available for Ditch L1.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 8+40	**Grass-Lined**					

Old Works Subarea 1 Channel L2

No design flow data were available for Ditch L2.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 8+00	**Grass-Lined**					
8+00 to 12+00	**Riprap-Lined**					
12+00 to 13+99	**Grass-Lined**					

Old Works Subarea 1 Channel L3

No design flow data were available for Ditch L3.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 5+60	**Grass Lined**					
5+60 to 8+59	**Riprap Lined**					

Engineered Controls Checklist
OW/EADA OU Subarea 1 Storm Water Controls
Inspection Year _____

Warm Springs Creek 100-year Erosion Control Protection

The 100-year erosion control protection on Warm Springs Creek was completed under the *Final Old Works Remedial Action Work Plan/Final Design Report (RAWP/FDR) Volumes I & II* (ESA, August 1994);As-Built information are provided in the *Final Remedial Action Completion Report, Old Works/East Anaconda Development Area Operable Unit, Subareas 1 and 2* (AERL, April 1, 1998). The Reds Sands/Warm Springs Creek erosion control protection As-Built information is provided in the *Anaconda Smelter NPL Site, Old Works Expedited Response Action Final Construction Report* (ARCO, February 1993).

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
No Stationing	**Warm Springs Creek Riprap Lining**		NR			
No Stationing	**Red Sands/Warm Springs Creek Gabion Baskets**		NR			

Stucky Ridge Sediment Pond

The Stucky Ridge Sediment Pond was completed under the *Remedial Action Work Plan/Final Design Report, Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit, Volume III - Addenda* (ESA, August 1996). The Stucky Ridge Sediment Pond is designed to contain the runoff from the 100-year, 24-hour storm event without overtopping the berm. This would result in a depth of approximately 4 feet for the 100-year storm.

Pond Feature	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
Principal Spillway/Outlet Structure (8" PVC)					
Dike/Berm					

Sediment Pond 5

Sediment Pond 5 was completed under the *Remedial Action Work Plan/Final Design Report, Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit, Volume III - Addenda* (ESA, August 1996); As-Built information is provided in the *Final Remedial Action Completion Report, Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit, Subareas 1 and 2, Anaconda, Montana* (AERL, April 1, 1998). The Sediment Pond 5 is designed to contain the runoff from the 25-year, 24-hour storm event without overtopping the dike crest. This would result in a depth of approximately 20 feet for the 25-yr storm.

Pond Feature	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
Emergency Spillway					
Principal Spillway/Outlet Works Riser Pipe					
Trash Rack					
Dike					
Inlet Channel					
Inlet from Stucky Ridge Sediment Pond (8" PVC)					
Inlet from Sediment Pond 6 (18" PVC)					

Note:
NR = Inspection not required
NC = Not Constructed

Engineered Controls Checklist
OW/EADA OU Subarea 3 and 4 Storm Water Controls
Inspection Year _____

OW/EADA SUBAREA 3 AND 4 ENGINEERED STORM WATER CONTROLS

The storm water controls within Subareas 3 and 4 were completed under the *Remedial Action Work Plan/Final Design Report, Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit, Volume III - Addenda* (ESA, August 1996); As-Built information is provided in the *Draft Final Old Works Remedial Action Construction Completion Report (RACCR) Subareas 3 (Ballfields/Industrial Park) and Portion of Subarea 4* (AERL, October 2000).

Old Works Subarea 3 Channel 1B

No design flow data were available for Channel 1B.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 1+46	**Grass Lined**		NR			
1+46 to 2+11	**12" CMP**		NR			
2+11 to 3+75	**Grass Lined**		NR			

The Old Works Subarea 4 East Ditch was completed under the *Final Old Works Industrial Area (IA) Remedial Action Work Plan/Final Design Report RAWP/FDR, Volume IV, Addendum D, Report II* (Atlantic Richfield Company, June 4, 2010); As-Built information is provided in the forthcoming *Old Works/East Anaconda Development Area (OW/EADA) Operable Unit (OU) Old Works Industrial Area Anaconda Local Development 2011 Construction Completion Report (CCR).*

Engineered Controls Checklist
OW/EADA OU Subarea 3 and 4 Storm Water Controls
Inspection Year _____

Old Works Subarea 4 Channel 3A

No design flow data were available for Channel 3A.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 1+00	Grass Lined		NR			
1+00 to 1+21	21-inch PVC Culvert		NR			
1+21 to 5+22	Grass Lined		NR			
5+22 to 5+27	Riprap-Lined		NR			
5+27 to 6+04	21-inch PVC Culvert		NR			
6+04 to 6+09	Riprap-Lined		NR			

Old Works Subarea 4 Channel 3B

No design flow data were available for Channel 3B.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 14+36	Grass Lined		NR			

Old Works Subarea 4 Channel 3

No design flow data were available for Channel 3.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 5+65	Grass Lined		NR			
5+65 to 5+92	Riprap Lined		NR			
5+92 to 6+00	Grass Lined		NR			
6+00 to 7+78	18-inch CMP		NR			
7+78 to 7+98	Riprap Lined		NR			
7+98 to 33+05	Grass Lined		NR			
33+05 to 34+09	30" CMP		NR			

Engineered Controls Checklist
OW/EADA OU Subarea 3 and 4 Storm Water Controls
Inspection Year _____

Old Works Subarea 4 Channel 4A

No design flow data were available for Channel 4A.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
3+40 to 18+90	Grass Lined		NR			
18+90 to 19+00	Riprap Lined		NR			
19+00 to 21+69	30" CMP		NR			

Old Works Subarea 4 Channel 6B

No design flow data were available for Channel 6B.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 4+10	Grass Lined		NR			

Old Works Subarea 4 Channel 8

No design flow data were available for Channel 8.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 20+25	Grass Lined		NR			
20+25 to 20+47	Riprap Lined		NR			
20+47 to 31+97	Grass Lined		NR			

Engineered Controls Checklist
OW/EADA OU Subarea 3 and 4 Storm Water Controls
Inspection Year _____

Old Works Subarea 4 Channel 10A

No design flow data were available for Channel 10A.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 10+18	Grass Lined		NR			
10+18 to 10+42	Riprap Lined		NR			
10+42 to 10+52	24-inch HDPE Culvert		NR			
10+52 to 10+68	Riprap Lined		NR			
10+68 to 13+93	Grass Lined		NR			

Old Works Subarea 4 Channel 10

No design flow data were available for Channel 10.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 14+13	Grass Lined		NR			
14+13 to 14+30	Riprap Lined		NR			
14+30 to 15+05	18-inch CMP		NR			
15+05 to 15+17	Riprap Lined		NR			
15+17 to 21+18	Grass Lined		NR			

Old Works Subarea 4 Channel 11A

No design flow data were available for Channel 11A.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 17+24	Grass Lined		NR			

Engineered Controls Checklist
OW/EADA OU Subarea 3 and 4 Storm Water Controls
Inspection Year _____

Old Works Subarea 4 Channel 11

No design flow data were available for Channel 11.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 10+24	**Grass Lined**		NR			
10+24 to 11+18	**Riprap Lined**		NR			
11+18 to 24+60	**Grass Lined**		NR			
24+60 to 25+62	**CMP**		NR			
25+62 to 25+82	**Riprap Lined**		NR			
25+82 to 35+60	**Grass Lined**		NR			

Engineered Controls Checklist
OW/EADA OU Subarea 3 and 4 Storm Water Controls
Inspection Year _____

Lot 1B-Swale

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 2+29	**Gravel Lined**		NR			
2+29	**Manhole**		NR			

Detention Pond 1

The detention pond was designed to contain the runoff from the 25-year, 24-hour storm event without overtopping the dike

Pond Feature	Annual Inspection	Quarterly Inpsections	Event Inspection	Repair Required	Repair Completed
Emergency Spillway					
Principal Spillway Pipe (36" RCP)					
Trash Rack					
Dike					
Inlet Channel					

Detention Pond 2

The detention pond was designed to contain the runoff from the 50-year, 24-hour storm event without overtopping the dike

Pond Feature	Annual Inspection	Quarterly Inpsections	Event Inspection	Repair Required	Repair Completed
Emergency Spillway					
Principal Spillway Pipe (12" PVC)					
Trash Rack					
Dike					

Note:
NR = Inspection not required
NC = Not Constructed

Engineered Controls Checklist
OW/EADA OU Subarea 5 Storm Water Controls
Inspection Year _____

OW/EADA SUBAREA 5 ENGINEERED STORM WATER CONTROLS

The channels within the East Anaconda Yards were completed under the R*emedial Action Work Plan/Final Design Report, Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit, Volume IV - Addendums E and F Aspen Hills and East Anaconda Yards* (ESA, August 1998); As-Built information is provided in the *Final Old Works/East Anaconda Development Area Operable Unit Remedial Action Construction Completion Report (RACCR) Subarea 5* (East Anaconda Yards/Benny Goodman Park) (AERL, April 2001).

East Anaconda Yards Channel 3 (EAY-3)

The 25-year, 24-hour storm design flow is 31 cubic feet per second (cfs) and would result in channel flow depth of approximately 1.5 feet on the upper end and 2 feet on the lower end.

Station	Channel Type	Annual Inspection	Quarterly Inpsections	Event Inspection	Repair Required	Repair Completed
0+00 to 0+20	**Riprap Lined**		NR			
0+20 to 1+44	**42" RCP**		NR			
1+44 to 2+89	**Riprap Lined**		NR			
2+89 to 6+97	**Grass Lined**		NR			

East Anaconda Yards Channel 4 (EAY-4)

No design flow data were available for EAY-4.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 2+50	**Grass Lined**		NR			
2+50 to 7+62	**Riprap Lined**		NR			

East Anaconda Yards Channel 5 (EAY-5)

No design flow data were available for EAY-5.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 6+97	**Grass Lined**		NR			

East Anaconda Yards Channel 6 (EAY-6)

No design flow data were available for EAY-6.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 16+15	**Grass Lined**		NR			

Engineered Controls Checklist
OW/EADA OU Subarea 5 Storm Water Controls
Inspection Year _____

East Anaconda Yards Storm Water Pipe

No design flow data were available for EAY-5.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 4+60	**Existing Culvert**		NR			

Note:
NR = Inspection not required
NC = Not Constructed

Engineered Controls Checklist
OW/EADA OU Subarea 6 Storm Water Controls
Inspection Year _____

OW/EADA SUBAREA 6 ENGINEERED STORM WATER CONTROLS

The channels within Subarea 6 were completed under the *Remedial Action Work Plan/Final Design Report, Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit, Volume IV - Addendum H Drag Strip* (ESA, July 1998); As-Built information is provided in the *Draft Final Old Works Remedial Action Construction Completion Report (RACCR) Subarea 6, Drag Strip* (AERL, May 2000).

Drag Strip Area Channel A

The 25-year, 24-hour storm design flow is 10 cubic feet per second (cfs) and would result in channel flow depth of approximately 1 foot.

Station	Channel Type	Annual Inspection	Quarterly Inspections	Event Inspection	Repair Required	Repair Completed
0+00 to 45+22	**Grass Lined**		NR			

Mill Creek Detention Pond

The Mill Creek Detention Pond within RDU 14 was completed under the *Final OW/EADA OU Remedial Action Work Plan/Final Design Report (RAWP/FDR) Volume IV Addendum G, Mill Creek Subarea* (ESA, July 1998); As-Built information is provided in the *Final OW/EADA OU Remedial Action Construction Completion Report (RACCR) Subarea 6, Mill Creek Addition* (AERL, March 2001). No design data were available for the Mill Creek Detention Pond.

Pond Feature	Annual Inspection	Quarterly Insepections	Event Inspection	Repair Required	Repair Completed
Outlet Pipe (30" RCP)					
Dike					

Note:
NR = Inspection not required
NC = Not Constructed

CHANNEL INSPECTION FORM

Inspector(s): _____

Date: _____

Weather: _____

Channel Name: _____

Location:

Approx. Stations	Channel Type	Condition of Vegetative Cover (Excellent, Good, Fair, Poor, Very Poor)	Noxious Weed Presence (None, Sparse, Frequent, Dominant)	Is there any evidence of erosion in the channel? (Yes or No)	Desription of Channel Erosion (Minor, Mild, Moderate, Severe; List Stationing)	Evidence of Sedimentation in Channel (None, <3 inches, >3 inches; list Stationing)	Debris and/or Garbage in Channel (None; Small Amount [removed]; Significant Amount [removal required])	Has there been any riprap displacement (Yes/No; Minor, Mild, Moderate, Severe)	Is follow-up Action Required (Yes or No)	PHOTOS
Description of Problem, Location, and Potential Action										
Other Comments/ Observations										
Description of Problem, Location, and Potential Action										
Other Comments/ Observations										
Description of Problem, Location, and Potential Action										
Other Comments/ Observations										
Description of Problem, Location, and Potential Action										
Other Comments/ Observations										
Description of Problem, Location, and Potential Action										
Other Comments/ Observations										
Description of Problem, Location, and Potential Action										
Other Comments/ Observations										
Description of Problem, Location, and Potential Action										
Other Comments/ Observations										
Description of Problem, Location, and Potential Action										
Other Comments/ Observations										
Description of Problem, Location, and Potential Action										

CHANNEL INSPECTION FORM

Inspector(s): Brett Kamrud & Nicole Hockaday

Date: 6/8/2012, 6/18/2012 & 6/19/2012

Weather: Partly cloudy, 50° F

Channel Name: Channel SW-1

Location: OW/EADA OU Subarea 5 - East Anaconda Yards & RDU #12 Main Granulated Slag Pile

Approx. Stations	Channel Type	Condition of Vegetative Cover (Excellent, Good, Fair, Poor, Very Poor)	Noxious Weed Presence (None, Sparse, Frequent, Dominant)	Is there any evidence of erosion in the channel? (Yes or No)	Description of Channel Erosion (Minor, Mild, Moderate, Severe; List Stationing)	Evidence of Sedimentation in Channel (None, <3 inches, >3 inches; list Stationing)	Debris and/or Garbage in Channel (None; Small Amount [removed]; Significant Amount [removal required])	Has there been any riprap displacement (Yes/No; Minor, Mild, Moderate, Severe)	Is follow-up Action Required (Yes or No)
0+00 to 0+40	**Grass-Lined**	Poor	Frequent	No	N/A	< 3 Inches	None	-	Yes
Description of Problem, Location, and Potential Action	Monitor poor vegetation. Monitor minor sedimentation and spray for leafy spurge from 0+00 to 0+80.								
Other Comments/ Observations									
0+40 to 2+07	**Riprap-Lined**	-	Frequent	No	N/A	< 3 Inches	None	No	No
Description of Problem, Location, and Potential Action	Monitor minor sedimentation and spray for leafy spurge from 0+00 to near 0+80. Spray for whitetop and knapweed near 1+70.								
Other Comments/ Observations									
2+07 to 4+13	**Culvert**	-	Frequent	No	N/A	None	None	-	No
Description of Problem, Location, and Potential Action	Spray for knappweed near 4+00.								

PHOTOS

Poor vegetation near Station 0+00

SAMPLE

Other Comments/ Observations									
4+13 to 4+50	**Riprap-Lined**	-	None	No	N/A	None	None	No	No
Description of Problem, Location, and Potential Action									
Other Comments/ Observations	No observed problems at this time.								
4+50 to 6+95	**Grass-Lined**	Good	Frequent	No	N/A	None	Small Amount	No	No
Description of Problem, Location, and Potential Action	Spray for knapweed from near 5+00 to near 8+60. Remove debris near 6+50.								
Other Comments/ Observations									
6+95 to 8+81	**Riprap-Lined**	-	Frequent	No	N/A	None	None	No	No
Description of Problem, Location, and Potential Action	Spray for knapweed from near 5+00 to near 8+60.								
Other Comments/ Observations									
8+81 to 9+83	**Culvert**	-	Frequent	No	N/A	None	None	-	No
Description of Problem, Location, and Potential Action	Spray for knapweed near 9+70 to near 11+20.								
Other Comments/ Observations									
9+83 to 11+28	**Riprap-Lined**	-	Frequent	No	N/A	None	None	No	No
Description of Problem, Location, and Potential Action	Spray for knapweed near 9+70 to near 11+20.								

Leafy Spurge and minor sedimentation near Station 0+00

SAMPLE

Other Comments/ Observations										
11+28 to 30+20	**Grass-Lined**	Good	Frequent	Yes	Minor	None	None	-	No	Leafy Spurge and minor sedimentation near Station 0+00
Description of Problem, Location, and Potential Action	Spray for knapweed near 9+70 to near 11+20. Spray for leafy spurge from near 14+00 to near 29+98. Monitor minor erosion from near 17+20 to near 19+98 and from near 24+70 to near 27+00.									
Other Comments/ Observations										

SAMPLE

Storm Water Pond Inspection Form

Inspector(s): _____Weather: _____

Date:_____

Basin Name:_____

Location:_____

1. **Debris/Garbage**
   Occurrence: ☐ None Present ☐ Small Amount (removed) ☐ Signif. Amount - Removal Required
   Location: ☐ Basin Influent ☐ Security Racks ☐ Outlet Structure ☐ Fencing ☐ Misc/Other

2. **Condition of Trash Rack(s)/Culverts/Inlet Structures/Outlet Structures**
   ☐ No Problems ☐ Damaged Trash Rack ☐ Damaged Culverts ☐ Damaged Inlet Structure ☐ Damaged Outlet Structure ☐ Damaged Orifice ☐ Damaged Spillway ☐ Damaged Aprons
   Describe: _____
   _____

3. **Evidence of Sedimentation in Conveyance Structures (not within basin)**
   ☐ None Observed ☐ Infrequent or Shallow (<3 inches) ☐ Frequent or Deep (>3 inches)
   Depth in inches: _____ **Location(s):** _____

4. **Evidence of Erosion around basin/structures**
   Severity: ☐ None Present ☐ Minor ☐ Mild ☐ Moderate ☐ Severe

   Location: ☐ Basin Influent ☐ Edges/Berm of Basin ☐ Outlet Structure ☐ Misc/Other

5. **Condition of Vegetative Cover in immediate vicinity of basin/structures**
   ☐ Excellent ☐ Good ☐ Fair ☐ Poor ☐ Very Poor

6. **Are noxious Weeds Present in immediate vicinity of basin/structures?**
   ☐ None Observed ☐ Sparse ☐ Frequent ☐ Dominant
   Describe type of weeds and location: _____
   _____
   _____

7. **Sedimentation Basin Embankment (Refer to attached Embankment Inspection Guidelines)**
   ☐No Problem ☐Slope Erosion ☐Settlement ☐Slope Movement/Instability ☐Seepage Noted

8. **Describe Current Flow Conditions (influent and effluent)**:
   _____

9. **Depth of Water in Basin Measured at Outlet Structure = _____ft.**

10. **Describe/Measure Sediment Thickness in Basin at monitoring point or near outlet**: **_____ft.**

    Location: _____

11. **Is follow Up Action Required? ☐ Yes ☐ No**

12. **Comments/Observations/Follow-up Action:** _____

_____

_____

_____

_____

13. **Sediment Pond Survey Data**

	Design Elevation (NAD 83)	As-Built Survey (NAD 83)	Previous Year Survey (NAD 83)	Current Year Survey (NAD 83)	Accumulation (Feet)
BM Elevation					
Staff Guage 0.0					
Sediment Storage					
Stake 1					
Stake 2					
Stake 3					
Stake 4					
10 Year Storage					
25 Year Storage					
100 Year Storage					
Dike Crest Elevation					

14. **Photographs taken during inspection:**

PREPARED FOR: Atlantic Richfield Company bp *A BP affiliated company*	Picture:
	Date:
	Description:
	Operable Unit:
	Project:

Storm Water Pond Inspection Form

Inspector(s): Brett Kamrud, Nicole Hockaday Weather: 80°F, Sunny

Date: 7/3/2012

Basin Name: Sediment Pond 1

Location: OW/EADA OU Subarea 1

1. **Debris/Garbage**
   Occurrence: X None Present ☐ Small Amount (removed) ☐Signif. Amount - Removal Required
   Location: ☐ Basin Influent ☐Security Racks ☐Outlet Structure ☐Fencing ☐Misc/Other

2. **Condition of Trash Rack(s)/Culverts/Inlet Structures/Outlet Structures**
   X No Problems ☐Damaged Trash Rack ☐Damaged Culverts ☐Damaged Inlet Structure
   ☐Damaged Outlet Structure ☐Damaged Orifice ☐Damaged Spillway ☐Damaged Aprons
   Describe: _____

3. **Evidence of Sedimentation in Conveyance Structures (not within basin)**
   X None Observed ☐ Infrequent or Shallow (<3 inches) ☐Frequent or Deep (>3 inches)
   Depth in inches: _____ **Location(s):** _____

4. **Evidence of Erosion around basin/structures**
   Severity: X None Present ☐ Minor ☐Mild ☐Moderate ☐Severe

   Location: ☐Basin Influent ☐Edges/Berm of Basin ☐Outlet Structure ☐Misc/Other

5. **Condition of Vegetative Cover in immediate vicinity of basin/structures**
   ☐Excellent X Good ☐Fair ☐Poor ☐Very Poor

6. **Are noxious Weeds Present in immediate vicinity of basin/structures?**
   ☐None Observed ☐ Sparse X Frequent ☐Dominant
   Describe type of weeds and location: Noxious weeds are abundant throughout the entire area.

7. **Sedimentation Basin Embankment (Refer to attached Embankment Inspection Guidelines)**
   X No Problem ☐Slope Erosion ☐Settlement ☐Slope Movement/Instability ☐Seepage Noted

8. **Describe Current Flow Conditions (influent and effluent)**:
   None

9. **Depth of Water in Basin Measured at Outlet Structure =** 0 **ft.**

10. **Describe/Measure Sediment Thickness in Basin at monitoring point or near outlet**: < ½ **ft.**

    Location: _____

11. **Is follow Up Action Required? ☐Yes X No**

12. **Comments/Observations/Follow-up Action:** _____

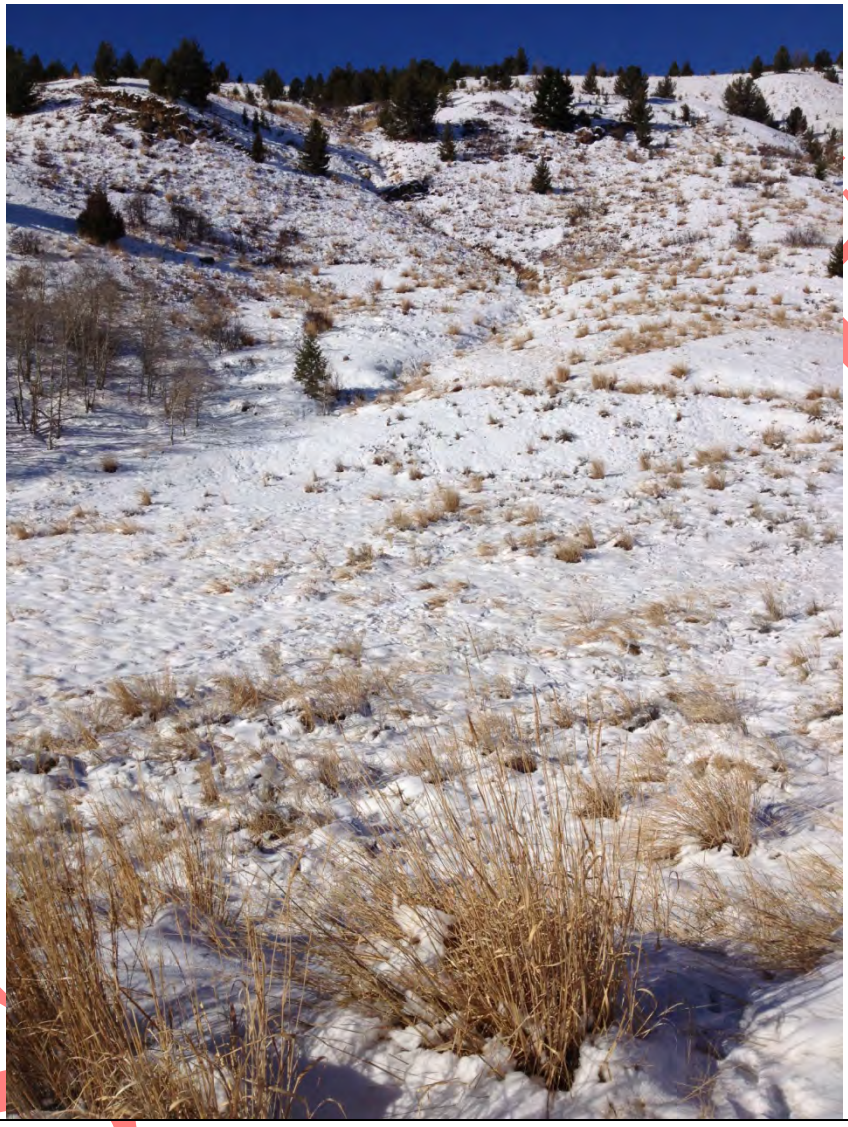
SAMPLE

13. **Sediment Pond Survey Data**

	Design Elevation (NAD 83)	As-Built Survey (NAD 83)	Previous Year Survey (NAD 83)	Current Year Survey (NAD 83)	Accumulation (Feet)
BM Elevation	5368.35	5368.35	5368.35		
Staff Gauge 0.0		5352.23		5352.23	
Sediment Storage	5353.7	5353.78	5353.80	5353.80	0.00
Stake 1	5348.19	5350.71	5350.57	5350.60	0.03
Stake 2	5348.54	5351.07	5350.97	5350.82	-0.15
Stake 3	5349.15	5351.77	5351.89	5351.92	0.03
Stake 4	5353.02	5355.63	5355.69	5355.69	0.00
10 Year Storage	5358.2	5358.25			
25 Year Storage					
100 Year Storage	5359.7				
Dike Crest Elevation	5361.2	5360.96			
				Average =	-0.018

SAMPLE

14. **Photographs taken during inspection:**



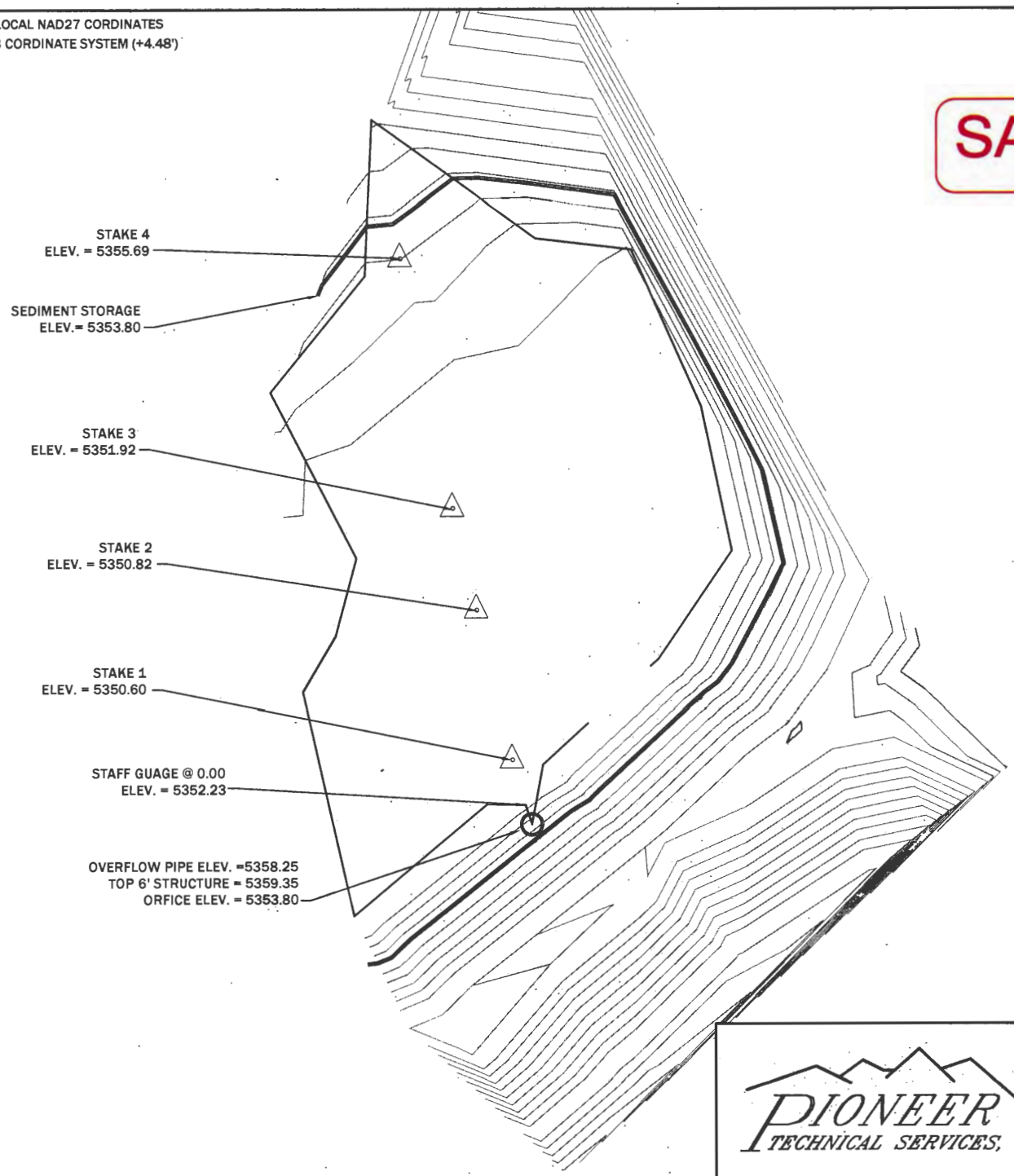
PREPARED FOR:

Atlantic Richfield Company

A BP affiliated company

Picture: Sediment Pond 1
Date: 11/20/12
Description: Sediment Pond 1 looking NW
Operable Unit: OW/EADA OU Subarea 1
Project: 2012 Engineered Controls I&M

SURVEY ADJUSTED LOCAL NAD27 CORDINATES
TO THE NEW NAD83 CORDINATE SYSTEM (+4.48')



SAMPLE
DATE

PIONEER TECHNICAL SERVICES, INC.

FIGURE 1
SEDIMENT POND 1
SEDIMENT SURVEY LOCATIONS
2012 ELEVATIONS
SCALE: 1" = 40'
DATE: 01-29-13

SED BASIN 1

12/18/2013 3:25:01 PM \\192.168.252.15\PROJECT$\ANADATA\DATA FROM BUTTE\I&M-PLAN-101-12-STANDARD\SEDPONDS-2012.DWG

Quarterly Storm Water Pond Inspection Form

Inspector(s): _____Weather: _____

Date:_____

Basin Name:_____

Location:_____

1. **Evidence of Sedimentation in Conveyance Structures (not within basin)**
   ☐ None Observed ☐Infrequent or Shallow (<3 inches) ☐Frequent or Deep (>3 inches)
   Depth in inches: _____ Location(s): _____

2. **Evidence of Erosion around basin/structures**
   Severity: ☐ None Present ☐Minor ☐ Mild ☐Moderate ☐Severe

   Location: ☐Basin Influent ☐ Edges/Berm of Basin ☐Outlet Structure ☐ Misc/Other .

3. **Sedimentation Basin Embankment (Refer to attached Embankment Inspection Guidelines)**
   ☐No Problem ☐Slope Erosion ☐Settlement ☐Slope Movement/Instability ☐Seepage Noted

4. **Describe Current Flow Conditions (influent and effluent)**:
   _____

5. **Depth of Water in Basin Measured at Outlet Structure = _____ft.**

6. **Is follow Up Action Required? ☐ Yes ☐ No**

7. **Comments/Observations/Follow-up Action:** _____
   _____
   _____
   _____

8. **Photographs taken during inspection:**

PREPARED FOR: Atlantic Richfield Company bp *A BP affiliated company*	Picture:
	Date:
	Description:
	Operable Unit:
	Project:

Quarterly Storm Water Pond Inspection Form

Inspector(s): Brett Kamrud Weather: Sunny, 60° F

Date: 6/20/2011

Basin Name: Sediment Pond 1

Location: OW/EADA Subarea 1

1. **Evidence of Sedimentation in Conveyance Structures (not within basin)**
   ☒ None Observed ☐Infrequent or Shallow (<3 inches) ☐Frequent or Deep (>3 inches)
   Depth in inches: _____ **Location(s):** _____

2. **Evidence of Erosion around basin/structures**
   Severity: ☐ None Present ☐Minor ☒ Mild ☐Moderate ☐Severe

   Location: ☐Basin Influent ☒ Edges/Berm of Basin ☐Outlet Structure ☐ Misc/Other .

3. **Sedimentation Basin Embankment (Refer to attached Embankment Inspection Guidelines)**
   ☒No Problem ☐Slope Erosion ☐Settlement ☐Slope Movement/Instability ☐Seepage Noted

4. **Describe Current Flow Conditions (influent and effluent)**:
   influent

5. **Depth of Water in Basin Measured at Outlet Structure =** 1.5 **ft.**

6. **Is follow Up Action Required?** ☐ **Yes** ☒ **No**

7. **Comments/Observations/Follow-up Action:** _____

SAMPLE

8. **Photographs taken during inspection:**

*Insert Photo Here

SAMPLE

PREPARED FOR: Atlantic Richfield Company, A BP affiliated company	Picture: 001
	Date: 6/20/2011
	Description: Sediment Pond 1 Overview
	Operable Unit: OW/EADA Subarea 1
	Project: Engineered Controls I&M

Engineered Covers Inspection Form

Inspector(s): _____ Weather: _____

Date:_____

Location:_____

1. **Debris/Garbage present in the Engineered Cover area?**
   Occurrence: ☐ None Present ☐Small Amount (removed) ☐ Signif. Amount-Removal Required

2. **Are noxious Weeds present in the Engineered Cover area?**
   ☐ None Observed ☐ Sparse ☐ Frequent ☐ Dominant
   Describe type of weeds and location: _____
   _____
   _____

3. **Is there evidence of Engineered Cover erosion?** ☐ Yes ☐ No
   If yes, describe below:
   ☐ Minor ☐ Mild ☐ Moderate ☐ Severe
   Location: _____
   _____
   _____

4. **Is there evidence of Engineered Cover settlement?** ☐ Yes ☐ No
   If yes, describe below:
   ☐ Minor ☐ Mild ☐ Moderate ☐ Severe
   Location: _____
   _____
   _____
   _____

5. **Is there evidence of Engineered Cover degradation or disturbance?** ☐ Yes ☐ No
   If yes, describe below:
   ☐ Minor ☐ Mild ☐ Moderate ☐ Severe
   Location: _____
   _____
   _____

6. **Other Comments/Observations:** _____
   _____
   _____

7. **Is Follow-up Action Required?** ☐ Yes ☐ No
   If Yes, describe problem, location, and potential action: _____
   _____
   _____
   _____

8. **Photographs taken during inspection:**

PREPARED FOR: Atlantic Richfield Company bp *A BP affiliated company*	Picture:
	Date:
	Description:
	Operable Unit:
	Project:

Engineered Covers Inspection Form

Inspector(s): Brett Kamrud, Nicole Hockaday Weather: Sunny, 60°F

Date: 7-18-12

Location: Anaconda Deer Lodge County (ADLC) Parcel (Parcel D)

1. **Debris/Garbage present in the Engineered Cover area?**

   Occurrence: ☒None Present ☐Small Amount (removed) ☐Signif. Amount-Removal Required

2. **Are noxious Weeds present in the Engineered Cover area?**

   ☐None Observed ☒Sparse ☐Frequent ☐Dominant
   Describe type of weeds and location:
   Minor amounts of Kochia and Knapweed along the fence line.

3. **Is there evidence of Engineered Cover erosion?** ☐ Yes ☒ No
   If yes, describe below:
   ☐ Minor ☐ Mild ☐ Moderate ☐ Severe
   Location:

4. **Is there evidence of Engineered Cover settlement?** ☐ Yes ☒ No
   If yes, describe below:
   ☐ Minor ☐ Mild ☐ Moderate ☐ Severe
   Location:

5. **Is there evidence of Engineered Cover degradation or disturbance?** ☐ Yes ☒ No
   If yes, describe below:
   ☐ Minor ☐ Mild ☐ Moderate ☐ Severe
   Location:

6. **Other Comments/Observations:**

7. **Is Follow-up Action Required?** ☐ Yes ☒ No

SAMPLE

If Yes, describe problem, location, and potential action: _____

_____

_____

_____

_____

8. **Photographs taken during inspection:**

PREPARED FOR: Atlantic Richfield Company bp *A BP affiliated company*	Picture: Type B1 Gravel Cover
	Date: 7/18/12
	Description: Looking west on Parcel D.
	Operable Unit: OW/EADA Industrial Area ADLC Parcel
	Project: 2012 Engineered Controls I&M

Storm Event Inspection Form

Inspector(s): _____Weather: _____

Date: _____

Storm Water Conveyance System:_____

Location:_____

1. **Duration of Storm Event**
   Date(s): _____
   Precipitation Accumulation (inches):_____

2. **Evidence of Sedimentation in Conveyance System**
   ☐ None Observed ☐ Infrequent or Shallow (<3 inches) ☐ Frequent or Deep (>3 inches)
   Depth in inches: _____ Location(s): _____

3. **Evidence of Erosion in Conveyance System**
   Severity: ☐ None Present ☐ Minor ☐ Mild ☐ Moderate ☐ Severe
   Location(s):_____

4. **Depth of Water in Conveyance System = _____ ft.**

5. **Is follow Up Action Required? ☐ Yes ☐ No**

6. **Comments/Observations/Follow-up Action: _____**
   _____
   _____
   _____
   _____
   _____

7. **Photographs to be taken during opportunistic/high intensity storm events:**

   - See attached photographs

PREPARED FOR: Atlantic Richfield Company bp *A BP affiliated company*	Picture:
	Date:
	Description:
	Operable Unit:
	Project:

Storm Event Inspection Form

Inspector(s): Thomas Brown Weather: Light rain and seasonally high temperatures (high 40s)

Date: 11/20/2012

Storm Water Conveyance System: RDU 13 – Old Works Waste Management Area

Location: Sediment Ponds 1, 2, 3, 5, and 6, Lakes #1 and #2 of the Old Works Golf Course

1. **Duration of Storm Event**
   Date(s): November 8-9, 2012
   Precipitation Accumulation (inches): 12 inches of snow with an approximate snow water equivalent of 1 inch.

2. **Evidence of Sedimentation in Conveyance System**
   ☒ None Observed ☐ Infrequent or Shallow (<3 inches) ☐ Frequent or Deep (>3 inches)
   Depth in inches: _____ **Location(s):** _____

3. **Evidence of Erosion in Conveyance System**
   Severity: ☒ None Present ☐ Minor ☐ Mild ☐ Moderate ☐ Severe
   Location(s):_____

4. **Depth of Water in Conveyance System = _____ ft.**

5. **Is follow Up Action Required? ☐ Yes ☒ No**

6. **Comments/Observations/Follow-up Action:** Lake #2 at the Old Works Golf Course was being dewatered to obtain survey information to complete a new design for the reconstruction of the existing liner system. Lake #2 is part of the overall storm water conveyance system for the Anaconda Smelter National Priorities List (NPL) Site, and as a safety measure, while dewatering was ongoing the up-gradient control structures were checked daily to monitor for unwanted storm water discharge. As can be seen from Pictures #1 and #2, a substantial amount of snow accumulated during the winter snow storm on November 8th and 9th. Temperatures over the following 10 day remained predominately below freezing. A warm weather front began to push through the area on November 19th resulting in seasonally warmer-than-average temperatures. A light rain storm and temperatures in the high 40s on November 20th resulted in a large amount of snow melt and runoff (Picture #3) that was captured by the storm water underdrain system at the Old Works Golf Course. Pictures #4 and #5 show that no water was discharged from Sediment Ponds 1 and 2, and as a result, the valve to discharge storm water from Lake #1 was kept closed (Pictures #6 and #7) to minimize the amount of water flowing into Lake #2. As can be seen in Pictures #8 through #11 a substantial amount of water was captured by storm water drains and discharged into Lake #2 via various underdrain networks. All water being pumped from Lake #2 was introduced to the down-gradient underdrain system and eventually discharged to Sediment Pond 6 where the water was allowed to infiltrate into the ground (Picture #12). No water was observed in Sediment Pond 5 (Picture #13).

7. **Photographs to be taken during opportunistic/high intensity storm events:**

   - Please note flows, system failures, areas of erosion, etc; and
   - Record photo info and attach photographs.

SAMPLE

*Insert Photo Here

PREPARED FOR: Atlantic Richfield Company A BP affiliated company	Picture: #1
	Date: 11/7/2012
	Description: Old Works Golf Course Lake #2 prior to the winter snow storm event.
	Operable Unit: Old Works/East Anaconda Development Area
	Project: Engineered Controls I&M

SAMPLE

ATTACHMENT 2

VEGETATION COVER INSPECTION AND

MAINTENANCE INFORMATION

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 1, Area 7 (VM_132)

Old Works Sub-Area 1, Area 7 (VM_132) 2015 -					
Year	**2015**				
Area (acres)	10.1				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/27/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	1				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	1				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	40				
Total Number of Acceptable Species	27				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*	Infrequent				
Field Bindweed *(Convolvulus arvensis)*					
Leafy Spurge *(Euphorbia esula)*	Infrequent				
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*	Infrequent				
Curly Dock *(Rumex crispus)*					
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 1, Area 7 (VM_132)

Old Works Sub-Area 1, Area 7 (VM_132) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0-15%				
Aspect	S, Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	7				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub-Area 1, Area 7 (VM_132) 2015-

Old Works Sub-Area 1, Area 7 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	x				
Thickspike Wheatgrass	*Agropyron dasystachyum*	m				
Tall Wheatgrass	*Agropyron elongatum*					
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Quackgrass	*Agropyron repens*					
Western Wheatgrass	*Agropyron smithii*	x				
Bluebunch Wheatgrass	*Agropyron spicatum*					
Slender Wheatgrass	*Agropyron trachycaulum*					
Red Top	*Agrostis alba*	x				
Pussytoes	*Antennaria rosea*					
Fringed Sagewort	*Artemisia frigida*					
Aster	*Aster adscendens*	x				
Cicer Milkvetch	*Astragalus cicer*					
Milkvetch	*Astragalus sp.*	x				
Side Oats Grama	*Bouteloua curtipendula*					
Blue Grama	*Bouteloua gracilis*					
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Rocky Mountain Bee Plant	*Cleome serrulata*	x				
Bastard Toadflax	*Comandra umbellata*	x				
Orchardgrass	*Dactylis glomerata*					
Great Basin Wildrye	*Elymus cinereus*	m				
Mammoth Wildrye	*Elymus giganteus*	x				
Russian Wildrye	*Elymus junceus*					
Willowherb	*Epilobium paniculatum*					
Sheep Fescue	*Festuca ovina*	m				
Bedstraw	*Galium aparine*					
Wild Licorice	*Glycyrrhiza lepidota*	x				
Curlycup Gumweed	*Grindelia squarrosa*	x				
Broom Snakeweed	*Gutierrezia sarothrae*					
Foxtail Barley	*Hordeum jubatum*	x				
Poverty Sumpweed	*Iva axillaris*	x				
Lewis's Flax	*Linum lewisii*					
Matrimony Vine	*Lycium halimifolium*	x				
Machaeranthera	*Machaeranthera canescens*	x				
Alfalfa	*Medicago sativa*	m				
White Sweetclover	*Melilotus alba*	x				
Yellow Sweetclover	*Melilotus officinalis*	x				
Yellow Evening Star	*Mentzelia laevicaulis*	x				
Evening Primrose	*Oenothera villosa*	x				
Indian Ricegrass	*Oryzopsis hymenoides*					
Beard Tongue	*Penstemon eriantherus*					
Scorpion Weed	*Phacelia hastata*	x				
Canada Bluegrass	*Poa compressa*	m				
Woods Rose	*Rosa woodsii*					
Willowleaf Dock	*Rumex salicifolius*					

Observed Species in Old Works Sub-Area 1, Area 7 (VM_132) 2015-

Old Works Sub-Area 1, Area 7 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
UNDESIRABLE WEEDY SPECIES						
Wild Oats	*Avena sativa*					
Japanese Brome	*Bromus japonicus*					
Cheatgrass	*Bromus tectorum*	x				
Tansy Mustard	*Descurainia richardsonii*					
Annual Sunflower	*Helianthus annuus*	x				
Black Henbane	*Hyoscyamus niger*					
Russian Thistle	*Salsola iberica*					
Bladder Campion	*Silene latifolia*					
Campion	*Silene vulgaris*	x				
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x				
Hedge Mustard	*Sisymbrium loeselii*	x				
Common Dandelion	*Taraxacum officinale*					
Salsify	*Tragopogon dubius*	x				
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I				
Spotted Knapweed	*Centaurea maculosa*	I				
Canada Thistle	*Cirsium arvense*	I				
Field Bindweed	*Convolvulus arvensis*					
Leafy Spurge	*Euphorbia esula*	I				
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*	I				
Dalmatian Toadflax	*Linaria dalmatica*	I				
Curly Dock	*Rumex crispus*					
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		27				
Total Number of Species		40				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1, Area 7 (VM_132) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• Other than some spot weed control, this area is doing very well. • This area was included in the 2009 Compliance Determination Report. In 2015, the standards are still being met. Compliance Status: LTIM. • Weeds are increasing (particularly spotted knapweed) and need control in the next 1-2 years. • Some road work/gravel along the west edge adjacent to golf course. • Dalmatian toadflax should be searched for and sprayed before it expands. It is still mostly localized in the sediment basin and area above the basin. This species is spreading and should be sprayed or pulled in 2016. The sediment basin has many weeds (whitetop, Dalmatian toadflax, spotted knapweed, Canada thistle and leafy spurge) and could be aerially sprayed. These conditions still exist in 2015. • The northwest corner of Area 7, northwest of the sediment basin was re-worked in 2014. This disturbance was seeded, but the vegetation has developed into a striped pattern and only about half seems to have seedlings; the alternating stripes have very few seedlings (photo 3). This repaired area also needs weed control for spotted knapweed.	No obvious signs of erosion.	No BMP's installed in this area.	

Site Aerial Photograph of Old Works Sub-Area 1, Area 7 (VM_132)

•1 Photo Location Point

Old Works Sub-Area 1, Area 7 (VM_132)

Old Works Sub-Area 1, Area 7 (VM_132) 2015-

PHOTO LOCATION 1 - Old Works Sub-Area 1, Area 7		**PHOTO LOCATION 2 - Old Works Sub-Area 1, Area 7**
N46° 08’ 03.0”; W112° 54’ 46.2”, looking west-southwest		N46° 08’ 05.0”; W112° 54’ 58.5”, looking West
July 27, 2015		July 27, 2015

PHOTO LOCATION 3 - Old Works Sub-Area 1, Area 7

N46° 08’ 01.3”; W112° 55’ 12.6”, looking northwest

July 29, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 1, Area 7 (VM_132)

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
Area (acres)	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner								
Inspection Date	7/10/00	7/3/01	7/20/02	7/21/03	8/12/04	8/19/05	7/20/06	6/12/07
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK	WK	WK	WK	WK	WK, KL	WK
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo								
Site Aerial Photo Follows the Transect Summary Table								
INSPECTION SUMMARY*								
Vegetation Inspection						1	1	1
Erosion Inspection						0	0	0
Stormwater BMP Inspection						0	0	0
VEGETATION INSPECTION*								
Overall Recommendation						1	1	1
Estimated Canopy Coverage	25-35%	25-35%	>35%	>35%	>35%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation						Moderate	Moderate	Moderate
Evidence of Reproduction						Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	16	31	32	28	24	27	40	26
Total Number of Acceptable Species	12	22	20	17	16	19	28	16
Ocular Estimate of Extent of Bare Areas						<1-5%	<1-5%	<1-5%
Weed Species Present								
White Top *(Cardaria draba)*		Infrequent	Infrequent	Infrequent	Infrequent		Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Frequent	Frequent	Infrequent
Canada Thistle *(Cirsium arvense)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent		Infrequent	Infrequent
Field Bindweed *(Convolvulus arvensis)*								
Leafy Spurge *(Euphorbia esula)*		Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*			Infrequent	Infrequent		Infrequent	Infrequent	Infrequent
Dalmatian Toadflax *(Linaria dalmatica)*								
Curly Dock *(Rumex crispus)*								
Vegetation Comments (See Comments Section)								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 1, Area 7 (VM_132)

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
EROSION INSPECTION*								
Average Slope (percent)						0-15	0-15	0-15
Aspect						South	South	South
Overall Recommendation						0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None	None
Evidence of Surface Litter Movement						None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None	None
Potential Instability	None	None	None	None		None	None	None
Presence of Gullies	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)								
BMP INSPECTION*								
Overall Recommendation						0	0	0
Evidence of Check Dam Failure						None	None	None
Evidence of Sediment Accumulation in Check Dams						None	None	None
Condition of Dozer Basins						None	None	None
Condition of Grade Control Structures						None	None	None
Evidence of Brush Barrier Failure or Movement						None	None	None
Condition of Mulch						None	None	None
BMP Comments (See Comments Section)								
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**								
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS								
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	No	Yes	Yes	Yes	Yes	Yes	Yes (42%)	Yes (32%)
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST	EST	EST	EST	EST	EST	TRAN	TRAN
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	<45	<45	<45	<45	<45
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 1, Area 7 (VM_132)

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	10.1	10.1	10.1	10.1	10.1	10.1	10.1
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner							
Inspection Date	6/16/08	8/19/09	8/6/10	8/3/11	8/23/12	8/4/13	6/18/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK, PF	WK, KL	WK, KL	WK,HK, CS	WK,HK, CS	WK,HK, CS	WK,HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo							
Site Aerial Photo Follows the Transect Summary Table							
INSPECTION SUMMARY*							
Vegetation Inspection	1	1	1	1	0	0	1
Erosion Inspection	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0
VEGETATION INSPECTION*							
Overall Recommendation	1	1	1	1	0	0	1
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	24	33	26	43	37	32	24
Total Number of Acceptable Species	17	21	20	30	26	22	18
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	
Weed Species Present							
White Top *(Cardaria draba)*	Infrequent	Infrequent		Infrequent	Infrequent	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Frequent	Infreq/Freq	Infreq/Freq	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	
Field Bindweed *(Convolvulus arvensis)*		Infrequent					
Leafy Spurge *(Euphorbia esula)*	Infrequent	Infrequent		Infrequent	Infrequent	Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*				Infrequent			
Dalmatian Toadflax *(Linaria dalmatica)*		Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Curly Dock *(Rumex crispus)*		Infrequent	Infrequent				
Vegetation Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 1, Area 7 (VM_132)

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION*							
Average Slope (percent)	0-15	0-15	0-15	0-15	0-15	0-15	0-15
Aspect	South	South	South	South	South	South	South
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)							
BMP INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None	None	None
Condition of Mulch	None	None	None	None	None	None	None
BMP Comments (See Comments Section)							
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**							
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS							
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	No (28%)	Yes	Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	TRAN	EST	EST	EST	EST	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	7	7	7	7
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No

Observed Species in Old Works Sub Area 1, Area 7 (VM_132) 2000-2014

Old Works Sub Area 1, Area 7 m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Crested Wheatgrass	*Agropyron cristatum*				x	x	x	x	x	x		x	x			x
Thickspike Wheatgrass	*Agropyron dasystachyum*		m	m	m	m	m	m	m	m	m	m	m	m	m	m
Tall Wheatgrass	*Agropyron elongatum*				x		x	x								
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Quackgrass	*Agropyron repens*							x								
Western Wheatgrass	*Agropyron smithii*					x		x			x	x	x	x	x	
Bluebunch Wheatgrass	*Agropyron spicatum*							x		x	x		x	x	x	x
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x	x		x	x	x				x	x	x	
Red Top	*Agrostis alba*	x	x	x	x	x	x	x			x	x	x	x	x	
Pussytoes	*Antennaria rosea*							x					x			x
Fringed Sagewort	*Artemisia frigida*		x	x												
Aster	*Aster adscendens*								x	x	x	x	x	x		x
Cicer Milkvetch	*Astragalus cicer*										x					
Milkvetch	*Astragalus sp.*										x		x		x	
Side Oats Grama	*Bouteloua curtipendula*												x			
Blue Grama	*Bouteloua gracilis*												x			
Smooth Brome	*Bromus inermis*		x	x	x	x	x	x	x	x	x	x	x	x	x	
Rubber Rabbitbrush	*Chrysothamnus nauseosus*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Rocky Mountain Bee Plant	*Cleome serrulata*		x				x	x								
Bastard Toadflax	*Comandra umbellata*	x	x					x				x		x		
Orchardgrass	*Dactylis glomerata*												x			
Great Basin Wildrye	*Elymus cinereus*	x	x	x	x	x	x	x	x	m	m	m	m	m	m	m
Mammoth Wildrye	*Elymus giganteus*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Russian Wildrye	*Elymus junceus*					x		x					x		x	
Willowherb	*Epilobium paniculatum*													x		
Sheep Fescue	*Festuca ovina*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bedstraw	*Galium aparine*		x							x						
Curlycup Gumweed	*Grindelia squarrosa*										x		x	x	x	
Broom Snakeweed	*Gutierrezia sarothrae*			x												
Foxtail Barley	*Hordeum jubatum*		x	x	x	x	x	x						x		
Poverty Sumpweed	*Iva axillaris*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Lewis's Flax	*Linum lewisii*		x										x	x		
Matrimony Vine	*Lycium halimifolium*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Machaeranthera	*Machaeranthera canescens*						x	x	x		x	x	x	x		x

Observed Species in Old Works Sub Area 1, Area 7 (VM_132) 2000-2014

Old Works Sub Area 1, Area 7 m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Alfalfa	*Medicago sativa*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
White Sweetclover	*Melilotus alba*							x			x	x	x	x	x	
Yellow Sweetclover	*Melilotus officinalis*							x			x	x	x	x	x	x
Yellow Evening Star	*Mentzelia laevicaulis*							x					x	x	x	
Indian Ricegrass	*Oryzopsis hymenoides*														x	
Beard Tongue	*Penstemon eriantherus*									x						x
Scorpion Weed	*Phacelia hastata*	x	x	x				x	x	x		x	x	x		x
Canada Bluegrass	*Poa compressa*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Woods Rose	*Rosa woodsii*			x												
Willowleaf Dock	*Rumex salicifolius*		x	x	x		x									
Wheat	*Triticum aestivum*		x	x												
UNDESIRABLE WEEDY SPECIES																
Wild Oats	*Avena sativa*					x	x									
Japanese Brome	*Bromus japonicus*			x	x								x			
Cheatgrass	*Bromus tectorum*	x	x	x	x	x	x	x	x	x	x		x	x	x	
Tansy Mustard	*Descurainia richardsonii*													x		
Annual Sunflower	*Helianthus annuus*										x			x		
Black Henbane	*Hyoscyamus niger*							x								
Russian Thistle	*Salsola iberica*		x	x	x											
Bladder Campion	*Silene latifolia*												x			
Campion	*Silene vulgaris*												x			
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x	x	x		x	x	x	x		x		x		x	
Hedge Mustard	*Sisymbrium loeselii*		x											x	x	
Common Dandelion	*Taraxacum officinale*			x	x			x	x	x	x	x	x	x	x	x
Salsify	*Tragopogon dubius*			x	x	x	x	x	x	x	x	x	x	x	x	x

Observed Species in Old Works Sub Area 1, Area 7 (VM_132) 2000-2014

Old Works Sub Area 1, Area 7 m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
NOXIOUS WEEDS																
White Top	*Cardaria draba*		x	x	x	x		x	x	I	I		I	I	I	I
Spotted Knapweed	*Centaurea maculosa*	x	x	x	x	x	x	x	x	I	F	I-F	I-F	I	I	I
Canada Thistle	*Cirsium arvense*	x	x	x	x	x		x	x	I	I	I	I	I	I	
Field Bindweed	*Convolvulus arvensis*										I					
Leafy Spurge	*Euphorbia esula*		x	x	x		x	x	x	I	I		I	I	I	I
Baby's Breath	*Gypsophila paniculata*			x	x		x	x	x				I			
Kochia	*Kochia scoparia*		x	x	x	x	x	x	x							
Dalmatian Toadflax	*Linaria dalmatica*										I	I	I	I	I	I
Curly Dock	*Rumex crispus*							x			I	I				
I=Infrequent; F=Frequent; C=Common; D=Dominant																

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Area 7 (VM_132) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	Area 7 includes a portion that was seeded in either the Fall of 1999 or Spring of 2000 (located at the east end of the parcel). The rest of the area was seeded several years ago. Newly seeded area. Currently dominated by wheat (from the mulch). Established species include alfalfa, perennial grass seedlings, Russian thistle, kochia, annual sunflower, tumbling hedge mustard. Overall vegetation cover is approximately 20 percent with approximately 5 percent attributable to perennial species. Bare soil is approximately 40 percent; litter cover is approximately 40 percent. (Note: There are also some newly seeded patches at the west end of Area 7). All newly seeded areas have enough perennial species established so that good stands of vegetation should develop. Older Reclaimed Portion of Area 7. Vegetation cover is approximately 30 percent; cover by bare soil is ± 5-10%; litter cover is ± 65-70%. There is enough spotted knapweed at N 46° 08’ 02.4”; W 112° 55’ 15.6” and the area just north of this location to spray. In the reclaimed area, use spot spraying. In the other area, a boom sprayer on a 4-wheeler could be used. There is a small stand of Canada thistle at N 46° 08’ 06.2”; W 112° 55’ 15.4” that needs to be spot sprayed (back pack sprayer or a wand sprayer on a 4-wheeler; do not use a boom sprayer at this location).	No obvious signs of erosion.	Riprap at N 46° 08’ 03.6”; W 112° 55’ 07.5” is in place.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Area 7 (VM_132) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2001	Newly seeded area. Fewer annuals and more perennials than in 2000. Major species include alfalfa (Medicago sativa), thickspike wheatgrass (Agropyron dasystachyum) and intermediate wheatgrass (Agropyron intermedium). Russian thistle (Salsola iberica) and kochia (Kochia scoparia) are still common but are mostly less than three inches tall. There is some regrowth of wheat from the mulch. Overall vegetation cover by perennial species is approximately 15-20 percent. Bare soil is approximately 20-30 percent; litter cover is approximately 40 percent. (Note: There are also some newly seeded patches at the west end of Area 7). All newly seeded areas have enough perennial species established so that good stands of vegetation should develop. Older Reclaimed Portion of Area 7. Vegetation cover is approximately 30-35 percent; cover by bare soil is approximately 5 percent; litter cover is approximately 65-70 percent and cover by rock is less than 5 percent. The portion of this area that extends into the golf course is doing well. Portion of Area 7 located at N46° 08’ 06.3”, W112° 55’ 15.6” is sparse with large bare areas and is also weedy. Vegetation may improve over time, however reseeding may be necessary. There is enough spotted knapweed at N 46° 08’ 02.4”; W 112° 55’ 15.6” and the area just north of this location to spray. In the reclaimed area, use spot spraying. In the other area, a boom sprayer on a 4-wheeler could be used. There is a small stand of Canada thistle at N 46° 08’ 06.2”; W 112° 55’ 15.4” that needs to be spot sprayed (back pack sprayer or a wand sprayer on a 4-wheeler; do not use a boom sprayer at this location).	No obvious signs of erosion.	Riprap at N 46° 08’ 03.6”; W 112° 55’ 07.5” is in place.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Area 7 (VM_132) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2002	Newly seeded area. Fewer annuals and more perennials than in 2001. Major species include alfalfa (Medicago sativa), thickspike wheatgrass (Agropyron dasystachyum) and intermediate wheatgrass (Agropyron intermedium). Russian thistle (Salsola iberica) and kochia (Kochia scoparia) are still present but are mostly less than three inches tall. Overall vegetation cover by perennial species is approximately 20-25 percent. Bare soil is approximately 10-20 percent; litter cover is approximately 50-60 percent. (Note: There are also some newly seeded patches at the west end of Area 7). All newly seeded areas have enough perennial species established so that good stands of vegetation should develop. Older Reclaimed Portion of Area 7. Vegetation cover is approximately 35 percent; cover by bare soil is approximately 5 percent; litter cover is approximately 65-70 percent and cover by rock is less than 5 percent. The portion of this area that extends into the golf course is doing well. Portion of Area 7 located at N46° 08' 06.3", W112° 55' 15.6" is sparse with large bare areas and is also weedy. Vegetation may improve over time, however reseeding may be necessary. There is enough spotted knapweed at N 46° 08' 02.4"; W 112° 55' 15.6" and the area just north of this location to spray. In the reclaimed area, use spot spraying. In the other area, a boom sprayer on a 4-wheeler could be used. There is a small stand of Canada thistle at N 46° 08' 06.2"; W 112° 55' 15.4" that needs to be spot sprayed (back pack sprayer or a wand sprayer on a 4-wheeler; do not use a boom sprayer at this location).	No obvious signs of erosion.	Riprap at N 46° 08' 03.6"; W 112° 55' 07.5" is in place.	
2003	Other than some spot weed control, this area is doing very well. Overall, the site is similar to 2002. Site needs knapweed control on west end. Other vegetation comments are the same as for 2002.	No obvious signs of erosion.	Riprap at N 46° 08' 03.6"; W 112° 55' 07.5" is in place. Culvert at N46° 08' 03.4"; W112° 55' 07.4" is clear/clean.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Area 7 (VM_132) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2004	Other than some spot weed control, this area is doing very well. Overall, the site is similar to 2003. Continue weed control. Very few knapweed – spot spray. The entire area would benefit from fertilization. Newer area. Vegetation well developed. No longer any noticeable differences between the older and newer reclamation. Major species include alfalfa, thickspike wheatgrass and intermediate wheatgrass. After five years, there is little difference between the portion of the area seeded in 1999-2000 and the areas that were seeded earlier. The main difference is that alfalfa is very abundant on the 2000 area, but is mostly absent in the older area. Overall vegetation cover by perennial species is approximately 30-35 percent. Bare soil is approximately 10-20 percent; litter cover is approximately 60-70 percent. Russian thistle and kochia still occur, however individual plants are small and scattered. Older Reclaimed Portion of Area 7. Vegetation cover is approximately 35 percent; cover by bare soil is approximately 5 percent; litter cover is approximately 65-70 percent and cover by rock is less than 5 percent. The portion of this area that extends into the golf course is doing well. Portion of Area 7 located at N46° 08' 06.3", W112° 55' 15.6" (east of sediment basin) is sparse with large bare areas and is also weedy (some evidence of knapweed control, but still some present). Vegetation may improve over time, however reseeding may be necessary. In 2003 this area still had sparse vegetation cover and needs control for knapweed. Weed control at N 46° 08' 02.4"; W 112° 55' 15.6" has been effective and most of the knapweed is dead. Continue weed control in this general area. There is a small stand of Canada thistle at N 46° 08' 06.2"; W 112° 55' 15.4" that has been sprayed. Most of the thistles are dead.	No obvious signs of erosion.	Riprap at N 46° 08' 03.6"; W 112° 55' 07.5" is in place. Culvert at N46° 08' 03.4"; W112° 55' 07.4" is clear/clean.	Weeds were sprayed.
2005	Other than some spot weed control, this area is doing very well. Overall, the site is similar to 2004. Continue weed control. Knapweed more abundant than in 2004 – spot spray. The entire area would benefit from fertilization. • Continue weed control for knapweed (Spot Spray) – DO NOT SPRAY ALFALFA PLANTS OR RABBITBRUSH PLANTS • The Canada thistle occurs on the west end of the area where the slag was stockpiled. • Portion of Area 7 located at N46° 08' 06.3", W112° 55' 15.6" (east of sediment basin) is sparse with large bare areas and is also weedy (some evidence of knapweed control, but still some present). Vegetation may improve over time, however reseeding may be necessary. In 2005 this area still had sparse vegetation cover and needs control for knapweed.	No obvious signs of erosion.	Riprap at N 46° 08' 03.6"; W 112° 55' 07.5" is in place. Culvert at N46° 08' 03.4"; W112° 55' 07.4" is clear/clean.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Area 7 (VM_132) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2006	Other than some spot weed control, this area is doing very well. Overall, the site is similar to 2005. Continue weed control. Knapweed more abundant than in 2005 – spot spray. • Continue weed control for knapweed (Spot Spray) – DO NOT SPRAY ALFALFA PLANTS OR RABBITBRUSH PLANTS • The Canada thistle occurs on the west end of the area where the slag was stockpiled. • Portion of Area 7 located at N46° 08' 06.3", W112° 55' 15.6" (east of sediment basin) is sparse with large bare areas and is also weedy (some evidence of knapweed control, but still some present). Vegetation may improve over time, however reseeding may be necessary. In 2006 this area still had sparse vegetation cover and needs control for knapweed. Possibly a few more perennial grasses in 2006. • Spot spray knapweed in the sediment basins.	No obvious signs of erosion.		
2007	Other than some spot weed control, this area is doing very well. Overall, the site is similar to 2006. Continue weed control. • Weeds (knapweed) were sprayed in this area in late May or early June. The plants that were sprayed are dying, but many plants were over looked or missed. Approximately 10-20% of the knapweed plants were missed. Also, some of the alfalfa was sprayed, probably because of mis-identification. • Continue weed control for knapweed (Spot Spray) – DO NOT SPRAY ALFALFA PLANTS OR RABBITBRUSH PLANTS • Portion of Area 7 located at N46° 08' 06.3", W112° 55' 15.6" (east of sediment basin) is sparse with large bare areas and is also weedy (some evidence of knapweed control, but still some present). Vegetation may improve over time, however reseeding may be necessary. In 2007 this area still had sparse vegetation cover, but it appeared that the cover by perennial grasses has increased. Alos, knapweed has been sprayed. There are still quite few knapweed plants that were missed. • Spot spray knapweed in the sediment basins.	No obvious signs of erosion.	No BMP's installed in this area.	Weed Control
2008	Other than some spot weed control, this area is doing very well. Overall, the site is similar to 2007. Weeds (knapweed) were sprayed in this area in late May or early June. The plants that were sprayed are dying, but many plants were over looked or missed. Approximately 10-20% of the knapweed plants were missed. • Continue weed control for knapweed (Spot Spray) – DO NOT SPRAY ALFALFA PLANTS OR RABBITBRUSH PLANTS • Portion of Area 7 located at N46° 08' 06.3", W112° 55' 15.6" (east of sediment basin) is sparse with large bare areas and is also weedy (some evidence of knapweed control, but still some present). Vegetation may improve over time, however reseeding may be necessary. In 2008 this area still had sparse vegetation cover, but it appeared that the cover by perennial grasses has increased. Also, knapweed has been sprayed. There are still quite few knapweed plants that were missed. • Spot spray knapweed in the sediment basins.	No obvious signs of erosion.	No BMP's installed in this area.	Weed Control

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Area 7 (VM_132) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2009	• Other than some spot weed control, this area is doing very well. Overall, the site is similar to 2008. • Weeds (knapweed) were sprayed in this area apparently early in the growing season. Most of the knapweed was missed because it was not in flower. Many of the alfalfa plants were sprayed. • Continue weed control for knapweed (Spot Spray) – DO NOT SPRAY ALFALFA PLANTS OR RABBITBRUSH PLANTS • Spot spray knapweed in the sediment basins. • This area was included in the 2009 Compliance Determination Request Report submitted to EPA. • As supporting data for Compliance Determination, a single vegetation transect was sampled in 2009. Cover by acceptable species along the transect was 36%.	No obvious signs of erosion. There is a small amount of sediment at the base of the historical area slope that has eroded from the adjacent area	No BMP's installed in this area.	
2010	• Other than some spot weed control, this area is doing very well. Overall, the site is similar to 2009. • Weeds (knapweed) were sprayed in this area apparently early in the growing season. Many of the knapweed plants were missed because it was not in flower. Also, some of the Canada thistle plants had been sprayed. Weed control for these species should be continued, but DO NOT SPRAY ALFALFA PLANTS OR RABBITBRUSH PLANTS • Spot spray knapweed in the sediment basins. • There was better targeting of the weed species in 2010, but many of the spotted knapweed plants, especially the basal rosettes were missed. Consider spraying later in the season when this species is in flower so that location and identification would be easier. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring.	No obvious signs of erosion. There is a small amount of sediment at the base of the historical area slope that has eroded from the adjacent area	No BMP's installed in this area.	
2011	• Other than some spot weed control, this area is doing very well. Overall, the site is similar to 2010. • No weed spraying was noted at the time of evaluation in 2011. Weed control for both spotted knapweed and Canada thistle should be continued, but DO NOT SPRAY ALFALFA PLANTS OR RABBITBRUSH PLANTS • Spot spray knapweed in the sediment basins. • Consider spraying later in the season when this species is in flower so that location and identification would be easier. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring.	No obvious signs of erosion.	No BMP's installed in this area.	
2012	• Other than some spot weed control, this area is doing very well. Overall, the site is similar to 2012. • This area was included in the 2009 Compliance Determination Report • Weeds were sprayed in 2012. Some knapweed was missed, but overall a successful, complete coverage. Continue in 2013. Fewer plants to spray than in 2012. • Some road work/gravel along the west edge adjacent to golf course. • Dalmatian toadflax should be searched for and sprayed before it expands.	No obvious signs of erosion.	No BMP's installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Area 7 (VM_132) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2013	• Other than some spot weed control, this area is doing very well. Overall, the site is similar to 2012. • This area was included in the 2009 Compliance Determination Report. In 2013, the standards are still being met. • Weeds were sprayed in 2012. Some knapweed was missed, but overall a successful, complete coverage. Continue in 2014. Fewer plants to spray than in 2012, but the spotted knapweed is increasing and needs to be controlled again. • Some road work/gravel along the west edge adjacent to golf course. • Dalmatian toadflax should be searched for and sprayed before it expands. It is still mostly localized to the sediment basin and area above the basin. This species is spreading and should be sprayed or pulled in 2014.	No obvious signs of erosion.	No BMP's installed in this area.	
2014	• Other than some spot weed control, this area is doing very well. • This area was included in the 2009 Compliance Determination Report. In 2014, the standards are still being met. Compliance Status: LTIM. • Weeds are increasing (particularly spotted knapweed) and need control in the next 1-2 years. • Some road work/gravel along the west edge adjacent to golf course. • Dalmatian toadflax should be searched for and sprayed before it expands. It is still mostly localized to the sediment basin and area above the basin. This species is spreading and should be sprayed or pulled in 2015. The sediment basin has many weeds (whitetop, Dalmatian toadflax, spotted knapweed, Canada thistle and leafy spurge) and could be aerially sprayed. • A new road was installed from the old landfill access road along the southern edge of the sediment basin to the edge of the golf course. A large area just to the north of the new road was also re-worked (photo 3).	No obvious signs of erosion.	No BMP's installed in this area.	

Transect Sampling Summary for Old Works Sub Area 1, Area 7 (VM_132)

Transects in Old Works Sub Area 1, Area 7	**Mean Cover (%)**			
	2006	**2007**	**2008**	**2009**
Number of Transects Sampled	1	1	1	1
Total Vegetation Cover (All Species)	42	32	30	36
Total Vegetation Cover (Acceptable Species)	42	32	28	36
Litter and Rock Combined	54	62	64	52
Bare Soil	4	6	6	12
Total Cover	96	94	94	88
Litter Cover	44	62	64	52
Rock Cover	10	0	0	0
Acceptable Species				
Agropyron dasystachyum	4		<1	2
Agropyron intermedium	8	26	10	8
Agropyron spicatum				<1
Astragalus sp.				<1
Bromus inermis			<1	<1
Chyrsothamnus nauseosus				<1
Comandra umbellata			<1	
Elymus cinereus	<1	6	<1	4
Elymus junceus	<1			
Festuca ovina		2		
Iva axillaris			<1	
Medicago sativa	26		10	20
Poa compressa	4			2
Undesirable Weedy Species				
Bromus japonicus			<1	
Bromus tectorum			<1	
Camelina microcarpa			<1	
Sisymbrium altissimum			<1	<1
Noxious Weeds				
Cardaria draba			<1	
Centaurea maculosa	<1		2	<1
Euphorbia esula				<1

Site Aerial Photo for Old Works Sub Area 1, Area 7 (VM_132)

•1 Photo Location Point

Old Works Sub Area 1, Area 7 (VM_132)

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1, Area 7	**PHOTO LOCATION 2 - Old Works Sub Area 1, Area 7**
N46° 08’ 03.8”; W112° 54’ 45.8”, Looking West-Southwest	N46° 08’ 04.9”; W112° 54’ 58.5”, Looking West
July 10, 2000	July 10, 2000
July 3, 2001	July 3, 2001

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1, Area 7		**PHOTO LOCATION 2 - Old Works Sub Area 1, Area 7**
N46° 08’ 03.8”; W112° 54’ 45.8”, Looking West-Southwest		N46° 08’ 04.9”; W112° 54’ 58.5”, Looking West
July 19, 2002		July 19, 2002
July 21, 2003		July 21, 2003

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1, Area 7	**PHOTO LOCATION 2 - Old Works Sub Area 1, Area 7**
N46° 08’ 03.8”; W112° 54’ 45.8”, Looking West-Southwest	N46° 08’ 04.9”; W112° 54’ 58.5”, Looking West
August 12, 2004	August 12, 2004
August 19, 2005	August 19, 2005

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1, Area 7	**PHOTO LOCATION 2 - Old Works Sub Area 1, Area 7**
N46° 08’ 03.8”; W112° 54’ 45.8”, Looking West-Southwest	N46° 08’ 04.9”; W112° 54’ 58.5”, Looking West
July 20, 2006	July 20, 2006
June 12, 2007	June 12, 2007

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1, Area 7	**PHOTO LOCATION 2 - Old Works Sub Area 1, Area 7**
N46° 08’ 03.8”; W112° 54’ 45.8”, Looking West-Southwest	N46° 08’ 04.9”; W112° 54’ 58.5”, Looking West
June 16, 2008	June 16, 2008
August 19, 2009	August 19, 2009

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1, Area 7	**PHOTO LOCATION 2 - Old Works Sub Area 1, Area 7**
N46° 08’ 03.8”; W112° 54’ 45.8”, Looking West-Southwest	N46° 08’ 04.9”; W112° 54’ 58.5”, Looking West
August 6, 2010	August 6, 2010
August 3, 2011	August 3, 2011

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1, Area 7		**PHOTO LOCATION 2 - Old Works Sub Area 1, Area 7**
N46° 08’ 03.8”; W112° 54’ 45.8”, Looking West-Southwest		N46° 08’ 04.9”; W112° 54’ 58.5”, Looking West
August 23, 2012		August 23, 2012
August 4, 2013		August 4, 2013

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1, Area 7		**PHOTO LOCATION 2 - Old Works Sub Area 1, Area 7**
N46° 08’ 03.8”; W112° 54’ 45.8”, Looking West-Southwest		N46° 08’ 04.9”; W112° 54’ 58.5”, Looking West
June 18, 2014		June 18, 2014

Old Works Sub Area 1, Area 7 (VM_132) 2000-2014

The following photo was added in 2014 to show the disturbance at the west end of Sub-Area 1, Area 7

PHOTO LOCATION 1 - Old Works Sub Area 1, Area 7
N46° 08’ 01.3”; W112° 55’ 12.6”, looking northwest
June 18, 2014

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 1 Landfill (VM_133)

Old Works Sub-Area 1 Landfill (VM_133) 2015 -					
Year	**2015**				
Area (acres)	44.2				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/27/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	1				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	1				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	37				
Total Number of Acceptable Species	23				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*	Infreq/Freq				
Canada Thistle *(Cirsium arvense)*	Infrequent				
Field Bindweed *(Convolvulus arvensis)*					
Leafy Spurge *(Euphorbia esula)*	Infrequent				
Baby's Breath *(Gypsophila paniculata)*					
Dalmatian Toadflax *(Linaria dalmatica)*	Infrequent				
Curly Dock *(Rumex crispus)*	Infrequent				
Sow Thistle *(Sonchus arvensis)*	Infrequent				
Common Mullein *(Verbascum thapsus)*	Infrequent				
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 1 Landfill (VM_133)

Old Works Sub-Area 1 Landfill (VM_133) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	5-25%				
Aspect	S, SW				
Overall Recommendation	0				
Evidence of Soil Movement	Infreq; <3”				
Evidence of Surface Litter Movement	<5% Trans				
Evidence of Coarse Fragment Movement	<5% Trans				
Presence of Rills	Infreq; <2”				
Potential Instability	Saturated				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	Performing				
Condition of Grade Control Structures	Controlling				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	7				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub-Area 1 Landfill (VM_133) 2015-

Old Works Sub-Area 1 Landfill m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	x				
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Tall Wheatgrass	*Agropyron elongatum*					
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Western Wheatgrass	*Agropyron smithii*	x				
Slender Wheatgrass	*Agropyron trachycaulum*					
Red Top	*Agrostis alba*	x				
Pussytoes	*Antennaria rosea*	x				
Rockcress	*Arabis sp.*					
Aster	*Aster adscendens*	x				
White Aster	*Aster falcatus*					
Cicer Milkvetch	*Astragalus cicer*					
Milkvetch	*Astragalus sp.*					
Regar Meadow Brome	*Bromus biebersteinii*					
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Rocky Mountain Bee Plant	*Cleome serrulata*	x				
Bastard Toadflax	*Comandra umbellata*					
Great Basin Wildrye	*Elymus cinereus*	m				
Mammoth Wildrye	*Elymus giganteus*	x				
Willowherb	*Epilobium paniculatum*					
Scouring Rush	*Equisetum hyemale*	x				
Horsetail	*Equisetum laevigatum*					
Fleabane	*Erigeron lonchophyllus*					
Sheep Fescue	*Festuca ovina*	m				
Broom Snakeweed	*Gutierrezia sarothrae*	x				
Foxtail Barley	*Hordeum jubatum*	x				
Poverty Sumpweed	*Iva axillaris*					
Baltic Rush	*Juncus balticus*					
Rocky Mountain Juniper	*Juniperus scopulorum*	x				
Skeletonweed	*Lygodesmia juncea*					
Machaeranthera	*Machaeranthera canescens*	x				
Alfalfa	*Medicago sativa*	x				
White Sweetclover	*Melilotus alba*	x				
Yellow Sweetclover	*Melilotus officinalis*	x				
Yellow Evening Star	*Mentzelia laevicaulis*					
Indian Ricegrass	*Oryzopsis hymenoides*					
Scorpion Weed	*Phacelia hastata*					
Timothy	*Phleum pratense*					
Limber Pine	*Pinus flexilis*					
Canada Bluegrass	*Poa compressa*	x				
Kentucky Bluegrass	*Poa pratensis*	x				
Nuttall's Alkaligrass	*Puccinellia nuttalliana*					
Willowleaf Dock	*Rumex salicifolius*					
Coyote Willow	*Salix exigua*					
Willow	*Salix sp.*					
Common Cattail	*Typha latifolia*					

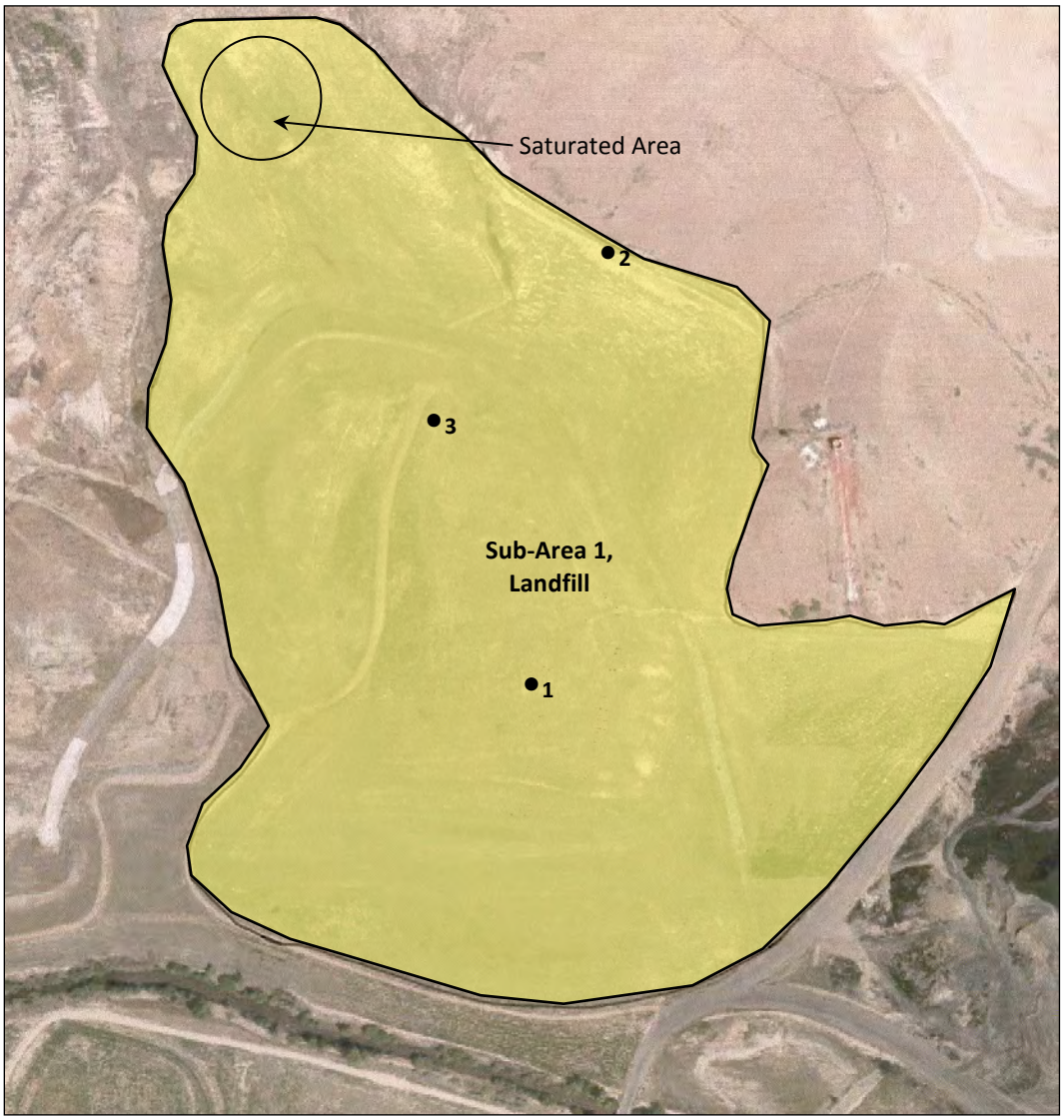
Observed Species in Old Works Sub-Area 1 Landfill (VM_133) 2015-

Old Works Sub-Area 1 Landfill m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
UNDESIRABLE WEEDY SPECIES						
Alyssum	*Alyssum desertorum*	x				
Wild Oats	*Avena sativa*					
Japanese Brome	*Bromus japonicus*					
Cheatgrass	*Bromus tectorum*	x				
Littleseed Falseflax	*Camelina microcarpa*					
Tansy Mustard	*Descurainia richardsonii*					
Filago	*Filago arvensis*	x				
Annual Sunflower	*Helianthus annuus*					
Prickly Lettuce	*Lactuca serriola*					
Russian Thistle	*Salsola iberica*	x				
Tumbling Hedge Mustard	*Sisymbrium altissimum*					
Hedge Mustard	*Sisymbrium loeselii*					
Common Dandelion	*Taraxacum officinale*	x				
Salsify	*Tragopogon dubius*	x				
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I				
Musk Thistle	*Carduus nutans*					
Spotted Knapweed	*Centaurea maculosa*	I-F				
Canada Thistle	*Cirsium arvense*	I				
Field Bindweed	*Convolvulus arvensis*					
Leafy Spurge	*Euphorbia esula*	I				
Baby's Breath	*Gypsophila paniculata*					
Kochia	*Kochia scoparia*					
Dalmatian Toadflax	*Linaria dalmatica*	I				
Curly Dock	*Rumex crispus*	I				
Sow Thistle	*Sonchus arvensis*	I				
Common Mullein	*Verbascum thapsus*	I				
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	23				
	Total Number of Species	37				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Landfill (VM_133) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• Overall, the vegetation in this area is good. Cover varies, but no significant bare areas. Intermediate wheatgrass has become the dominant species. Site conditions are similar to those observed in 2014. • The area needs weed control, particularly for spotted knapweed. • Spot spray knapweed (and other weeds) – DO NOT SPRAY THE ALFALFA OR RABBITBRUSH PLANTS. Although past weed control has been very successful, the spotted knapweed is increasing again and more weed control work is needed • Weed control was conducted in this area (at least the upper slope) after the evaluation date in 2015. Weed abundance categories represent pre-control observations. Evaluate weed status in 2016. • This area was included in the 2009 Compliance Determination Report. In 2015, the standards are still being met. Compliance Status: LTIM.	Site is stable. Some bare areas associated with upper southwest facing slope and old dozer basins. BLM Score is 7.	No problems with BMPs in this area.	

Site Aerial Photograph of Old Works Sub-Area 1 Landfill (VM_133)



•1 Photo Location Point

Old Works Sub-Area 1 Landfill (VM_133)

Old Works Sub-Area 1 Landfill (VM_133) 2015-

PHOTO LOCATION 1 - Old Works Sub-Area 1 Landfill		**PHOTO LOCATION 2 - Old Works Sub-Area 1 Landfill**
N46° 08’ 09.2”; W112° 54’ 51.2”, looking Northeast		N46° 08’ 17.2”; W112° 54’ 44.5” looking Southwest
July 27, 2015		July 27, 2015

PHOTO LOCATION 3 - Old Works Sub-Area 1 Landfill

N46° 08’ 15.1”; W112° 54’ 52.1”, looking South

July 27, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 1, Landfill (VM_133)

Old Works Sub Area 1, Landfill (VM_133) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
Area (acres)	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner								
Inspection Date	7/10/00	7/3/01	7/20/02	7/21/03	8/12/04	8/19/05	8/15/06	6/12/07
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK	WK	WK	WK	WK	WK, CH	WK
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo								
Site Aerial Photo Follows the Transect Summary Table								
INSPECTION SUMMARY*								
Vegetation Inspection						1	1	1
Erosion Inspection						0	0	0
Stormwater BMP Inspection						0	0	0
VEGETATION INSPECTION*								
Overall Recommendation						1	1	1
Estimated Canopy Coverage	15-25%	25-35%	>35%	>35%	25-35%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation						Moderate	Moderate	Moderate
Evidence of Reproduction						Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	10	20	27	25	33	32	35	31
Total Number of Acceptable Species	7	14	20	17	19	20	21	21
Ocular Estimate of Extent of Bare Areas						<1-5%	<1-5%	<1-5%
Weed Species Present								
White Top *(Cardaria draba)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*		Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*			Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Field Bindweed *(Convolvulus arvensis)*								
Leafy Spurge *(Euphorbia esula)*			Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*			Infrequent					
Dalmatian Toadflax *(Linaria dalmatica)*								
Curly Dock *(Rumex crispus)*		Infrequent		Infrequent	Infrequent	Infrequent	Infrequent	
Sow Thistle (*Sonchus arvensis*)								
Common Mullein (*Verbascum thapsus*)								
Vegetation Comments (See Comments Section)								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 1, Landfill (VM_133)

Old Works Sub Area 1, Landfill (VM_133) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
EROSION INSPECTION*								
Average Slope (percent)						5-25	5-25	5-25
Aspect						S, SW	S, SW	S, SW
Overall Recommendation						0	0	0
Evidence of Soil Movement	Infrequent	Infrequent	Infrequent	Infrequent	None	None	None	None
Evidence of Surface Litter Movement						None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None	None
Presence of Rills	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	None	None	None
Potential Instability	None	None	None	None	None	None	None	Saturated Area Present
Presence of Gullies	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)								
BMP INSPECTION*								
Overall Recommendation						0	0	0
Evidence of Check Dam Failure						None	None	None
Evidence of Sediment Accumulation in Check Dams						None	None	None
Condition of Dozer Basins						Performing	Performing	Performing
Condition of Grade Control Structures						Controlling	Controlling	Controlling
Evidence of Brush Barrier Failure or Movement						None	None	None
Condition of Mulch						None	None	None
BMP Comments (See Comments Section)								
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**								
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS								
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	No	No	Yes	Yes	Yes	Yes	Yes (30%)	Yes (33%)
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST	EST	EST	EST	EST	EST	TRAN	TRAN
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	<45	<45	<45	<45	<45
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 1, Landfill (VM_133)

Old Works Sub Area 1, Landfill (VM_133) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	44.2	44.2	44.2	44.2	44.2	44.2	44.2
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner							
Inspection Date	6/16/08	8/20/09	8/6/10	8/3/11	8/23/12	8/4/13	6/18/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK, PF	WK, KL	WK, KL	WK,HK, CS	WK,HK, CS	WK,HK, CS	WK,HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo							
Site Aerial Photo Follows the Transect Summary Table							
INSPECTION SUMMARY*							
Vegetation Inspection	1	1	1	1	0	0	0
Erosion Inspection	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0
VEGETATION INSPECTION*							
Overall Recommendation	1	1	1	1	0	0	0
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	36	44	34	51	35	36	29
Total Number of Acceptable Species	24	30	24	33	23	23	19
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present							
White Top *(Cardaria draba)*	Infrequent	Infrequent		Infrequent	Infrequent	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Frequent	Infreq/Freq	Infreq/Freq	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Field Bindweed *(Convolvulus arvensis)*				Infrequent			
Leafy Spurge *(Euphorbia esula)*	Infrequent	Infrequent	Infrequent	Infreq/Freq	Infrequent	Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*							
Dalmatian Toadflax *(Linaria dalmatica)*				Infrequent	Infrequent	Infrequent	Infrequent
Curly Dock *(Rumex crispus)*		Infrequent	Infrequent	Infrequent	Infrequent		
Sow Thistle (*Sonchus arvensis*)				Infrequent			
Common Mullein (*Verbascum thapsus*)				Infrequent			
Vegetation Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 1, Area 7 (VM_133)

Old Works Sub Area 1, Landfill (VM_133) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION*							
Average Slope (percent)	5-25	5-25	5-25	5-25	5-25	5-25	5-25
Aspect	S, SW	S, SW	S, SW	S, SW	S, SW	S, SW	S, SW
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Soil Movement	None	Infreq <3"	Infreq <3"	Infreq <3"	Infreq <3"	Infreq <3"	Infreq <3"
Evidence of Surface Litter Movement	None	<5% Trans	<5% Trans	<5% Trans	<5% Trans	<5% Trans	<5% Trans
Evidence of Coarse Fragment Movement	None	<5% Trans	<5% Trans	<5% Trans	<5% Trans	<5% Trans	<5% Trans
Presence of Rills	None	Infreq <2"	Infreq <2"	Infreq <2"	Infreq <2"	Infreq <2"	Infreq <2"
Potential Instability	Saturated Area Present	Saturated Area Present	Saturated Area Present	Saturated Area Present	Saturated Area Present	Saturated Area Present	Saturated Area Present
Presence of Gullies	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)							
BMP INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None	None	None
Condition of Dozer Basins	Performing	Performing	Performing	Performing	Performing	Performing	Performing
Condition of Grade Control Structures	Controlling	Controlling	Controlling	Controlling	Controlling	Controlling	Controlling
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None	None	None
Condition of Mulch	None	None	None	None	None	None	None
BMP Comments (See Comments Section)							
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**							
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS							
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes (30%)	Yes	Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	TRAN	EST	EST	EST	EST	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	<45	<45	<45	<45
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No

Observed Species in Old Works Sub Area 1, Landfill (VM_133) 2000-2014

Old Works Sub Area 1, Landfill m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Tall Wheatgrass	*Agropyron elongatum*						x				x					
Intermediate Wheatgrass	*Agropyron intermedium*		m	m	m	m	m	m	m	m	m	m	m	m	m	m
Western Wheatgrass	*Agropyron smithii*			x		x	x	x	x	x	x	x	x	x	x	x
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x		x			x	x			x	x		
Red Top	*Agrostis alba*	x	x	x	x	x	x	x		x	x	x	x	x	x	x
Pussytoes	*Antennaria rosea*								x		x		x			x
Rockcress	*Arabis sp.*															x
Aster	*Aster adscendens*			x	x	x	x	x		x	x	x	x	x	x	x
White Aster	*Aster falcatus*												x			
Cicer Milkvetch	*Astragalus cicer*								x							
Milkvetch	*Astragalus sp.*												x			
Regar Meadow Brome	*Bromus biebersteinii*			x						x	x					
Smooth Brome	*Bromus inermis*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x	x		x	x	x	x	x	x	x	x	x	x	x	x
Bastard Toadflax	*Comandra umbellata*														x	
Great Basin Wildrye	*Elymus cinereus*		x	x	x	x	x	x	x	m	m	m	m	m	m	m
Mammoth Wildrye	*Elymus giganteus*		x	x	x	x		x	x	x	x	x	x		x	x
Willowherb	*Epilobium paniculatum*														x	
Scouring Rush	*Equisetum hyemale*								x	x	x					
Horsetail	*Equisetum laevigatum*												x	x	x	
Fleabane	*Erigeron lonchophyllus*										x		x	x	x	
Sheep Fescue	*Festuca ovina*		m	m	m	m	m	m	m	m	m	m	m	m	m	m
Broom Snakeweed	*Gutierrezia sarothrae*							x			x					
Foxtail Barley	*Hordeum jubatum*	x	x	x	x	x	x				x	x	x	x	x	
Poverty Sumpweed	*Iva axillaris*			x				x				x	x			x
Baltic Rush	*Juncus balticus*								x	x	x	x				
Skeletonweed	*Lygodesmia juncea*												x			
Machaeranthera	*Machaeranthera canescens*						x	x	x	x	x	x	x	x	x	x
Alfalfa	*Medicago sativa*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
White Sweetclover	*Melilotus alba*						x				x	x	x	x	x	
Yellow Sweetclover	*Melilotus officinalis*			x	x	x	x	x	x	x	x	x	x	x	x	x

Observed Species in Old Works Sub Area 1, Landfill (VM_133) 2000-2014

Old Works Sub Area 1, Landfill m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES (continued)																
Yellow Evening Star	*Mentzelia laevicaulis*		x	x	x	x		x			x	x	x			
Indian Ricegrass	*Oryzopsis hymenoides*			x	x	x	x	x	x	x	x	x	x			
Scorpion Weed	*Phacelia hastata*		x	x	x	x	x	x	x	x	x	x	x	x		x
Timothy	*Phleum pratense*			x			x									
Limber Pine	*Pinus flexilis*												x			
Canada Bluegrass	*Poa compressa*				x	x	x	x		x	x	x	x	x	x	
Kentucky Bluegrass	*Poa pratensis*							x		x	x				x	
Nutall's Alkaligrass	*Puccinellia nuttalliana*												x			
Willowleaf Dock	*Rumex salicifolius*														x	
Coyote Willow	*Salix exigua*								x	x	x	x	x	x		
Willow	*Salix sp.*												x	x		x
Common Cattail	*Typha latifolia*								x	x	x	x	x	x		
UNDESIRABLE WEEDY SPECIES																
Alyssum	*Alyssum desertorum*										x	x				
Wild Oats	*Avena sativa*					x		x								
Japanese Brome	*Bromus japonicus*					x		x					x	x		
Cheatgrass	*Bromus tectorum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Littleseed Falseflax	*Camelina microcarpa*					x				x			x			x
Tansy Mustard	*Descurainia richardsonii*														x	
Filago	*Filago arvensis*										x		x			
Annual Sunflower	*Helianthus annuus*					x	x							x	x	
Prickly Lettuce	*Lactuca serriola*					x	x	x	x	x	x	x	x		x	
Russian Thistle	*Salsola iberica*													x		
Tumbling Hedge Mustard	*Sisymbrium altissimum*		x		x	x	x	x	x	x	x	x	x		x	
Hedge Mustard	*Sisymbrium loeselii*									x	x					x
Common Dandelion	*Taraxacum officinale*	x	x	x		x	x	x	x	x	x	x	x	x	x	x
Salsify	*Tragopogon dubius*					x	x	x	x	x	x	x	x	x	x	x

Observed Species in Old Works Sub Area 1, Landfill (VM_133) 2000-2014

Old Works Sub Area 1, Landfill m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
NOXIOUS WEEDS																
White Top	*Cardaria draba*	x	x	x	x	x	x	x	x	I	I		I	I	I	I
Musk Thistle	*Carduus nutans*							x								
Spotted Knapweed	*Centaurea maculosa*		x	x	x	x	x	x	x	I	F	I-F	I-F	I	I	I
Canada Thistle	*Cirsium arvense*				x	x	x	x	x	I	I	I	I	I	I	I
Field Bindweed	*Convolvulus arvensis*												I			
Leafy Spurge	*Euphorbia esula*			x	x		x	x	x	I	I	I	I-F	I	I	I
Baby's Breath	*Gypsophila paniculata*			x												
Kochia	*Kochia scoparia*			x	x	x	x	x	x	I	I		I		I	
Dalmatian Toadflax	*Linaria dalmatica*												I	I	I	I
Curly Dock	*Rumex crispus*		x		x	x	x	x			I	I	I	I		
Sow Thistle	*Sonchus arvensis*												I			
Common Mullein	*Verbascum thapsus*												I			
I=Infrequent; F=Frequent; C=Common; D=Dominant																

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Landfill (VM_133) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	Patch of spotted knapweed at N 46° 08' 10.5"; W 112° 54' 49.4". A boom sprayer could be used since all of the alfalfa is already dead from previous herbicide application. Most of the alfalfa in this area is dead. Most likely as a result of weed control targeting spotted knapweed. Vegetation cover ranges from ± 20-25 percent; bare soil cover is ± 10 percent; litter cover is ± 60 percent; and rock cover is ± 10 percent. Overall, the vegetation is quite uniform. There are a few small bare patches on the east-facing slope of the drainage ditch.	A few small rills noted at N 46° 08' 14.5"; W 112° 54' 44.9" (steep west-facing slope located below the Old Works Stack No. 1 ruins. There are also some small rills on adjacent south-facing slope.	Riprap beginning at N 46° 08' 11.3"; W 112° 54' 45.1" and ending at N 46° 08' 07.0"; W 112° 54' 43.5" is in place. There is a small amount of sediment in the rocks at the upper end of the riprap channel.	
2001	Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Site could be fertilized to increase vegetation cover. Patch of spotted knapweed at N 46° 08' 10.5"; W 112° 54' 49.4". A boom sprayer could be used since all of the alfalfa is already dead from previous herbicide application. Most of the alfalfa in this area is dead. Most likely as a result of weed control targeting spotted knapweed. Vegetation cover ranges from approximately 25-30 percent; bare soil cover is 5-10 percent; litter cover is approximately 60-70 percent; and rock cover is 5-10 percent. Overall, the vegetation is quite uniform. There are a few small bare patches on the east-facing slope of the drainage ditch. The south and west facing slopes have less cover. Evidence of past rilling on parts of these slopes, but site seems to be more stable than in earlier years.	A few small rills noted at N 46° 08' 14.5"; W 112° 54' 44.9" (steep west-facing slope located below the Old Works Stack No. 1 ruins. There are also some small rills on adjacent south-facing slope.	Riprap beginning at N 46° 08' 11.3"; W 112° 54' 45.1" and ending at N 46° 08' 07.0"; W 112° 54' 43.5" is in place. There is a small amount of sediment in the rocks at the upper end of the riprap channel. Riprap at N46° 08' 17.1", W112° 54' 50.6" in place. A small amount of fine material on the surface of the rocks.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Landfill (VM_133) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2002	Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Site could be fertilized to increase vegetation cover. Intermediate wheatgrass is becoming the overwhelmingly dominant species. Patch of spotted knapweed at N 46° 08' 10.5"; W 112° 54' 49.4". A boom sprayer could be used since all of the alfalfa is already dead from previous herbicide application. Vegetation cover ranges from approximately 25-35 percent; bare soil cover is 5-10 percent; litter cover is approximately 60-70 percent; and rock cover is 5-10 percent. Overall, the vegetation is quite uniform. There are a few small bare patches on the east-facing slope of the drainage ditch. The south and west facing slopes have less cover. Evidence of past rilling on parts of these slopes, but site seems to be more stable than in earlier years.	A few small rills noted at N 46° 08' 14.5"; W 112° 54' 44.9" (steep west-facing slope located below the Old Works Stack No. 1 ruins. There are also some small rills on adjacent south-facing slope. These rills are old and appear to have developed before the vegetation became established. No new rills noted. Erosion is not really a problem on these slopes. Increased vegetation cover is reducing the tendency for these slopes to erode.	Riprap beginning at N 46° 08' 11.3"; W 112° 54' 45.1" and ending at N 46° 08' 07.0"; W 112° 54' 43.5" is in place. There is a small amount of sediment in the rocks at the upper end of the riprap channel. Riprap at N46° 08' 17.1", W112° 54' 50.6" in place. A small amount of fine material on the surface of the rocks.	
2003	Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Site could be fertilized to increase vegetation cover. Intermediate wheatgrass is becoming the overwhelmingly dominant species. Site conditions are similar to those observed in 2002. Any changes from 2002 are minor and subtle. Most of the alfalfa in this area is dead, however more live alfalfa plants were noted in 2003 suggesting that the plants that were not killed by herbicide application, may be increasing in abundance. Vegetation cover ranges from approximately 25-35 percent; bare soil cover is 5-10 percent; litter cover is approximately 60-70 percent; and rock cover is 5-10 percent. Overall, the vegetation is quite uniform. There are a few small bare patches on the east-facing slope of the drainage ditch. The south and west facing slopes have less cover. Evidence of past rilling on parts of these slopes, but site seems to be more stable than in earlier years. The bare areas on the southwest facing slope that can be seen from a distance are the faces of dozer basins that were installed on the slope.	A few small rills noted at N 46° 08' 14.5"; W 112° 54' 44.9" (steep west-facing slope located below the Old Works Stack No. 1 ruins. There are also some small rills on adjacent south-facing slope. These rills are old and appear to have developed before the vegetation became established. No new rills noted. Erosion is not really a problem on these slopes. Increased vegetation cover is reducing the tendency for these slopes to erode. In 2003, overall vegetation cover was somewhat greater than 2002.	Riprap beginning at N 46° 08' 11.3"; W 112° 54' 45.1" and ending at N 46° 08' 07.0"; W 112° 54' 43.5" is in place. There is a small amount of sediment in the rocks at the upper end of the riprap channel. Riprap at N46° 08' 17.1", W112° 54' 50.6" in place. A small amount of fine material on the surface of the rocks.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Landfill (VM_133) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2004	Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Site could be fertilized to increase vegetation cover. Intermediate wheatgrass is becoming the overwhelmingly dominant species. Site conditions are similar to those observed in 2003. Overall, no major management issues. All of the weeds are mostly widely scattered. Most of the alfalfa in this area is dead, however more live alfalfa plants were noted in 2003 suggesting that the plants that were not killed by herbicide application, may be increasing in abundance. Vegetation cover ranges from approximately 25-35 percent; bare soil cover is 5-10 percent; litter cover is approximately 60-70 percent; and rock cover is 5-10 percent. Overall, the vegetation is quite uniform. There are a few small bare patches on the east-facing slope of the drainage ditch. The south and west facing slopes have less cover. The bare areas on the southwest facing slope that can be seen from a distance are the faces of dozer basins that were installed on the slope.	A few small rills noted at N 46° 08' 14.5"; W 112° 54' 44.9" (steep west-facing slope located below the Old Works Stack No. 1 ruins. There are also some small rills on adjacent south-facing slope. These rills are old and appear to have developed before the vegetation became established. No new rills noted. Erosion is not really a problem on these slopes. Increased vegetation cover is reducing the tendency for these slopes to erode.	Riprap beginning at N 46° 08' 11.3"; W 112° 54' 45.1" and ending at N 46° 08' 07.0"; W 112° 54' 43.5" is in place. There is a small amount of sediment in the rocks at the upper end of the riprap channel. Channel is becoming vegetated. Riprap at N46° 08' 17.1", W112° 54' 50.6" in place. A small amount of fine material on the surface of the rocks.	
2005	Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Site could be fertilized to increase vegetation cover. Intermediate wheatgrass is becoming the overwhelmingly dominant species. Site conditions are similar to those observed in 2004. Overall, no major management issues other than weed control. • Fertilize the upper south and west-facing slopes to increase cover. • Spot spray knapweed (and other weeds) – DO NOT SPRAY THE ALFALFA OR RABBITBRUSH PLANTS. • Overall recommendation was given a "1" because of the need for weed control.	Site is stable. Some bare areas associated with upper southwest facing slope and old dozer basins. These appear to be stable. Rills noted in previous years are inactive.	Riprap beginning at N 46° 08' 11.3"; W 112° 54' 45.1" and ending at N 46° 08' 07.0"; W 112° 54' 43.5" is in place. There is a small amount of sediment in the rocks at the upper end of the riprap channel. Channel is becoming vegetated. Riprap at N46° 08' 17.1", W112° 54' 50.6" in place. A small amount of fine material on the surface of the rocks.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Landfill (VM_133) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2006	Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Site could be fertilized to increase vegetation cover. Intermediate wheatgrass is becoming the dominant species. Site conditions are similar to those observed in 2005. Overall, no major management issues other than weed control. • Fertilize the upper south and west-facing slopes to increase cover. • Spot spray knapweed (and other weeds) – DO NOT SPRAY THE ALFALFA OR RABBITBRUSH PLANTS. • Overall recommendation was given a "1" because of the need for weed control. • Because of a regional forest fire, the conditions were very smoky on the day of the evaluation. These conditions are reflected in the site photos.	Site is stable. Some bare areas associated with upper southwest facing slope and old dozer basins. These appear to be stable.	No problems with BMPs in this area.	
2007	Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Site could be fertilized to increase vegetation cover. Intermediate wheatgrass is becoming the dominant species. Site conditions are similar to those observed in 2006. Overall, no major management issues other than weed control. • Fertilize the upper south and west-facing slopes to increase cover. • Spot spray knapweed (and other weeds) – DO NOT SPRAY THE ALFALFA OR RABBITBRUSH PLANTS. • Knapweed is still present in this area, but it tends to be scattered. No large, dense patches. Most of this area has good vegetation development. • Faces and sides of dozer basins are still mostly bare. • Weed control has been conducted in this area. At least 20% of the knapweed plants were missed. Some of the alfalfa plants were sprayed possibly because of mis-identification. • Overall recommendation was given a "1" because of the need for weed control.	Site is stable. Some bare areas associated with upper southwest facing slope and old dozer basins. These appear to be stable. There is a small seep located in northwest corner of the area. This is not a new feature, but rather it is located in a portion of the area that had not been evaluated in previous years.	No problems with BMPs in this area.	Weed Control

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Landfill (VM_133) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2008	Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Site could be fertilized to increase vegetation cover. Intermediate wheatgrass is becoming the dominant species. Site conditions are similar to those observed in 2007. Overall, no major management issues other than weed control. • Fertilize the upper south and west-facing slopes to increase cover. • Spot spray knapweed (and other weeds) – DO NOT SPRAY THE ALFALFA OR RABBITBRUSH PLANTS. • Knapweed is still present in this area, but it tends to be scattered. No large, dense patches. Most of this area has good vegetation development. • Faces and sides of dozer basins are still mostly bare. • Weed control has been conducted in this area. At least 20% of the knapweed plants were missed. Some of the alfalfa plants were sprayed possibly because of mis-identification. • Overall recommendation was given a "1" because of the need for weed control.	Site is stable. Some bare areas associated with upper southwest facing slope and old dozer basins. These appear to be stable. There is a small seep located in northwest corner of the area. This is not a new feature, but rather it is located in a portion of the area that had not been evaluated prior to 2007.	No problems with BMPs in this area.	Weed Control
2009	• Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Site could be fertilized to increase vegetation cover. Intermediate wheatgrass is becoming the dominant species. Site conditions are similar to those observed in 2008. Overall, no major management issues other than weed control. • Fertilize the upper south and west-facing slopes to increase cover. This could help with possible erosion problems (This work could be done in association with other aerial applications). • Spot spray knapweed (and other weeds) – DO NOT SPRAY THE ALFALFA OR RABBITBRUSH PLANTS. • Knapweed is still present in this area, but it tends to be scattered. No large, dense patches. Most of this area has good vegetation development. Knapweed was sprayed early in the growing season, but at least 40% of the plants were missed. Need to continue control program. Do not drive on the remediated areas when the soils are moist. • Many of the alfalfa plants were sprayed possibly because of mis-identification. • This area was included in the 2009 Compliance Determination Request Report submitted to EPA.	Site is stable. Some bare areas associated with upper southwest facing slope and old dozer basins. A small amount of erosion and deposition was noted on the southwest facing slope in 2009. This apparently resulted from several intense thunderstorms that occurred in the area. There is a small seep located in northwest corner of the area. This is not a new feature, but rather it is located in a portion of the area that had not been evaluated prior to 2007.	No problems with BMPs in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Landfill (VM_133) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2010	• Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Site could be fertilized to increase vegetation cover. Intermediate wheatgrass is becoming the dominant species. Site conditions are similar to those observed in 2009. Somewhat higher cover values in 2010. Overall, no major management issues other than weed control. • Fertilize the upper south and west-facing slopes to increase cover. This could help with possible erosion problems (This work could be done in association with other aerial applications). • Spot spray knapweed (and other weeds) – DO NOT SPRAY THE ALFALFA OR RABBITBRUSH PLANTS. • Knapweed is still present in this area, but it tends to be scattered. No large, dense patches. Most of this area has good vegetation development. Knapweed was sprayed early in the growing season, but many of the plants were missed. Need to continue control program. Do not drive on the remediated areas when the soils are moist. • Many elk tracks were noted in the saturated area in the northwest part of the site. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring.	Site is stable. Some bare areas associated with upper southwest facing slope and old dozer basins. BLM Score not evaluated in 2010.	No problems with BMPs in this area.	
2011	• Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Site could be fertilized to increase vegetation cover. Intermediate wheatgrass is becoming the dominant species. Site conditions are similar to those observed in 2010. Overall, no major management issues other than weed control, particularly the south west facing slope. • Fertilize the upper south and west-facing slopes to increase cover. This could help with possible erosion problems (This work could be done in association with other aerial applications). • Spot spray knapweed (and other weeds) – DO NOT SPRAY THE ALFALFA OR RABBITBRUSH PLANTS. • Knapweed is becoming more abundant in the area. Most of this area has good vegetation development. Do not drive on the remediated areas when the soils are moist. • Many elk tracks were noted in the saturated area in the northwest part of the site. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring.	Site is stable. Some bare areas associated with upper southwest facing slope and old dozer basins. BLM Score not evaluated in 2011. Flow patterns on SW facing slope.	No problems with BMPs in this area.	

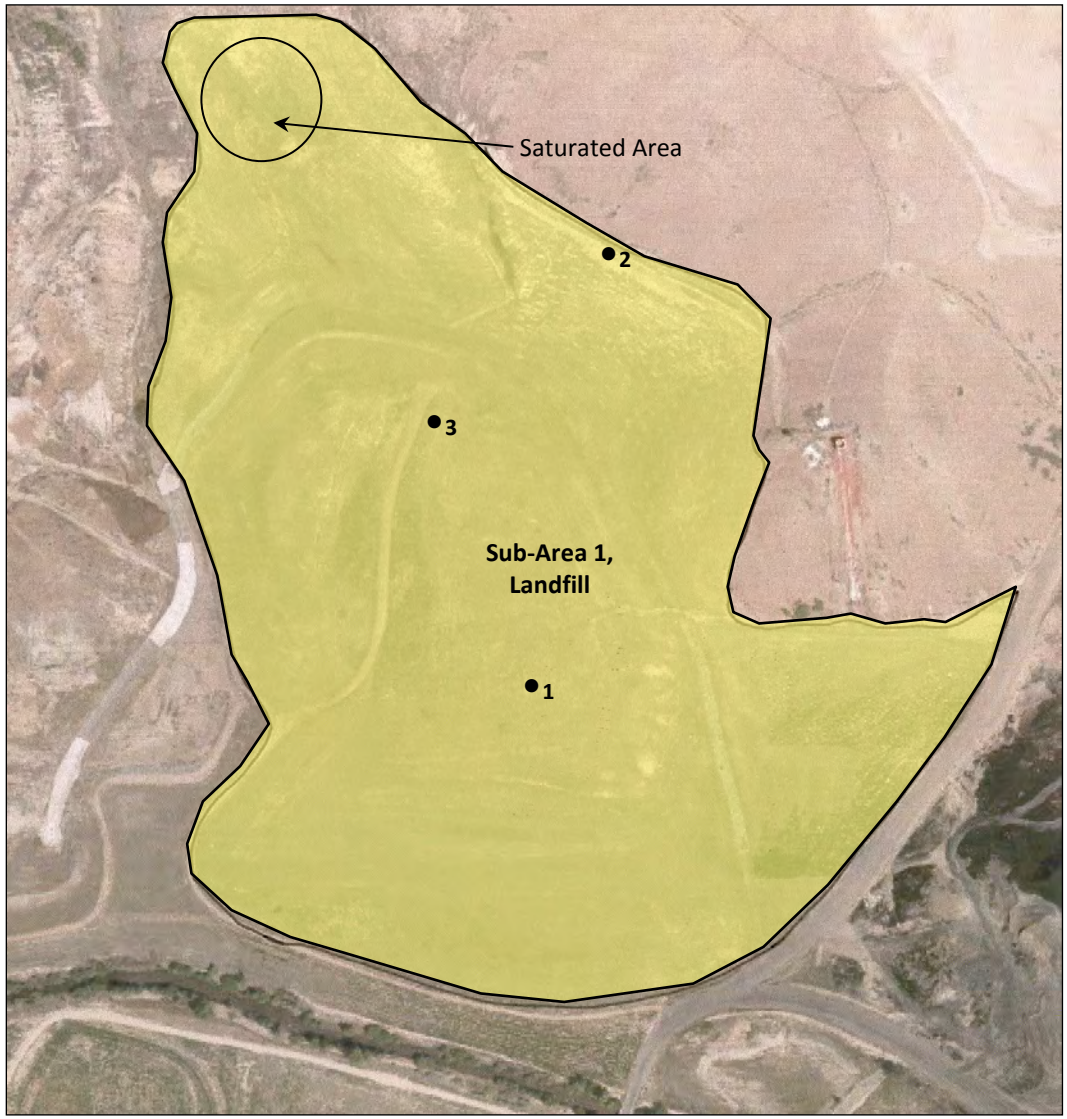
Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 1 Landfill (VM_133) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2012	• Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Intermediate wheatgrass is becoming the dominant species. Site conditions are similar to those observed in 2011. Overall, no major management issues other than weed control. • Spot spray knapweed (and other weeds) – DO NOT SPRAY THE ALFALFA OR RABBITBRUSH PLANTS. • Many elk tracks were noted in the saturated area in the northwest part of the site. • This area was included in the 2009 Compliance Determination Report. In 2012, the standards are still being met.	Site is stable. Some bare areas associated with upper southwest facing slope and old dozer basins. BLM Score in 2012 estimate to be <45.	No problems with BMPs in this area.	
2013	• Overall the vegetation in this area is good. Cover varies, but no significant bare areas. Intermediate wheatgrass is becoming the dominant species. Site conditions are similar to those observed in 2012. Overall, no major management issues other than weed control. • Spot spray knapweed (and other weeds) – DO NOT SPRAY THE ALFALFA OR RABBITBRUSH PLANTS. Although past weed control has been very successful, the spotted knapweed is increasing again and more weed control work is needed in the next 1-2 years. • Many elk tracks were noted in the saturated area in the northwest part of the site. • This area was included in the 2009 Compliance Determination Report. In 2013, the standards are still being met.	Site is stable. Some bare areas associated with upper southwest facing slope and old dozer basins. BLM Score in 2012 estimate to be <45.	No problems with BMPs in this area.	
2014	• Overall, the vegetation in this area is good. Cover varies, but no significant bare areas. Intermediate wheatgrass is becoming the dominant species. Site conditions are similar to those observed in 2013. There are no major management issues other than weed control (especially whitetop and spotted knapweed). • Spot spray knapweed (and other weeds) – DO NOT SPRAY THE ALFALFA OR RABBITBRUSH PLANTS. Although past weed control has been very successful, the spotted knapweed is increasing again and more weed control work is needed in the next 1-2 years. • This area was included in the 2009 Compliance Determination Report. In 2014, the standards are still being met. Compliance Status: LTIM.	Site is stable. Some bare areas associated with upper southwest facing slope and old dozer basins. BLM Score in 2012 estimate to be <45.	No problems with BMPs in this area.	

Transect Sampling Summary for Old Works Sub Area 1, Landfill (VM_133)

Transects in Old Works Sub Area 1, Landfill	Mean Cover (%)			Frequency (%)		
	2006	**2007**	**2008**	**2006**	**2007**	**2008**
Number of Transects Sampled	1	2	2	1	2	2
Total Vegetation Cover (All Species)	30	34	30			
Total Vegetation Cover (Acceptable Species)	30	33	30			
Litter and Rock Combined	64	62	67			
Bare Soil	6	4	3			
Total Cover	94	96	97			
Litter Cover	60	56	62			
Rock Cover	4	6	5			
Agropyron cristatum	<0.1		1	NA		50
Agropyron dasystachyum	6	1	5	NA	50	100
Agropyron intermedium	14	17	10	NA	100	100
Agropyron smithii	<0.1		<0.1	NA		50
Antennaria rosea			<0.1			50
Bromus japonicus (weedy species)			<0.1			50
Bromus tectorum (weedy species)			<0.1			100
Centaurea maculosa (noxious weed)			<0.1			100
Chrysothamnus nauseosus	<0.1		<0.1	NA		50
Cirsium arvense (noxious weed)		1			50	
Elymus cinereus	<0.1	1	<0.1	NA	50	100
Festuca ovina	10	13	7	NA	100	100
Machaeranthera canescens			<0.1			50
Medicago sativa		1	4		50	100
Melilotus officinalis	<0.1		3	NA		100
Mosses			<0.1			50
Taraxacum officinale (weedy species)			<0.1			100
Tragopogon dubius (weedy species)			<0.1			50

Site Aerial Photo for Old Works Sub Area 1, Landfill (VM_133)



•**1** Photo Location Point

Old Works Sub Area 1, Landfill (VM_133)

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1 Landfill		**PHOTO LOCATION 2 - Old Works Sub Area 1 Landfill**
N46° 08’ 09.3”; W112° 54’ 51.5”, Looking Northeast		N46° 08’ 17.2”; W112° 54’ 44.5”, Looking South
July 10, 2000		July 10, 2000
July 3, 2001		July 3, 2001

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1 Landfill		**PHOTO LOCATION 2 - Old Works Sub Area 1 Landfill**
N46° 08’ 09.3”; W112° 54’ 51.5”, Looking Northeast		N46° 08’ 17.2”; W112° 54’ 44.5”, Looking South
July 20, 2002		July 20, 2002
July 21, 2003		July 21, 2003

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1 Landfill	**PHOTO LOCATION 2 - Old Works Sub Area 1 Landfill**
N46° 08’ 09.3”; W112° 54’ 51.5”, Looking Northeast	N46° 08’ 17.2”; W112° 54’ 44.5”, Looking South
August 12, 2004	August 12, 2004
August 19, 2005	August 19, 2005

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1 Landfill	**PHOTO LOCATION 2 - Old Works Sub Area 1 Landfill**
N46° 08’ 09.3”; W112° 54’ 51.5”, Looking Northeast	N46° 08’ 17.2”; W112° 54’ 44.5”, Looking South
August 15, 2006	August 15, 2006
June 12, 2007	June 12, 2007

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1 Landfill	**PHOTO LOCATION 2 - Old Works Sub Area 1 Landfill**
N46° 08’ 09.3”; W112° 54’ 51.5”, Looking Northeast	N46° 08’ 17.2”; W112° 54’ 44.5”, Looking South
June 16, 2008	June 16, 2008
August 20, 2009	August 20, 2009

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1 Landfill		**PHOTO LOCATION 2 - Old Works Sub Area 1 Landfill**
N46° 08’ 09.3”; W112° 54’ 51.5”, Looking Northeast		N46° 08’ 17.2”; W112° 54’ 44.5”, Looking South
August 6, 2010		August 6, 2010
August 3, 2011		August 3, 2011

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1 Landfill	**PHOTO LOCATION 2 - Old Works Sub Area 1 Landfill**
N46° 08’ 09.3”; W112° 54’ 51.5”, Looking Northeast	N46° 08’ 17.2”; W112° 54’ 44.5”, Looking South
August 23, 2012	August 23, 2012
August 4, 2013	August 4, 2013

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 1 Landfill		**PHOTO LOCATION 2 - Old Works Sub Area 1 Landfill**
N46° 08’ 09.3”; W112° 54’ 51.5”, Looking Northeast		N46° 08’ 17.2”; W112° 54’ 44.5”, Looking South
June 18, 2014		June 18, 2014

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 3 - Old Works Sub Area 1 Landfill
N46° 08’ 15.1”; W112° 54’ 52.1”, Looking South
July 10, 2000
July 3, 2001

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 3 - Old Works Sub Area 1 Landfill

N46° 08’ 15.1”; W112° 54’ 52.1”, Looking South

July 20, 2002

July 21, 2003

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 3 - Old Works Sub Area 1 Landfill

N46° 08’ 15.1”; W112° 54’ 52.1”, Looking South

August 12, 2004

August 19, 2005

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 3 - Old Works Sub Area 1 Landfill

N46° 08’ 15.1”; W112° 54’ 52.1”, Looking South

August 15, 2006

June 12, 2007

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 3 - Old Works Sub Area 1 Landfill

N46° 08’ 15.1”; W112° 54’ 52.1”, Looking South

June 16, 2008

August 20, 2009

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 3 - Old Works Sub Area 1 Landfill

N46° 08’ 15.1”; W112° 54’ 52.1”, Looking South

August 6, 2010

August 3, 2011

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 3 - Old Works Sub Area 1 Landfill

N46° 08’ 15.1”; W112° 54’ 52.1”, Looking South

August 23, 2012

August 4, 2013

Old Works Sub Area 1, Landfill (VM_133) 2000-2014

PHOTO LOCATION 3 - Old Works Sub Area 1 Landfill
N46° 08’ 15.1”; W112° 54’ 52.1”, Looking South
June 18, 2014

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 2 North of Bowling Alley (VM_134)

Old Works Sub-Area 2 North of Bowling Alley (VM_134) 2015 -					
Year	**2015**				
Area (acres)	6.3				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/27/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	26				
Total Number of Acceptable Species	19				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*					
Leafy Spurge *(Euphorbia esula)*	Infrequent				
Baby's Breath *(Gypsophila paniculata)*					
Dalmatian Toadflax *(Linaria dalmatica)*	Infrequent				
Curly Dock *(Rumex crispus)*	Infrequent				
Common Mullein *(Verbascum thapsus)*					
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 2 North of Bowling Alley (VM_134)

Old Works Sub-Area 2 North of Bowling Alley (VM_134) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	5-10%				
Aspect	South				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	Controlling				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	6				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub-Area 2 North of Bowling Alley (VM_134) 2015-

Old Works Sub-Area 2 North of Bowling Alley m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Western Yarrow	*Achillea lanulosa*					
Crested Wheatgrass	*Agropyron cristatum*					
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Intermediate Wheatgrass	*Agropyron intermedium*	x				
Western Wheatgrass	*Agropyron smithii*					
Bluebunch Wheatgrass	*Agropyron spicatum*					
Slender Wheatgrass	*Agropyron trachycaulum*					
Red Top	*Agrostis alba*	x				
Pussytoes	*Antennaria rosea*					
Aster	*Aster adscendens*	x				
White Aster	*Aster falcatus*	x				
Cicer Milkvetch	*Astragalus cicer*					
Milkvetch	*Astragalus sp.*	x				
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	m				
Rabbitbrush	*Chrysothamnus viscidiflorus*					
Bastard Toadflax	*Comandra umbellata*					
Great Basin Wildrye	*Elymus cinereus*	m				
Mammoth Wildrye	*Elymus giganteus*					
Creeping Wildrye	*Elymus triticoides*					
Fireweed	*Epilobium angustifolium*					
Wallflower	*Erysimum repandum*					
Sheep Fescue	*Festuca ovina*	m				
Broom Snakeweed	*Gutierrezia sarothrae*					
Poverty Sumpweed	*Iva axillaris*	x				
Rocky Mountain Juniper	*Juniperus scopulorum*	x				
Lewis's Flax	*Linum lewisii*					
Machaeranthera	*Machaeranthera canescens*					
Alfalfa	*Medicago sativa*	x				
White Sweetclover	*Melilotus alba*					
Yellow Sweetclover	*Melilotus officinalis*	x				
Yellow Evening Star	*Mentzelia laevicaulis*	x				
Indian Ricegrass	*Oryzopsis hymenoides*	x				
Beardtongue	*Penstemon eriantherus*	x				
Phacelia	*Phacelia hastata*	x				
Big Bluegrass	*Poa ampla*	x				
Canada Bluegrass	*Poa compressa*					
Woods Rose	*Rosa woodsii*					
Missouri Goldenrod	*Solidago missouriensis*					

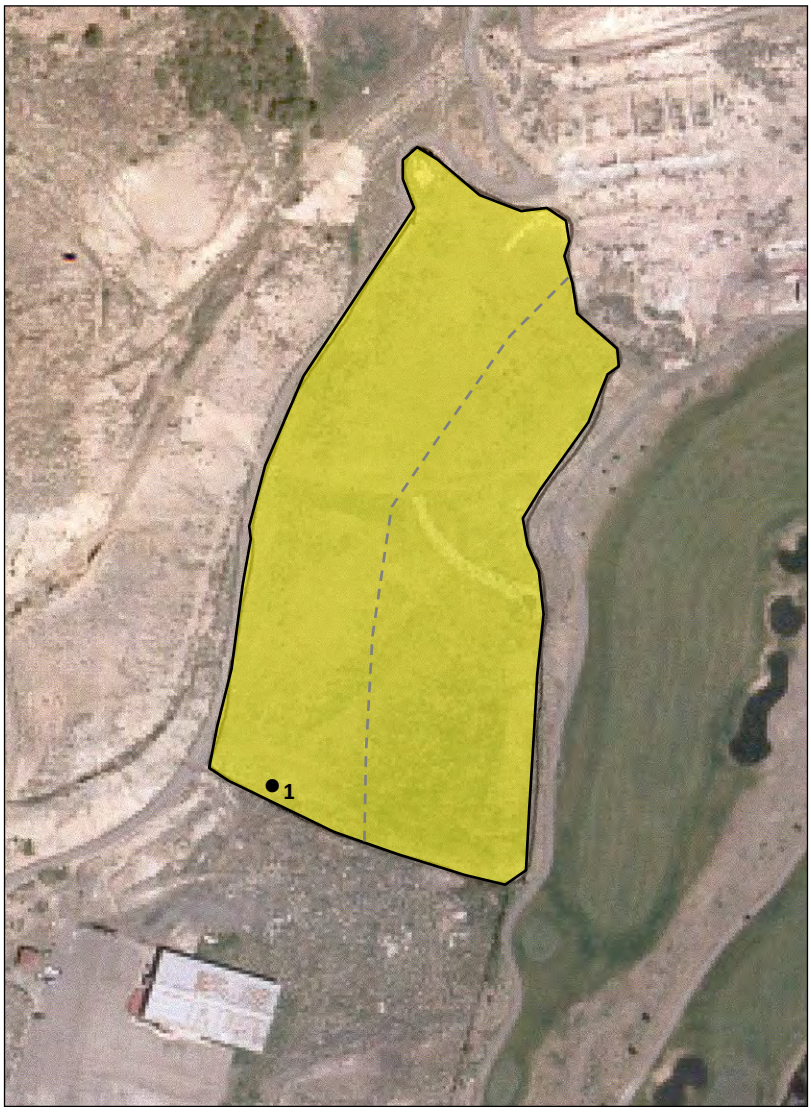
Observed Species in Old Works Sub-Area 2 North of Bowling Alley (VM_134)2015-

Old Works Sub-Area 2 North of Bowling Alley m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
UNDESIRABLE WEEDY SPECIES						
Japanese Brome	*Bromus japonicus*					
Annual Sunflower	*Helianthus annuus*					
Prickly Lettuce	*Lactuca serriola*					
Clasping Peppergrass	*Lepidium perfoliatum*					
Tumbling Hedge Mustard	*Sisymbrium altissimum*					
Common Dandelion	*Taraxacum officinale*	x				
Salsify	*Tragopogon dubius*	x				
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I				
Spotted Knapweed	*Centaurea maculosa*	I				
Canada Thistle	*Cirsium arvense*					
Leafy Spurge	*Euphorbia esula*	I				
Baby's Breath	*Gypsophila paniculata*					
Kochia	*Kochia scoparia*					
Dalmatian Toadflax	*Linaria dalmatica*	I				
Curly Dock	*Rumex crispus*	I				
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		19				
Total Number of Species		26				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 2 North of Bowling Alley (VM_134) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• Overall, the vegetation is doing very well. No problems other than weed control. • This area was included in the 2009 Compliance Determination Report. In 2015, the standards were still being met. Compliance Status: LTIM. • The portion on the east side of the fence has scattered knapweed throughout as well as leafy spurge, Dalmatian toadflax and whitetop in a patch just upslope from the rip-rap channel. This portion of the area needs weed control in the next 1-2 years. •	No obvious signs of erosion. The small subsidence area that was repaired in 2010 has partially collapsed again and may need additional fill in the future.	No problems with BMPs in this area.	

Site Aerial Photograph of Old Works Sub-Area 2 North of Bowling Alley (VM_134)



•1 Photo Location Point

Old Works Sub-Area 2 North of Bowling Alley (VM_134)

Old Works Sub-Area 2 North of Bowling Alley (VM_134) 2015-

PHOTO LOCATION 1 - Old Works Sub-Area 2 N. of Bowling Alley
N46° 08’ 05.6”; W112° 56’ 46.1”, looking Northeast
July 27, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 2, N. of Bowling Alley (VM_134)

Old Works Sub Area 2, North of Bowling Alley (VM_134) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
Area (acres)	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner								
Inspection Date	7/13/00	7/5/01	7/23/02	7/23/03	8/12/04	8/19/05	8/17/06	8/26/07
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK	WK	WK	WK	WK	WK, KL	WK, KL
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo								
Site Aerial Photo Follows the Transect Summary Table								
INSPECTION SUMMARY*								
Vegetation Inspection						1	1	1
Erosion Inspection						0	0	0
Stormwater BMP Inspection						0	0	0
VEGETATION INSPECTION*								
Overall Recommendation						1	1	1
Estimated Canopy Coverage	25-35%	25-35%	>35%	>35%	>35%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation						Moderate	Moderate	Moderate
Evidence of Reproduction						Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	18	22	25	19	20	23	24	27
Total Number of Acceptable Species	14	14	17	15	15	19	19	20
Ocular Estimate of Extent of Bare Areas						<1-5%	<1-5%	<1-5%
Weed Species Present								
White Top *(Cardaria draba)*				Infrequent	Infrequent			Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Frequent	Frequent	Frequent	Frequent	Frequent
Canada Thistle *(Cirsium arvense)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Leafy Spurge *(Euphorbia esula)*								
Baby's Breath *(Gypsophila paniculata)*			Infrequent	Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*			Infrequent					
Curly Dock *(Rumex crispus)*						Infrequent		
Vegetation Comments (See Comments Section)								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 2, N. of Bowling Alley (VM_134)

Old Works Sub Area 2, North of Bowling Alley (VM_134) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
EROSION INSPECTION*								
Average Slope (percent)						5-10	5-10	5-10
Aspect						South	South	South
Overall Recommendation						0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None	None
Evidence of Surface Litter Movement						None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None	None
Potential Instability	Subsidence	Subsidence	Subsidence	Subsidence	Subsidence	Subsidence	Subsidence	Subsidence
Presence of Gullies	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)								
BMP INSPECTION*								
Overall Recommendation						0	0	0
Evidence of Check Dam Failure						None	None	None
Evidence of Sediment Accumulation in Check Dams						None	None	None
Condition of Dozer Basins						None	None	None
Condition of Grade Control Structures						None	None	None
Evidence of Brush Barrier Failure or Movement						None	None	None
Condition of Mulch						None	None	None
BMP Comments (See Comments Section)								
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**								
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS								
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes (40%)	Yes (42%)
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST	EST	EST	EST	EST	EST	TRAN	TRAN
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	<45	<45	<45	<45	<45
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 2, N. of Bowling Alley (VM_134)

Old Works Sub Area 2, North of Bowling Alley (VM_134) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner							
Inspection Date	8/20/08	8/20/09	7/14/10	8/4/11	8/22/12	8/5/13	7/14/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK, KL	WK, KL	WK, KL	WK,HK, CS	WK,HK, CS	WK,HK, CS	WK,HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo							
Site Aerial Photo Follows the Transect Summary Table							
INSPECTION SUMMARY*							
Vegetation Inspection	1	1	1	1	0	0	0
Erosion Inspection	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0
VEGETATION INSPECTION*							
Overall Recommendation	1	1	1	1	0	0	0
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	30	21	22	30	27	24	23
Total Number of Acceptable Species	22	18	18	23	20	18	15
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present							
White Top *(Cardaria draba)*	Infrequent					Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Frequent	Infrequent/ Common	Infrequent/ Common	Infrequent/ Common	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*	Infrequent		Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Leafy Spurge *(Euphorbia esula)*				Infrequent		Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*							
Dalmatian Toadflax *(Linaria dalmatica)*				Infrequent		Infrequent	Infrequent
Curly Dock *(Rumex crispus)*				Infrequent	Infrequent		
Vegetation Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 2, N. of Bowling Alley (VM_134)

Old Works Sub Area 2, North of Bowling Alley (VM_134) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION*							
Average Slope (percent)	5-10	5-10	5-10	5-10	5-10	5-10	5-10
Aspect	South	South	South	South	South	South	South
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None
Potential Instability	Subsidence	Subsidence	Subsidence	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)							
BMP INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None	None	None
Condition of Mulch	None	None	None	None	None	None	None
BMP Comments (See Comments Section)							
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**							
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS							
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes (44%)	Yes	Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	TRAN	EST	EST	EST	EST	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	6	6	6	6
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No

Observed Species in Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

Old Works Sub Area 2, North of Bowling Alley

m = major species; x = other species

Common Name	Scientific Name	YEAR														
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
ACCEPTABLE SPECIES																
Western Yarrow	*Achillea lanulosa*												x	x	x	x
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x	x	x	x	x	x	x	x	x	x		
Thickspike Wheatgrass	*Agropyron dasystachyum*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m	m	m	m	m	m	m	x	x	x	x
Western Wheatgrass	*Agropyron smithii*		x	x				x	x				x			
Bluebunch Wheatgrass	*Agropyron spicatum*	x	x	x	x	x	x	x	x	x	x	x	x	x		
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x				x								
Red Top	*Agrostis alba*		x	x	x	x	x	x						x	x	
Pussytoes	*Antennaria rosea*												x			
Aster	*Aster adscendens*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
White Aster	*Aster falcatus*			x			x	x	x	x	x	x	x	x	x	x
Cicer Milkvetch	*Astragalus cicer*												x	x		
Smooth Brome	*Bromus inermis*			x	x		x	x	x	x	x	x	x	x	x	
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x	x	x	x	x	m	m	x	x	m	m	m	m	m	m
Rabbitbrush	*Chrysothamnus viscidiflorus*	x	x	x	x	x	x	x	x	x	x	x	x			
Bastard Toadflax	*Comandra umbellata*													x	x	
Great Basin Wildrye	*Elymus cinereus*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Mammoth Wildrye	*Elymus giganteus*	x											x			
Creeping Wildrye	*Elymus triticoides*								x							
Fireweed	*Epilobium angustifolium*						x	x		x			x			
Wallflower	*Erysimum repandum*											x				
Sheep Fescue	*Festuca ovina*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Broom Snakeweed	*Gutierrezia sarothrae*									x				x	x	x
Poverty Sumpweed	*Iva axillaris*	x		x	x	x	x	x	x	x	x	x	x	x	x	x
Rocky Mountain Juniper	*Juniperus scopulorum*					x				x						
Lewis's Flax	*Linum lewisii*						x		x	x	x	x			x	
Machaeranthera	*Machaeranthera canescens*										x			x	x	
Alfalfa	*Medicago sativa*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
White Sweetclover	*Melilotus alba*									x						
Yellow Sweetclover	*Melilotus officinalis*			x	x	x	x	x	x	x	x	x	m	x	x	x
Yellow Evening Star	*Mentzelia laevicaulis*								x							x
Phacelia	*Phacelia hastata*															x
Big Bluegrass	*Poa ampla*												x	x		
Canada Bluegrass	*Poa compressa*	x					x		x	x	x	x	x			x
Woods Rose	*Rosa woodsii*	x	x		x	x		x	x	x	x	x	x		x	
Missouri Goldenrod	*Solidago missouriensis*						x			x						

Observed Species in Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

Old Works Sub Area 2, North of Bowling Alley m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
UNDESIRABLE WEEDY SPECIES																
Japanese Brome	*Bromus japonicus*		x			x										
Annual Sunflower	*Helianthus annuus*		x						x					x		
Prickly Lettuce	*Lactuca serriola*		x	x												
Clasping Peppergrass	*Lepidium perfoliatum*		x							x				x		
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x		x				x	x	x						x
Common Dandelion	*Taraxacum officinale*		x	x	x		x	x		x	x	x	x	x	x	x
Salsify	*Tragopogon dubius*	x	x			x		x	x	x	x	x	x	x		x
NOXIOUS WEEDS																
White Top	*Cardaria draba*				x	x			x	I					I	I
Spotted Knapweed	*Centaurea maculosa*	x	x	x	x	x	x	x	x	x	I/C	I/C	I/C	I	I	I
Canada Thistle	*Cirsium arvense*	x	x	x		x	x	x	x	x		I	I	I	I	I
Leafy Spurge	*Euphorbia esula*												I		I	I
Baby's Breath	*Gypsophila paniculata*			x	x											
Kochia	*Kochia scoparia*			x												
Dalmatian Toadflax	*Linaria dalmatica*			x									I		I	I
Curly Dock	*Rumex crispus*						x		x	x			I	I		
I=Infrequent; F=Frequent; C=Common; D=Dominant																

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	A portion of this area was burned early in the 2000 growing season. Burning affected the amount of litter, but did not adversely affect the amount of vegetation cover. In the non-burned portion of this area, total vegetation cover was ± 25-30 percent; bare soil was ± 3 percent; rock cover was ± 3 percent and litter cover was ± 70-80 percent. In the burned portions of the area, total vegetation cover was ± 25-30 percent, bare soil was ± 15-20 percent, rock cover was ± 5-10 percent and litter cover was ± 30-50 percent.	A small subsidence hole (± 8 feet across) was noted at N 46° 08′ 09.8″; W 112° 56′ 42.1″. It is large enough that it should be filled.	Riprap beginning at N 46° 08′ 08.4″; W 112° 56′ 43.5″ and ending at N 46° 08′ 07.2″; W 112° 56′ 41.3″ is in place. Riprap at N 46° 08′ 11.1″; W 112° 56′ 42.2″ is in place.	
2001	Evidence of 2000 fire is mostly gone. Major difference is amount of litter. Weed control did not extend beyond the fence in the center of the area. Overall, the vegetation is doing very well. No problems other than weed control. Some of the desirable species (like rabbitbrush) were sprayed along with the knapweed. Apparently problems associated with species identification. For the area in general, total vegetation cover was approximately 30-35 percent; bare soil was approximately 3-5 percent; rock cover was approximately 3 percent and litter cover was approximately 70-80 percent.	A small subsidence hole (± 8 feet across) was noted at N 46° 08′ 09.8″; W 112° 56′ 42.1″. It is large enough that it should be filled.	Riprap beginning at N 46° 08′ 08.4″; W 112° 56′ 43.5″ and ending at N 46° 08′ 07.2″; W 112° 56′ 41.3″ is in place. Riprap at N 46° 08′ 11.1″; W 112° 56′ 42.2″ is in place.	
2002	Need to spray knapweed on east side of fence. Thorough spot spraying needed. Evidence of 2000 fire is mostly gone. Major difference is amount of litter. Weed control did not extend beyond the fence in the center of the area. Overall, the vegetation is doing very well. No problems other than weed control. Some of the desirable species (like rabbitbrush) were sprayed along with the knapweed. Apparently problems associated with species identification. It appears that some of the alfalfa was sprayed in 2002. For the area in general, total vegetation cover was approximately 35-40 percent; bare soil was approximately 3-5 percent; rock cover was approximately 3 percent and litter cover was approximately 70-80 percent.	A small subsidence hole (± 8 feet across) was noted at N 46° 08′ 09.8″; W 112° 56′ 42.1″. It is large enough that it should be filled. This hole was also noted in 2000. The hole appears to be a bit larger in 2002.	Riprap beginning at N 46° 08′ 08.4″; W 112° 56′ 43.5″ and ending at N 46° 08′ 07.2″; W 112° 56′ 41.3″ is in place. Riprap at N 46° 08′ 11.1″; W 112° 56′ 42.2″ is in place. Some sediment among the rocks. Riprap at N46° 08′ 11.9″; W112° 56′ 43.6″ is in place – culvert clean.	
2003	Need to spray knapweed on east side of fence. Thorough spot spraying needed. Evidence of 2000 fire is gone. Weed control in 2002 did not extend beyond the fence in the center of the area. Overall, the vegetation is doing very well. No problems other than weed control. Some of the desirable species (like rabbitbrush) were sprayed along with the knapweed. Apparently problems associated with species identification. The areas west of the fence were sprayed for weed control in 2003. For the area in general, total vegetation cover was approximately 30-35 percent; bare soil was approximately 5-10 percent; rock cover was approximately 3 percent and litter cover was approximately 70-80 percent. Vegetation cover is higher on the east side of the fence. On the west side of fence, most of the forbs were at least partly sprayed with herbicide.	A small subsidence hole (± 8 feet across, 5-6 feet deep) was noted at N 46° 08′ 09.8″; W 112° 56′ 42.1″. It is large enough that it should be filled. This hole was also noted in 2000. The hole appeared to be a bit larger in 2002. Still present in 2003.	Riprap beginning at N 46° 08′ 08.4″; W 112° 56′ 43.5″ and ending at N 46° 08′ 07.2″; W 112° 56′ 41.3″ is in place. Riprap at N 46° 08′ 11.1″; W 112° 56′ 42.2″ is in place. Some sediment among the rocks. Riprap at N46° 08′ 11.9″; W112° 56′ 43.6″ is in place – culvert clean.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2004	Need to spray knapweed on east side of fence. Thorough spot spraying needed. Very little knapweed on west side of fence. Weed control has not extended beyond the fence in the center of the area. Overall, the vegetation is doing very well. No problems other than weed control. For the area in general, total vegetation cover was approximately 30-35 percent; bare soil was approximately 5 percent; rock cover was approximately 3 percent and litter cover was approximately 70-80 percent. Vegetation cover is higher on the east side of the fence.	A small subsidence hole (± 8 feet across, 5-6 feet deep) was noted at N 46° 08' 09.8"; W 112° 56' 42.1". It is large enough that it should be filled. This hole was noted in 2000. The hole appeared to be a bit larger in 2002. Still present in 2004.	Riprap beginning at N 46° 08' 08.4"; W 112° 56' 43.5" and ending at N 46° 08' 07.2"; W 112° 56' 41.3" is in place. Riprap at N 46° 08' 11.1"; W 112° 56' 42.2" is in place. Some sediment among the rocks. Riprap at N46° 08' 11.9"; W112° 56' 43.6" is in place – a few cobbles in the culvert.	
2005	Weed control has not extended beyond the fence in the center of the area. Overall, the vegetation is doing very well. No problems other than weed control. • Weed problems are mostly on the east side of the fence.	A small subsidence hole (± 8 feet across, 5-6 feet deep) was noted at N 46° 08' 09.8"; W 112° 56' 42.1". It is large enough that it should be filled. This hole was noted in 2000. The hole appeared to be a bit larger in 2002. Still present in 2005. No obvious signs of erosion.	Riprap beginning at N 46° 08' 08.4"; W 112° 56' 43.5" and ending at N 46° 08' 07.2"; W 112° 56' 41.3" is in place. Riprap at N 46° 08' 11.1"; W 112° 56' 42.2" is in place. Some sediment among the rocks. Riprap at N46° 08' 11.9"; W112° 56' 43.6" is in place – a few cobbles in the culvert.	
2006	Weed control has not extended beyond the fence in the center of the area. Overall, the vegetation is doing very well. No problems other than weed control. • Weed problems are mostly on the east side of the fence. • Wet, rainy on day of evaluation.	A small subsidence hole (± 8 feet across, 5-6 feet deep) was noted at N 46° 08' 09.8"; W 112° 56' 42.1". It is large enough that it should be filled. This hole was noted in 2000. The hole appeared to be a bit larger in 2002. Still present in 2006. No obvious signs of erosion.	No problems with BMPs in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2007	Weed control has not extended beyond the fence in the center of the area. Overall, the vegetation is doing very well. No problems other than weed control. • Weed problems are mostly on the east side of the fence.	A small subsidence hole (± 8 feet across, 5-6 feet deep) was noted at N 46° 08' 09.8"; W 112° 56' 42.1". It is large enough that it should be filled. This hole was noted in 2000. The hole appeared to be a bit larger in 2002. Still present in 2007. No obvious signs of erosion.	No problems with BMPs in this area.	
2008	Weed control has not extended beyond the fence in the center of the area. Overall, the vegetation is doing very well. No problems other than weed control. • Weed problems are mostly on the east side of the fence. • Some golf course waste (grass clippings and grass plugs) dumped along the cart path – east side of the area east of the fence.	A small subsidence hole (± 8 feet across, 5-6 feet deep) was noted at N 46° 08' 09.8"; W 112° 56' 42.1". It is large enough that it should be filled. This hole was noted in 2000. The hole appeared to be a bit larger in 2002. Still present in 2008. See Photo. No obvious signs of erosion.	No problems with BMPs in this area.	
2009	• Weed control has not extended beyond the fence in the center of the area. Overall, the vegetation is doing very well. No problems other than weed control. Weed problems are mostly on the east side of the fence, where knapweed continues to increase. • This area was included in the 2009 Compliance Determination Request Report submitted to EPA.	A small subsidence hole (Approximately 8 feet across, 5-6 feet deep) was noted at N 46° 08' 09.8"; W 112° 56' 42.1". It is large enough that it should be filled. This hole was noted in 2000. The hole appeared to be a bit larger in 2002. Still present in 2009 (Photo 2). Essentially the same size as in the past. No obvious signs of erosion.	No problems with BMPs in this area.	

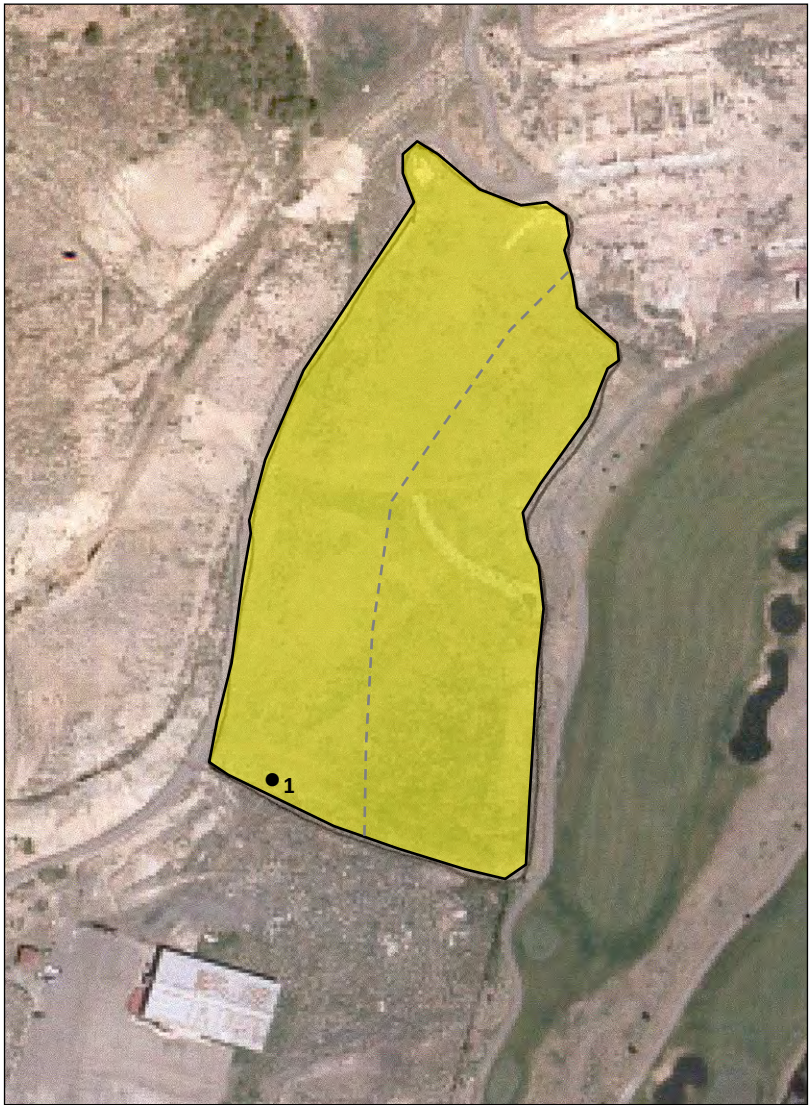
Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2010	• Weed control has not extended beyond the fence in the center of the area. Overall, the vegetation is doing very well. No problems other than weed control. Weed problems are mostly on the east side of the fence, where knapweed continues to increase. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring.	A small subsidence hole (Approximately 8 feet across, 5-6 feet deep) was noted at N 46° 08' 09.8"; W 112° 56' 42.1". It is large enough that it should be filled. This hole was noted in 2000. The hole appeared to be a bit larger in 2002. Still present in 2010 (Photo 2), but current plans call for filling the depression later in July, 2010. No obvious signs of erosion.	No problems with BMPs in this area.	
2011	• Weed control has not extended beyond the fence in the center of the area. Overall, the vegetation is doing very well. No problems other than weed control. Weed problems are mostly on the east side of the fence, where knapweed continues to increase. • The subsidence hole that had been noted previously was filled in 2010. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring.	The small subsidence hole that had been noted was filled in 2010. No obvious signs of erosion.	No problems with BMPs in this area.	
2012	• Overall, the vegetation is doing very well. No problems other than weed control. • This area was included in the 2009 Compliance Determination Report. In 2012, the standards were still being met. • The portion on the east side of the fence was mowed in 2012 (also sprayed for weed control). • Weeds were sprayed in 2012. Check and spot spray as necessary in 2013.	No obvious signs of erosion.	No problems with BMPs in this area.	
2013	• Overall, the vegetation is doing very well. No problems other than weed control. • This area was included in the 2009 Compliance Determination Report. In 2013, the standards were still being met. • The portion on the east side of the fence has scattered knapweed throughout as well as leafy spurge, Dalmatian toadflax and whitetop in a patch just upslope from the rip-rap channel. Weeds should be sprayed on the east side of the fence.	No obvious signs of erosion.	No problems with BMPs in this area.	
2014	• Overall, the vegetation is doing very well. No problems other than weed control. • This area was included in the 2009 Compliance Determination Report. In 2014, the standards were still being met. Compliance Status: LTIM. • The portion on the east side of the fence has scattered knapweed throughout as well as leafy spurge, Dalmatian toadflax and whitetop in a patch just upslope from the rip-rap channel. These appear to have been sprayed. Continue weed control on the east side of the fence.	No obvious signs of erosion.	No problems with BMPs in this area.	

Transect Sampling Summary for Old Works Sub Area 2, N. of Bowling Alley (VM_134)

Transects in Old Works Sub Area 2, North of Bowling Alley	Mean Cover (%)			Frequency (%)		
	2006	**2007**	**2008**	**2006**	**2007**	**2008**
Number of Transects Sampled	1	1	1	1	1	1
Total Vegetation Cover (All Species)	40	42	44			
Total Vegetation Cover (Acceptable Species)	40	42	44			
Litter and Rock Combined	52	56	50			
Bare Soil	8	2	6			
Total Cover	92	98	94			
Litter Cover	50	54	48			
Rock Cover	2	2	2			
Acceptable Species						
Agropyron cristatum	<0.1	2		NA	NA	
Agropyron dasystachyum	2			NA		
Agropyron intermedium	8	4	6	NA	NA	NA
Agropyron smithii	2			NA		
Agropyron spicatum	<0.1			NA		
Aster adscendens			<0.1			NA
Aster falcatus	<0.1		<0.1	NA		NA
Chrysothamnus nauseosus	2	14	6	NA	NA	NA
Chrysothamnus viscidiflorus			<0.1			NA
Elymus cinereus	14	14	10	NA	NA	NA
Festuca ovina	10	4	18	NA	NA	NA
Medicago sativa	<0.1		2	NA		NA
Melilotus officinalis	2	4	2	NA	NA	NA
Sphaeralcea coccinea			<0.1			NA
Unacceptable Weedy Species						
Tragopogon dubius			<0.1			NA
Noxious Weeds						
Centaurea maculosa	<0.1		<0.1	NA		NA

Site Aerial Photo for Old Works Sub Area 2, N. of Bowling Alley (VM_134)



•**1** Photo Location Point

Old Works Sub Area 2, N. of Bowling Alley (VM_134)

Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

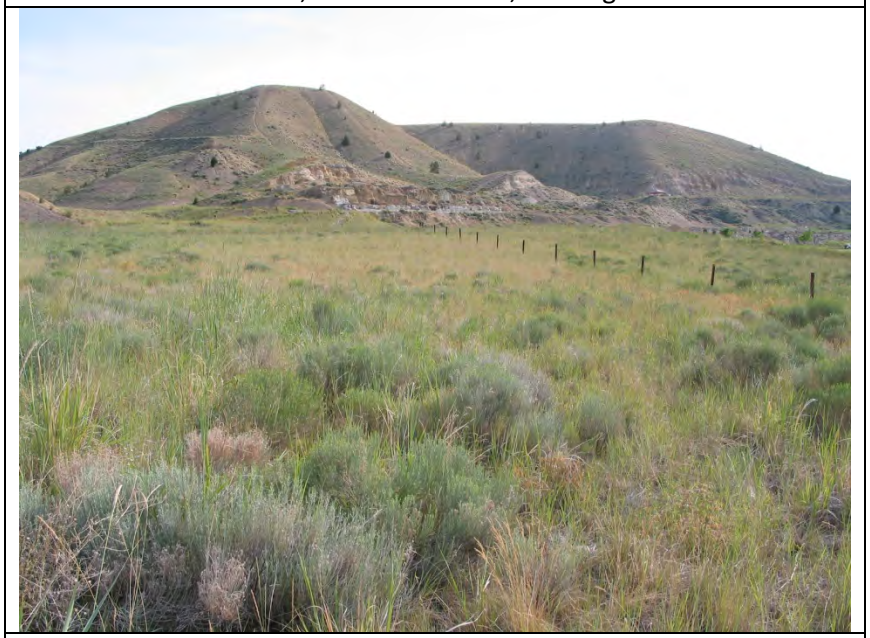
PHOTO LOCATION 1 - Old Works Sub Area 2, North of Bowling Alley

N46° 08’ 05.6”; W112° 56’ 46.2”, Looking Northeast

July 13, 2000

July 5, 2001

Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 2, North of Bowling Alley
N46° 08’ 05.6”; W112° 56’ 46.2”, Looking Northeast

July 23, 2002
July 23, 2003

Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 2, North of Bowling Alley

N46° 08’ 05.6”; W112° 56’ 46.2”, Looking Northeast

August 13, 2004

August 19, 2005

Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

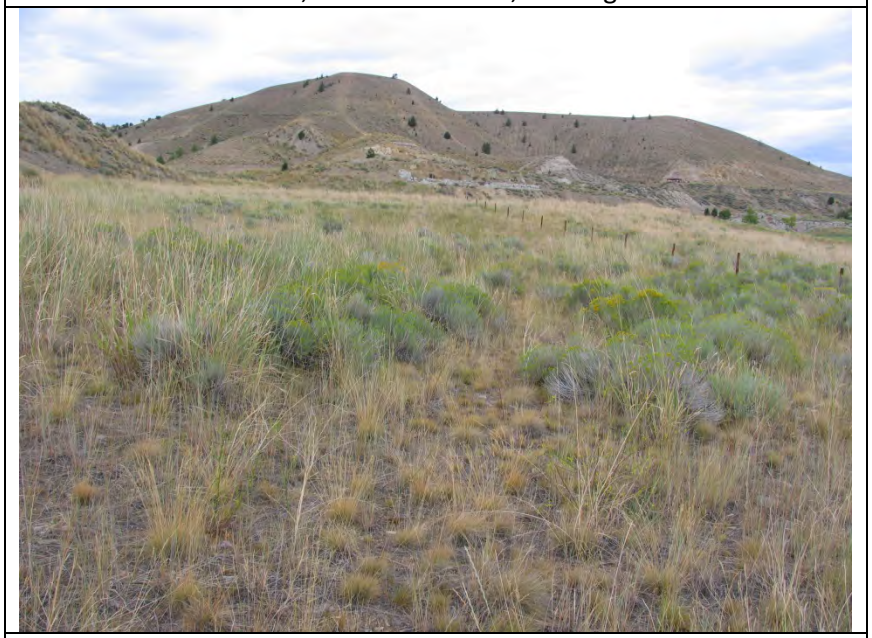
PHOTO LOCATION 1 - Old Works Sub Area 2, North of Bowling Alley

N46° 08’ 05.6”; W112° 56’ 46.2”, Looking Northeast

August 17, 2006

August 26, 2007

Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 2, North of Bowling Alley
N46° 08’ 05.6”; W112° 56’ 46.2”, Looking Northeast

August 20, 2008
August 20, 2009

Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 2, North of Bowling Alley

N46° 08’ 05.6”; W112° 56’ 46.2”, Looking Northeast

July 14, 2010

August 4, 2011

Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 2, North of Bowling Alley

N46° 08’ 05.6”; W112° 56’ 46.2”, Looking Northeast

August 22, 2012

August 5, 2013

Old Works Sub Area 2, N. of Bowling Alley (VM_134) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 2, North of Bowling Alley
N46° 08’ 05.6”; W112° 56’ 46.2”, Looking Northeast
July 14, 2014

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 3, Area 1 (VM_136)

Old Works Sub-Area 3, Area 1 (VM_136) 2015 -					
Year	**2015**				
Area (acres)	3.5				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/13/15				
RDU	OWEADA				
Evaluators: Warren Keammerer (WK) Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	WK, HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	24				
Total Number of Acceptable Species	14				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*					
Field Bindweed *(Convolvulus arvensis)*	Infrequent				
Leafy Spurge *(Euphorbia esula)*					
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*	Infrequent				
Curly Dock *(Rumex crispus)*					
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 3, Area 1 (VM_136)

Old Works Sub-Area 3, Area 1 (VM_136) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	0 (1)				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub-Area 3, Area 1 (VM_136) 2015-

Old Works Sub-Area 3, Area 1 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Silver Maple	*Acer saccharinum*					
Western Yarrow	*Achillea lanulosa*					
Crested Wheatgrass	*Agropyron cristatum*	x				
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Tall Wheatgrass	*Agropyron elongatum*					
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Western Wheatgrass	*Agropyron smithii*					
Slender Wheatgrass	*Agropyron trachycaulum*					
Red Top	*Agrostis alba*	x				
Meadow Foxtail	*Alopecurus pratensis*	x				
Aster	*Aster adscendens*					
Cicer Milkvetch	*Astragalus cicer*					
Regar Meadow Brome	*Bromus biebersteinii*					
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Larkspur	*Delphinium sp.*					
Great Basin Wildrye	*Elymus cinereus*	m				
Mammoth Wildrye	*Elymus giganteus*					
Russian Wildrye	*Elymus junceus*					
Sheep Fescue	*Festuca ovina*	x/m				
Curlycup Gumweed	*Grindelia squarrosa*					
Broom Snakeweed	*Gutierrezia sarothrae*					
Foxtail Barley	*Hordeum jubatum*					
Poverty Sumpweed	*Iva axillaris*					
Lewis's Flax	*Linum lewisii*					
Machaeranthera	*Machaeranthera canescens*					
Alfalfa	*Medicago sativa*	m				
White Sweetclover	*Melilotus alba*					
Yellow Sweetclover	*Melilotus officinalis*	x				
Yellow Evening Star	*Mentzelia laevicaulis*					
Indian Ricegrass	*Oryzopsis hymenoides*					
Scorpion Weed	*Phacelia hastata*	x				
Timothy	*Phleum pratense*	x				
Big Bluegrass	*Poa ampla*					
Canada Bluegrass	*Poa compressa*	m				
Kentucky Bluegrass	*Poa pratensis*					
Cottonwood	*Populus trichocarpa*					
Coyote Willow	*Salix exigua*					
Alkali Sacaton	*Sporobolus airoides*					

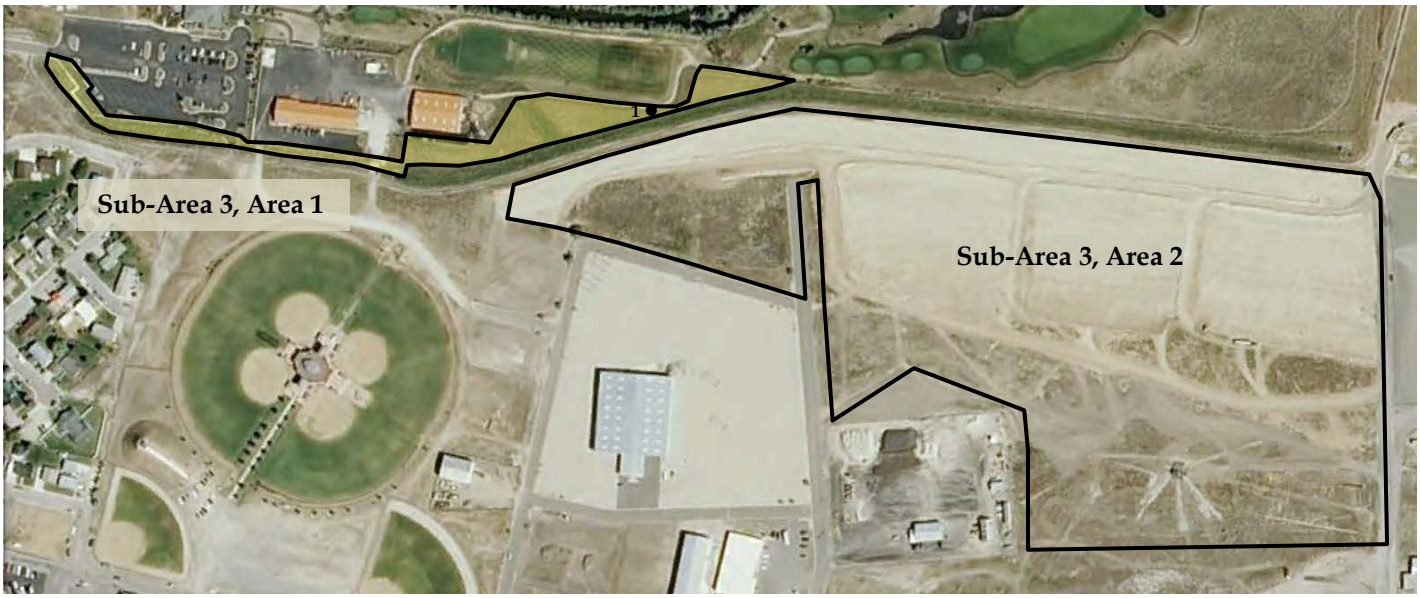
Observed Species in Old Works Sub-Area 3, Area 1 (VM_136) 2015-

Old Works Sub-Area 3, Area 1 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
UNDESIRABLE WEEDY SPECIES						
Japanese Brome	*Bromus japonicus*					
Annual Brome	*Bromus secalinus*					
Cheatgrass	*Bromus tectorum*	x				
Littleseed Falseflax	*Camelina microcarpa*	x				
Tansy Mustard	*Descurainia richardsonii*					
Prickly Lettuce	*Lactuca serriola*					
Clasping Peppergrass	*Lepidium perfoliatum*					
Tumbling Hedge Mustard	*Sisymbrium altissimum*					
Nightshade	*Solanum dulcamara*					
Common Dandelion	*Taraxacum officinale*	x				
Salsify	*Tragopogon dubius*	x				
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I				
Spotted Knapweed	*Centaurea maculosa*	I				
Oxeyed Daisy	*Chrysanthemum leucanthemum*					
Canada Thistle	*Cirsium arvense*					
Field Bindweed	*Convolvulus arvensis*	I				
Leafy Spurge	*Euphorbia esula*					
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*	I				
Dalmatian Toadflax	*Linaria dalmatica*	I				
Curly Dock	*Rumex crispus*					
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	14				
	Total Number of Species	24				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 3, Area 1 (VM_136) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	This area has a Type A Cap. Vegetation cover in the ditch that crosses this area ranges between 90 and 100 percent. There was flowing water in the ditch at the time of evaluation in 2015. This area was evaluated relative to meeting the performance standards for waste management areas in 2009 and 2010. In 2015, the performance standards were still being met. Compliance Status: LTIM.	No obvious signs of erosion. The BLM score is essentially “0” – the site is flat.	No problems with BMPs in this area.	

Site Aerial Photograph of Old Works Sub-Area 3, Area 1 (VM_136)



•1 Photo Location Point

Old Works Sub-Area 3, Area 1 (VM_136)

Old Works Sub-Area 3, Area 1 (VM_136) 2015-

PHOTO LOCATION 1 - Old Works Sub-Area 3, Area 1

N46° 07’ 51.6”; W112° 55’ 48.4”, looking West

July 13, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 3 Area 1 A Cap (VM_136)

Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
Area (acres)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner								
Inspection Date	7/13/00	7/5/01	7/23/02	7/23/03	8/12/04	8/19/05	8/18/06	8/25/07
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK	WK	WK	WK	WK	WK, KL	WK, KL
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo								
Site Aerial Photo Follows the Transect Summary Table								
INSPECTION SUMMARY*								
Vegetation Inspection						1	1	1
Erosion Inspection						0	0	0
Stormwater BMP Inspection						0	0	0
VEGETATION INSPECTION*								
Overall Recommendation						1	1	1
Estimated Canopy Coverage	>35%	25-35%	>35%	>35%	>35%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation						Moderate	Moderate	Moderate
Evidence of Reproduction						Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	18	28	28	28	24	30	29	31
Total Number of Acceptable Species	14	15	18	18	15	18	20	19
Ocular Estimate of Extent of Bare Areas						<1-5%	<1-5%	<1-5%
Weed Species Present								
White Top *(Cardaria draba)*						Infrequent	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Frequent	Frequent	Frequent	Infrequent	Infrequent	Infrequent	Infrequent
Oxeye Daisy (*Chrysanthemum leucanthemum*)								
Canada Thistle *(Cirsium arvense)*						Infrequent		
Field Bindweed *(Convolvulus arvensis)*		Frequent	Frequent	Frequent	Infrequent			
Leafy Spurge *(Euphorbia esula)*								
Baby's Breath *(Gypsophila paniculata)*			Frequent	Frequent	Infrequent		Infrequent	Infrequent
Vegetation Comments (See Comments Section)								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 3 Area 1 A Cap (VM_136)

Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
EROSION INSPECTION*								
Average Slope (percent)						0	0	0
Aspect						Flat	Flat	Flat
Overall Recommendation						0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None	None
Evidence of Surface Litter Movement						None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None	None
Potential Instability						None	None	None
Presence of Gullies	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)								
BMP INSPECTION*								
Overall Recommendation						0	0	0
Evidence of Check Dam Failure						None	None	None
Evidence of Sediment Accumulation in Check Dams						None	None	None
Condition of Dozer Basins						None	None	None
Condition of Grade Control Structures	Controlling	Controlling	Controlling	Controlling	Controlling	Controlling	Controlling	Controlling
Evidence of Brush Barrier Failure or Movement						None	None	None
Condition of Mulch						None	None	None
BMP Comments (See Comments Section)								
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**								
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS								
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST	EST	EST	EST	EST	EST	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	<45	<45	<45	<45	<45
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 3 Area 1 A Cap (VM_136)

Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner							
Inspection Date	8/20/08	8/20/09	8/6/10	8/4/11	8/22/12	8/4/13	7/14/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK, KL	WK, KL	WK, KL	WK,HK, CS	WK,HK, CS	WK,HK, CS	WK,HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo							
Site Aerial Photo Follows the Transect Summary Table							
INSPECTION SUMMARY*							
Vegetation Inspection	1	0	0	0	0	0	0
Erosion Inspection	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0
VEGETATION INSPECTION*							
Overall Recommendation	1	0	0	0	0	0	0
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	27	26	25	41	40	17	18
Total Number of Acceptable Species	19	17	19	27	28	9	12
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present							
White Top *(Cardaria draba)*		Infrequent		Infrequent	Infrequent	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Oxeye Daisy (*Chrysanthemum leucanthemum*)				Infrequent	Infrequent	Infrequent	
Canada Thistle *(Cirsium arvense)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	
Field Bindweed *(Convolvulus arvensis)*				Infrequent	Infrequent		Infrequent
Leafy Spurge *(Euphorbia esula)*				Infrequent			
Baby's Breath *(Gypsophila paniculata)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Vegetation Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 3 Area 1 A Cap (VM_136)

Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION*							
Average Slope (percent)	0	0	0	0	0	0	0
Aspect	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)							
BMP INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None	None	None
Condition of Grade Control Structures	Controlling	Controlling	Controlling	Controlling	Controlling	Controlling	Controlling
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None	None	None
Condition of Mulch	None	None	None	None	None	None	None
BMP Comments (See Comments Section)							
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**							
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS							
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST	TRAN (40%)	TRAN (40%)	EST	EST	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	0	0 (1)	0 (1)	0 (1)	0 (1)	0 (1)
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No

Observed Species in Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

Old Works Sub Area 3 Area 1 A Cap m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Silver Maple	*Acer saccharinum*				x											
Western Yarrow	*Achillea lanulosa*												x	x		
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*	x	x	x	x	x	x		x	x	x	x	x	x	x	x
Tall Wheatgrass	*Agropyron elongatum*							x	x		x	x				
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Western Wheatgrass	*Agropyron smithii*	x											x	x		
Slender Wheatgrass	*Agropyron trachycaulum*			x	x			x				x	x	x		
Red Top	*Agrostis alba*	x	x	x	x	x	x	x	x	x	x	x	x	x		
Meadow Foxtail	*Alopecurus pratensis*													x		
Aster	*Aster adscendens*												x	x		
Cicer Milkvetch	*Astragalus cicer*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Regar Meadow Brome	*Bromus biebersteinii*				x		x		x	x	x	x	x			
Smooth Brome	*Bromus inermis*	x		x	x		x		x	x	x	x	x	x		x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*					x	x	x	x	x	x	x	x	x		x
Larkspur	*Delphinium sp.*												x	x		
Great Basin Wildrye	*Elymus cinereus*	x	x	x	x	x	x	x	x	x	x	x	m	m	m	m
Mammoth Wildrye	*Elymus giganteus*	x	x	x	x		x	x	x	x	x	x	x	x		x
Russian Wildrye	*Elymus junceus*								x							
Sheep Fescue	*Festuca ovina*	x	x	x	x	x	x	x	x	x	x	x	x	x	m	x
Curlycup Gumweed	*Grindelia squarrosa*						x	x	x	x		x		x	x	
Broom Snakeweed	*Gutierrezia sarothrae*							x								
Foxtail Barley	*Hordeum jubatum*		x	x												
Poverty Sumpweed	*Iva axillaris*	x	x	x	x	x	x	x	x	x	x	x	x	x		
Lewis's Flax	*Linum lewisii*		x	x		x		x	x	x	x		x	x		x
Machaeranthera	*Machaeranthera canescens*													x		
Alfalfa	*Medicago sativa*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
White Sweetclover	*Melilotus alba*			x												
Yellow Sweetclover	*Melilotus officinalis*	x	x	x	x		x	x					x	x		x
Yellow Evening Star	*Mentzelia laevicaulis*		x			x	x	x		x				x		
Indian Ricegrass	*Oryzopsis hymenoides*												x			
Scorpion Weed	*Phacelia hastata*			x				x					x	x		
Timothy	*Phleum pratense*				x								x			

Observed Species in Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

Old Works Sub Area 3 Area 1 A Cap m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES Continued																
Big Bluegrass	*Poa ampla*												x			
Canada Bluegrass	*Poa compressa*	x	x	x	x	x	x	x	x	x	x	x	m	m	m	m
Kentucky Bluegrass	*Poa pratensis*				x								x	x		
Cottonwood	*Populus trichocarpa*					x										
Coyote Willow	*Salix exigua*					x		x	x	x	x	x	x	x		
Alkali Sacaton	*Sporobolus airoides*						x			x		x		x		
UNDESIRABLE WEEDY SPECIES																
Japanese Brome	*Bromus japonicus*		x	x		x	x		x	x	x	x	x	x	x	
Annual Brome	*Bromus secalinus*								x							
Cheatgrass	*Bromus tectorum*		x	x	x	x	x	x	x	x	x	x	x	x		
Littleseed Falseflax	*Camelina microcarpa*		x	x									x			
Tansy Mustard	*Descurainia richardsonii*		x						x	x			x	x		
Prickly Lettuce	*Lactuca serriola*	x	x		x											
Clasping Peppergrass	*Lepidium perfoliatum*		x								x		x			
Tumbling Hedge Mustard	*Sisymbrium altissimum*		x	x	x		x		x		x			x		x
Nightshade	*Solanum dulcamara*				x		x	x	x							
Common Dandelion	*Taraxacum officinale*	x	x	x	x	x	x	x			x		x	x	x	x
Salsify	*Tragopogon dubius*		x	x	x	x	x	x	x	x	x	x	x	x	x	
NOXIOUS WEEDS																
White Top	*Cardaria draba*					x	x	x	x		I		I	I	I	I
Spotted Knapweed	*Centaurea maculosa*	x	x	x	x		x	x	x	I	I	I	I	I	I	I
Oxeyed Daisy	*Chrysanthemum leucanthemum*	x											I	I	I	
Canada Thistle	*Cirsium arvense*					x	x			x		I	I	I	I	
Field Bindweed	*Convolvulus arvensis*		x	x	x	x							I	I		I
Leafy Spurge	*Euphorbia esula*												I			
Baby's Breath	*Gypsophila paniculata*		x	x	x	x	x	x	x	x		I	I	I	I	I
Kochia	*Kochia scoparia*		x	x	x	x	x	x	x							
Curly Dock	*Rumex crispus*						x	x	x	I	I					
I=Infrequent; F=Frequent; C=Common; D=Dominant																

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	•Vegetation cover is ± 35-40 percent, bare soil is ± 5 percent, rock cover is ± 3 percent, and litter cover is ± 75 percent •Weed control for knapweed at N 46° 07' 49.9"; W 112° 55' 58.3" has killed the alfalfa as well as knapweed. This is a small area. •Recently seeded area south of the Golf Course parking lot has good establishment of perennial species. Vegetation cover in the ditch that crosses this area ranges between 90 and 100 percent.	No obvious signs of erosion.	•Riprap at N 46° 07' 50.1"; W 112° 55' 55.4" in place; a small amount of sediment in culvert. Some standing water •Riprap at N 46° 07' 51.2"; W 112° 56' 03.6" in place, but has a small amount of accumulated trash. •Riprap at N 46° 07' 51.9"; W 112° 56' 06.7" in place, a few rock cobbles are in the culvert. Riprap just upstream from this site also in place. A few cobbles in the culvert. •Drain at N 46° 07' 50.6"; W 112° 55' 58.1" is clear.	
2001	•Vegetation cover is 30-35 percent, bare soil is 5 percent, rock cover is 5 percent, and litter cover is 60-75 percent. •Weed control for knapweed at N 46° 07' 49.9"; W 112° 55' 58.3" noted in 2000 killed the alfalfa as well as knapweed. In 2001, much of the alfalfa recovered from spraying. This is a small area. •Recently seeded area south of the Golf Course parking lot has good establishment of perennial species. Vegetation cover in the ditch that crosses this area ranges between 90 and 100 percent. •Small amount of easily removed debris (garbage) is present	No obvious signs of erosion.	•Riprap at N 46° 07' 50.1"; W 112° 55' 55.4" in place; a small amount of sediment in culvert. Some standing water and limited trickle flow at this site. •Riprap at N 46° 07' 51.2"; W 112° 56' 03.6" in place, but has a small amount of accumulated trash. •Riprap at N 46° 07' 51.9"; W 112° 56' 06.7" in place, a few rock cobbles are in the culvert. Riprap just upstream from this site also in place. A few cobbles in the culvert. •Drain at N 46° 07' 50.6"; W 112° 55' 58.1" is clear.	
2002	•Vegetation cover is 35-40 percent, bare soil is 5 percent, rock cover is 5 percent, and litter cover is 60-75 percent. •Weed control for knapweed at N 46° 07' 49.9"; W 112° 55' 58.3" noted in 2000 killed the alfalfa as well as knapweed. In 2001, much of the alfalfa recovered from spraying. This is a small area. Area was also sprayed in 2002. •Vegetation cover in the ditch that crosses this area ranges between 90 and 100 percent. •Small amount of easily removed debris (garbage) is present	No obvious signs of erosion.	•Riprap at N 46° 07' 50.1"; W 112° 55' 55.4" in place; a small amount of sediment in culvert. Some standing water and limited trickle flow at this site. •Riprap at N 46° 07' 51.2"; W 112° 56' 03.6" in place, but has a small amount of accumulated trash. •Riprap at N 46° 07' 51.9"; W 112° 56' 06.7" in place, a few rock cobbles are in the culvert. Riprap just upstream from this site also in place. A few cobbles in the culvert. •Drain at N 46° 07' 50.6"; W 112° 55' 58.1" is clear.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2003	•Vegetation cover is 35-40 percent, bare soil is 5 percent, rock cover is 5 percent, and litter cover is 60-75 percent •Weed control for knapweed at N 46° 07' 49.9"; W 112° 55' 58.3" noted in 2000 killed the alfalfa as well as knapweed. In 2001, much of the alfalfa recovered from spraying. This is a small area. Area was also sprayed in 2002 and 2003. There is still a small amount of alfalfa. •Vegetation cover in the ditch that crosses this area ranges between 90 and 100 percent. •Small amount of easily removed debris (garbage) is present	No obvious signs of erosion.	•Riprap at N 46° 07' 50.1"; W 112° 55' 55.4" in place; a small amount of sediment in culvert. Some standing water and limited trickle flow at this site. •Riprap at N 46° 07' 51.2"; W 112° 56' 03.6" in place, but has a small amount of accumulated trash. •Riprap at N 46° 07' 51.9"; W 112° 56' 06.7" in place, a few rock cobbles are in the culvert. Riprap just upstream from this site also in place. A few cobbles in the culvert. •Drain at N 46° 07' 50.6"; W 112° 55' 58.1" is clear.	
2004	•Vegetation cover in the ditch that crosses this area ranges between 90 and 100 percent. Evidence of limited flow in 2004. • Dense cover by alfalfa at drain	No obvious signs of erosion.	•Riprap at N 46° 07' 50.1"; W 112° 55' 55.4" in place; a small amount of sediment in culvert. Some standing water and limited trickle flow at this site. •Riprap at N 46° 07' 51.2"; W 112° 56' 03.6" in place, but has a small amount of accumulated trash. •Riprap at N 46° 07' 51.9"; W 112° 56' 06.7" in place, a few rock cobbles are in the culvert. Riprap just upstream from this site also in place. A few cobbles in the culvert. •Drain at N 46° 07' 50.6"; W 112° 55' 58.1" is clear.	
2005	• Much less knapweed than several years ago. Still some plants that could be spot sprayed.	No obvious signs of erosion.	•Riprap at N 46° 07' 50.1"; W 112° 55' 55.4" in place; a small amount of sediment in culvert. Some standing water and limited trickle flow at this site. •Riprap at N 46° 07' 51.2"; W 112° 56' 03.6" in place, but has a small amount of accumulated trash. •Riprap at N 46° 07' 51.9"; W 112° 56' 06.7" in place, a few rock cobbles are in the culvert. Riprap just upstream from this site also in place. A few cobbles in the culvert. •Drain at N 46° 07' 50.6"; W 112° 55' 58.1" is clear.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2006	• This area has a Type A Cap. • Much less knapweed than several years ago. Still some plants that could be spot sprayed, especially along the bike/pedestrian path. • Continue weed control, but do not spray the desirable species – especially alfalfa.	No obvious signs of erosion.	No problems with BMPs in this area	
2007	• This area has a Type A Cap. • Much less knapweed than several years ago. Still some plants that could be spot sprayed, especially along the bike/pedestrian path. • Continue weed control, but do not spray the desirable species – especially alfalfa.	No obvious signs of erosion.	No problems with BMPs in this area	
2008	• This area has a Type A Cap. • Much less knapweed than several years ago. Still some plants that could be spot sprayed, especially along the bike/pedestrian path. • Continue weed control, but do not spray the desirable species – especially alfalfa.	No obvious signs of erosion.	No problems with BMPs in this area	
2009	• This area has a Type A Cap. • Much less knapweed than several years ago. Still some plants that could be spot sprayed, especially along the bike/pedestrian path. Some knapweed was sprayed in 2009. • Continue weed control, but do not spray the desirable species – especially alfalfa. In 2009, alfalfa had been sprayed in part of the area. • Vegetation cover in the ditch that crosses this area ranges between 90 and 100 percent. Some standing water in places in 2008. Evidence of recent flow. • In 2009, this area was evaluated relative to meeting the performance standards for waste management areas.	No obvious signs of erosion.	No problems with BMPs in this area	
2010	• This area has a Type A Cap. • Much less knapweed than several years ago. Still some plants that could be spot sprayed, especially along the bike/pedestrian path. • Vegetation cover in the ditch that crosses this area ranges between 90 and 100 percent. Some standing water in places in 2010. Evidence of recent flow. • In 2010, this area was evaluated relative to meeting the performance standards for waste management areas. This was the second year that the standards were evaluated and met.	No obvious signs of erosion.	No problems with BMPs in this area	
2011	• This area has a Type A Cap. • Much less knapweed than several years ago. Still some plants that could be spot sprayed, especially along the bike/pedestrian path. • Vegetation cover in the ditch that crosses this area ranges between 90 and 100 percent. Some standing water in places in 2011. Evidence of recent flow. • This area was evaluated relative to meeting the performance standards for waste management areas in 2009 and 2010. • In 2011, the performance standards were still being met.	No obvious signs of erosion.	No problems with BMPs in this area	

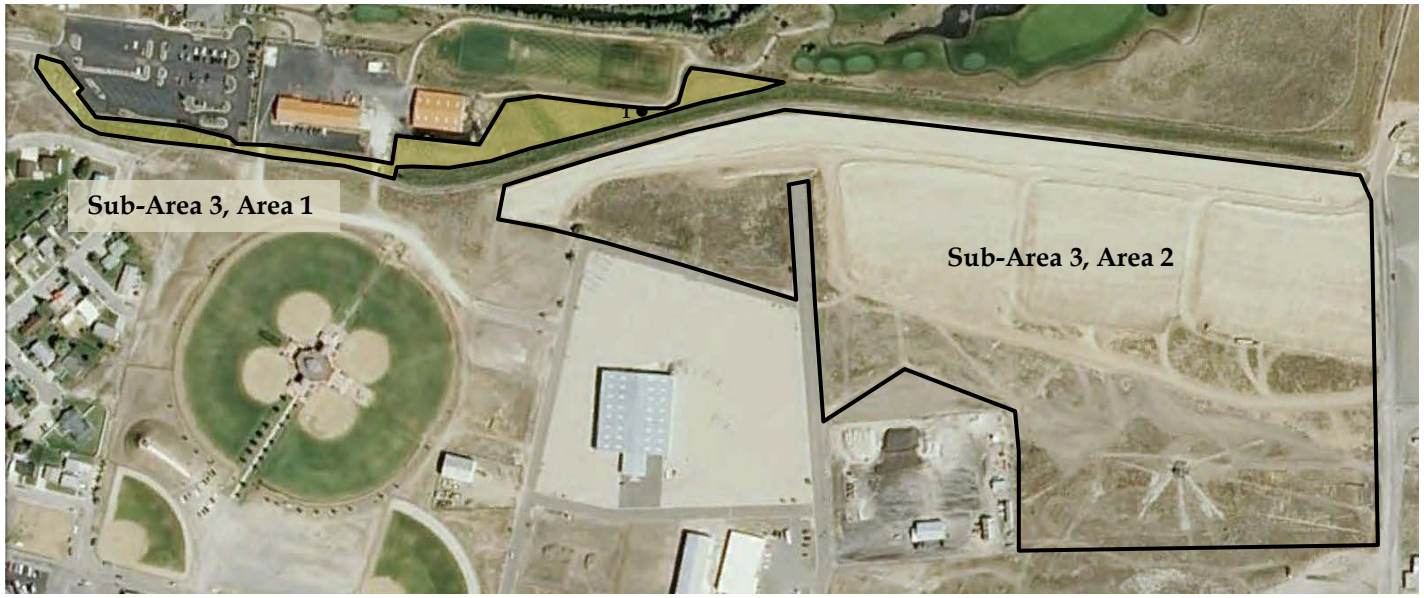
Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2012	• This area has a Type A Cap. • Much less knapweed than several years ago. Still some plants were spot sprayed, especially along the bike/pedestrian path. The Babys breath at the west end needs control. • Vegetation cover in the ditch that crosses this area ranges between 90 and 100 percent. Evidence of recent flow. A portion of the channel east of the golf facilities was de-nuded of vegetation. Some distrubance associated with removal to north and south of channel. There is also some construction disturbance along the northside of the channel related to the work in the channel - possibly a rip-rap installation. • This area was evaluated relative to meeting the performance standards for waste management areas in 2009 and 2010. • In 2012, the performance standards were still being met.	No obvious signs of erosion.	No problems with BMPs in this area	
2013	• This area has a Type A Cap. • Much less knapweed than several years ago. Some plants that could be spot sprayed, especially along the bike/pedestrian path. Additionally, the baby's breath at the west end of the path needs control. • Vegetation cover in the ditch that crosses this area ranges between 90 and 100 percent. Evidence of recent flow. There was some construction disturbance along the northside of the channel related to work in the channel east of the golf facilities. This disturbance has been repaired and the seedling density suggests that the area will fill in over the next few years. • This area was evaluated relative to meeting the performance standards for waste management areas in 2009 and 2010. • In 2013, the performance standards were still being met.	No obvious signs of erosion.	No problems with BMPs in this area	
2014	• This area has a Type A Cap. • Spotted knapweed could be spot sprayed, especially along the bike/pedestrian path. Additionally, the baby's breath at the west end of the path needs control. • Vegetation cover in the ditch that crosses this area ranges between 90 and 100 percent. Evidence of recent flow. There was some construction disturbance along the northside of the channel related to work in the channel east of the golf facilities in 2013. This disturbance has been repaired and has filled in with perennial species. • This area was evaluated relative to meeting the performance standards for waste management areas in 2009 and 2010. In 2014, the performance standards were still being met. Compliance Status: LTIM.	No obvious signs of erosion.	No problems with BMPs in this area	

Transect Sampling Summary for Old Works Sub Area 3 Area 1 A Cap (VM_136)

Transects in Old Works Sub Area 3, Area 1 Type A Cap	Mean Cover (%)	
	2009	**2010**
Number of Transects Sampled	1	1
Total Vegetation Cover (All Species)	40	40
Total Vegetation Cover (Acceptable Species)	40	40
Litter and Rock Combined	60	60
Bare Soil	0	0
Total Cover	100	100
Litter Cover	60	60
Acceptable Species		
Agropyron dasystachyum	12	2
Agropyron intermedium	2	6
Bromus biebersteinii	<1	
Elymus cinereus	2	4
Festuca ovina	4	6
Medicago sativa	12	18
Mosses		<1
Poa compressa	8	4
Undesirable Weedy Species		
Bromus japonicus	<1	
Bromus tectorum	<1	
Descurainia richardsonii		<1
Taraxacum officinale		<1
Tragopogon dubius	<1	
Noxious Weeds		
Centaurea maculosa		<1

Site Aerial Photo for Old Works Sub Area 3 Area 1 A Cap (VM_136)



•**1** Photo Location Point

Old Works Sub Area 3 Area 1 A Cap (VM_136)

Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 3 Area 1 A Cap

N46° 07’ 51.6”; W112° 55’ 48.4”, Looking West

July 13, 2000

July 5, 2001

Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 3 Area 1 A Cap

N46° 07’ 51.6”; W112° 55’ 48.4”, Looking West

July 23, 2002

July 23, 2003

Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 3 Area 1 A Cap

N46° 07’ 51.6”; W112° 55’ 48.4”, Looking West

August 12, 2004

August 19, 2005

Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 3 Area 1 A Cap

N46° 07’ 51.6”; W112° 55’ 48.4”, Looking West

August 18, 2006

August 25, 2007

Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 3 Area 1 A Cap

N46° 07’ 51.6”; W112° 55’ 48.4”, Looking West

August 20, 2008

August 20, 2009

Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 3 Area 1 A Cap

N46° 07’ 51.6”; W112° 55’ 48.4”, Looking West

August 6, 2010

August 4, 2011

Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 3 Area 1 A Cap

N46° 07’ 51.6”; W112° 55’ 48.4”, Looking West

August 22, 2012

August 4, 2013

Old Works Sub Area 3 Area 1 A Cap (VM_136) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 3 Area 1 A Cap
N46° 07’ 51.6”; W112° 55’ 48.4”, Looking West
July 14, 2014

Annual Monitoring and Maintenance Data Summary for Old Works Sub- Area 4, Area 4 Type A Cap (VM_137)

Old Works Sub- Area 4, Area 4 Type A Cap (VM_137) 2015 -					
Year	**2015**				
Area (acres)	4.0				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/29/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	18				
Total Number of Acceptable Species	13				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*					
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*					
Field Bindweed *(Convolvulus arvensis)*					
Leafy Spurge *(Euphorbia esula)*					
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*					
Curly Dock *(Rumex crispus)*					
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub- Area 4, Area 4 Type A Cap (VM_137)

Old Works Sub- Area 4, Area 4 Type A Cap (VM_137) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	10-20%				
Aspect	E, N				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	Controlling				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	4				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub- Area 4, Area 4 Type A Cap (VM_137) 2015-

Old Works Sub- Area 4, Area 4 Type A Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	x				
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Tall Wheatgrass	*Agropyron elongatum*					
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Western Wheatgrass	*Agropyron smithii*					
Bluebunch Wheatgrass	*Agropyron spicatum*					
Slender Wheatgrass	*Agropyron trachycaulum*					
Red Top	*Agrostis alba*					
Aster	*Aster adscendens*					
Regar Meadow Brome	*Bromus biebersteinii*					
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Orchardgrass	*Dactylis glomerata*					
Great Basin Wildrye	*Elymus cinereus*	x				
Mammoth Wildrye	*Elymus giganteus*					
Sheep Fescue	*Festuca ovina*	m				
Foxtail Barley	*Hordeum jubatum*					
Alfalfa	*Medicago sativa*	m				
White Sweetclover	*Melilotus alba*	x				
Yellow Sweetclover	*Melilotus officinalis*	x				
Yellow Evening Star	*Mentzelia laevicaulis*					
Indian Ricegrass	*Oryzopsis hymenoides*					
Big Bluegrass	*Poa ampla*	x				
Canada Bluegrass	*Poa compressa*	x/m				
Green Needlegrass	*Stipa viridula*	x				
UNDESIRABLE WEEDY SPECIES						
Alyssum	*Alyssum desertorum*					
Japanese Brome	*Bromus japonicus*					
Cheatgrass	*Bromus tectorum*	x				
Little Seed False Flax	*Camelina microcarpa*					
Tansy Mustard	*Descurainia richardsonii*	x				
Prickly Lettuce	*Lactuca serriola*					
Tumbling Hedge Mustard	*Sisymbrium altissimum*					
Common Dandelion	*Taraxacum officinale*					
Penny Cress	*Thlaspi arvense*					
Salsify	*Tragopogon dubius*	x				

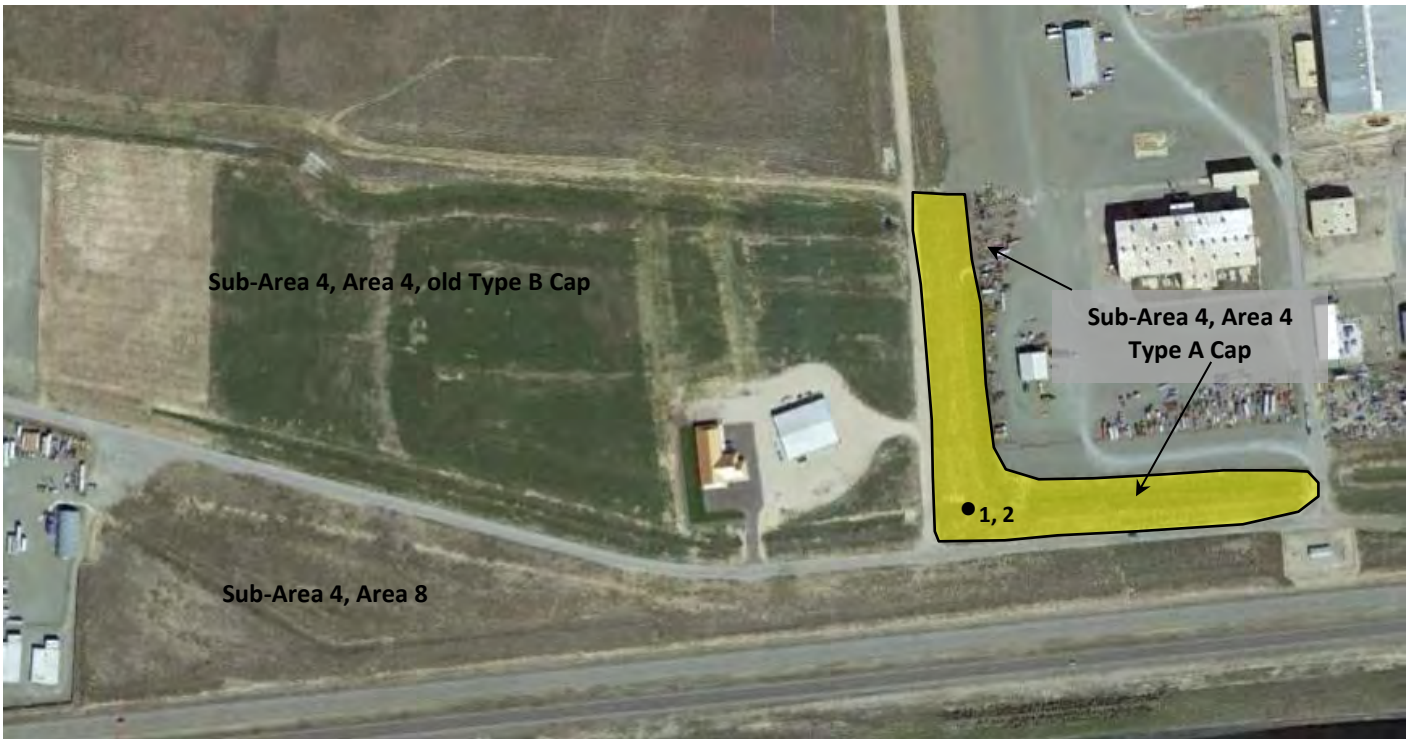
Observed Species in Old Works Sub- Area 4, Area 4 Type A Cap (VM_137)2015-

Old Works Sub-Area Area 4, Area 4 Type A Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
NOXIOUS WEEDS						
Spotted Knapweed	*Centaurea maculosa*	I				
Canada Thistle	*Cirsium arvense*					
Leafy Spurge	*Euphorbia esula*					
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*					
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		13				
Total Number of Species		18				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub- Area 4, Area 4 Type A Cap (VM_137) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• A few scattered knapweed plants. • Cheatgrass still occurs on east-facing part of berm. • Pocket gophers noted at N46° 07’ 45.0”; W112° 54’ 46.4” and southwards along the east-facing slope. (Still present in 2015). • Windblown trash is still a minor problem in 2015. • The area is mostly comparable to what was observed in 2014. • This area was included in the 2009 Compliance Determination Report. In 2015, the performance standards are still being met. Compliance Status: LTIM.	No obvious signs of erosion. BLM erosion score =4	Rip rap in the channel is in place.	

Site Aerial Photograph of Old Works Sub- Area 4, Area 4 Type A Cap (VM_137)



•1 Photo Location Point

Old Works Sub- Area 4, Area 4 Type A Cap (VM_137)

Old Works Sub-Area 4, Area 4 Type A Cap (VM_137) 2015-

PHOTO LOCATION 1 – Old Works Sub Area 4, Area 4 Type A Cap		**PHOTO LOCATION 2 - Old Works Sub Area 4, Area 4 Type A Cap**
N46° 07’ 41.6”; W112° 54’ 45.9”, Looking East		N46° 07’ 41.6”; W112° 54’ 45.9”, Looking North
July 29, 2015		July 29, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 4 Type A Cap (VM_137)

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
Area (acres)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner								
Inspection Date	7/10/00	7/4/01	7/21/02	7/22/03	8/11/04	8/19/05	7/19/06	8/25/07
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK	WK	WK	WK	WK	WK, KL	WK, KL
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo								
Site Aerial Photo Follows the Transect Summary Table								
INSPECTION SUMMARY*								
Vegetation Inspection						1	0	0
Erosion Inspection						0	0	0
Stormwater BMP Inspection						0	0	0
VEGETATION INSPECTION*								
Overall Recommendation						1	0	0
Estimated Canopy Coverage	15-25%	25-35%	25-35%	25-35%	25-35%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation						Moderate	Moderate	Moderate
Evidence of Reproduction						Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	13	17	19	17	16	16	29	20
Total Number of Acceptable Species	8	10	13	10	10	9	19	11
Ocular Estimate of Extent of Bare Areas						<1-5%	<1-5%	<1-5%
Weed Species Present								
White Top *(Cardaria draba)*								
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*						Infrequent		Infrequent
Leafy Spurge *(Euphorbia esula)*								
Baby's Breath *(Gypsophila paniculata)*							Infrequent	Infrequent
Dalmatian Toadflax *(Linaria dalmatica)*								
Curly Dock *(Rumex crispus)*								
Vegetation Comments (See Comments Section)								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 4 Type A Cap (VM_137)

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
EROSION INSPECTION*								
Average Slope (percent)						10-20	10-20	10-20
Aspect						E and N	E and N	E and N
Overall Recommendation								
Evidence of Soil Movement						0	0	0
Evidence of Surface Litter Movement	None	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement						None	None	None
Presence of Rills	None	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)	None	None	None	None	None	None	None	None
BMP INSPECTION*								
Overall Recommendation						0	0	0
Evidence of Check Dam Failure						None	None	None
Evidence of Sediment Accumulation in Check Dams						None	None	None
Condition of Dozer Basins						None	None	None
Condition of Grade Control Structures						Controlling	Controlling	Controlling
Evidence of Brush Barrier Failure or Movement						None	None	None
Condition of Mulch						None	None	None
BMP Comments (See Comments Section)								
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**								
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS								
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	No (kochia)	Yes	Yes	Yes	Yes	Yes	Yes (30%)	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST	EST	EST	EST	EST	EST	TRAN	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	<45	<45	<45	<45	<45
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 4 Type A Cap (VM_137)

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner							
Inspection Date	8/20/08	8/20/09	7/14/10	8/4/11	8/21/12	8/4/13	6/18/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK, KL	WK, KL	WK, KL	WK,HK, CS	WK,HK, CS	WK,HK, CS	WK,HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo							
Site Aerial Photo Follows the Transect Summary Table							
INSPECTION SUMMARY*							
Vegetation Inspection	0	0	0	0	0	0	0
Erosion Inspection	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0
VEGETATION INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	20	18	19	27	17	18	20
Total Number of Acceptable Species	12	11	11	15	10	12	11
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present							
White Top *(Cardaria draba)*							
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*							
Leafy Spurge *(Euphorbia esula)*				Infrequent			
Baby's Breath *(Gypsophila paniculata)*	Infrequent	Infrequent		Infrequent	Infrequent	Infrequent	Infrequent
Dalmatian Toadflax *(Linaria dalmatica)*							
Curly Dock *(Rumex crispus)*							
Vegetation Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 4 Type A Cap (VM_137)

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION*							
Average Slope (percent)	10-20	10-20	10-20	10-20	10-20	10-20	10-20
Aspect	E and N	E and N	E and N	E and N	E and N	E and N	E and N
Overall Recommendation							
Evidence of Soil Movement	0	0	0	0	0	0	0
Evidence of Surface Litter Movement	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)	None	None	None	None	None	None	None
BMP INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None	None	None
Condition of Grade Control Structures	Controlling	Controlling	Controlling	Controlling	Controlling	Controlling	Controlling
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None	None	None
Condition of Mulch	None	None	None	None	None	None	None
BMP Comments (See Comments Section)							
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**							
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS							
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes (38%)	Yes	Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	TRAN	EST	EST	EST	EST	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	4	4	4	4	4
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No

Observed Species in Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*			x	x	x	x	x	x	x	x	x	x	x	x	x
Tall Wheatgrass	*Agropyron elongatum*											x				
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Western Wheatgrass	*Agropyron smithii*		x					x		x		x	x		x	
Bluebunch Wheatgrass	*Agropyron spicatum*							x								
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x				x					x			
Red Top	*Agrostis alba*			x				x								
Aster	*Aster adscendens*															x
Regar Meadow Brome	*Bromus biebersteinii*			x												
Smooth Brome	*Bromus inermis*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*					x	x	x	x	x	x		x	x	x	
Orchardgrass	*Dactylis glomerata*							x					x			
Great Basin Wildrye	*Elymus cinereus*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Mammoth Wildrye	*Elymus giganteus*							x								
Sheep Fescue	*Festuca ovina*	x	x	x	x	x	x	x	x	m	m	m	m	m	m	m
Foxtail Barley	*Hordeum jubatum*	x	x	x	x											
Alfalfa	*Medicago sativa*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
White Sweetclover	*Melilotus alba*							x	x		x		x		x	
Yellow Sweetclover	*Melilotus officinalis*			x	x			x	x	x	x	x	x	x	x	x
Yellow Evening Star	*Mentzelia laevicaulis*							x								
Indian Ricegrass	*Oryzopsis hymenoides*					x		x		x						
Big Bluegrass	*Poa ampla*												x			x
Canada Bluegrass	*Poa compressa*	x	x	x	x	x	x	x	x	m	m	m	m	m	m	x/m
UNDESIRABLE WEEDY SPECIES																
Alyssum	*Alyssum desertorum*										x		x			x
Japanese Brome	*Bromus japonicus*	x	x	x	x	x	x	x		x	x	x	x	x	x	x
Cheatgrass	*Bromus tectorum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Little Seed False Flax	*Camelina microcarpa*								x	x		x	x			x
Tansy Mustard	*Descurainia richardsonii*						x	x	x	x		x	x	x		x
Prickly Lettuce	*Lactuca serriola*				x			x	x				x			
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x	x	x	x	x	x	x	x	x	x	x			x	
Common Dandelion	*Taraxacum officinale*		x					x				x	x	x		x
Penny Cress	*Thlaspi arvense*												x			
Salsify	*Tragopogon dubius*		x	x	x	x	x	x	x	x	x	x	x	x	x	x

Observed Species in Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
NOXIOUS WEEDS																
Spotted Knapweed	*Centaurea maculosa*	x	x	x	x	x	x	x	x	I	I	I	I	I	I	I
Canada Thistle	*Cirsium arvense*						x		x							
Leafy Spurge	*Euphorbia esula*												I			
Baby's Breath	*Gypsophila paniculata*							x	x	I	I		I	I	I	I
Kochia	*Kochia scoparia*	x	x	x	x	x		x								
I=Infrequent; F=Frequent; C=Common; D=Dominant																

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	The portion of Sub Area 4, Area 4 reclaimed using a Type A cap is located on the east side of the old landfill road. East-facing part of berm has only limited development of perennial grasses and forbs (approximately 15 percent cover). Annual species including kochia and tumbling hedge mustard are common. There is more cover on the north-facing berm (approximately 30 percent). Flat areas adjacent to the road where the Fiber Optic Right-of-Way is located has limited development of perennial vegetation and is dominated by kochia. Vegetation cover was approximately 15-30 percent, bare soil was approximately 5 percent, rock cover was approximately 3 percent and litter cover was approximately 40-60 percent.	No obvious signs of erosion.	Riprap at N 46° 07' 42.1"; W 112° 54' 35.3" in place. Culvert clean.	
2001	The portion of Sub Area 4, Area 4 reclaimed using a Type A cap is located on the east side of the old landfill road. East-facing part of berm has more perennial grasses and forbs than in 2000 but annual species are still prevalent. (approximately 20 percent cover). Annual species including kochia and tumbling hedge mustard are common. There is more cover on the north-facing berm (approximately 30 percent). Flat areas adjacent to the road where the Fiber Optic Right-of-Way is located has more perennial vegetation than in 2000. Kochia is still present, but much reduced. Intermediate wheatgrass has regrown and has become reestablished in the bare areas. Vegetation cover was approximately 25-30 percent, bare soil was approximately 5 percent, rock cover was approximately 5 percent and litter cover was approximately 60-70 percent.	No obvious signs of erosion.	Riprap at N 46° 07' 42.1"; W 112° 54' 35.3" in place. Culvert clean. Riprap at N 46° 07' 46.7"; W 112° 54' 45.9" in place. Culverts clean. Riprap at N 46° 07' 41.7"; W 112° 54' 44.6" in place. Culvert with 2-3 inches of sediment.	
2002	The portion of Sub Area 4, Area 4 reclaimed using a Type A cap is located on the east side of the old landfill road. East-facing part of berm has more perennial grasses and forbs than in 2000 but annual species are still prevalent. (approximately 20 percent cover). Annual species including kochia and tumbling hedge mustard are common. There is more cover on the north-facing berm (approximately 30 percent). Flat areas adjacent to the road where the Fiber Optic Right-of-Way is located has more perennial vegetation than in 2001. Kochia is still present, but much reduced. Intermediate wheatgrass has re-grown and has become reestablished in the bare areas. Perennial species appear to be increasing. Vegetation cover was approximately 30 percent, bare soil was approximately 5 percent, rock cover was approximately 5 percent and litter cover was approximately 60-70 percent.	No obvious signs of erosion.	Riprap at N 46° 07' 42.1"; W 112° 54' 35.3" in place. Culvert with a small amount of debris. Riprap at N 46° 07' 46.7"; W 112° 54' 45.9" in place. Culverts clean. Riprap at N 46° 07' 41.7"; W 112° 54' 44.6" in place. Culvert with 2-3 inches of sediment.	
2003	The portion of Sub Area 4, Area 4 reclaimed using a Type A cap is located on the east side of the old landfill road. East-facing part of berm has more perennial grasses and forbs than in 2000 but annual species are still prevalent. Conditions in 2003 are comparable to 2002 (approximately 20 percent cover by perennials). Cheatgrass is common. There is more cover on the north-facing berm (approximately 30 percent). Flat areas adjacent to the road where the Fiber Optic Right-of-Way is located has more perennial vegetation than in 2001. Kochia is still present, but much reduced. Intermediate wheatgrass has re-grown and has become reestablished in the bare areas. Perennial species appear to be increasing in 2003. Vegetation cover was approximately 30 percent, bare soil was approximately 5 percent, rock cover was approximately 5 percent and litter cover was approximately 60-70 percent.	No obvious signs of erosion.	Riprap at N 46° 07' 42.1"; W 112° 54' 35.3" in place. Culvert with a small amount of debris. Riprap at N 46° 07' 46.7"; W 112° 54' 45.9" in place. Culverts clean. A small amount of gravel. Riprap at N 46° 07' 41.7"; W 112° 54' 44.6" in place. Culvert with 2-3 inches of sediment.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2004	The portion of Sub Area 4, Area 4 reclaimed using a Type A cap is located on the east side of the old landfill road. Annual species are still prevalent on east-facing part of berm. Cheatgrass is common. There is more cover on the north-facing berm (approximately 30 percent). Flat areas adjacent to the road where the Fiber Optic Right-of-Way is located has more perennial vegetation than in previous years. Intermediate wheatgrass has re-grown and has become reestablished in the bare areas. Perennial species appear to be increasing. Pocket gophers noted at N46° 07' 45.0"; W112° 54' 46.4" and southwards along the east-facing slope. Vegetation cover was approximately 30 percent, bare soil was approximately 5 percent, rock cover was approximately 5 percent and litter cover was approximately 60-70 percent.	No obvious signs of erosion.	Riprap at N 46° 07' 42.1"; W 112° 54' 35.3" in place. Culvert with a small amount of debris. Riprap at N 46° 07' 46.7"; W 112° 54' 45.9" in place. Culverts clean. A small amount of gravel. Riprap at N 46° 07' 41.7"; W 112° 54' 44.6" in place. Culvert with 2-3 inches of sediment.	
2005	Vegetation Inspection was given a "1" because the construction disturbances should be re-seeded. • Annual species are still prevalent on east-facing part of berm. Cheatgrass is common. • Perennial species appear to be increasing. • Pocket gophers noted at N46° 07' 45.0"; W112° 54' 46.4" and southwards along the east-facing slope. • New disturbances in the southwest corner of the area. Related to construction of building in Sub-Area 4, Area 4 (Type B Cap) on west side of road. Vehicle tracks and excavations. No reclamation work has been done in the disturbed areas. • Canada thistle occurs in the riprap areas.	No obvious signs of erosion.	Riprap at N 46° 07' 42.1"; W 112° 54' 35.3" in place. Culvert with a small amount of debris. Riprap at N 46° 07' 46.7"; W 112° 54' 45.9" in place. Culverts clean. A small amount of gravel. Riprap at N 46° 07' 41.7"; W 112° 54' 44.6" in place. Culvert with 2-3 inches of sediment.	
2006	• Annual species are still prevalent on east-facing part of berm. Cheatgrass is common. • Pocket gophers noted at N46° 07' 45.0"; W112° 54' 46.4" and southwards along the east-facing slope. • New disturbances in the southwest corner of the area noted in 2005 were not re-seeded. Cheatgrass is the major species in this disturbed area. • There is a bit of windblown trash in this area. Pieces of styrofoam and cardboard that are large enough to adversely affect the vegetation.	Small inactive rill found at N46° 07' 41.5"; W112° 54' 44.9"	Rip rap in the channel is in place.	
2007	• Annual species are still prevalent on east-facing part of berm. Cheatgrass is common. • Pocket gophers noted at N46° 07' 45.0"; W112° 54' 46.4" and southwards along the east-facing slope. (Still present in 2007). • New disturbances in the southwest corner of the area noted in 2005 were not re-seeded. Cheatgrass is the major species in this disturbed area. There has been some establishment of perennial grasses in these areas. There is still quite a bit of cheatgrass. Over time this area will probably fill in without any active seeding. • There is a bit of windblown trash in this area. Pieces of styrofoam and cardboard that are large enough to adversely affect the vegetation. • A few scattered knapweed plants. Spot spraying now would reduce potential problems in the future.	No obvious signs of erosion.	Rip rap in the channel is in place.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2008	• Annual species are still prevalent on east-facing part of berm. Cheatgrass is common. • Pocket gophers noted at N46° 07' 45.0"; W112° 54' 46.4" and southwards along the east-facing slope. (Still present in 2008). • New disturbances in the southwest corner of the area noted in 2005 were not re-seeded. There are still some sparse patches in this location, but mostly the site is okay. • There is a bit of windblown trash in this area. Pieces of styrofoam and cardboard that are large enough to adversely affect the vegetation. • A few scattered knapweed plants. Spot spraying now would reduce potential problems in the future.	No obvious signs of erosion.	Rip rap in the channel is in place.	
2009	• A few scattered knapweed plants. Spot spraying now would reduce potential problems in the future. Some weed spraying was conducted in 2009. • Cheatgrass is still prevalent on east-facing part of berm. • Pocket gophers noted at N46° 07' 45.0"; W112° 54' 46.4" and southwards along the east-facing slope. (Still present in 2009). • New disturbances in the southwest corner of the area noted in 2005 were not re-seeded. There are still some sparse patches in this location, but mostly the site is okay. • There is a bit of windblown trash in this area. Pieces of styrofoam and cardboard that are large enough to adversely affect the vegetation. Still a minor problem in 2009 • The area is mostly comparable to what was observed in 2008. • This area was included in the 2009 Compliance Determination Request Report submitted to EPA.	No obvious signs of erosion.	Rip rap in the channel is in place.	
2010	• A few scattered knapweed plants. • Cheatgrass is still prevalent on east-facing part of berm, but was less noticeable in 2010. • Pocket gophers noted at N46° 07' 45.0"; W112° 54' 46.4" and southwards along the east-facing slope. (Still present in 2010). • There is a bit of windblown trash in this area. Pieces of styrofoam and cardboard that are large enough to adversely affect the vegetation. Still a minor problem in 2010. • The area is mostly comparable to what was observed in 2009. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring. The performance standards are still being met.	No obvious signs of erosion. BLM Erosion Score = 4.	Rip rap in the channel is in place.	
2011	• A few scattered knapweed plants. • Cheatgrass still occurs on east-facing part of berm. • Pocket gophers noted at N46° 07' 45.0"; W112° 54' 46.4" and southwards along the east-facing slope. (Still present in 2011). • There is a bit of windblown trash in this area. Pieces of styrofoam and cardboard that are large enough to adversely affect the vegetation. Still a minor problem in 2011. • The area is mostly comparable to what was observed in 2010. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring. The performance standards are still being met.	No obvious signs of erosion. BLM Erosion Score = 4.	Rip rap in the channel is in place.	
2012	• A few scattered knapweed plants. • Cheatgrass still occurs on east-facing part of berm. • Pocket gophers noted at N46° 07' 45.0"; W112° 54' 46.4" and southwards along the east-facing slope. (Still present in 2012). • There is a bit of windblown trash in this area. Pieces of styrofoam and cardboard that are large enough to adversely affect the vegetation. Still a minor problem in 2012. • The area is mostly comparable to what was observed in 2011. • This area was included in the 2009 Compliance Determination Report. In 2012, the performance standards are still being met.	No obvious signs of erosion. BLM Erosion Score = 4.	Rip rap in the channel is in place.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2013	• A few scattered knapweed plants. • Cheatgrass still occurs on east-facing part of berm. • Pocket gophers noted at N46° 07’ 45.0”; W112° 54’ 46.4” and southwards along the east-facing slope. (Still present in 2013). • There is a bit of windblown trash in this area. Pieces of styrofoam and cardboard that are large enough to adversely affect the vegetation. Still a minor problem in 2013. • The area is mostly comparable to what was observed in 2012. • The portion of the area parallel to landfill access road could be fertilized to improve vegetation cover. • This area was included in the 2009 Compliance Determination Report. In 2013, the performance standards are still being met.	No obvious signs of erosion. BLM Erosion Score = 4.	Rip rap in the channel is in place.	
2014	• A few scattered knapweed plants. • Cheatgrass still occurs on east-facing part of berm. • Pocket gophers noted at N46° 07’ 45.0”; W112° 54’ 46.4” and southwards along the east-facing slope. (Still present in 2014). • There is a bit of windblown trash in this area. Pieces of styrofoam and cardboard that are large enough to adversely affect the vegetation. Still a minor problem in 2014. • The area is mostly comparable to what was observed in 2013. • The portion of the area parallel to landfill access road could be fertilized to improve vegetation cover. • This area was included in the 2009 Compliance Determination Report. In 2014, the performance standards are still being met. Compliance Status: LTIM.	No obvious signs of erosion. BLM Erosion Score = 4.	Rip rap in the channel is in place.	

Transect Sampling Summary for Old Works Sub Area 4, Area 4 Type A Cap (VM_137)

Transects in Old Works Sub Area 4, Area 4 Type A Cap	Mean Cover (%)		Frequency (%)	
	2006	**2008**	**2006**	**2008**
Number of Transects Sampled	1	1	1	1
Total Vegetation Cover (All Species)	30	38		
Total Vegetation Cover (Acceptable Species)	34	38		
Litter and Rock Combined	62	60		
Bare Soil	4	2		
Total Cover	96	98		
Litter Cover	58	60		
Rock Cover	4			
Acceptable Species				
Agropyron cristatum	2	8	NA	NA
Agropyron dasystachyum	<0.1		NA	
Agropyron intermedium	10	18	NA	NA
Elymus cinereus		<0.1		NA
Festuca ovina	<0.1	12	NA	NA
Medicago sativa	14		NA	
Poa compressa	4	<0.1	NA	NA
Undesirable Weedy Species				
Bromus japonicus	<0.1		NA	
Bromus tectorum	4	<0.1	NA	NA

Site Aerial Photo for Old Works Sub Area 4, Area 4 Type A Cap (VM_137)

•1 Photo Location Point

Old Works Sub Area 4, Area 4 Type A Cap (VM_137)

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

PHOTO LOCATION 1 – Old Works Sub Area 4 Area 4 Type A Cap		**PHOTO LOCATION 2 - Old Works Sub Area 4 Area 4 Type A Cap**
N46° 07’ 41.6”; W112° 54’ 45.9”, Looking East		N46° 07’ 41.6”; W112° 54’ 45.9”, Looking North
		No Photo Taken at this Location until 2007
July 10, 2000		
		No Photo Taken at this Location until 2007
July 4, 2001		

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

PHOTO LOCATION 1 – Old Works Sub Area 4 Area 4 Type A Cap		**PHOTO LOCATION 2 - Old Works Sub Area 4 Area 4 Type A Cap**
N46° 07’ 41.6”; W112° 54’ 45.9”, Looking East		N46° 07’ 41.6”; W112° 54’ 45.9”, Looking North
		No Photo Taken at this Location until 2007
July 21, 2002		
		No Photo Taken at this Location until 2007
July 22, 2003		

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

PHOTO LOCATION 1 – Old Works Sub Area 4 Area 4 Type A Cap		**PHOTO LOCATION 2 - Old Works Sub Area 4 Area 4 Type A Cap**
N46° 07’ 41.6”; W112° 54’ 45.9”, Looking East		N46° 07’ 41.6”; W112° 54’ 45.9”, Looking North
		No Photo Taken at this Location until 2007
August 11, 2004		
		No Photo Taken at this Location until 2007
August 19, 2005		

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

PHOTO LOCATION 1 – Old Works Sub Area 4 Area 4 Type A Cap		**PHOTO LOCATION 2 - Old Works Sub Area 4 Area 4 Type A Cap**
N46° 07’ 41.6”; W112° 54’ 45.9”, Looking East		N46° 07’ 41.6”; W112° 54’ 45.9”, Looking North
		No Photo Taken at this Location until 2007
July 19, 2006		
August 25, 2007		August 25, 2007

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

PHOTO LOCATION 1 – Old Works Sub Area 4 Area 4 Type A Cap		**PHOTO LOCATION 2 - Old Works Sub Area 4 Area 4 Type A Cap**
N46° 07’ 41.6”; W112° 54’ 45.9”, Looking East		N46° 07’ 41.6”; W112° 54’ 45.9”, Looking North
August 20, 2008		August 20, 2008
August 20, 2009		August 20, 2009

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

PHOTO LOCATION 1 – Old Works Sub Area 4 Area 4 Type A Cap		**PHOTO LOCATION 2 - Old Works Sub Area 4 Area 4 Type A Cap**
N46° 07’ 41.6”; W112° 54’ 45.9”, Looking East		N46° 07’ 41.6”; W112° 54’ 45.9”, Looking North
July 14, 2010		July 14, 2010
August 4, 2011		August 4, 2011

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

PHOTO LOCATION 1 – Old Works Sub Area 4 Area 4 Type A Cap		**PHOTO LOCATION 2 - Old Works Sub Area 4 Area 4 Type A Cap**
N46° 07’ 41.6”; W112° 54’ 45.9”, Looking East		N46° 07’ 41.6”; W112° 54’ 45.9”, Looking North
August 21, 2012		August 21, 2012
August 4, 2013		August 4, 2013

Old Works Sub Area 4, Area 4 Type A Cap (VM_137) 2000-2014

PHOTO LOCATION 1 – Old Works Sub Area 4 Area 4 Type A Cap		**PHOTO LOCATION 2 - Old Works Sub Area 4 Area 4 Type A Cap**
N46° 07’ 41.6”; W112° 54’ 45.9”, Looking East		N46° 07’ 41.6”; W112° 54’ 45.9”, Looking North
June 18, 2014		June 18, 2014

Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139) 2015 -					
Year	**2015**				
Area (acres)	6.2				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/29/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Small/ Infrequent				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	24				
Total Number of Acceptable Species	13				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
Berteroa *(Berteroa incana)*	Infrequent				
White Top *(Cardaria draba)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*					
Field Bindweed *(Convolvulus arvensis)*					
Leafy Spurge *(Euphorbia esula)*					
Baby's Breath *(Gypsophila paniculata)*					
Dalmatian Toadflax *(Linaria dalmatica)*					
Curly Dock *(Rumex crispus)*					
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139)

Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0, 20%				
Aspect	Flat, N				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	4				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139) 2015-

Old Works Sub-Area 4, Area 5 Red Sands Original m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Western Yarrow	*Achillea lanulosa*					
Crested Wheatgrass	*Agropyron cristatum*	x				
Thickspike Wheatgrass	*Agropyron dasystachyum*	m				
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Bluebunch Wheatgrass	*Agropyron spicatum*	x				
Slender Wheatgrass	*Agropyron trachycaulum*					
Aster	*Aster adscendens*	x				
Milkvetch	*Astragalus sp.*					
Regar Meadow Brome	*Bromus biebersteinii*					
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Great Basin Wildrye	*Elymus cinereus*	m				
Mammoth Wildrye	*Elymus giganteus*					
Russian Wildrye	*Elymus junceus*					
Sheep Fescue	*Festuca ovina*	m				
Poverty Sumpweed	*Iva axillaris*					
Lewis Flax	*Linum lewisii*					
Alfalfa	*Medicago sativa*	m				
Yellow Sweetclover	*Melilotus officinalis*	x				
Beard Tongue	*Penstemon eriantherus*					
Phacelia	*Phacelia hastata*					
Big Bluegrass	*Poa ampla*	x				
Bulbous Bluegrass	*Poa bulbosa*					
Canada Bluegrass	*Poa compressa*	x				
Kentucky Bluegrass	*Poa pratensis*					
Currant	*Ribes sp.*					
Woods Rose	*Rosa woodsii*					
UNDESIRABLE WEEDY SPECIES						
Annual Brome	*Bromus secalinus*					
Cheatgrass	*Bromus tectorum*	x				
Littleseed Falseflax	*Camelina microcarpa*					
Shepherd's Purse	*Capsella bursa-pastoris*					
Goosefoot	*Chenopodium album*	x				
Tansy Mustard	*Descurainia richardsonii*	x				
Filaree	*Erodium cicutarium*					
Fluffweed	*Filago arvensis*					
Black Henbane	*Hyoscyamus niger*					
Prickly Lettuce	*Lactuca serriola*	x				
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x				
Hedge Mustard	*Sisymbrium loeselii*	x				
Common Dandelion	*Taraxacum officinale*	x				
Penny Cress	*Thlaspi arvense*					
Salsify	*Tragopogon dubius*	x				

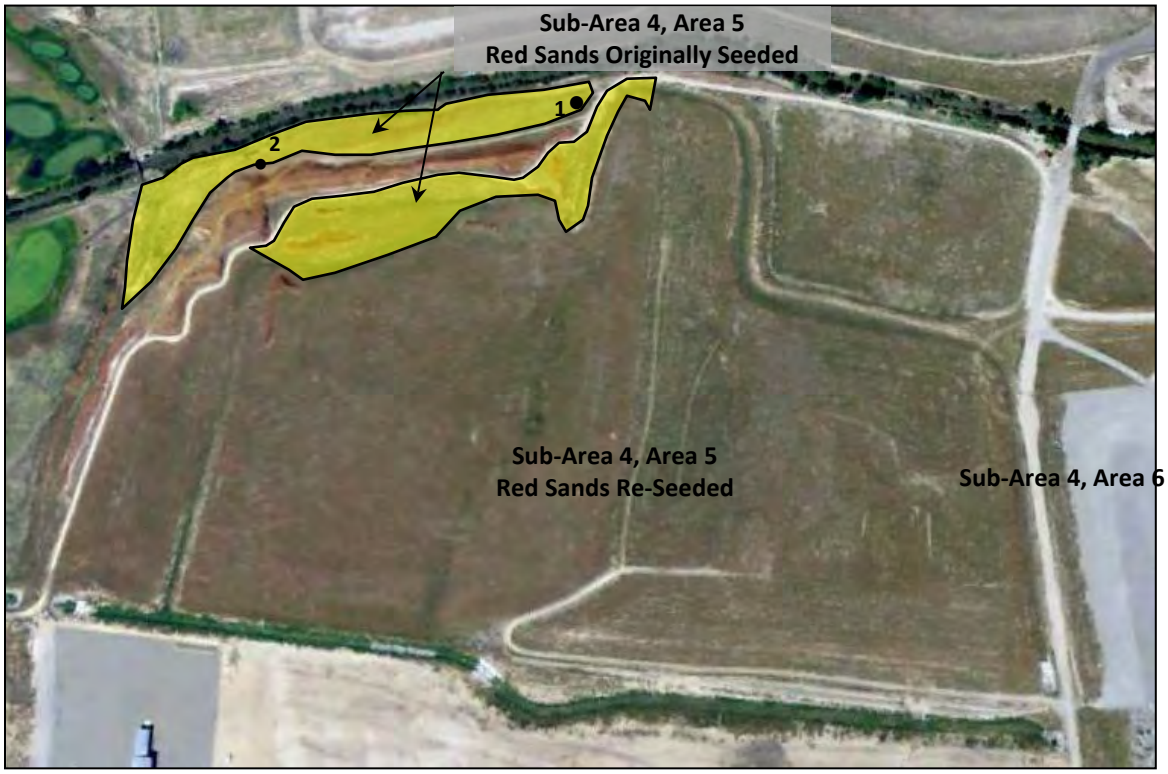
Observed Species in Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139) 2015-

Old Works Sub-Area Area 4, Area 5 Red Sands Original m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
NOXIOUS WEEDS						
Berteroa	*Berteroa incana*	I				
White Top	*Cardaria draba*	I				
Spotted Knapweed	*Centaurea maculosa*	I				
Canada Thistle	*Cirsium arvense*					
Field Bindweed	*Convolvulus arvensis*					
Baby's Breath	*Gypsophila paniculata*					
Kochia	*Kochia scoparia*					
Curly Dock	*Rumex crispus*					
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		13				
Total Number of Species		24				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• 4-wheeler tracks along north edge of red sands have killed the vegetation. Vegetation cover on the upper part of the west end of the north-facing slope is comparable to what it was in 2014. • The weedy area at N46° 08’ 02.1”; W112° 55’ 07.2” (and westward) was sprayed in 2008. Nearly all of the broadleaved plants (including alfalfa and rubber rabbitbrush were killed. In 2015, cover by perennial grasses including sheep fescue and thickspike wheatgrass was somewhat greater (See Photo 2). While the vegetation cover is still sparse, it was estimated to exceed 10 percent, so it was not considered as a bare area. • Spotted knapweed was sprayed again in 2015. Evaluate weed status in 2016. • This area met compliance standards for two years. In 2015, the performance standards were still being met. Compliance Status: LTIM. • Some garbage had been dumped on the site (see Photo 2). Only a small amount was present in 2015.	No obvious signs of erosion. BLM erosion score =4 Some erosion on the 4-wheeler trespass trail.	No BMPs in this area. A small amount of rip rap in the channel along the east side of the area.	

Site Aerial Photo for Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139)



•**1** Photo Location Point

Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139)

Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139) 2015-

PHOTO LOCATION 1 - Sub Area 4, Area 5- Red Sands Original		**PHOTO LOCATION 2 - Sub Area 4, Area 5- Red Sands Original**
N46° 08’ 02.1”, W112° 55’ 03.7”, Looking West Southwest		N46° 08’ 01.4”, W112° 55’ 11.9”, Looking Northeast
July 29, 2015		July 29, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139)

Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
Area (acres)	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner								
Inspection Date	7/10/00	7/4/01	7/21/02	7/22/03	8/11/04	8/19/05	7/20/06	6/12/07
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK	WK	WK	WK	WK	WK, KL	WK
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo								
Site Aerial Photo Follows the Transect Summary Table								
INSPECTION SUMMARY*								
Vegetation Inspection						1	3	3
Erosion Inspection						0	0	0
Stormwater BMP Inspection						0	0	0
VEGETATION INSPECTION*								
Overall Recommendation						1	3	3
Estimated Canopy Coverage	25-35%	25-35%	25-35%	25-35%	25-35%	20-29%	20-29%	20-29%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation						Moderate	Moderate	Moderate
Evidence of Reproduction						Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	16	21	21	24	20	21	27	16
Total Number of Acceptable Species	9	11	11	13	9	14	17	10
Ocular Estimate of Extent of Bare Areas						<1-5%	<1-5%	<1-5%
Weed Species Present								
Berteroa *(Berteroa incana)*		Infrequent		Infrequent		Infrequent		
White Top *(Cardaria draba)*								
Spotted Knapweed *(Centaurea maculosa)*	Frequent	Frequent	Frequent	Frequent	Frequent	Common	Common	Frequent
Canada Thistle *(Cirsium arvense)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Leafy Spurge *(Euphorbia esula)*								
Baby's Breath *(Gypsophila paniculata)*			Infrequent				Infrequent	
Dalmatian Toadflax *(Linaria dalmatica)*								
Curly Dock *(Rumex crispus)*				Infrequent	Infrequent		Infrequent	
Vegetation Comments (See Comments Section)								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 5 Red Sands Original (VM_139)

Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
EROSION INSPECTION*								
Average Slope (percent)	20%	20%	20%	20%	20%	20%	20%	20%
Aspect	Flat, N	Flat, N	Flat, N	Flat, N	Flat, N	Flat, N	Flat, N	Flat, N
Overall Recommendation						0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None	None
Evidence of Surface Litter Movement						None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)								
BMP INSPECTION*								
Overall Recommendation						0	0	0
Evidence of Check Dam Failure						None	None	None
Evidence of Sediment Accumulation in Check Dams						None	None	None
Condition of Dozer Basins						None	None	None
Condition of Grade Control Structures						Controlling	None	None
Evidence of Brush Barrier Failure or Movement						None	None	None
Condition of Mulch						None	None	None
BMP Comments (See Comments Section)								
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**								
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS								
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)								
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?								
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.								
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)								
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.								
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.								
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).								
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 5 Red Sands Original (VM_139)

Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner							
Inspection Date	6/17/08	8/20/09	6/8/10	8/2/11	8/21/12	8/4/13	6/18/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK, KL	WK, KL	WK,HK, CS	WK,HK, CS	WK,HK, CS	WK,HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo							
Site Aerial Photo Follows the Transect Summary Table							
INSPECTION SUMMARY*							
Vegetation Inspection	3	3	1	1	1	0	0
Erosion Inspection	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0
VEGETATION INSPECTION*							
Overall Recommendation	3	3	0	0	1	0	0
Estimated Canopy Coverage	20-29%	20-39%	20-39%	20-39%	20-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Lrg/Infreq	Lrg/Infreq	Lrg/Infreq	Lrg/Infreq	Sm/Infreq	Sm/Infreq	Sm/Infreq
Litter Accumulation	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	18	24	22	26	24	22	16
Total Number of Acceptable Species	10	13	14	15	12	11	11
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present							
Berteroa *(Berteroa incana)*		Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
White Top *(Cardaria draba)*				Infrequent	Infrequent	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Frequent	Infrequent	Infreq/Freq	Infreq/Freq
Canada Thistle *(Cirsium arvense)*			Infrequent		Infrequent		
Leafy Spurge *(Euphorbia esula)*							
Baby's Breath *(Gypsophila paniculata)*							
Dalmatian Toadflax *(Linaria dalmatica)*							
Curly Dock *(Rumex crispus)*							
Vegetation Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 5 Red Sands Original (VM_139)

Old Works Sub-Area 4, Area 5 Red Sands Original (VM_139) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION*							
Average Slope (percent)	20%	20%	20%	20%	20%	20%	20%
Aspect	Flat, N	Flat, N	Flat, N	Flat, N	Flat, N	Flat, N	Flat, N
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)							
BMP INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None	None	None
Condition of Mulch	None	None	None	None	None	None	None
BMP Comments (See Comments Section)							
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**							
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS							
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)			Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?			TRAN (42%)	TRAN (42%)	EST	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.			Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)			Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.			No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.			4	4	4	4	4
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).			No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).			No	No	No	No	No

Observed Species in Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

Old Works Sub 4, Area 5 Red Sands Original m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Western Yarrow	*Achillea lanulosa*					x	x	x								
Crested Wheatgrass	*Agropyron cristatum*							x	x	x	x	x	x	x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*	x	x	x	x	x	x	x	m	m	m	m	m	m	m	m
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bluebunch Wheatgrass	*Agropyron spicatum*		x			x	x	x								x
Slender Wheatgrass	*Agropyron trachycaulum*				x										x	
Aster	*Aster adscendens*	x		x	x	x	x	x	x	x			x			
Milkvetch	*Astragalus sp.*				x		x	x						x		
Regar Meadow Brome	*Bromus biebersteinii*			x			x									
Smooth Brome	*Bromus inermis*		x	x	x		x	x	x	x	x	x	x	x	x	
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Great Basin Wildrye	*Elymus cinereus*	x	x	x	x	x	x	x	m	m	m	m	m	m	m	m
Mammoth Wildrye	*Elymus giganteus*	x	x	x	x			x			x	x	x	x		
Russian Wildrye	*Elymus junceus*										x		x		x	
Sheep Fescue	*Festuca ovina*	x	x	x	x	x	x	x	x	x	x	x	x	x	m	m
Poverty Sumpweed	*Iva axillaris*												x			
Lewis Flax	*Linum lewisii*															x
Alfalfa	*Medicago sativa*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Yellow Sweetclover	*Melilotus officinalis*		x		x			x				x	x			
Beard Tongue	*Penstemon eriantherus*										x	x	x			x
Phacelia	*Phacelia hastata*											x		x		
Bulbous Bluegrass	*Poa bulbosa*											x				
Canada Bluegrass	*Poa compressa*	x	x	x	x		x	x	x	x	x	x	x	x	x	x
Kentucky Bluegrass	*Poa pratensis*										x					
Currant	*Ribes sp.*							x								
Woods Rose	*Rosa woodsii*						x	x								

Observed Species in Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

Old Works Sub 4, Area 5 Red Sands Original m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
UNDESIRABLE WEEDY SPECIES																
Annual Brome	*Bromus secalinus*													x		
Cheatgrass	*Bromus tectorum*		x	x				x	x	x	x	x	x	x	x	
Littleseed Falseflax	*Camelina microcarpa*										x	x	x		x	
Shepherd's Purse	*Capsella bursa-pastoris*								x							
Goosefoot	*Chenopodium album*					x										
Tansy Mustard	*Descurainia richardsonii*	x	x	x	x	x	x	x		x		x	x	x	x	
Filaree	*Erodium cicutarium*		x	x	x	x										
Fluffweed	*Filago arvensis*														x	
Black Henbane	*Hyoscyamus niger*		x	x	x											
Prickly Lettuce	*Lactuca serriola*							x						x		
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x	x	x	x	x	x	x	x	x	x		x	x	x	
Hedge Mustard	*Sisymbrium loeselii*										x		x	x		
Common Dandelion	*Taraxacum officinale*	x	x	x	x	x	x	x	x	x	x	x		x	x	x
Penny Cress	*Thlaspi arvense*								x	x	x	x	x			
Salsify	*Tragopogon dubius*	x	x	x	x	x	x	x		x	x	x	x	x	x	x
NOXIOUS WEEDS																
Berteroa	*Berteroa incana*		x		x		x				I	I	I	I	I	I
White Top	*Cardaria draba*												I	I	I	I
Spotted Knapweed	*Centaurea maculosa*	x			x	x	x	x		I	I	I	F	I	I-F	I-F
Canada Thistle	*Cirsium arvense*	x	x	x	x	x	x	x	x		I		I			
Field Bindweed	*Convolvulus arvensis*					x										
Baby's Breath	*Gypsophila paniculata*			x				x								
Kochia	*Kochia scoparia*	x	x	x	x	x				I	I			I	I	
Curly Dock	*Rumex crispus*				x	x		x								
I=Infrequent; F=Frequent; C=Common; D=Dominant																

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	• Vegetation cover approximately 30 percent, bare soil approximately 10 percent and litter cover approximately 55-65 percent.	No obvious signs of erosion.	Rip-rap in places	
2001	• West end of site needs knapweed control. • 4-wheeler trespass use on Red Sands. •Vegetation cover approximately 30 percent, bare soil approximately 10-15 percent and litter cover approximately 60-70 percent.	No obvious signs of erosion.	Rip-rap in places	
2002	• There is a patch of knapweed at N 46° 08' 02.1"; W 112° 55' 07.2" (and westward) that needs to be controlled. Do not boom spray. Use either a back pack sprayer or a wand sprayer on a 4-wheeler. This problem was noted in 2000 and 2001. Scattered Canada Thistle. The north facing hillside has the most knapweed. • West end of site needs knapweed control.	No obvious signs of erosion.	Rip-rap in places	
2003	• There is a patch of knapweed at N 46° 08' 02.1"; W 112° 55' 07.2" (and westward) that needs to be controlled. Do not boom spray. Use either a back pack sprayer or a wand sprayer on a 4-wheeler. This problem was noted in previous years. Scattered Canada Thistle. The north facing hillside has the most knapweed •West end of site needs knapweed control. 4-wheeler tracks along north edge of red sands. Needs a "No Motorized Vehicles" sign.	No obvious signs of erosion.	Rip-rap in places	
2004	• There is a patch of knapweed at N 46° 08' 02.1"; W 112° 55' 07.2" (and westward) that needs to be controlled. Do not boom spray. Use either a back pack sprayer or a wand sprayer on a 4-wheeler. This problem was noted in previous years. Scattered Canada Thistle. The north facing hillside has the most knapweed • West end of site needs knapweed control. 4-wheeler tracks along north edge of red sands has killed the vegetation. Needs a "No Motorized Vehicles" or "No Access – Please use Established Trail" sign. The 4-wheeler trespass is more of a problem in 2004 than it was in 2003.	No obvious signs of erosion.	Rip-rap in places	
2005	• There is a patch of knapweed at N 46° 08' 02.1"; W 112° 55' 07.2" (and westward) that needs to be controlled. It appears that this area has been sprayed, but there are still many live plants. Need to continue weed control in this area. • Perennial grasses are limited in the knapweed area noted above. If the perennials do not increase once the knapweed has been controlled, it may be necessary to interseed this area. • An old couch has been dumped on the west end (north side) of the red sands deposits. •West end of site needs knapweed control. 4-wheeler tracks along north edge of red sands has killed the vegetation. Needs a "No Motorized Vehicles" or "No Access – Please use Established Trail" sign. The 4-wheeler trespass problem in 2005 was about the same as was noted in 2004.	No obvious signs of erosion.	Riprap at N 46° 08' 03.1"; W 112° 55' 01.9" in place. 1-2 inches of sediment in culvert. Riprap at N 46° 07' 59.5"; W 112° 55' 03.7" in place. Culvert with 3-4 inches of sediment. Riprap at N 46° 08' 02.9"; W 112° 55' 03.1" in place. No sediment in culvert.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2006	•There is a patch of knapweed at N 46° 08' 02.1"; W 112° 55' 07.2" (and westward) that needs to be controlled. Need to continue weed control in this area. • Perennial grasses are limited in the knapweed area noted above. This area needs to be interseeded because of the lack of perennial grasses. • An old couch has been dumped on the west end (north side) of the red sands deposits. • From approximately N46° 08' 01.7"; W112° 55' 10.7" to the west end of the area, the upper part of the slope is mostly just knapweed with only a few scattered perennial grasses, forbs and rubber rabbitbrush. This part of the area should be further evaluated. (Probably needs disking and re-seeding – possibly 1-2 acres). This is the part of the area where netting was originally installed. • West end of site needs knapweed control. 4-wheeler tracks along north edge of red sands has killed the vegetation. Vegetation evaluation was given a "3" because of the need for weed control and possible re-seeding on the upper part of the west end of the north-facing slope.	No obvious signs of erosion.	No BMP's installed in this area; A small amount of rip rap in the channel along the east side of the area.	
2007	• The weedy area at N 46° 08' 02.1"; W 112° 55' 07.2" (and westward) was sprayed. Nearly all of the broadleaved plants (including alfalfa and rubber rabbitbrush were killed. Because there are so few perennial grasses in the sprayed area, it will be necessary to re-seed the western part of the north-facing slope. A light disking of the site prior to seeding will enhance establishment of the perennial grass seedlings. • Overall conditions on the site are comparable to 2006, except for the differences in the weed control area noted above. • Alfalfa in this area was selectively sprayed, apparently because of mis-identification. • West end of site needs to be re-seeded. 4-wheeler tracks along north edge of red sands has killed the vegetation. Vegetation evaluation was given a "3" because of the need for re-seeding on the upper part of the west end of the north-facing slope.	No obvious signs of erosion.	No BMPs in this area. A small amount of rip rap in the channel along the east side of the area. The area where netting was originally installed in this area needs to be disked and re-seeded	
2008	• The weedy area at N 46° 08' 02.1"; W 112° 55' 07.2" (and westward) was sprayed. Nearly all of the broadleaved plants (including alfalfa and rubber rabbitbrush were killed. Because there are so few perennial grasses in the sprayed area, it will be necessary to re-seed the western part of the north-facing slope. A light disking of the site prior to seeding will enhance establishment of the perennial grass seedlings. • Overall conditions on the site are comparable to 2007. • West end of site needs to be re-seeded. 4-wheeler tracks along north edge of red sands have killed the vegetation. Vegetation evaluation was given a "3" because of the need for re-seeding on the upper part of the west end of the north-facing slope.	No obvious signs of erosion.	No BMPs in this area. A small amount of rip rap in the channel along the east side of the area. The area where netting was originally installed in this area needs to be disked and re-seeded	
2009	• West end of site needs to be re-seeded. 4-wheeler tracks along north edge of red sands have killed the vegetation. Vegetation evaluation was given a "3" because of the need for re-seeding on the upper part of the west end of the north-facing slope. • The weedy area at N 46° 08' 02.1"; W 112° 55' 07.2" (and westward) was sprayed. Nearly all of the broadleaved plants (including alfalfa and rubber rabbitbrush were killed. Because there are so few perennial grasses in the sprayed area, it will be necessary to re-seed the western part of the north-facing slope. A light disking of the site prior to seeding will enhance establishment of the perennial grass seedlings. In 2009, this part of the area was dominated by cheatgrass, spotted knapweed and kochia. (See Photo 2). • Overall conditions on the site are comparable to 2008.	No obvious signs of erosion.	No BMPs in this area. A small amount of rip rap in the channel along the east side of the area. The area where netting was originally installed in this area needs to be disked and re-seeded	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2010	• 4-wheeler tracks along north edge of red sands have killed the vegetation. Vegetation cover on the upper part of the west end of the north-facing slope is higher than what it was in 2009.. • The weedy area at N 46° 08' 02.1"; W 112° 55' 07.2" (and westward) was sprayed in 2008. Nearly all of the broadleaved plants (including alfalfa and rubber rabbitbrush were killed. In 2010, cover by perennial grasses including sheep fescue and thickspike wheatgrass was somewhat greater (See Photo 2). While the vegetation cover is still sparse, it was estimated to exceed 10 percent, so it was not considered as a bare area. • Some spotted knapweed was noted on the south side of the open space trail in the central part of the area. • In 2010, a first year compliance determination was conducted. Vegetation cover along the sampled transect was 42 percent.	No obvious signs of erosion.	No BMP's installed in this area; A small amount of rip rap in the channel along the east side of the area.	
2011	• 4-wheeler tracks along north edge of red sands have killed the vegetation. Vegetation cover on the upper part of the west end of the north-facing slope is higher than what it was in 2010. • The weedy area at N 46° 08' 02.1"; W 112° 55' 07.2" (and westward) was sprayed in 2008. Nearly all of the broadleaved plants (including alfalfa and rubber rabbitbrush were killed. In 2010, cover by perennial grasses including sheep fescue and thickspike wheatgrass was somewhat greater (See Photo 2). While the vegetation cover is still sparse, it was estimated to exceed 10 percent, so it was not considered as a bare area. • Spotted knapweed needs to be controlled in this area, particularly on the west side of the north facing slope. It needs to be sprayed but DO NOT spray desirable species. • Spotted knapweed was also noted on the south side of the open space trail in the central part of the area. • In 2011, a second year compliance determination was conducted. Vegetation cover by acceptable species along the sampled transect was 38 percent. • Some garbage had been dumped on the site (see Photo 2)	No obvious signs of erosion.	No BMP's installed in this area; A small amount of rip rap in the channel along the east side of the area.	
2012	• 4-wheeler tracks along north edge of red sands have killed the vegetation. More use in 2012. Vegetation cover on the upper part of the west end of the north-facing slope is higher than what it was in 2011. • The weedy area at N 46° 08' 02.1"; W 112° 55' 07.2" (and westward) was sprayed in 2008. Nearly all of the broadleaved plants (including alfalfa and rubber rabbitbrush were killed. In 2011, cover by perennial grasses including sheep fescue and thickspike wheatgrass was somewhat greater (See Photo 2). While the vegetation cover is still sparse, it was estimated to exceed 10 percent, so it was not considered as a bare area. • Continue weed control for spotted knapweed. • In 2011, a second year compliance determination was conducted. In 2012, the standards are still being met. • Some garbage had been dumped on the site (see Photo 2). Only a small amount left in 2012.	There is some erosion on the 4 wheeler trespass trail	No BMP's installed in this area; A small amount of rip rap in the channel along the east side of the area.	

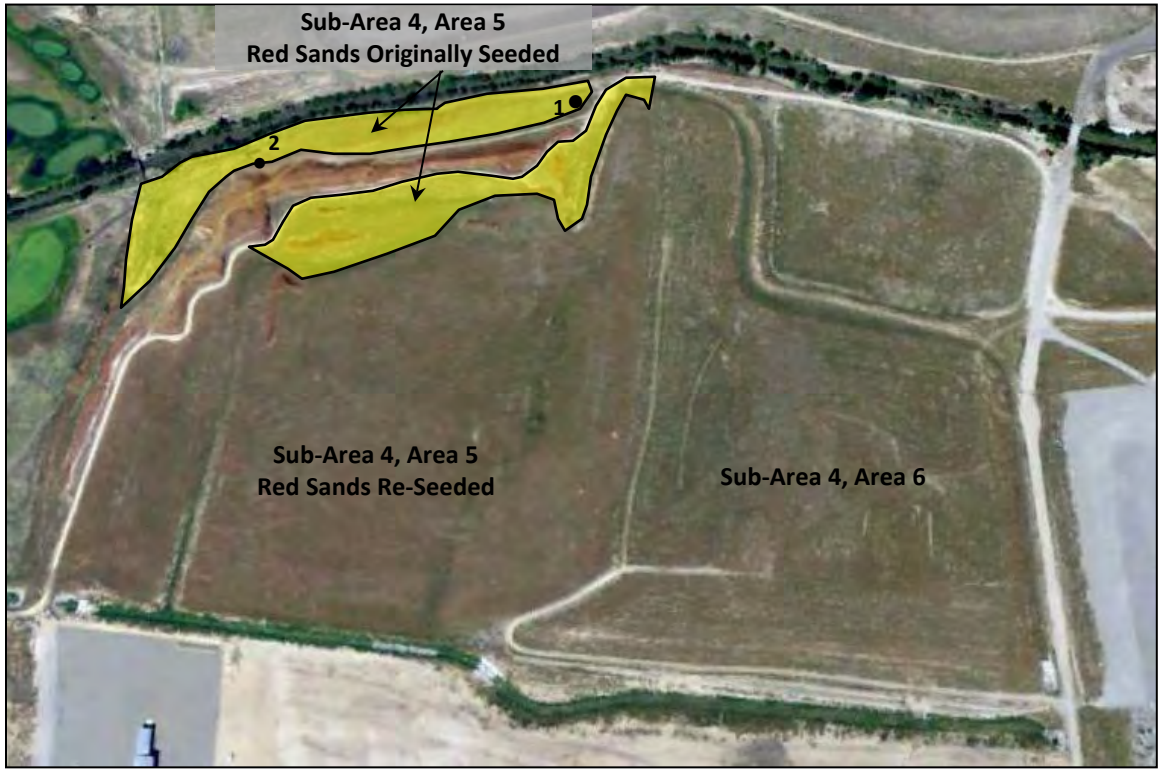
Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2013	• 4-wheeler tracks along north edge of red sands have killed the vegetation. Vegetation cover on the upper part of the west end of the north-facing slope is higher than what it was in 2012. • The weedy area at N 46° 08' 02.1"; W 112° 55' 07.2" (and westward) was sprayed in 2008. Nearly all of the broadleaved plants (including alfalfa and rubber rabbitbrush were killed. In 2013, cover by perennial grasses including sheep fescue and thickspike wheatgrass was somewhat greater (See Photo 2). While the vegetation cover is still sparse, it was estimated to exceed 10 percent, so it was not considered as a bare area. • Spotted knapweed density was reduced by spraying in the past, but has increased again. Spotted knapweed in this area needs control. • In 2011, a second year compliance determination was conducted. In 2013, the performance standards were still being met. • Some garbage had been dumped on the site (see Photo 2). Only a small amount was present in 2013.	No obvious signs of erosion. BLM erosion score =4 Some erosion on the 4-wheeler trespass trail.	No BMPs in this area. A small amount of rip rap in the channel along the east side of the area.	
2014	• 4-wheeler tracks along north edge of red sands have killed the vegetation. Vegetation cover on the upper part of the west end of the north-facing slope is comparable to what it was in 2013. • The weedy area at N46° 08' 02.1"; W112° 55' 07.2" (and westward) was sprayed in 2008. Nearly all of the broadleaved plants (including alfalfa and rubber rabbitbrush were killed. In 2014, cover by perennial grasses including sheep fescue and thickspike wheatgrass was somewhat greater (See Photo 2). While the vegetation cover is still sparse, it was estimated to exceed 10 percent, so it was not considered as a bare area. • Spotted knapweed is increasing in this area again and will need control in the next few years. • This area met compliance standards for two years. In 2014, the performance standards were still being met. Compliance Status: LTIM. • Some garbage had been dumped on the site (see Photo 2). Only a small amount was present in 2014.	No obvious signs of erosion. BLM erosion score =4 Some erosion on the 4-wheeler trespass trail.	No BMPs in this area. A small amount of rip rap in the channel along the east side of the area.	

Transect Sampling Summary for Old Works Sub Area 4, Area 5 Red Sands Original (VM_139)

Old Works Sub-Area 4, Area 5- Red Sands Original	**Cover (%)**	
	2010	**2011**
Number of Transects Sampled	1	1
Total Vegetation Cover (All Species)	42	42
Total Vegetation Cover (Acceptable Species)	42	38
Litter and Rock Combined	54	56
Bare Soil	4	2
Total Cover	96	98
Litter Cover	54	56
Rock Cover	0	0
Acceptable Species		
Agropyron dasystachyum	4	4
Agropyron intermedium	10	8
Elymus cinereus	12	14
Festuca ovina	10	8
Mosses	<1	
Poa compressa	6	4
Undesirable Weedy Species		
Bromus tectorum	<1	4
Descurainia richardsonii		<1
Sisymbrium altissimum	<1	
Taraxacum officinale	<1	<1
Tragopogon dubius		<1
Noxious Weed Species		
Centaurea maculosa		<1

Site Aerial Photo for Old Works Sub Area 4, Area 5 Red Sands Original (VM_139)



•1 Photo Location Point

Old Works Sub Area 4, Area 5 Red Sands Original (VM_139)

Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

PHOTO LOCATION 1 - Sub Area 4, Area 5- Red Sands Original		**PHOTO LOCATION 2 - Sub Area 4, Area 5- Red Sands Original**
N46° 08’ 02.1”, W112° 55’ 03.7”, Looking West Southwest		N46° 08’ 01.4”, W112° 55’ 11.9”, Looking Northeast
		No Photo Taken at this Location until 2009
July 10, 2000		
		No Photo Taken at this Location until 2009
July 4, 2001		

Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

PHOTO LOCATION 1 - Sub Area 4, Area 5- Red Sands Original		**PHOTO LOCATION 2 - Sub Area 4, Area 5- Red Sands Original**
N46° 08’ 02.1”, W112° 55’ 03.7”, Looking West Southwest		N46° 08’ 01.4”, W112° 55’ 11.9”, Looking Northeast
		No Photo Taken at this Location until 2009
July 21, 2002		
		No Photo Taken at this Location until 2009
July 22, 2003		

Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

PHOTO LOCATION 1 - Sub Area 4, Area 5- Red Sands Original		**PHOTO LOCATION 2 - Sub Area 4, Area 5- Red Sands Original**
N46° 08’ 02.1”, W112° 55’ 03.7”, Looking West Southwest		N46° 08’ 01.4”, W112° 55’ 11.9”, Looking Northeast
		No Photo Taken at this Location until 2009
August 11, 2004		
		No Photo Taken at this Location until 2009
August 19, 2005		

Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

PHOTO LOCATION 1 - Sub Area 4, Area 5- Red Sands Original		**PHOTO LOCATION 2 - Sub Area 4, Area 5- Red Sands Original**
N46° 08’ 02.1”, W112° 55’ 03.7”, Looking West Southwest		N46° 08’ 01.4”, W112° 55’ 11.9”, Looking Northeast
		No Photo Taken at this Location until 2009
July 20, 2006		
		No Photo Taken at this Location until 2009
June 12, 2007		

Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

PHOTO LOCATION 1 - Sub Area 4, Area 5- Red Sands Original		**PHOTO LOCATION 2 - Sub Area 4, Area 5- Red Sands Original**
N46° 08’ 02.1”, W112° 55’ 03.7”, Looking West Southwest		N46° 08’ 01.4”, W112° 55’ 11.9”, Looking Northeast
		No Photo Taken at this Location until 2009
June 17, 2008		
August 20, 2009		August 20, 2009

Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

PHOTO LOCATION 1 - Sub Area 4, Area 5- Red Sands Original	**PHOTO LOCATION 2 - Sub Area 4, Area 5- Red Sands Original**
N46° 08’ 02.1”, W112° 55’ 03.7”, Looking West Southwest	N46° 08’ 01.4”, W112° 55’ 11.9”, Looking Northeast
June 8, 2010	June 8, 2010
August 11, 2011	August 11, 2011

Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

PHOTO LOCATION 1 - Sub Area 4, Area 5- Red Sands Original	**PHOTO LOCATION 2 - Sub Area 4, Area 5- Red Sands Original**
N46° 08’ 02.1”, W112° 55’ 03.7”, Looking West Southwest	N46° 08’ 01.4”, W112° 55’ 11.9”, Looking Northeast
August 21, 2012	August 21, 2012
August 4, 2013	August 4, 2013

Old Works Sub Area 4, Area 5 Red Sands Original (VM_139) 2000-2014

PHOTO LOCATION 1 - Sub Area 4, Area 5- Red Sands Original		**PHOTO LOCATION 2 - Sub Area 4, Area 5- Red Sands Original**
N46° 08’ 02.1”, W112° 55’ 03.7”, Looking West Southwest		N46° 08’ 01.4”, W112° 55’ 11.9”, Looking Northeast
June 18, 2014		June 18, 2014

Old Works Sub- Area 4, Area 5 Red Sands Reseeded (VM_140) 2015 -					
Year	**2015**				
Area (acres)	26.2				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/29/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	21				
Total Number of Acceptable Species	13				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*					
Canada Thistle *(Cirsium arvense)*					
Field Bindweed *(Convolvulus arvensis)*					
Leafy Spurge *(Euphorbia esula)*	Infrequent				
Baby's Breath *(Gypsophila paniculata)*					
Dalmatian Toadflax *(Linaria dalmatica)*					
Curly Dock *(Rumex crispus)*					
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub- Area 4, Area 5 Red Sands Reseeded (VM_140)

Old Works Sub- Area 4, Area 5 Red Sands Reseeded (VM_140) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	2				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub- Area 4, Area 5 Red Sands Reseeded (VM_140) 2015-

Old Works Sub- Area 4, Area 5 Red Sands Reseeded m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	x				
Thickspike Wheatgrass	*Agropyron dasystachyum*	m				
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Western Wheatgrass	*Agropyron smithii*	x				
Slender Wheatgrass	*Agropyron trachycaulum*					
Red Top	*Agrostis alba*	x				
Meadow Foxtail	*Alopecurus pratensis*					
Aster	*Aster adscendens*					
Regar Meadow Brome	*Bromus biebersteinii*					
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Great Basin Wildrye	*Elymus cinereus*	x				
Mammoth Wildrye	*Elymus giganteus*					
Russian Wildrye	*Elymus junceus*	x				
Sheep Fescue	*Festuca ovina*	m				
Lewis Flax	*Linum lewisii*					
Alfalfa	*Medicago sativa*	m				
Yellow Sweetclover	*Melilotus officinalis*					
Phacelia	*Phacelia hastata*					
Bulbous Bluegrass	*Poa bulbosa*	x				
Canada Bluegrass	*Poa compressa*	x				
Kentucky Bluegrass	*Poa pratensis*					
Wheat	*Triticum aestivum*					
UNDESIRABLE WEEDY SPECIES						
Alyssum	*Alyssum desertorum*					
Wild Oats	*Avena sativa*					
Japanese Brome	*Bromus japonicus*	x				
Annual Brome Grass	*Bromus secalinus*					
Cheatgrass	*Bromus tectorum*	x				
Littleseed Falseflax	*Camelina microcarpa*	x				
Goosefoot	*Chenopodium sp.*					
Tansy Mustard	*Descurainia richardsonii*	x				
Filaree	*Erodium cicutarium*					
Black Henbane	*Hyoscyamus niger*					
Prickly Lettuce	*Lactuca serriola*					
Stickseed	*Lappula echinata*					
False Bindweed	*Polygonum convolvulus*					
Catchfly	*Silene noctiflora*					
Tumbling Hedge Mustard	*Sisymbrium altissimum*					
Hedge Mustard	*Sisymbrium loeselii*					
Common Dandelion	*Taraxacum officinale*	x				
Penny Cress	*Thlaspi arvense*					
Salsify	*Tragopogon dubius*	x				

Observed Species in Old Works Sub- Area 4, Area 5 Red Sands Reseeded (VM_140) 2015-

Old Works Sub-Area Area 4, Area 5 Red Sands Reseeded m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
NOXIOUS WEEDS						
Berteroa	*Berteroa incana*					
White Top	*Cardaria draba*	I				
Spotted Knapweed	*Centaurea maculosa*					
Canada Thistle	*Cirsium arvense*					
Leafy Spurge	*Euphorbia esula*	I				
Kochia	*Kochia scoparia*					
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		13				
Total Number of Species		21				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub- Area 4, Area 5 Red Sands Reseeded (VM_140) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• Vegetation cover in 2015 is comparable to 2014. • Annual grasses and other annual species are still present, but less abundant than in the past years. • Cheatgrass is still present, but is no longer a problem. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met in 2015. Compliance Status: LTIM.	No obvious signs of erosion. BLM Score = 2.	No BMPs installed in this area.	

Site Aerial Photo for Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140)

•1 Photo Location Point

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140)

Old Works Sub-Area 4, Area 5 Red Sands Reseeded (VM_140) 2015-

PHOTO LOCATION 1 - Sub Area 4, Area 5- Red Sands Reseeded
N46° 07’ 51.5”; W112° 55’ 08.4”, looking north-northwest
July 29, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140)

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
Area (acres)	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner								
Inspection Date	7/10/00	7/4/01	7/21/02	7/22/03	8/11/04	8/19/05	7/20/06	6/12/07
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK	WK	WK	WK	WK	WK, KL	WK
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo								
Site Aerial Photo Follows the Transect Summary Table								
INSPECTION SUMMARY*								
Vegetation Inspection						0	0	0
Erosion Inspection						0	0	0
Stormwater BMP Inspection						0	0	0
VEGETATION INSPECTION*								
Overall Recommendation						0	0	0
Estimated Canopy Coverage	15-25%	25-35%	25-35%	25-35%	25-35%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation						Moderate	Moderate	Moderate
Evidence of Reproduction						Yes	Yes	Yes
Species Richness (Total Number of Species – See List)	17	27	26	21	18	18	25	21
Total Number of Acceptable Species	7	14	13	11	9	9	13	9
Ocular Estimate of Extent of Bare Areas						<1-5%	<1-5%	<1-5%
Weed Species Present								
Berteroa *(Berteroa incana)*	Infrequent		Infrequent	Infrequent				
White Top *(Cardaria draba)*		Infrequent	Infrequent	Infrequent			Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*		Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	
Canada Thistle *(Cirsium arvense)*	Frequent	Infrequent	Infrequent	Infrequent	Infrequent			
Leafy Spurge *(Euphorbia esula)*		Infrequent	Infrequent	Infrequent		Infrequent		Infrequent
Baby's Breath *(Gypsophila paniculata)*				Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*								
Curly Dock *(Rumex crispus)*								
Vegetation Comments (See Comments Section)								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140)

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
EROSION INSPECTION*								
Average Slope (percent)						0	0	0
Aspect						Flat	Flat	Flat
Overall Recommendation						0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None	None
Evidence of Surface Litter Movement						None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)								
BMP INSPECTION*								
Overall Recommendation						0	0	0
Evidence of Check Dam Failure						None	None	None
Evidence of Sediment Accumulation in Check Dams						None	None	None
Condition of Dozer Basins						None	None	None
Condition of Grade Control Structures						None	None	None
Evidence of Brush Barrier Failure or Movement						None	None	None
Condition of Mulch						None	None	None
BMP Comments (See Comments Section)								
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**								
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS								
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	No	No (9nnual)	No	Yes	Yes	Yes	Yes (34%)	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST	EST	EST	EST	EST	EST	TRAN	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No	No
Erosion – BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	<45	<45	<45	<45	<45
Erosion – Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No
Erosion – Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140)

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	26.2	26.2	26.2	26.2	26.2	26.2	26.2
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner							
Inspection Date	6/17/08	8/20/09	7/14/10	8/2/11	8/21/12	8/4/13	6/18/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK, KL	WK, KL	WK,HK, CS	WK,HK, CS	WK,HK, CS	WK,HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo							
Site Aerial Photo Follows the Transect Summary Table							
INSPECTION SUMMARY*							
Vegetation Inspection	0	0	0	0	0	0	0
Erosion Inspection	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0
VEGETATION INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	23	20	21	18	15	20	25
Total Number of Acceptable Species	11	10	11	10	9	12	14
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present							
Berteroa *(Berteroa incana)*							
White Top *(Cardaria draba)*	Infrequent	Infrequent	Infrequent		Infrequent	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*		Infrequent					
Canada Thistle *(Cirsium arvense)*							
Leafy Spurge *(Euphorbia esula)*	Infrequent	Infrequent	Infrequent	Infrequent			Infrequent
Baby's Breath *(Gypsophila paniculata)*							
Dalmatian Toadflax *(Linaria dalmatica)*							
Curly Dock *(Rumex crispus)*							
Vegetation Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140)

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION*							
Average Slope (percent)	0	0	0	0	0	0	0
Aspect	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)							
BMP INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None	None	None
Condition of Mulch	None	None	None	None	None	None	None
BMP Comments (See Comments Section)							
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**							
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS							
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes (38%)	Yes (34%)	Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	TRAN	TRAN	EST	EST	EST	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	2	2	2	2
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No

Observed Species in Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

Old Works Sub Area 4, Area 5 Red Sands Reseeded m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Western Wheatgrass	*Agropyron smithii*														x	x
Slender Wheatgrass	*Agropyron trachycaulum*		x	x				x				x	x		x	
Red Top	*Agrostis alba*		x													
Meadow Foxtail	*Alopecurus pratensis*		x													
Aster	*Aster adscendens*															x
Regar Meadow Brome	*Bromus biebersteinii*			x												
Smooth Brome	*Bromus inermis*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*		x	x	x	x		x			x	x				x
Great Basin Wildrye	*Elymus cinereus*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Mammoth Wildrye	*Elymus giganteus*		x		x	x	x	x		x						
Russian Wildrye	*Elymus junceus*			x	x		x	x	x	x	x	x	x		x	x
Sheep Fescue	*Festuca ovina*		x	x	x	x	x	x	x	x	x	x	m	m	m	m
Lewis Flax	*Linum lewisii*							x								
Alfalfa	*Medicago sativa*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Yellow Sweetclover	*Melilotus officinalis*	x	x	x												
Phacelia	*Phacelia hastata*															x
Bulbous Bluegrass	*Poa bulbosa*									x					x	x
Canada Bluegrass	*Poa compressa*				x			x	x	x	x	x	x	x	x	x
Kentucky Bluegrass	*Poa pratensis*													x		
Wheat	*Triticum aestivum*	x	x	x												

Observed Species in Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

Old Works Sub Area 4, Area 5 Red Sands Reseeded m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
UNDESIRABLE WEEDY SPECIES																
Alyssum	*Alyssum desertorum*															x
Wild Oats	*Avena sativa*	x				x										
Japanese Brome	*Bromus japonicus*						x	x	x	x	x	x	x		x	
Annual Brome Grass	*Bromus secalinus*										x					
Cheatgrass	*Bromus tectorum*	x	x	x	x	x	x	x/m	x	m	m	m	m	x	x	x
Littleseed Falseflax	*Camelina microcarpa*						x	x	x	x		x	x	x	x	x
Goosefoot	*Chenopodium sp.*	x						x							x	x
Tansy Mustard	*Descurainia richardsonii*			x		x	x	x	x	x				x	x	x
Filaree	*Erodium cicutarium*								x							
Black Henbane	*Hyoscyamus niger*		x													
Prickly Lettuce	*Lactuca serriola*		x	x												
Stickseed	*Lappula echinata*									x						
False Bindweed	*Polygonum convolvulus*	x	x													
Catchfly	*Silene noctiflora*	x														
Tumbling Hedge Mustard	*Sisymbrium altissimum*		x	x	x	x	x	x	x	x	x	x	x	x		x
Hedge Mustard	*Sisymbrium loeselii*		x	x				x	x	x	x	x	x		x	x
Common Dandelion	*Taraxacum officinale*	x	x	x	x				x	x	x	x	x			x
Penny Cress	*Thlaspi arvense*			x		x		x	x	x		x				
Salsify	*Tragopogon dubius*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
NOXIOUS WEEDS																
Berteroa	*Berteroa incana*	x		x	x											
White Top	*Cardaria draba*		x		x			x	x	I	I	I		I	I	I
Spotted Knapweed	*Centaurea maculosa*		x	x	x	x	x	x			I					
Canada Thistle	*Cirsium arvense*	x	x	x	x	x										
Leafy Spurge	*Euphorbia esula*		x	x	x		x		x	I	I	I	I			I
Kochia	*Kochia scoparia*	x	x	x	x	x	x	x								
I=Infrequent; F=Frequent; C=Common; D=Dominant																

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	Vegetation development in this area has been slow. The area was re-seeded in Spring, 1999. The 1999 growing season was very dry followed by a low snowfall winter (1999-2000) and a dry Spring in 2000. There are many seedlings, but most of the plants are of small stature. Overall, the area looks much better than it did before it was re-seeded. Vegetation cover approximately 15 percent (excluding kochia), bare soil approximately 30 percent and litter cover approximately 55 percent. There is a patch of Canada thistle at N 46° 07' 51.9"; W 112° 55' 16.5" (and in the immediate area) that needs to be controlled. Do not boom spray. Use either a back pack sprayer or a wand sprayer on a 4-wheeler. Need to use caution until the perennial grasses are well-established.	No erosion. The site is essentially flat.		
2001	Vegetation development in this area has been slow. The area was re-seeded in Spring, 1999. The 1999 growing season was very dry followed by a low snowfall winter (1999-2000) and a dry Spring in 2000. There are many seedlings, but most of the plants are of small stature. Overall, the area looks much better than it did before it was re-seeded. Vegetation is much better developed in 2001 compared to 2000. Vegetation cover approximately 25 percent (excluding kochia), bare soil approximately 15-20 percent and litter cover approximately 50-60 percent. There is a patch of Canada thistle at N 46° 07' 51.9"; W 112° 55' 16.5" (and in the immediate area) that needs to be controlled. Do not boom spray. Use either a back pack sprayer or a wand sprayer on a 4-wheeler. Leafy spurge, white top and spotted knapweed also occur in this area.	No erosion. The site is essentially flat.		
2002	Vegetation development in this area has been slow. The area was re-seeded in Spring, 1999. The 1999 growing season was very dry followed by a low snowfall winter (1999-2000) and a dry Spring in 2000. There are many seedlings, but most of the plants are of small stature. Overall, the area looks much better than it did before it was re-seeded. Vegetation is much better developed in 2002 compared to 2000 and 2001. Vegetation cover approximately 25 percent (excluding kochia), bare soil approximately 15-20 percent and litter cover approximately 50-60 percent. There is a patch of Canada thistle at N 46° 07' 51.9"; W 112° 55' 16.5" (and in the immediate area) that needs to be controlled. Do not boom spray. Use either a back pack sprayer or a wand sprayer on a 4-wheeler. Leafy spurge, white top and spotted knapweed also occur in this area.	No erosion. The site is essentially flat.		
2003	Vegetation development in this area has been slow. The area was re-seeded in Spring, 1999. The 1999 growing season was very dry followed by a low snowfall winter (1999-2000) and a dry Spring in 2000. Overall, the area looks much better than it did before it was re-seeded. Vegetation is better developed in 2003 compared to previous years. Vegetation cover approximately 30-35 percent (excluding kochia), bare soil approximately 15-20 percent and litter cover approximately 50-60 percent. There is a patch of Canada thistle at N 46° 07' 51.9"; W 112° 55' 16.5" (and in the immediate area) that needs to be controlled. Do not boom spray. Use either a back pack sprayer or a wand sprayer on a 4-wheeler. Leafy spurge, white top and spotted knapweed also occur in this area. Spotted knapweed is scattered throughout the area.	No erosion. The site is essentially flat.		
2004	Overall, the area looks much better than it did before it was re-seeded. Still many places with annual grasses and mustards. Site needs to be mowed and fertilized. Vegetation cover approximately 30-35 percent, bare soil approximately 15-20 percent and litter cover approximately 50-60 percent. Spotted knapweed is scattered throughout the area and is becoming more abundant.	No erosion. The site is essentially flat.		

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2005	Overall, the area looks much better than it did before it was re-seeded. Still many places with annual grasses and mustards. Site could be mowed and fertilized. • Site is comparable to what was observed in 2004.	No obvious signs of erosion.	No BMPs installed in this area.	
2006	• Overall, the area looks much better than it did before it was re-seeded. Still many places with annual grasses and mustards. Site could be mowed and fertilized. • Site is comparable to what was observed in 2005.	No obvious signs of erosion.	No BMPs installed in this area.	
2007	• Overall, the area looks much better than it did before it was re-seeded. Still many places with annual grasses and mustards. Site could be mowed and fertilized. • Site has more vegetation cover than what was observed in 2006. • Good growth by perennial species in 2007. Annual grasses are still present and abundant in places, but overall there is more cover by acceptable species. Also, there is more growth by alfalfa. • The cover by annual mustards in 2007 appeared to be less than what was noted in 2006. • The major problem species in this area is cheatgrass.	No obvious signs of erosion.	No BMPs installed in this area.	
2008	• Overall, the area looks much better than it did before it was re-seeded. Still many places with annual grasses and mustards. • Vegetation cover is comparable to what was observed in 2007. • Good growth by perennial species in 2008. Annual grasses are still present and abundant in many places. The abundance of alfalfa appears to be increasing. • The major problem species in this area is cheatgrass.	No obvious signs of erosion.	No BMPs installed in this area.	
2009	• Overall, the area looks much better than it did before it was re-seeded. Still many places with cheatgrass and mustards. • Vegetation cover is comparable to what was observed in 2008. • Good growth by perennial species in 2008. Annual grasses are still present and abundant in many places. The abundance of alfalfa appears to be increasing. • The major problem species in this area is cheatgrass. • This area was included in the 2009 Compliance Determination Request Report submitted to EPA. As supporting data for this request, two additional transects were sampled in this area in 2009. The mean vegetation cover by acceptable species was 34%.	No obvious signs of erosion. BLM Erosion Score <45.	No BMPs installed in this area.	
2010	• Overall, the area looks much better than it did before it was re-seeded. Still many places with cheatgrass and mustards. • Vegetation cover in 2010 somewhat higher than what was observed n 2009.. • Good growth by perennial species in 2009. Annual grasses are still present and abundant in many places. The abundance of alfalfa appears to be increasing. • The major problem species in this area is cheatgrass. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring. The performance standards are still being met.	No obvious signs of erosion. BLM Erosion Score <45.	No BMPs installed in this area.	

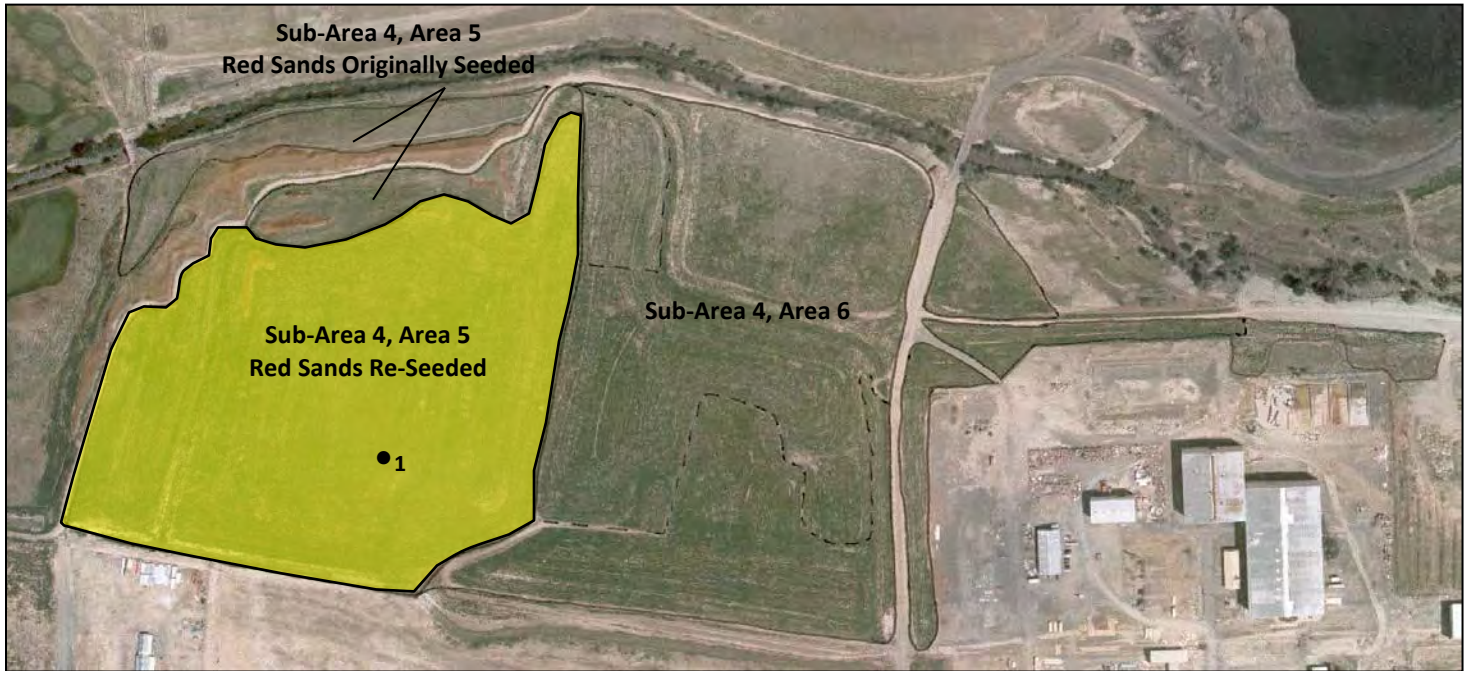
Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2011	• Overall, the area looks much better than it did before it was re-seeded. Still many places with cheatgrass and mustards. • Vegetation cover in 2011 is comparable to 2010, but fewer mustards in 2011. • Increased cover by perennial species in 2011. Annual grasses are still present and abundant in many places. The abundance of alfalfa appears to be increasing. • The major problem species in this area is cheatgrass. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring. The performance standards are still being met.	No obvious signs of erosion. BLM Erosion Score = 2.	No BMPs installed in this area.	
2012	• Vegetation cover in 2012 is comparable to 2011, but fewer mustards in 2012. • Annual grasses are still present, but less abundant in 2012. • The major problem species in this area is cheatgrass, however, it was less abundant in the dry conditions in 2012. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met.	No obvious signs of erosion. BLM Erosion Score = 2.	No BMPs installed in this area.	
2013	• Vegetation cover in 2013 is comparable to 2012. • Annual grasses are still present, but less abundant in 2013. • The major problem species in this area is cheatgrass. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met.	No obvious signs of erosion. BLM Erosion Score = 2.	No BMPs installed in this area.	
2014	• Vegetation cover in 2014 is comparable to 2013. • Annual grasses and other annual species are still present, but less abundant than in the past years. • Cheatgrass is still present, but is no longer a problem. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met. Compliance Status: LTIM.	No obvious signs of erosion. BLM Score = 2.	No BMPs installed in this area.	

Transect Sampling Summary for Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140)

Transects in Old Works Sub Area 4, Area 5 Red Sands Reseeded	Mean Cover (%)			Frequency (%)		
	2006	**2008**	**2009**	**2006**	**2008**	**2009**
Number of Transects Sampled	1	1	2	1	1	2
Total Vegetation Cover (All Species)	38	52	44			
Total Vegetation Cover (Acceptable Species)	34	32	34			
Litter and Rock Combined	62	48	56			
Bare Soil	0	0	0			
Total Cover	100	100	100			
Litter Cover	60	48	56			
Rock Cover	2	0	0			
Acceptable Species						
Agropyron cristatum	<0.1	4	<1			100
Agropyron dasystachyum	16	6	15			100
Agropyron intermedium	8	2	4			100
Bromus inermis	2		<1			50
Elymus cinereus	<0.1	2	<1			100
Elymus junceus			<1			50
Festuca ovina	<0.1	<0.1	<1			50
Medicago sativa	8	18	15			100
Poa compressa			<1			100
Undesirable Weedy Species						
Bromus japonicus	<0.1					
Bromus secalinus			<1			50
Bromus tectorum	2	20	10			100
Descurainia richardsonii	2					
Sisymbrium altissimum	<0.1					
Sisymbrium loeselii			<1			50
Taraxacum officinale			<1			100
Tragopogon dubius	<0.1	<0.1	<1			100

Site Aerial Photo for Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140)



•1 Photo Location Point

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140)

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4,
Area 5 Red Sands Reseeded

N46° 07’ 51.5”; W112° 55’ 08.4”, Looking North

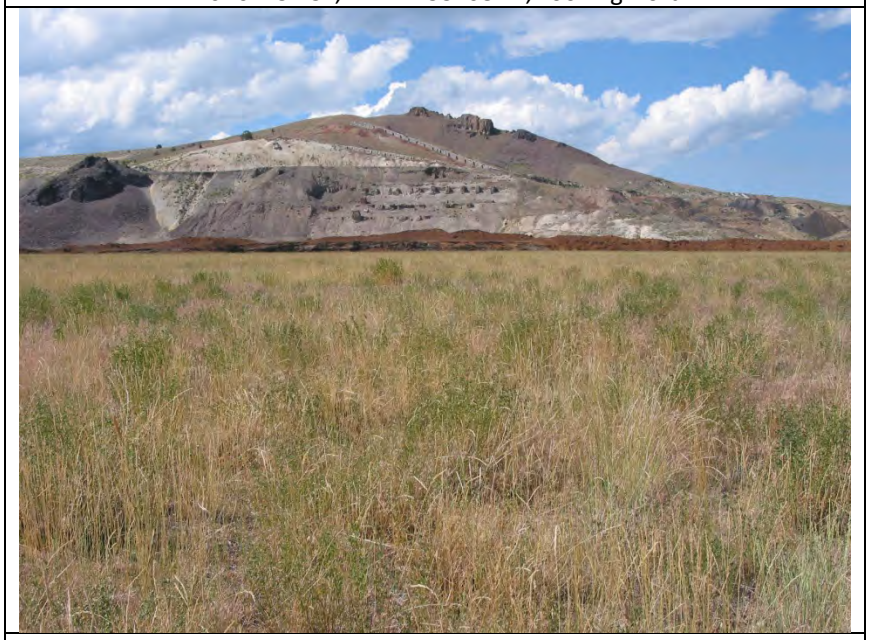
July 10, 2000

July 4, 2001

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

PHOTO LOCATION 1 - PHOTO LOCATION 1 - Old Works Sub Area 4, Area 5 Red Sands Reseeded

N46° 07’ 51.5”; W112° 55’ 08.4”, Looking North



July 21, 2002

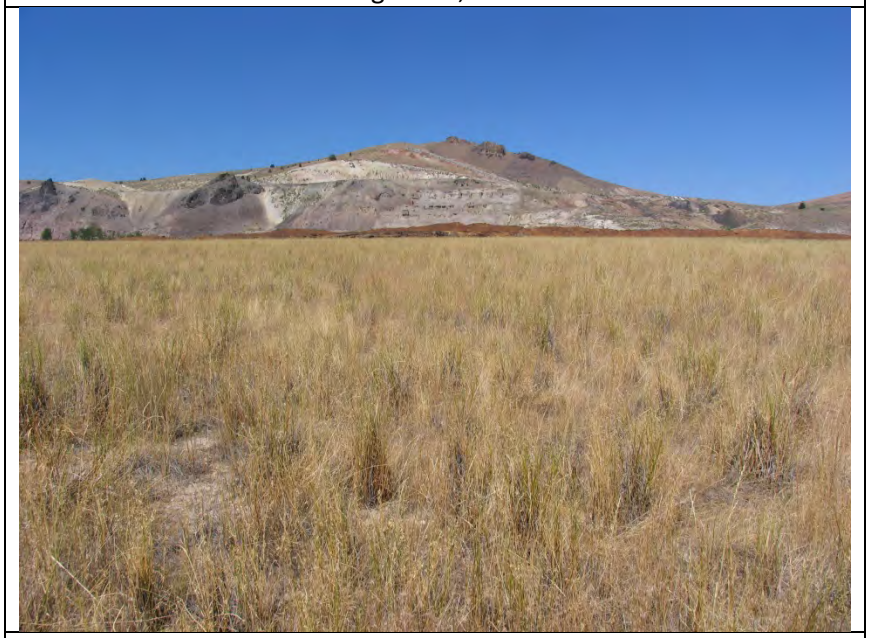
July 22, 2003

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4,
Area 5 Red Sands Reseeded

N46° 07’ 51.5”; W112° 55’ 08.4”, Looking North

August 11, 2004

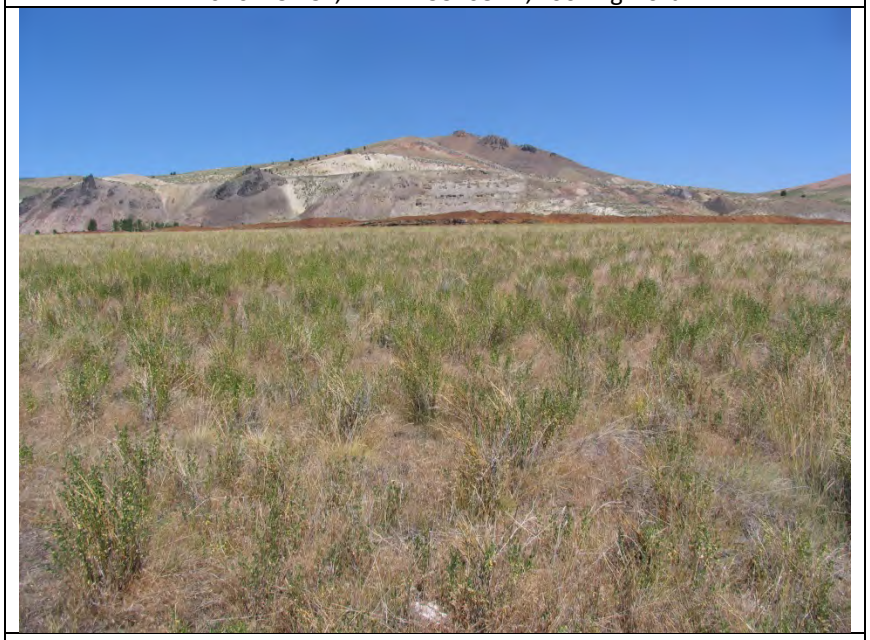


August 19, 2005

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4,
Area 5 Red Sands Reseeded

N46° 07’ 51.5”; W112° 55’ 08.4”, Looking North



July 20, 2006

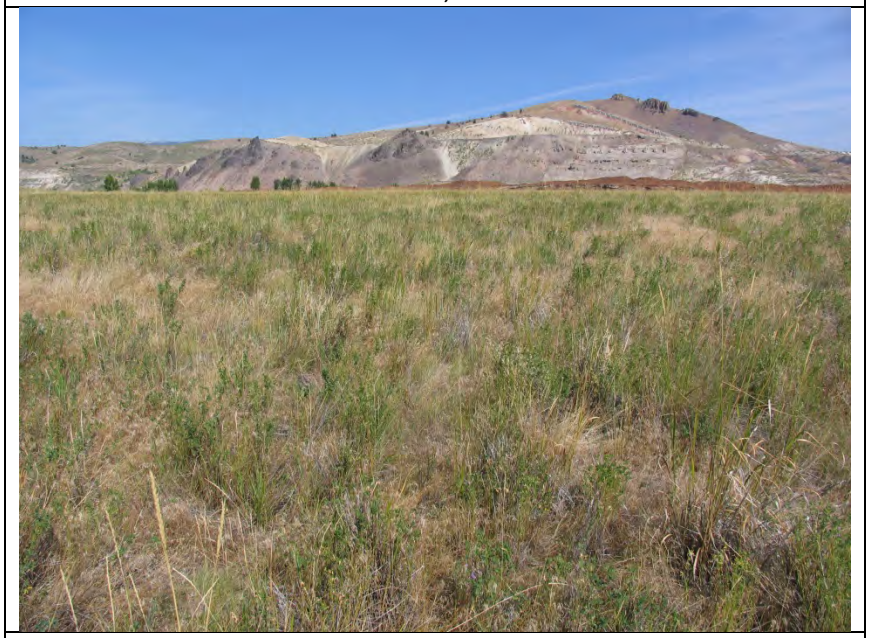
June 12, 2007

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4,
Area 5 Red Sands Reseeded

N46° 07’ 51.5”; W112° 55’ 08.4”, Looking North

June 17, 2008



August 20, 2009

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4,
Area 5 Red Sands Reseeded

N46° 07’ 51.5”; W112° 55’ 08.4”, Looking North

June 14, 2010

August 2, 2011

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4,
Area 5 Red Sands Reseeded

N46° 07’ 51.5”; W112° 55’ 08.4”, Looking North

August 21, 2012

August 4, 2013

Old Works Sub Area 4, Area 5 Red Sands Reseeded (VM_140) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4, Area 5 Red Sands Reseeded
N46° 07’ 51.5”; W112° 55’ 08.4”, Looking North
June 18, 2014

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 6 A and C Cap (VM_141)

Old Works Sub- Area 4, Area 6 A & C Cap (VM_141) 2015 -					
Year	**2015**				
Area (acres)	33.7				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/29/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	35				
Total Number of Acceptable Species	19				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Musk Thistle *(Carduus nutans)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*					
Field Bindweed *(Convolvulus arvensis)*					
Leafy Spurge *(Euphorbia esula)*	Infrequent				
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*	Infrequent				
Curly Dock *(Rumex crispus)*					
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 6 A and C Cap (VM_141)

Old Works Sub-Area 4, Area 6 A & C Cap (VM_141) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	2				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub-Area 4, Area 6 A and C Cap (VM_141) 2015-

Old Works Sub-Area 4, Area 6 A & C Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Western Yarrow	*Achillea lanulosa*	x				
Crested Wheatgrass	*Agropyron cristatum*	x				
Thickspike Wheatgrass	*Agropyron dasystachyum*	m				
Tall Wheatgrass	*Agropyron elongatum*					
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Quackgrass	*Agropyron repens*					
Western Wheatgrass	*Agropyron smithii*	x				
Bluebunch Wheatgrass	*Agropyron spicatum*					
Slender Wheatgrass	*Agropyron trachycaulum*					
Red Top	*Agrostis alba*	x				
Pussytoes	*Antennaria rosea*					
Fringed Sagewort	*Artemisia frigida*					
Aster	*Aster adscendens*					
White Aster	*Aster falcatus*					
Canada Milkvetch	*Astragalus canadensis*	x				
Woolly Milvetch	*Astragalus purshii*					
Milkvetch	*Astragalus sp.*					
Regar Meadow Brome	*Bromus biebersteinii*					
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Bastard Toadflax	*Comandra umbellata*					
Great Basin Wildrye	*Elymus cinereus*	x				
Mammoth Wildrye	*Elymus giganteus*	x				
Russian Wildrye	*Elymus junceus*	x				
Creeping Wildrye	*Elymus triticoides*					
Sheep Fescue	*Festuca ovina*	m				
Golden Aster	*Heterotheca villosa*					
Foxtail Barley	*Hordeum jubatum*	x				
Machaeranthera	*Machaeranthera canescens*					
Alfalfa	*Medicago sativa*	m				
White Sweetclover	*Melilotus alba*					
Yellow Sweetclover	*Melilotus officinalis*	x				
White Evening Star	*Mentzelia decapetala*					
Yellow Evening Star	*Mentzelia laevicaulis*					
Indian Ricegrass	*Oryzopsis hymenoides*	x				
Phacelia	*Phacelia hastata*					
Timothy	*Phleum pratense*					
Big Bluegrass	*Poa ampla*	x				
Canada Bluegrass	*Poa compressa*	m				
Cottonwood	*Populus trichocarpa*					

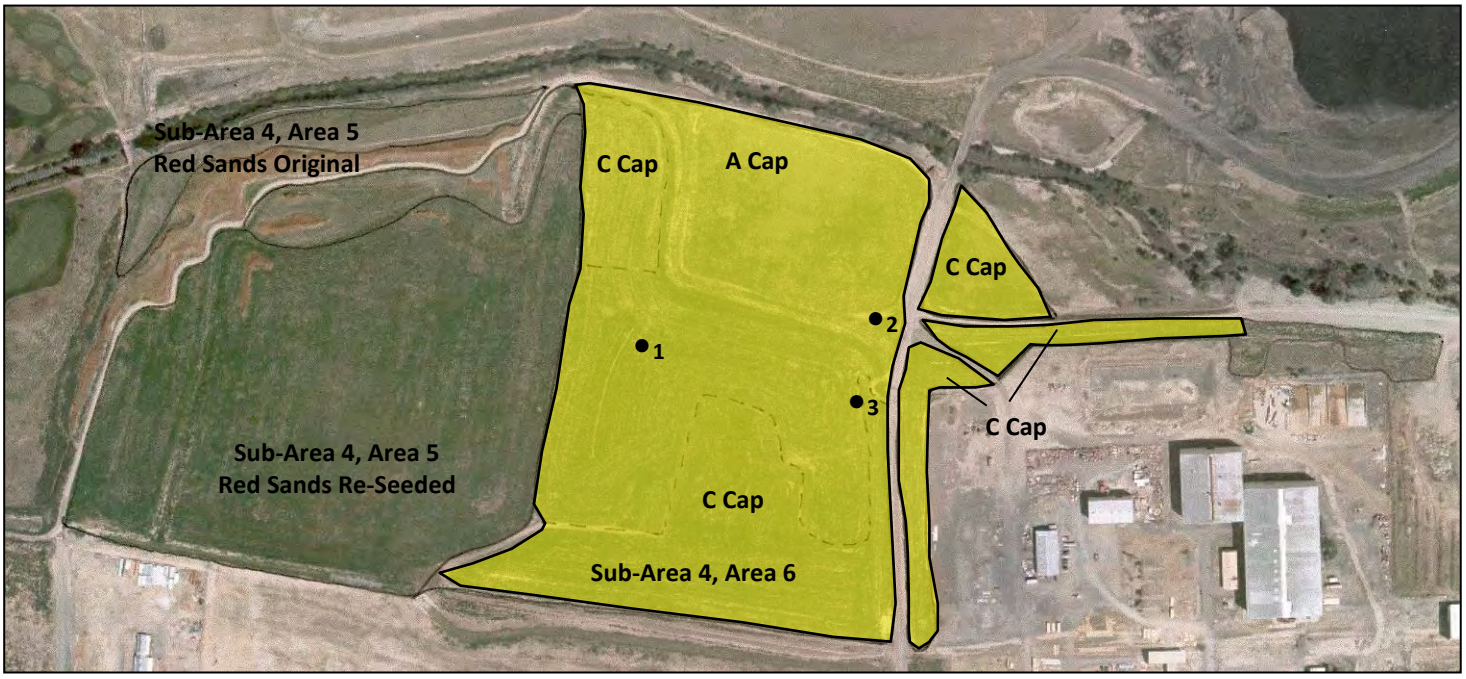
Observed Species in Old Works Sub-Area 4, Area 6 A and C Cap (VM_141) 2015-

Old Works Sub-Area 4, Area 6 A & C Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
UNDESIRABLE WEEDY SPECIES						
Alyssum	*Alyssum desertorum*					
Wild Oats	*Avena sativa*					
Japanese Brome	*Bromus japonicus*	x				
Annual Brome	*Bromus secalinus*					
Cheatgrass	*Bromus tectorum*	x				
Littleseed Falseflax	*Camelina microcarpa*					
Shepherd's Purse	*Capsella bursa-pastoris*					
Goosefoot	*Chenopodium album*	x				
Bull Thistle	*Cirsium vulgare*					
Tansy Mustard	*Descurainia richardsonii*	x				
Prickly Lettuce	*Lactuca serriola*	x				
Stickseed	*Lappula redowskii*					
Bulbous Bluegrass	*Poa bulbosa*					
False Bindweed	*Polygonum convolvulus*					
Russian Thistle	*Salsola iberica*					
Catchfly	*Silene noctiflora*					
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x				
Hedge Mustard	*Sisymbrium loeselii*	x				
Common Dandelion	*Taraxacum officinale*	x				
Penny Cress	*Thlaspi arvense*					
Salsify	*Tragopogon dubius*	x				
NOXIOUS WEEDS						
Berteroa	*Berteroa incana*					
White Top	*Cardaria draba*	I				
Musk Thistle	*Carduus nutans*	I				
Spotted Knapweed	*Centaurea maculosa*	I				
Canada Thistle	*Cirsium arvense*					
Leafy Spurge	*Euphorbia esula*	I				
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*	I				
Dalmatian Toadflax	*Linaria dalmatica*	I				
Curly Dock	*Rumex crispus*					
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	19				
	Total Number of Species	35				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 4, Area 6 A and C Cap (VM_141) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• Overall, this area is very similar to what was observed in 2014. • In 2007, the pedestrian path was upgraded to a roadway for access to the repair work on the Dragstrip Type D Cap areas on the south side of Warm Springs Creek. This area was ripped and re-seeded. Very good vegetation establishment in the repaired area. This area is now similar to other parts of the 2007 Dragstrip Coversoil Project. • Starting in 2011, this area includes only the A and C caps. • There is some pocket gopher activity. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met in 2015. Compliance Status: LTIM.	No obvious signs of erosion. Mostly flat. BLM erosion score =2.	Other than rip-rap, there are no BMP's installed in this area.	

Site Aerial Photo for Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141)



•1 Photo Location Point

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141)

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2015-

PHOTO LOCATION 1 - OW Sub Area 4, Area 6 Types A & C Caps		**PHOTO LOCATION 2 - OW Sub Area 4, Area 6 Types A & C Caps**
N46° 07’ 56.9”; W112° 54’ 58.6”, Looking South		N46° 07’ 57.3”; W112° 54’ 48.8”, Looking Northwest
July 29, 2015		July 29, 2015

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2015-

PHOTO LOCATION 3 - OW Sub Area 4, Area 6 Types A & C Caps
N46° 07’ 53.1”; W112° 54’ 52.8”, looking Southwest
July 29, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141)

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
Area (acres)	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner								
Inspection Date	7/10/00	7/4/01	7/21/02	7/22/03	8/12/04	8/19/05	7/20/06	8/25/07
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK	WK	WK	WK	WK, CH	WK, KL	WK, KL
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo								
Site Aerial Photo Follows the Transect Summary Table								
INSPECTION SUMMARY*								
Vegetation Inspection						1	1	1
Erosion Inspection						0	0	0
Stormwater BMP Inspection						0	0	0
VEGETATION INSPECTION*								
Overall Recommendation						1	1	1
Estimated Canopy Coverage	25-35%	25-35%	>35%	>35%	25-35%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation						Moderate	Moderate	Moderate
Evidence of Reproduction						Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	32	45	41	30	30	36	38	36
Total Number of Acceptable Species	17	26	27	17	16	23	25	21
Ocular Estimate of Extent of Bare Areas						<1-5%	<1-5%	<1-5%
Weed Species Present								
Berteroa *(Berteroa incana)*		Infrequent						
White Top *(Cardaria draba)*		Infrequent		Infrequent		Infrequent	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Leafy Spurge *(Euphorbia esula)*				Infrequent	Infrequent	Infrequent		Infrequent
Baby's Breath *(Gypsophila paniculata)*		Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Curly Dock *(Rumex crispus)*			Infrequent					
Vegetation Comments (See Comments Section)								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141)

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
EROSION INSPECTION*								
Average Slope (percent)						0	0	0
Aspect						Flat	Flat	Flat
Overall Recommendation						0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None	None
Evidence of Surface Litter Movement						None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)								
BMP INSPECTION*								
Overall Recommendation						0	0	0
Evidence of Check Dam Failure						None	None	None
Evidence of Sediment Accumulation in Check Dams						None	None	None
Condition of Dozer Basins						None	None	None
Condition of Grade Control Structures						None	None	None
Evidence of Brush Barrier Failure or Movement						None	None	None
Condition of Mulch						None	None	None
BMP Comments (See Comments Section)								
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**								
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS								
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	No	No	Yes	Yes	Yes	Yes	Yes (46%)	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST	EST	EST	EST	EST	EST	TRAN	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	<45	<45	<45	<45	<45
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141)

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011‡**	**2012**	**2013**	**2014**
Area (acres)	33.7	33.7	33.7	33.7	33.7	33.7	33.7
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner							
Inspection Date	6/17/08	8/20/09	8/8/10	8/2/11	8/21/12	8/1/13 8/4/13	6/18/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK, KL	WK, KL	WK,HK, CS	WK,HK, CS	WK,HK, CS	WK,HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo							
Site Aerial Photo Follows the Transect Summary Table							
INSPECTION SUMMARY*							
Vegetation Inspection	1	1	1	0	0	0	0
Erosion Inspection	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0
VEGETATION INSPECTION*							
Overall Recommendation	1	1	1	0	0	0	0
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Moderate	Mod/Heavy	Mod/Heavy	Mod/Heavy	Mod/Heavy	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	40	32	22	40	28	30	31
Total Number of Acceptable Species	23	17	14	24	18	16	18
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present							
Berteroa *(Berteroa incana)*							
White Top *(Cardaria draba)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*	Infrequent	Infrequent					Infrequent
Leafy Spurge *(Euphorbia esula)*	Infrequent	Infrequent				Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Curly Dock *(Rumex crispus)*							
Vegetation Comments (See Comments Section)				‡ B cap was re-done in 2010 (VM_243); starting in 2011, only A and C caps are evaluated here			

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141)

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION*							
Average Slope (percent)	0	0	0	0	0	0	0
Aspect	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)							
BMP INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None	None	None
Condition of Mulch	None	None	None	None	None	None	None
BMP Comments (See Comments Section)							
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**							
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS							
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes (43%)	Yes	Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	TRAN	EST	EST	EST	EST	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	2	2	2	2
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No

Observed Species in Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

Old Works Sub Area 4, Area 6 Types A and C Caps m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Western Yarrow	*Achillea lanulosa*		x	x										x		
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*	x	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Tall Wheatgrass	*Agropyron elongatum*			x		x	x						x			
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Quackgrass	*Agropyron repens*							x								
Western Wheatgrass	*Agropyron smithii*		x	x			x	x	x	x		x				x
Bluebunch Wheatgrass	*Agropyron spicatum*		x	x		x	x									
Slender Wheatgrass	*Agropyron trachycaulum*		x	x		x		x				x	x	x		
Red Top	*Agrostis alba*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Pussytoes	*Antennaria rosea*												x			
Fringed Sagewort	*Artemisia frigida*							x								
Aster	*Aster adscendens*		x	x	x	x	x	x	x	x			x		x	x
White Aster	*Aster falcatus*						x			x	x					
Woolly Milvetch	*Astragalus purshii*									x	x					
Milkvetch	*Astragalus sp.*		x	x	x		x		x	x	x	x	x			
Regar Meadow Brome	*Bromus biebersteinii*	x		x				x	x		x		x			
Smooth Brome	*Bromus inermis*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Bastard Toadflax	*Comandra umbellata*									x			x			
Great Basin Wildrye	*Elymus cinereus*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Mammoth Wildrye	*Elymus giganteus*	x	x	x	x	x	x	x	x	x	x		x	x	x	x
Russian Wildrye	*Elymus junceus*			x			x	x	x	x	x	x	x	x	x	x
Creeping Wildrye	*Elymus triticoides*								x	x			x			
Sheep Fescue	*Festuca ovina*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Golden Aster	*Heterotheca villosa*		x													
Foxtail Barley	*Hordeum jubatum*	x	x	x	x		x	x								
Machaeranthera	*Machaeranthera canescens*			x			x	x	x	x				x		
Alfalfa	*Medicago sativa*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
White Sweetclover	*Melilotus alba*			x												
Yellow Sweetclover	*Melilotus officinalis*	x	x	x	x		x	x		x	x		x	x	x	x
White Evening Star	*Mentzelia decapetala*							x								
Yellow Evening Star	*Mentzelia laevicaulis*	x	x	x	x	x	x	x	x				x			

Observed Species in Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

Old Works Sub Area 4, Area 6 Types A and C Caps m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES Continued																
Indian Ricegrass	*Oryzopsis hymenoides*															x
Phacelia	*Phacelia hastata*							x		x			x	x	x	x
Timothy	*Phleum pratense*		x													
Big Bluegrass	*Poa ampla*		x						x	x			x	x	x	x
Canada Bluegrass	*Poa compressa*	x	x	x	x	x	x	x/m	x/m	m	m	m	m	m	m	m
Cottonwood	*Populus trichocarpa*	x	x	x	x		x	x	x							
Willowleaf Dock	*Rumex salicifolius*	x	x													
Wheat	*Triticum aestivum*		x	x												
UNDESIRABLE WEEDY SPECIES																
Alyssum	*Alyssum alyssoides*														x	
Alyssum	*Alyssum desertorum*							x		x			x			x
Wild Oats	*Avena sativa*	x														
Japanese Brome	*Bromus japonicus*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Annual Brome	*Bromus secalinus*								x				x			
Cheatgrass	*Bromus tectorum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Littleseed Falseflax	*Camelina microcarpa*						x		x	x	x		x	x	x	x
Shepherd's Purse	*Capsella bursa-pastoris*		x													
Goosefoot	*Chenopodium album*					x						x	x		x	
Bull Thistle	*Cirsium vulgare*	x	x													
Tansy Mustard	*Descurainia richardsonii*	x	x	x		x		x	x	x	x		x	x	x	x
Prickly Lettuce	*Lactuca serriola*	x	x	x						x	x					
Stickseed	*Lappula redowskii*					x										
Bulbous Bluegrass	*Poa bulbosa*									x						
False Bindweed	*Polygonum convolvulus*		x		x											
Russian Thistle	*Salsola iberica*	x	x	x		x										
Catchfly	*Silene noctiflora*	x	x													
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x	x	x	x	x	x	x	x	x	x		x	x		
Hedge Mustard	*Sisymbrium loeselii*		x		x		x	x	x	x	x		x		x	x
Common Dandelion	*Taraxacum officinale*	x	x	x	x	x	x	x	x	x	x		x		x	x
Penny Cress	*Thlaspi arvense*	x		x						x		x	x			
Salsify	*Tragopogon dubius*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Observed Species in Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

Old Works Sub Area 4, Area 6 Types A and C Caps m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
NOXIOUS WEEDS																
Berteroa	*Berteroa incana*		x													
White Top	*Cardaria draba*		x		x		x	x	x	I	I	I	I	I	I	I
Spotted Knapweed	*Centaurea maculosa*	x	x	x	x	x	x	x	x	I	I	I	I	I	I	I
Canada Thistle	*Cirsium arvense*	x	x	x	x	x	x	x	x	I	I					I
Leafy Spurge	*Euphorbia esula*				x	x	x		x	I	I				I	I
Baby's Breath	*Gypsophila paniculata*		x	x	x	x	x	x	x	I	I	I	I	I	I	I
Kochia	*Kochia scoparia*	x	x	x	x	x	x	x	x		I		I	I	I	I
Curly Dock	*Rumex crispus*			x												
I=Infrequent; F=Frequent; C=Common; D=Dominant																

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	A Cap: Vegetation cover approximately 30-35 percent, cover by bare soil approximately 5 percent and cover by litter approximately 60-65 percent. C Cap: Vegetation cover approximately 30-35 percent, cover by bare soil approximately 10 percent and cover by litter approximately 70 percent.	No obvious signs of erosion.	Riprap along railroad tracks in place. A small amount of sediment in drainage ditch. The ditch is mostly vegetated. Sediment accumulation probably occurred prior to vegetation establishment.	
2001	A Cap: Site could be mowed. Vegetation cover approximately 30-35 percent, cover by bare soil approximately 5-10 percent and cover by litter approximately 60-70 percent. C Cap: Vegetation cover approximately 30-35 percent, cover by bare soil approximately 5-10 percent and cover by litter approximately 60-70 percent.	No obvious signs of erosion.	Riprap at N46° 07' 49.2", W112° 54' 48.4" along railroad tracks in place. A small amount of sediment in drainage ditch. The ditch is mostly vegetated. Sediment accumulation probably occurred prior to vegetation establishment. Culvert with a small amount of windblown plant litter and trash at N46° 07' 48.7", W112° 54' 48.4" (needs to be cleaned out). A small amount of Canada Thistle.	
2002	A Cap: Site could be mowed. Vegetation cover approximately 35 percent, cover by bare soil approximately 5-10 percent and cover by litter approximately 60-70 percent. C Cap: Vegetation cover approximately 35 percent, cover by bare soil approximately 5-10 percent and cover by litter approximately 60-70 percent.	No obvious signs of erosion.	Riprap at N46° 07' 49.2", W112° 54' 48.4" along railroad tracks in place. A small amount of sediment in drainage ditch. The ditch is mostly vegetated. Sediment accumulation probably occurred prior to vegetation establishment. Culvert with a small amount of windblown plant litter and trash at N46° 07' 48.7", W112° 54' 48.4" (needs to be cleaned out). A small amount of Canada Thistle.	
2003	A Cap: Site could be mowed. Vegetation cover approximately 35 percent, cover by bare soil approximately 5-10 percent and cover by litter approximately 60-70 percent. C Cap: Vegetation cover approximately 35 percent, cover by bare soil approximately 5-10 percent and cover by litter approximately 60-70 percent.	No obvious signs of erosion.	Riprap at N46° 07' 49.2", W112° 54' 48.4" along railroad tracks in place. A small amount of sediment in drainage ditch. The ditch is mostly vegetated. Sediment accumulation probably occurred prior to vegetation establishment. Culvert with a small amount of windblown plant litter and trash at N46° 07' 48.7", W112° 54' 48.4" (needs to be cleaned out). A small amount of Canada Thistle.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2004	A Cap: Site should be mowed and fertilized. Vegetation cover approximately 25 percent, cover by bare soil approximately 5-10 percent and cover by litter approximately 60-70 percent. C Cap: Vegetation cover approximately 30-35 percent, cover by bare soil approximately 5-10 percent and cover by litter approximately 60-70 percent.	No obvious signs of erosion.	Riprap at N46° 07' 49.2", W112° 54' 48.4" along railroad tracks in place. A small amount of sediment in drainage ditch. The ditch is mostly vegetated. Sediment accumulation probably occurred prior to vegetation establishment. Culvert with a small amount of windblown plant litter and trash at N46° 07' 48.7", W112° 54' 48.4" (needs to be cleaned out). A small amount of Canada Thistle.	
2005	Because of vegetation similarities, all of the Sub-Area 4, Area 6 sites were combined for evaluation purposes. Weed control is needed in the portion of the area with the Type B Cap (see aerial photograph). • These areas need Knapweed control Vegetation recommendation was given a "1" because of the need for weed control in the Typ B Cap Area.	No obvious signs of erosion.	Riprap at N46° 07' 49.2", W112° 54' 48.4" along railroad tracks in place. A small amount of sediment in drainage ditch. The ditch is mostly vegetated. Sediment accumulation probably occurred prior to vegetation establishment. Culvert with a small amount of windblown plant litter and trash at N46° 07' 48.7", W112° 54' 48.4" (needs to be cleaned out). A small amount of Canada Thistle.	
2006	Because of vegetation similarities, all of the Sub-Area 4, Area 6 sites were combined for evaluation purposes. Weed control is needed in the portion of the area with the Type B Cap (see aerial photograph). • These areas need Knapweed control, especially the Type B Cap area. Vegetation recommendation was given a "1" because of the need for weed control in the Typ B Cap Area.	No obvious signs of erosion.	No BMPs in this area.	
2007	Because of vegetation similarities, all of the Sub-Area 4, Area 6 sites were combined for evaluation purposes. Weed control is needed in the portion of the area with the Type B Cap (see aerial photograph). • These areas need Knapweed control, especially the Type B Cap area. • The pedestrian path was upgraded to a roadway for access to the repair work on the Dragstrip Type D Cap areas on the south side of Warm Springs Creek. • Some of the alfalfa was sprayed in this area (portions of the Type C Cap area). Vegetation recommendation was given a "1" because of the need for weed control in the Typ B Cap Area.	No obvious signs of erosion.	No BMPs in this area.	Weed Control

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2008	Because of vegetation similarities, all of the Sub-Area 4, Area 6 sites were combined for evaluation purposes. Weed control is needed in the portion of the area with the Type B Cap (see aerial photograph). • The Type B Cap area needs knapweed control. • In 2007, the pedestrian path was upgraded to a roadway for access to the repair work on the Dragstrip Type D Cap areas on the south side of Warm Springs Creek. This area was ripped and re-seeded. Very good seedling establishment in the repaired area. Vegetation recommendation was given a "1" because of the need for weed control in the Typ B Cap Area.	No obvious signs of erosion.	No BMPs in this area.	
2009	• Because of vegetation similarities, all of the Sub-Area 4, Area 6 sites were combined for evaluation purposes. • The Type B Cap area needs knapweed control (see aerial photograph). Some spraying was conducted in 2009, but the target plants (knapweed and baby's breath) did not appear to be dead. Some alfalfa was also sprayed. • In 2007, the pedestrian path was upgraded to a roadway for access to the repair work on the Dragstrip Type D Cap areas on the south side of Warm Springs Creek. This area was ripped and re-seeded. Very good seedling establishment in the repaired area. In 2009, this area was similar to other parts of the 2007 Dragstrip Coversoil Project. • Most of this Area scores "0" for the vegetation inspection. The Type B Cap portion still has knapweed and baby's breath. Very few noxious weeds in the rest of the area. • This area was included in the 2009 Compliance Determination Request Report submitted to EPA.	No obvious signs of erosion. Mostly flat.	Other than rip-rap, there are no BMP's installed in this area.	
2010	• Overall, this area is very similar to what was observed in 2009. • The Type B Cap area needs knapweed control (see aerial photograph). Some spraying was conducted in 2009, but the target plants (knapweed and baby's breath) did not appear to be dead. Some alfalfa was also sprayed. • In 2007, the pedestrian path was upgraded to a roadway for access to the repair work on the Dragstrip Type D Cap areas on the south side of Warm Springs Creek. This area was ripped and re-seeded. Very good vegetation establishment in the repaired area. In 2010, this area was similar to other parts of the 2007 Dragstrip Coversoil Project. • Most of this Area scores "0" for the vegetation inspection. The Type B Cap portion still has knapweed and baby's breath. Very few noxious weeds in the rest of the area. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring. The performance standards are still being met. • In the summer of 2010, an east-west access road (Photo 5) was installed across the part of the area located north of the Arbiter Plant. The road was used to transport cover soil from the borrow area at the east end of Stucky Ridge to Sub-Area 4, Areas 9 and 10. The Type B cap in these areas was being upgraded to a final cap design.	No obvious signs of erosion. Mostly flat. BLM erosion score <45.	Other than rip-rap, there are no BMP's installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2011	• Overall, this area is very similar to what was observed in 2010. • In 2007, the pedestrian path was upgraded to a roadway for access to the repair work on the Dragstrip Type D Cap areas on the south side of Warm Springs Creek. This area was ripped and re-seeded. Very good vegetation establishment in the repaired area. In 2011, this area was similar to other parts of the 2007 Dragstrip Coversoil Project. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring. The performance standards are still being met. • In the summer of 2010, an east-west access road was installed across the part of the area located north of the Arbiter Plant. The road was used to transport cover soil from the borrow area at the east end of Stucky Ridge to Sub-Area 4, Areas 9 and 10. The Type B cap in these areas was being upgraded to a final cap design. This road is still in place and will be used for accessing other remediation areas east of the sewage treatment plant (in the next several years). Photo not re-taken. • Starting in 2011, this area only includes the A and C caps.	No obvious signs of erosion. Mostly flat. BLM erosion score =2.	Other than rip-rap, there are no BMP's installed in this area.	
2012	• Overall, this area is very similar to what was observed in 2011. • In 2007, the pedestrian path was upgraded to a roadway for access to the repair work on the Dragstrip Type D Cap areas on the south side of Warm Springs Creek. This area was ripped and re-seeded. Very good vegetation establishment in the repaired area. In 2011, this area was similar to other parts of the 2007 Dragstrip Coversoil Project. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring. The performance standards are still being met. • In the summer of 2010, an east-west access road was installed across the part of the area located north of the Arbiter Plant. The road was used to transport cover soil from the borrow area at the east end of Stucky Ridge to Sub-Area 4, Areas 9 and 10. The Type B cap in these areas was being upgraded to a final cap design. Photo re-taken in 2012. • Starting in 2011, this area only includes the A and C caps. • The haul road was re-seeded in May-June 2012 (VM_277). In August, essentially no seedlings were noted. Should be disked and re-seeded in the fall (2012). • Some pocket gopher activity.	No obvious signs of erosion. Mostly flat. BLM erosion score =2.	Other than rip-rap, there are no BMP's installed in this area.	
2013	• Overall, this area is very similar to what was observed in 2012. • In 2007, the pedestrian path was upgraded to a roadway for access to the repair work on the Dragstrip Type D Cap areas on the south side of Warm Springs Creek. This area was ripped and re-seeded. Very good vegetation establishment in the repaired area. In 2012, this area was similar to other parts of the 2007 Dragstrip Coversoil Project. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met. • Starting in 2011, this area includes only the A and C caps. • Some pocket gopher activity.	No obvious signs of erosion. Mostly flat. BLM erosion score =2.	Other than rip-rap, there are no BMP's installed in this area.	

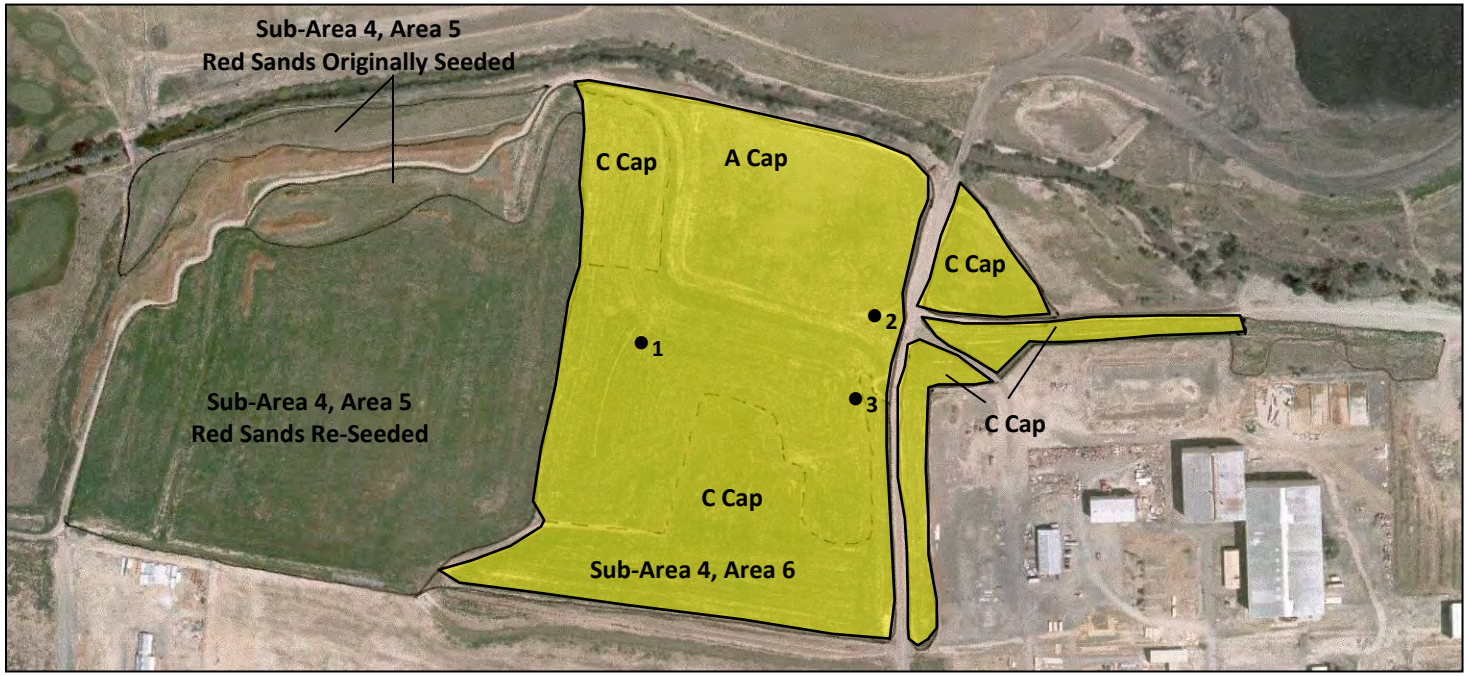
Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2014	• Overall, this area is very similar to what was observed in 2013. • In 2007, the pedestrian path was upgraded to a roadway for access to the repair work on the Dragstrip Type D Cap areas on the south side of Warm Springs Creek. This area was ripped and re-seeded. Very good vegetation establishment in the repaired area. This area is now similar to other parts of the 2007 Dragstrip Coversoil Project. • Starting in 2011, this area includes only the A and C caps. • There is some pocket gopher activity. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met. Compliance Status: LTIM.	No obvious signs of erosion. Mostly flat. BLM erosion score =2.	Other than rip-rap, there are no BMP's installed in this area.	

Transect Sampling Summary for Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141)

Transects in Old Works Sub Area 4, Area 6 Type A and C Caps	Mean Cover (%)		Frequency (%)	
	2006	**2008**	**2006**	**2008**
Number of Transects Sampled	1	2	1	2
Total Vegetation Cover (All Species)	46	44		
Total Vegetation Cover (Acceptable Species)	46	43		
Litter and Rock Combined	42	53		
Bare Soil	12	3		
Total Cover	88	97		
Litter Cover	42	53		
Rock Cover				
Acceptable Species				
Agropyron cristatum		<0.1		100
Agropyron dasystachyum	8	4	NA	100
Agropyron intermedium	8	5	NA	100
Elymus cinereus	<0.1	4	NA	100
Festuca ovina		3		100
Medicago sativa	30	16	NA	100
Mosses		<0.1		50
Poa compressa		11		100
Undesirable Weedy Species				
Bromus japonicus (weedy species)		<0.1		100
Bromus tectorum (weedy species)	<0.1	1	NA	100
Sisymbrium altissimum (weedy species)		<0.1		50
Sisymbrium loeselii (weedy species)		<0.1		50
Tragopogon dubius (weedy species)	<0.1	<0.1	NA	100
Noxious Weeds				
Cardaria draba (noxious weed)		<0.1		50

Site Aerial Photo for Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141)



•1 Photo Location Point

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141)

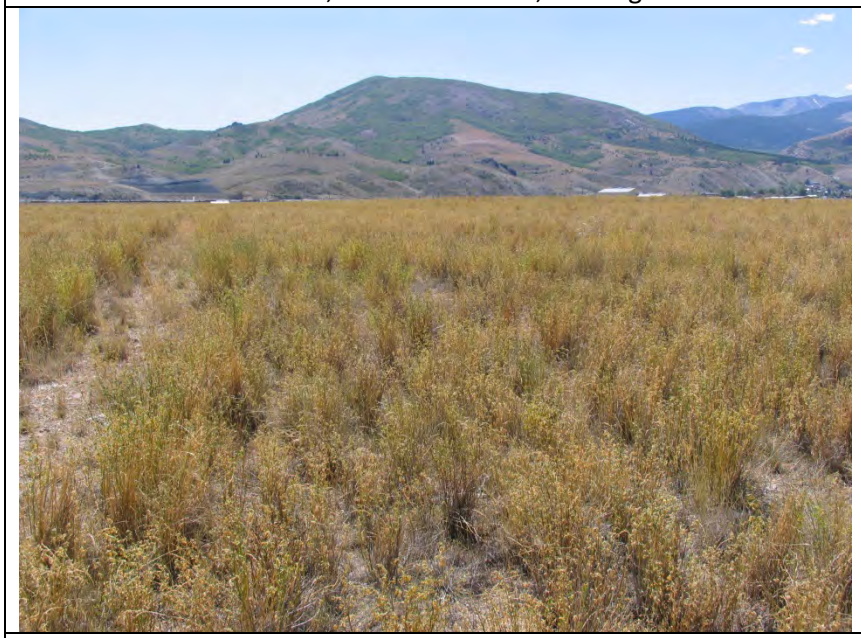
Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 6 Types A and C Caps		**PHOTO LOCATION 2 - OW Sub Area 4, Area 6 Types A and C Caps**
N46° 07’ 56.9”; W112° 54’ 58.6”, Looking South		N46° 07’ 57.3”; W112° 54’ 48.8”, Looking Northwest
July 10, 2000		July 10, 2000
July 4, 2001		July 4, 2001

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 6 Types A and C Caps	**PHOTO LOCATION 2 - OW Sub Area 4, Area 6 Types A and C Caps**
N46° 07’ 56.9”; W112° 54’ 58.6”, Looking South	N46° 07’ 57.3”; W112° 54’ 48.8”, Looking Northwest
July 20, 2002	July 20, 2002
July 22, 2003	July 22, 2003

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 6 Types A and C Caps	**PHOTO LOCATION 2 - OW Sub Area 4, Area 6 Types A and C Caps**
N46° 07’ 56.9”; W112° 54’ 58.6”, Looking South	N46° 07’ 57.3”; W112° 54’ 48.8”, Looking Northwest
	
August 12, 2004	August 12, 2004
August 19, 2005	August 19, 2005

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 6 Types A and C Caps	**PHOTO LOCATION 2 - OW Sub Area 4, Area 6 Types A and C Caps**
N46° 07’ 56.9”; W112° 54’ 58.6”, Looking South	N46° 07’ 57.3”; W112° 54’ 48.8”, Looking Northwest
July 20, 2006	July 20, 2006
August 25, 2007	August 25, 2007

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 6 Types A and C Caps	**PHOTO LOCATION 2 - OW Sub Area 4, Area 6 Types A and C Caps**
N46° 07’ 56.9”; W112° 54’ 58.6”, Looking South	N46° 07’ 57.3”; W112° 54’ 48.8”, Looking Northwest
June 17, 2008	June 17, 2008
August 20, 2009	August 20, 2009

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 6 Types A and C Caps	**PHOTO LOCATION 2 - OW Sub Area 4, Area 6 Types A and C Caps**
N46° 07’ 56.9”; W112° 54’ 58.6”, Looking South	N46° 07’ 57.3”; W112° 54’ 48.8”, Looking Northwest
August 8, 2010	August 8, 2010
August 2, 2011	August 2, 2011

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 6 Types A and C Caps		**PHOTO LOCATION 2 - OW Sub Area 4, Area 6 Types A and C Caps**
N46° 07’ 56.9”; W112° 54’ 58.6”, Looking South		N46° 07’ 57.3”; W112° 54’ 48.8”, Looking Northwest
August 21, 2012		August 21, 2012
August 4, 2013		August 4, 2013

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 6 Types A and C Caps		**PHOTO LOCATION 2 - OW Sub Area 4, Area 6 Types A and C Caps**
N46° 07’ 56.9”; W112° 54’ 58.6”, Looking South		N46° 07’ 57.3”; W112° 54’ 48.8”, Looking Northwest
June 18, 2014		June 18, 2014

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 3 - OW Sub Area 4, Area 6 Types A and C Caps

N46° 07’ 53.1”; W112° 54’ 52.8”, Looking Southwest

July 10, 2000

July 4, 2001

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 3 - OW Sub Area 4, Area 6 Types A and C Caps

N46° 07’ 53.1”; W112° 54’ 52.8”, Looking Southwest

July 20, 2002

July 22, 2003

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 3 - OW Sub Area 4, Area 6 Types A and C Caps

N46° 07’ 53.1”; W112° 54’ 52.8”, Looking Southwest

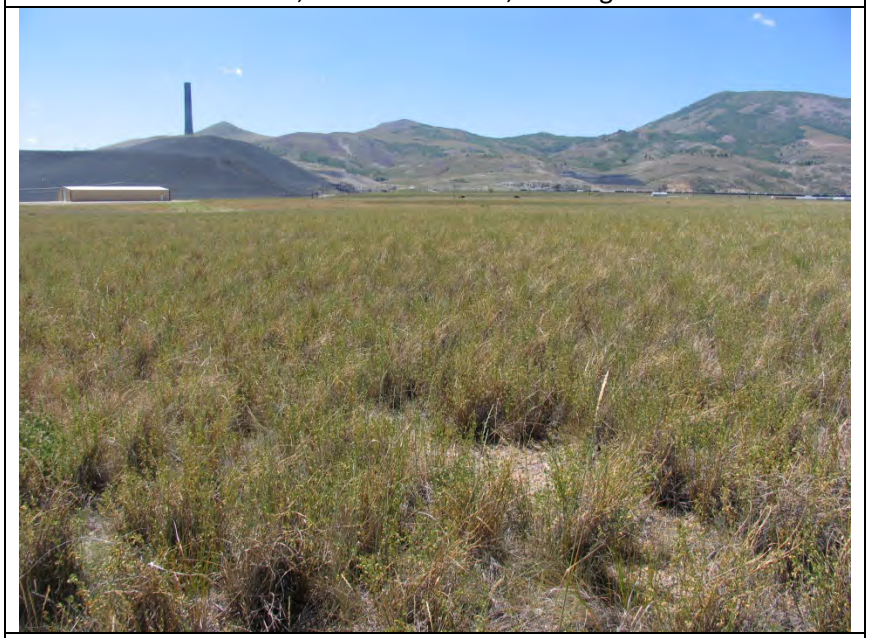
August 12, 2004

August 19, 2005

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 3 - OW Sub Area 4, Area 6 Types A and C Caps

N46° 07’ 53.1”; W112° 54’ 52.8”, Looking Southwest



July 20, 2006

August 25, 2007

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 3 - OW Sub Area 4, Area 6 Types A and C Caps

N46° 07’ 53.1”; W112° 54’ 52.8”, Looking Southwest

June 17, 2008

August 20, 2009

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 3 - OW Sub Area 4, Area 6 Types A and C Caps

N46° 07’ 53.1”; W112° 54’ 52.8”, Looking Southwest

August 8, 2010

August 2, 2011

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 3 - OW Sub Area 4, Area 6 Types A and C Caps

N46° 07’ 53.1”; W112° 54’ 52.8”, Looking Southwest

August 21, 2012

August 4, 2013

Old Works Sub Area 4, Area 6 Types A and C Caps (VM_141) 2000-2014

PHOTO LOCATION 3 - OW Sub Area 4, Area 6 Types A and C Caps
N46° 07’ 53.1”; W112° 54’ 52.8”, Looking Southwest
June 18, 2014

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 8 A and C Cap (VM_142)

Old Works Sub- Area 4, Area 8 A & C Cap (VM_142) 2015 -					
Year	**2015**				
Area (acres)	13.9				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/29/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	33				
Total Number of Acceptable Species	21				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Musk Thistle *(Carduus nutans)*					
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*	Infrequent				
Field Bindweed *(Convolvulus arvensis)*					
Leafy Spurge *(Euphorbia esula)*	Infrequent				
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*	Infrequent				
Curly Dock *(Rumex crispus)*					
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 8 A and C Cap (VM_142)

Old Works Sub-Area 4, Area 8 A & C Cap (VM_142) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	2				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub-Area 4, Area 8 A and C Cap (VM_142) 2015-

Old Works Sub-Area 4, Area 8 A & C Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Western Yarrow	*Achillea lanulosa*	x				
Crested Wheatgrass	*Agropyron cristatum*	x				
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Quackgrass	*Agropyron repens*					
Western Wheatgrass	*Agropyron smithii*	x				
Slender Wheatgrass	*Agropyron trachycaulum*	x				
Red Top	*Agrostis alba*					
Fringed Sagewort	*Artemisia frigida*					
Big Sagebrush	*Artemisia tridentata*					
Aster	*Aster adscendens*	x				
Milkvetch	*Astragalus sp.*					
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Rabbitbrush	*Chrysothamnus viscidiflorus*					
Bastard Toadflax	*Comandra umbellata*	x				
Russian Olive	*Elaeagnus angustifolia*	x				
Great Basin Wildrye	*Elymus cinereus*	x				
Sheep Fescue	*Festuca ovina*	m				
Curlycup Gumweed	*Grindelia squarrosa*					
Golden Aster	*Heterotheca villosa*	x				
Foxtail Barley	*Hordeum jubatum*					
Lewis's Flax	*Linum lewisii*	x				
Machaeranthera	*Machaeranthera canescens*					
Alfalfa	*Medicago sativa*	m				
White Sweetclover	*Melilotus alba*	x				
Yellow Sweetclover	*Melilotus officinalis*	x				
Yellow Evening Star	*Mentzelia laevicaulis*	x				
Phacelia	*Phacelia hastata*	x				
Canada Bluegrass	*Poa compressa*	x				
Kentucky Bluegrass	*Poa pratensis*					
UNDESIRABLE WEEDY SPECIES						
Alyssum	*Alyssum desertorum*	x				
Wild Oats	*Avena sativa*					
Japanese Brome	*Bromus japonicus*					
Annual Brome	*Bromus secalinus*					
Cheatgrass	*Bromus tectorum*	x				
Littleseed Falseflax	*Camelina microcarpa*					
Tansy Mustard	*Descurainia richardsonii*	x				
Prickly Lettuce	*Lactuca serriola*	x				
Clasping Peppergrass	*Lepidium perfoliatum*					
Russian Thistle	*Salsola iberica*					
Tumbling Hedge Mustard	*Sisymbrium altissimum*					
Hedge Mustard	*Sisymbrium loeselii*					
Common Dandelion	*Taraxacum officinale*					
Salsify	*Tragopogon dubius*	x				

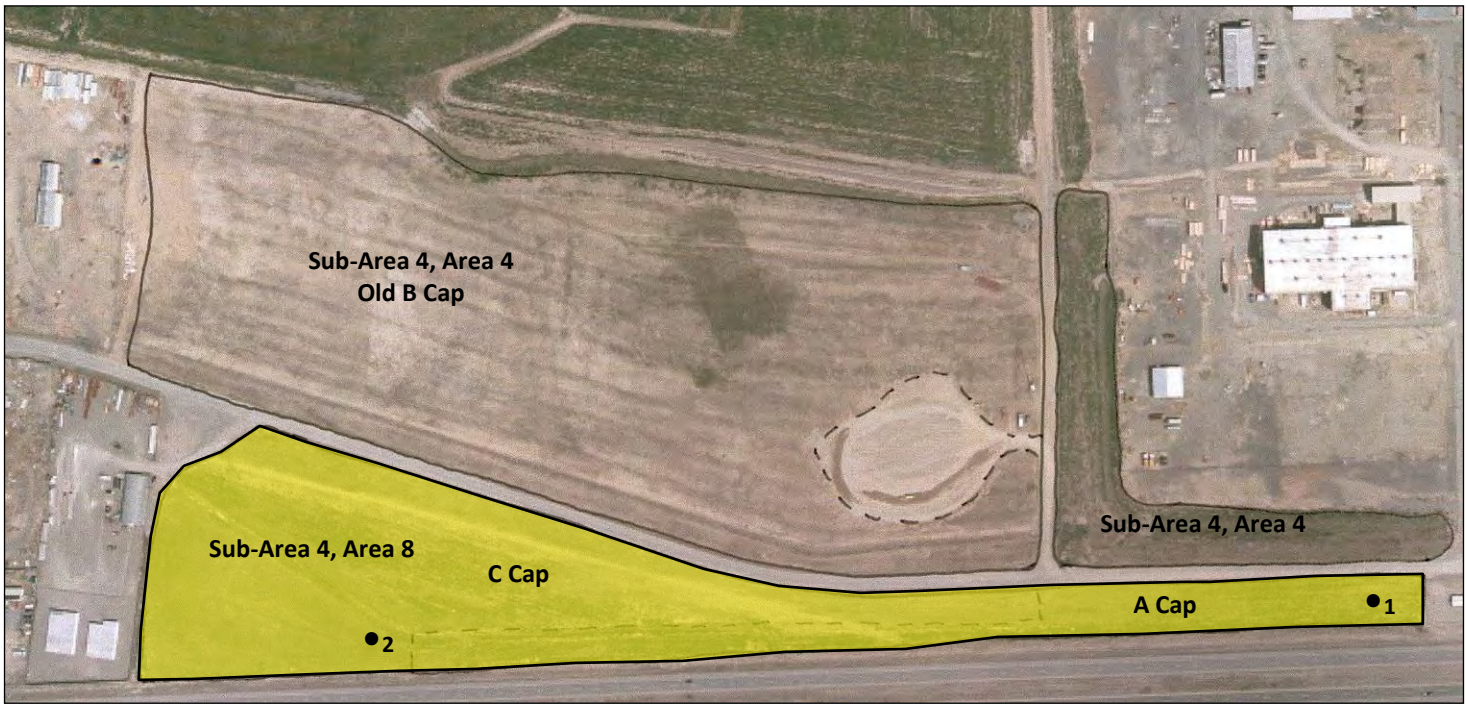
Observed Species in Old Works Sub-Area 4, Area 8 A and C Cap (VM_142) 2015-

Old Works Sub-Area 4, Area 8 A & C Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I				
Spotted Knapweed	*Centaurea maculosa*	I				
Canada Thistle	*Cirsium arvense*	I				
Field Bindweed	*Convolvulus arvensis*					
Leafy Spurge	*Euphorbia esula*	I				
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*	I				
Dalmatian Toadflax	*Linaria dalmatica*	I				
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		21				
Total Number of Species		33				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 4, Area 8 A and C Cap (VM_142) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	Overall, site conditions are comparable to what was observed in 2014. Any problems in this area are related to post-remediation disturbances. Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has recovered to some extent. Cover by perennial species is approximately 20%. Some Canada thistle also occurs in these disturbed areas. Conditions in 2015 were comparable to what was noted in 2014. Pocket gophers were noted at N46° 07’ 41.0”; W112° 55’ 06.8” in 2006 (excavations are bringing up the underlying red sand material). Some new excavations in 2015 in this area and also a few in other locations. Knapweed occurs along and near the road on the west end of the north side of this area. Previous weed control has been successful, but there are still some basal rosettes – mostly close to the road but also in the utility right-of-way and between the right-of-way and the arbiter road. Some additional control will be needed. There is also leafy spurge in this area that should be sprayed. DO NOT spray the desirable species. There is some highway trash in this area. This area was included in the 2009 Compliance Determination Report. The performance standards are still being met in 2015. Compliance Status: LTIM.	No obvious signs of erosion. BLM Score = 2.	No storm water BMPs installed in this area.	

Site Aerial Photo for Old Works Sub Area 4, Area 8 Types A and C Caps (VM_142)



•1 Photo Location Point

Old Works Sub Area 4, Area 8 Types A and C Caps (VM_142)

Old Works Sub Area 4, Area 8 Types A and C Caps (VM_142) 2015-

PHOTO LOCATION 1 - OW Sub Area 4, Area 8 Types A & C Caps		**PHOTO LOCATION 2 - OW Sub Area 4, Area 8 Types A & C Caps**
N46° 07’ 40.3”; W112° 54’ 40.7”, looking west		N46° 07’ 39.5”; W112° 55’ 00.5”, looking west
July 29, 2015		July 29, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 8 A and C Caps (VM_142)

Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
Area (acres)	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner								
Inspection Date	7/13/00	7/4/01	7/21/02	7/22/03	8/11/04	8/19/05	8/18/06	8/25/07
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK	WK	WK	WK	WK	WK	WK, KL
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo								
Site Aerial Photo Follows the Transect Summary Table								
INSPECTION SUMMARY*								
Vegetation Inspection						2	1	0
Erosion Inspection						0	0	0
Stormwater BMP Inspection						0	0	0
VEGETATION INSPECTION*								
Overall Recommendation						2	1	0
Estimated Canopy Coverage	25-35%	25-35%	25-35%	25-35%	25-35%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Uniform	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation						Moderate	Moderate	Moderate
Evidence of Reproduction						Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	14	20	26	17	22	19	24	30
Total Number of Acceptable Species	9	11	14	12	12	12	13	19
Ocular Estimate of Extent of Bare Areas						<1-5%	<1-5%	<1-5%
Weed Species Present								
White Top *(Cardaria draba)*								
Spotted Knapweed *(Centaurea maculosa)*		Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*					Infrequent	Infrequent	Infrequent	Infrequent
Field Bindweed *(Convolvulus arvensis)*								
Leafy Spurge *(Euphorbia esula)*			Infrequent			Infrequent	Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*				Infrequent	Infrequent			
Dalmatian Toadflax *(Linaria dalmatica)*								
Curly Dock *(Rumex crispus)*								
Vegetation Comments (See Comments Section)								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 8 A and C Caps (VM_142)

Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
EROSION INSPECTION*								
Average Slope (percent)						0	0	0
Aspect						Flat	Flat	Flat
Overall Recommendation						0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None	None
Evidence of Surface Litter Movement						None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)								
BMP INSPECTION*								
Overall Recommendation						0	0	0
Evidence of Check Dam Failure						None	None	None
Evidence of Sediment Accumulation in Check Dams						None	None	None
Condition of Dozer Basins						None	None	None
Condition of Grade Control Structures						None	None	None
Evidence of Brush Barrier Failure or Movement						None	None	None
Condition of Mulch						None	None	None
BMP Comments (See Comments Section)								
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**								
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS								
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	No	Yes	Yes	Yes	No	Yes	Yes (38%)	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST	EST	EST	EST	EST	EST	TRAN	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	<45	<45	<45	<45	<45
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 8 A and C Caps (VM_142)

Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	13.9	13.9	13.9	13.9	13.9	13.9	13.9
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner							
Inspection Date	8/20/08	8/20/09	7/14/10	8/4/11	8/21/12	8/4/13	7/14/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK, KL	WK, KL	WK, KL	WK,HK, CS	WK,HK, CS	WK,HK, CS	WK,HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo							
Site Aerial Photo Follows the Transect Summary Table							
INSPECTION SUMMARY*							
Vegetation Inspection	0	0	0	0	0	0	0
Erosion Inspection	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0
VEGETATION INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	28	23	22	30	28	23	21
Total Number of Acceptable Species	15	15	14	19	20	15	15
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present							
White Top *(Cardaria draba)*				Infrequent			
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Field Bindweed *(Convolvulus arvensis)*						Infrequent	
Leafy Spurge *(Euphorbia esula)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*				Infrequent	Infrequent		
Dalmatian Toadflax *(Linaria dalmatica)*							
Curly Dock *(Rumex crispus)*							
Vegetation Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 8 A and C Caps (VM_142)

Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION*							
Average Slope (percent)	0	0	0	0	0	0	0
Aspect	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)							
BMP INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None	None	None
Condition of Mulch	None	None	None	None	None	None	None
BMP Comments (See Comments Section)							
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**							
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS							
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes (39%)	Yes	Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	TRAN	EST	EST	EST	EST	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	2	2	2	2	2
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No

Observed Species in Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

Old Works Sub Area 4, Area 8 A and C Caps m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Quackgrass	*Agropyron repens*						x									
Western Wheatgrass	*Agropyron smithii*	x	x	x		x		x	x	x	x	x	x	x		x
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x	x	x	x	x	x	x	x		x		x	
Red Top	*Agrostis alba*								x							x
Fringed Sagewort	*Artemisia frigida*													x		
Big Sagebrush	*Artemisia tridentata*										x	x			x	
Aster	*Aster adscendens*				x	x		x	x	x			x	x	x	x
Milkvetch	*Astragalus sp.*											x				
Smooth Brome	*Bromus inermis*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*			x		x		x	x	x	x	x	x	x	x	x
Rabbitbrush	*Chrysothamnus viscidiflorus*								x		x					
Russian Olive	*Elaeagnus angustifolia*												x	x		
Great Basin Wildrye	*Elymus cinereus*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Sheep Fescue	*Festuca ovina*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Curlycup Gumweed	*Grindelia squarrosa*													x		
Golden Aster	*Heterotheca villosa*												x	x	x	
Foxtail Barley	*Hordeum jubatum*	x	x	x	x		x		x				x			
Lewis's Flax	*Linum lewisii*						x	x	x	x	x	x	x	x		x
Machaeranthera	*Machaeranthera canescens*								x					x		
Alfalfa	*Medicago sativa*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
White Sweetclover	*Melilotus alba*			x									x	x	x	x
Yellow Sweetclover	*Melilotus officinalis*			x	x				x	x	x	x	x	x	x	x
Yellow Evening Star	*Mentzelia laevicaulis*								x	x			x			
Canada Bluegrass	*Poa compressa*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Kentucky Bluegrass	*Poa pratensis*													x		

Observed Species in Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

Old Works Sub Area 4, Area 8 A and C Caps m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
UNDESIRABLE WEEDY SPECIES																
Alyssum	*Alyssum desertorum*			x				x		x						
Wild Oats	*Avena sativa*					x		x								
Japanese Brome	*Bromus japonicus*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Annual Brome	*Bromus secalinus*								x	x	x		x			
Cheatgrass	*Bromus tectorum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Littleseed Falseflax	*Camelina microcarpa*					x			x	x			x			
Tansy Mustard	*Descurainia richardsonii*			x		x				x		x		x		
Prickly Lettuce	*Lactuca serriola*		x	x		x		x	x	x						
Clasping Peppergrass	*Lepidium perfoliatum*		x							x						
Russian Thistle	*Salsola iberica*		x													
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x	x	x		x		x				x				
Hedge Mustard	*Sisymbrium loeselii*								x							
Common Dandelion	*Taraxacum officinale*			x						x	x		x		x	x
Salsify	*Tragopogon dubius*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
NOXIOUS WEEDS																
White Top	*Cardaria draba*												I			
Spotted Knapweed	*Centaurea maculosa*		x	x	x	x	x	x	x	I	I	I	I	I	I	I
Canada Thistle	*Cirsium arvense*						x	x	x	I	I	I	I	I	I	I
Field Bindweed	*Convolvulus arvensis*														I	
Leafy Spurge	*Euphorbia esula*			x			x	x	x	I	I	I	I	I	I	I
Baby's Breath	*Gypsophila paniculata*			x	x								I	I		
Kochia	*Kochia scoparia*	x	x	x		x	x	x	x							
I=Infrequent; F=Frequent; C=Common; D=Dominant																

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	Type A Cap: Total vegetation cover was approximately 25-30 percent, cover by bare soil was approximately 5 percent, cover by rock was approximately 3 percent and cover by litter was approximately 70-80 percent. Type C Cap: Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. Weeds along road were sprayed (alfalfa was also killed). Total vegetation cover was approximately 25-30 percent, cover by bare soil was approximately 5 percent, cover by rock was approximately 5 percent and cover by litter was approximately 65-75 percent.	No obvious signs of erosion.	No BMP's installed in this area.	Weed Control
2001	Type A Cap: Total vegetation cover was approximately 30-35 percent, cover by bare soil was approximately 5 percent, cover by rock was approximately 2 percent and cover by litter was approximately 70-80 percent. Type C Cap: Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has essentially no perennial grasses, is more than 70 percent bare, is dominated by annual weeds and apparently was never seeded. Total vegetation cover was approximately 25-30 percent, cover by bare soil was approximately 5 percent, cover by rock was approximately 2 percent and cover by litter was approximately 65-75 percent.	No obvious signs of erosion.	No BMP's installed in this area.	
2002	Type A Cap: Total vegetation cover was approximately 35 percent, cover by bare soil was approximately 5 percent, cover by rock was approximately 2 percent and cover by litter was approximately 70-80 percent. Type C Cap: Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has essentially no perennial grasses, is more than 70 percent bare, is dominated by annual weeds and apparently was never seeded. Dominated by Kochia, which is about 2 inches tall. Total vegetation cover was approximately 30-35 percent, cover by bare soil was approximately 5 percent, cover by rock was approximately 2 percent and cover by litter was approximately 65-75 percent.	No obvious signs of erosion.	No BMP's installed in this area.	
2003	Type A Cap: Total vegetation cover was approximately 35 percent, cover by bare soil was approximately 5 percent, cover by rock was approximately 2 percent and cover by litter was approximately 70-80 percent. Type C Cap: Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has essentially no perennial grasses, is more than 70 percent bare, is dominated by annual weeds and apparently was never seeded. Dominated by Kochia, which is about 2 inches tall. Conditions in 2003 were comparable to those observed in 2002. Total vegetation cover was approximately 30-35 percent, cover by bare soil was approximately 5 percent, cover by rock was approximately 2 percent and cover by litter was approximately 65-75 percent.	No obvious signs of erosion.	No BMP's installed in this area.	
2004	Type A Cap: Total vegetation cover was approximately 25-30 percent, cover by bare soil was approximately 5 percent, cover by rock was approximately 2 percent and cover by litter was approximately 70-80 percent. Type C Cap: Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has essentially no perennial grasses, is more than 70 percent bare, is dominated by annual weeds and apparently was never seeded. Dominated by Kochia, which is about 2 inches tall. Conditions in 2004 were comparable to those observed in 2002 and 2003. Site needs to be mowed and fertilized. Pocket gophers noted at N46° 07' 41.0"; W112° 55' 06.8" (excavations are bringing up the underlying red sand material). Total vegetation cover was approximately 20-25 percent, cover by bare soil was approximately 5-10 percent, cover by rock was approximately 2 percent and cover by litter was approximately 65-75 percent	No obvious signs of erosion.	No BMP's installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2005	Because of vegetation similarities, the Type A and Type C Cap areas were combined for evaluation purposes in 2005. The vegetation recommendation was given a "2" because of the need to re-seed construction disturbances. • Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has essentially no perennial grasses, is more than 70 percent bare, is dominated by annual weeds and apparently was never seeded. Dominated by Kochia, which is about 2 inches tall. Canada thistle also occurs in these disturbed areas. Conditions in 2005 were comparable to those observed in 2002, 2003 and 2004; however a few more perennial grasses were noted in 2005. Pocket gophers noted at N46° 07' 41.0"; W112° 55' 06.8" (excavations are bringing up the underlying red sand material). • In 2005, there were new disturbances at N46° 07' 40.0"; W112° 54' 46.4" and N46° 07' 39.6"; W112° 54' 52.0" associated with utility installation for the new building in Sub-Area 4 Area 4. Also some piles of waste soil, concrete and asphalt. • Overall, the total vegetation cover seemed higher in 2005 compared with 2004. • Consider fertilization to maintain cover levels.	No obvious signs of erosion.	No BMP's installed in this area.	
2006	Because of vegetation similarities, the Type A and Type C Cap areas were combined for evaluation purposes in 2005. The vegetation recommendation was given a "1" because of the need to re-seed construction disturbances. • Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has recovered to some extent. Cover by perennial species is approximately 15-20%. Kochia still occurs, but is only several inches tall. Canada thistle also occurs in these disturbed areas. Conditions in 2006 were somewhat improved over those noted in 2005. Pocket gophers present at N46° 07' 41.0"; W112° 55' 06.8" in 2006 (excavations are bringing up the underlying red sand material). • In 2005, there were new disturbances at N46° 07' 40.0"; W112° 54' 46.4" and N46° 07' 39.6"; W112° 54' 52.0" associated with utility installation for the new building in Sub-Area 4, Area 4. The disturbed areas have not been re-seeded, but there has been some recovery from adjacent seed sources. • Piles of waste soil, concrete and asphalt noted in 2005 were removed. • Overall, the total vegetation cover in 2006 was comparable to 2005.	No obvious signs of erosion.	No BMP's installed in this area.	
2007	Because of vegetation similarities, the Type A and Type C Cap areas were combined for evaluation purposes in 2005. • Any problems in this area are related to post-remediation disturbances. • Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has recovered to some extent. Cover by perennial species is approximately 15-20%. Kochia still occurs, but is only several inches tall. Canada thistle also occurs in these disturbed areas. Conditions in 2007 were comparable to what was noted in 2006. Pocket gophers present at N46° 07' 41.0"; W112° 55' 06.8" in 2006 (excavations are bringing up the underlying red sand material). A small amount of new excavation in 2007. • In 2005, there were new disturbances at N46° 07' 40.0"; W112° 54' 46.4" and N46° 07' 39.6"; W112° 54' 52.0" associated with utility installation for the new building in Sub-Area 4, Area 4. The disturbed areas have not been re-seeded, but there has been some recovery from adjacent seed sources. Cover by perennial grasses is lower than in adjacent areas, but it appears to be increasing. • Knapweed occurs along the road on the north side of this area.	No obvious signs of erosion.	No BMP's installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2008	Because of vegetation similarities, the Type A and Type C Cap areas were combined for evaluation purposes in 2005. • Any problems in this area are related to post-remediation disturbances. • Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has recovered to some extent. Cover by perennial species is approximately 15-20%. Some Canada thistle also occurs in these disturbed areas. Conditions in 2008 were comparable to what was noted in 2007. Pocket gophers present at N46° 07' 41.0"; W112° 55' 06.8" in 2006 (excavations are bringing up the underlying red sand material). No new excavations in 2008. • In 2005, there were new disturbances at N46° 07' 40.0"; W112° 54' 46.4" and N46° 07' 39.6"; W112° 54' 52.0" associated with utility installation for the new building in Sub-Area 4, Area 4. The disturbed areas have not been re-seeded, but there has been some recovery from adjacent seed sources. Cover by perennial grasses is lower than in adjacent areas, but it appears to be increasing. Probably no additional work will be needed in this area. • Knapweed occurs along and near the road on the west end of the north side of this area.	No obvious signs of erosion.	No BMP's installed in this area.	
2009	• Any problems in this area are related to post-remediation disturbances. • Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has recovered to some extent. Cover by perennial species is approximately 15-20%. Some Canada thistle also occurs in these disturbed areas. Conditions in 2009 were comparable to what was noted in 2008. Pocket gophers were noted at N46° 07' 41.0"; W112° 55' 06.8" in 2006 (excavations are bringing up the underlying red sand material). No new excavations in 2009. • In 2005, there were new disturbances at N46° 07' 40.0"; W112° 54' 46.4" and N46° 07' 39.6"; W112° 54' 52.0" associated with utility installation for the new building in Sub-Area 4, Area 4. The disturbed areas have not been re-seeded, but there has been good recovery from adjacent seed sources. Cover by perennial grasses is lower than in adjacent areas, but it appears to be increasing. Probably no additional work will be needed in this area. • Knapweed occurs along and near the road on the west end of the north side of this area. Mostly, these plants had been sprayed. • There is some highway trash in this area. • This area was included in the 2009 Compliance Determination Request Report submitted to EPA.	No obvious signs of erosion.	No storm water BMPs installed in this area.	
2010	• Overall, site conditions are comparable to what was observed in 2009. Any problems in this area are related to post-remediation disturbances. • Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has recovered to some extent. Cover by perennial species is approximately 15-20%. Some Canada thistle also occurs in these disturbed areas. Conditions in 2010 were comparable to what was noted in 2009. Pocket gophers were noted at N46° 07' 41.0"; W112° 55' 06.8" in 2006 (excavations are bringing up the underlying red sand material). No new excavations in 2010. • Knapweed occurs along and near the road on the west end of the north side of this area. Mostly, these plants had been sprayed. There has been quite a bit of effort put into knapweed control in this area. There has been good success, but there are still some basal rosettes – mostly close to the road but also in the utility right-of-way and between the right-of-way and the arbiter road. Sooner or later some additional control will be needed. • There is some highway trash in this area. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring. The performance standards are still being met.	No obvious signs of erosion. BLM Score = 2.	No storm water BMPs installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2011	• Overall, site conditions are comparable to what was observed in 2010. Any problems in this area are related to post-remediation disturbances. • Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has recovered to some extent. Cover by perennial species is approximately 15-20%. Some Canada thistle also occurs in these disturbed areas. Conditions in 2011 were comparable to what was noted in 2010. Pocket gophers were noted at N46° 07' 41.0"; W112° 55' 06.8" in 2006 (excavations are bringing up the underlying red sand material). No new excavations in 2011. • Knapweed occurs along and near the road on the west end of the north side of this area. Mostly, these plants had been sprayed. There has been quite a bit of effort put into knapweed control in this area. There has been good success, but there are still some basal rosettes – mostly close to the road but also in the utility right-of-way and between the right-of-way and the arbiter road. Sooner or later some additional control will be needed. • There is some highway trash in this area. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring. The performance standards are still being met.	No obvious signs of erosion. BLM Score = 2.	No storm water BMPs installed in this area.	
2012	• Overall, site conditions are comparable to what was observed in 2011. Any problems in this area are related to post-remediation disturbances. • Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has recovered to some extent. Cover by perennial species is approximately 15-20%. Some Canada thistle also occurs in these disturbed areas. Conditions in 2012 were comparable to what was noted in 2011. Pocket gophers were noted at N46° 07' 41.0"; W112° 55' 06.8" in 2006 (excavations are bringing up the underlying red sand material). Some new excavations in 2012 in this area and also a few in other locations. • Knapweed occurs along and near the road on the west end of the north side of this area. Mostly, these plants had been sprayed. There has been quite a bit of effort put into knapweed control in this area. There has been good success, but there are still some basal rosettes – mostly close to the road but also in the utility right-of-way and between the right-of-way and the arbiter road. Sooner or later some additional control will be needed. • There is some highway trash in this area. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met.	No obvious signs of erosion. BLM Score = 2.	No storm water BMPs installed in this area.	
2013	• Overall, site conditions are comparable to what was observed in 2012. Any problems in this area are related to post-remediation disturbances. • Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has recovered to some extent. Cover by perennial species is approximately 15-20%. Some Canada thistle also occurs in these disturbed areas. Conditions in 2013 were comparable to what was noted in 2012. Pocket gophers were noted at N46° 07' 41.0"; W112° 55' 06.8" in 2006 (excavations are bringing up the underlying red sand material). Some new excavations in 2013 in this area and also a few in other locations. • Knapweed occurs along and near the road on the west end of the north side of this area. Previous weed control has been successful, but there are still some basal rosettes – mostly close to the road but also in the utility right-of-way and between the right-of-way and the arbiter road. Some additional control will be needed. There is also leafy spurge in this area that should be sprayed. DO NOT spray the desirable species. • There is some highway trash in this area. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met.	No obvious signs of erosion. BLM Score = 2.	No storm water BMPs installed in this area.	

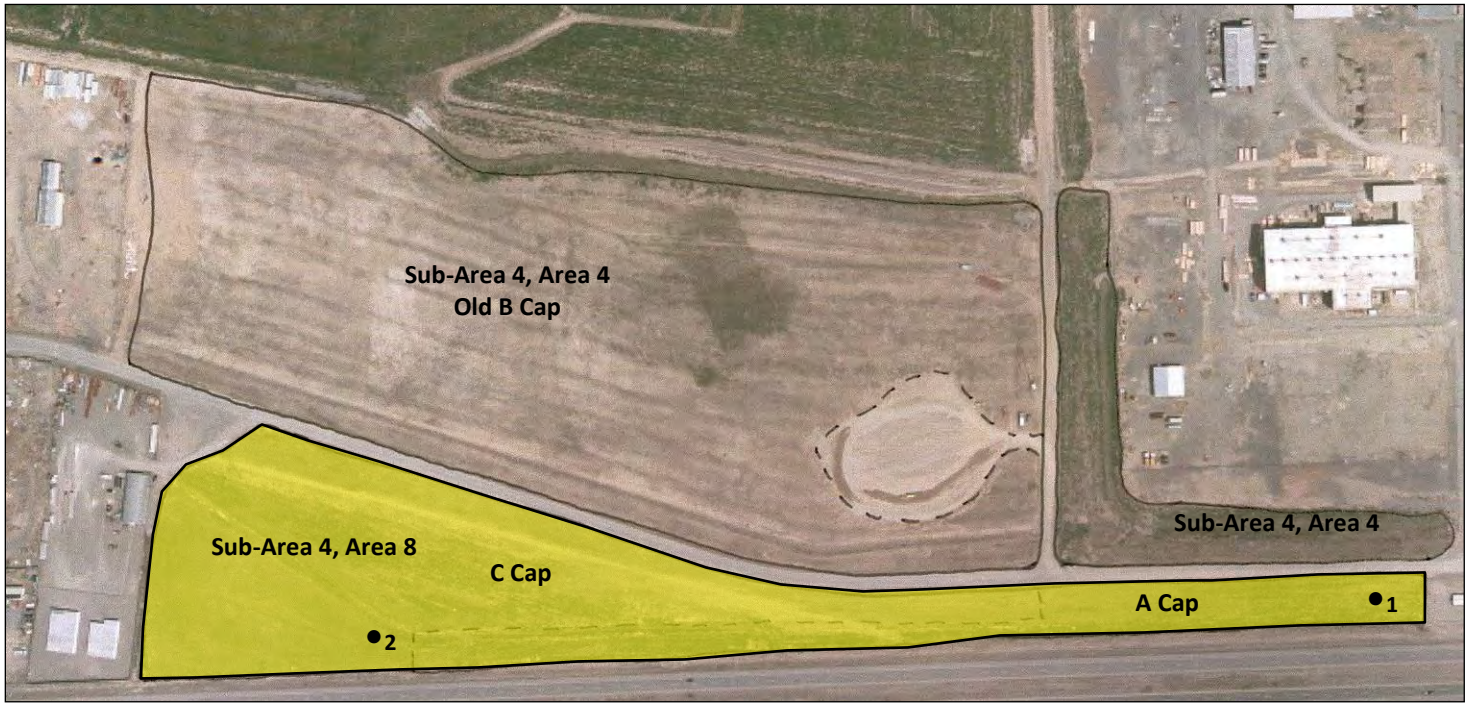
Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2014	• Overall, site conditions are comparable to what was observed in 2013. Any problems in this area are related to post-remediation disturbances. • Vegetation is uniform except for post-remediation disturbances associated with a utility right-of-way. The right-of-way has recovered to some extent. Cover by perennial species is approximately 15-20%. Some Canada thistle also occurs in these disturbed areas. Conditions in 2014 were comparable to what was noted in 2013. • Pocket gophers were noted at N46° 07' 41.0"; W112° 55' 06.8" in 2006 (excavations are bringing up the underlying red sand material). Some new excavations in 2014 in this area and also a few in other locations. • Knapweed occurs along and near the road on the west end of the north side of this area. Previous weed control has been successful, but there are still some basal rosettes – mostly close to the road but also in the utility right-of-way and between the right-of-way and the arbiter road. Some additional control will be needed. There is also leafy spurge in this area that should be sprayed. DO NOT spray the desirable species. • There is some highway trash in this area. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met. Compliance Status: LTIM.	No obvious signs of erosion. BLM Score = 2.	No storm water BMPs installed in this area.	

Transect Sampling Summary for Old Works Sub Area 4, Area 8 A and C Caps (VM_142)

Transects in Old Works Sub Area 4, Area 8 Type A and C Caps	Mean Cover (%)		Frequency (%)	
	2006	**2008**	**2006**	**2008**
Number of Transects Sampled	1	2	1	2
Total Vegetation Cover (All Species)	38	39		
Total Vegetation Cover (Acceptable Species)	38	39		
Litter and Rock Combined	48	53		
Bare Soil	14	8		
Total Cover	86	92		
Litter Cover	48	51		
Rock Cover		2		
Acceptable Species				
Agropyron cristatum	2	<0.1	NA	100
Agropyron dasystachyum	2	1	NA	100
Agropyron intermedium	6	16	NA	100
Agropyron smithii	<0.1		NA	
Elymus cinereus	<0.1	<0.1	NA	100
Festuca ovina	4	10	NA	100
Medicago sativa	24	12	NA	100
Mosses		<0.1		50
Poa compressa	<0.1	<0.1	NA	100
Undesirable Weedy Species				
Bromus japonicus		<0.1		50
Tragopogon dubius	<0.1		NA	
Noxious Weeds				
Centaurea maculosa		<0.1		50

Site Aerial Photo for Old Works Sub Area 4, Area 8 A and C Caps (VM_142)



•1 Photo Location Point

Old Works Sub Area 4, Area 8 A and C Caps (VM_142)

Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 8 A and C Caps	**PHOTO LOCATION 2 – OW Sub Area 4, Area 8 A and C Caps**
N46° 07’ 40.3”; W112° 54’ 40.7”, Looking West	N46° 07’ 39.5”; W112° 55’ 00.5”, Looking West
July 13, 2000	July 13, 2000
July 4, 2001	July 4, 2001

Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 8 A and C Caps		**PHOTO LOCATION 2 – OW Sub Area 4, Area 8 A and C Caps**
N46° 07’ 40.3”; W112° 54’ 40.7”, Looking West		N46° 07’ 39.5”; W112° 55’ 00.5”, Looking West
July 21, 2002		July 21, 2002
July 22, 2003		July 22, 2003

Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 8 A and C Caps	**PHOTO LOCATION 2 – OW Sub Area 4, Area 8 A and C Caps**
N46° 07’ 40.3”; W112° 54’ 40.7”, Looking West	N46° 07’ 39.5”; W112° 55’ 00.5”, Looking West
August 11, 2004	August 11, 2004
August 19, 2005	August 19, 2005

Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 8 A and C Caps		**PHOTO LOCATION 2 – OW Sub Area 4, Area 8 A and C Caps**
N46° 07’ 40.3”; W112° 54’ 40.7”, Looking West		N46° 07’ 39.5”; W112° 55’ 00.5”, Looking West
August 18, 2006		August 18, 2006
August 25, 2007		August 25, 2007

Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 8 A and C Caps	**PHOTO LOCATION 2 – OW Sub Area 4, Area 8 A and C Caps**
N46° 07’ 40.3”; W112° 54’ 40.7”, Looking West	N46° 07’ 39.5”; W112° 55’ 00.5”, Looking West
August 20, 2008	August 20, 2008
August 20, 2009	August 20, 2009

Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 8 A and C Caps		**PHOTO LOCATION 2 – OW Sub Area 4, Area 8 A and C Caps**
N46° 07’ 40.3”; W112° 54’ 40.7”, Looking West		N46° 07’ 39.5”; W112° 55’ 00.5”, Looking West
July 14, 2010		July 14, 2010
August 4, 2011		August 4, 2011

Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 8 A and C Caps		**PHOTO LOCATION 2 – OW Sub Area 4, Area 8 A and C Caps**
N46° 07’ 40.3”; W112° 54’ 40.7”, Looking West		N46° 07’ 39.5”; W112° 55’ 00.5”, Looking West
August 21, 2012		August 21, 2012
August 4, 2013		August 4, 2013

Old Works Sub Area 4, Area 8 A and C Caps (VM_142) 2000-2014

PHOTO LOCATION 1 - OW Sub Area 4, Area 8 A and C Caps		**PHOTO LOCATION 2 – OW Sub Area 4, Area 8 A and C Caps**
N46° 07’ 40.3”; W112° 54’ 40.7”, Looking West		N46° 07’ 39.5”; W112° 55’ 00.5”, Looking West
July 14, 2014		July 14, 2014

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 9 (VM_143)

Old Works Sub-Area 4, Area 9 (VM_143) 2015-					
Year	**2015**				
Area (acres)	12.1				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/29/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species - See List)	17				
Total Number of Acceptable Species	12				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Musk Thistle *(Carduus nutans)*					
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 9 (VM_143)

Old Works Sub-Area 4, Area 9 (VM_143) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	2				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species Old Works Sub-Area 4, Area 9 (VM_143) 2015-

Old Works Sub-Area 4, Area 9 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	x				
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Slender Wheatgrass	*Agropyron trachycaulum*	x				
Red Top	*Agrostis alba*					
Cicer Milkvetch	*Astragalus cicer*					
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Rocky Mountain Bee Plant	*Cleome serrulata*					
Great Basin Wildrye	*Elymus cinereus*	x				
Russian Wildrye	*Elymus junceus*					
Willow Herb	*Epilobium paniculatum*					
Wallflower	*Erysimum repandum*					
Sheep Fescue	*Festuca ovina*	x				
Foxtail Barley	*Hordeum jubatum*					
Alfalfa	*Medicago sativa*	m				
White Sweetclover	*Melilotus alba*					
Yellow Sweetclover	*Melilotus officinalis*	x				
Phacelia	*Phacelia hastata*					
Big Bluegrass	*Poa ampla*	m				
Canada Bluegrass	*Poa compressa*					
Kentucky Bluegrass	*Poa pratensis*					
Willowleaf Dock	*Rumex salicifolius*					
Green Needle Grass	*Stipa viridula*	x				
UNDESIRABLE WEEDY SPECIES						
Alyssum	*Alyssum desertorum*					
Wild Oats	*Avena sativa*					
Japanese Brome	*Bromus japonicus*					
Cheatgrass	*Bromus tectorum*					
Littleseed Falseflax	*Camelina microcarpa*					
Goosefoot	*Chenopodium album*					
Goosefoot	*Chenopodium botrys*					
Tansy Mustard	*Descurainia richardsonii*	x				
Annual Sunflower	*Helianthus annuus*					
Prickly Lettuce	*Lactuca serriola*					
Tumbling Hedge Mustard	*Sisymbrium altissimum*					
Hedge Mustard	*Sisymbrium loeselii*					
Thelopody	*Thelypodium integrifolium*					
Penny Cress	*Thlaspi arvense*					
Salsify	*Tragopogon dubius*					

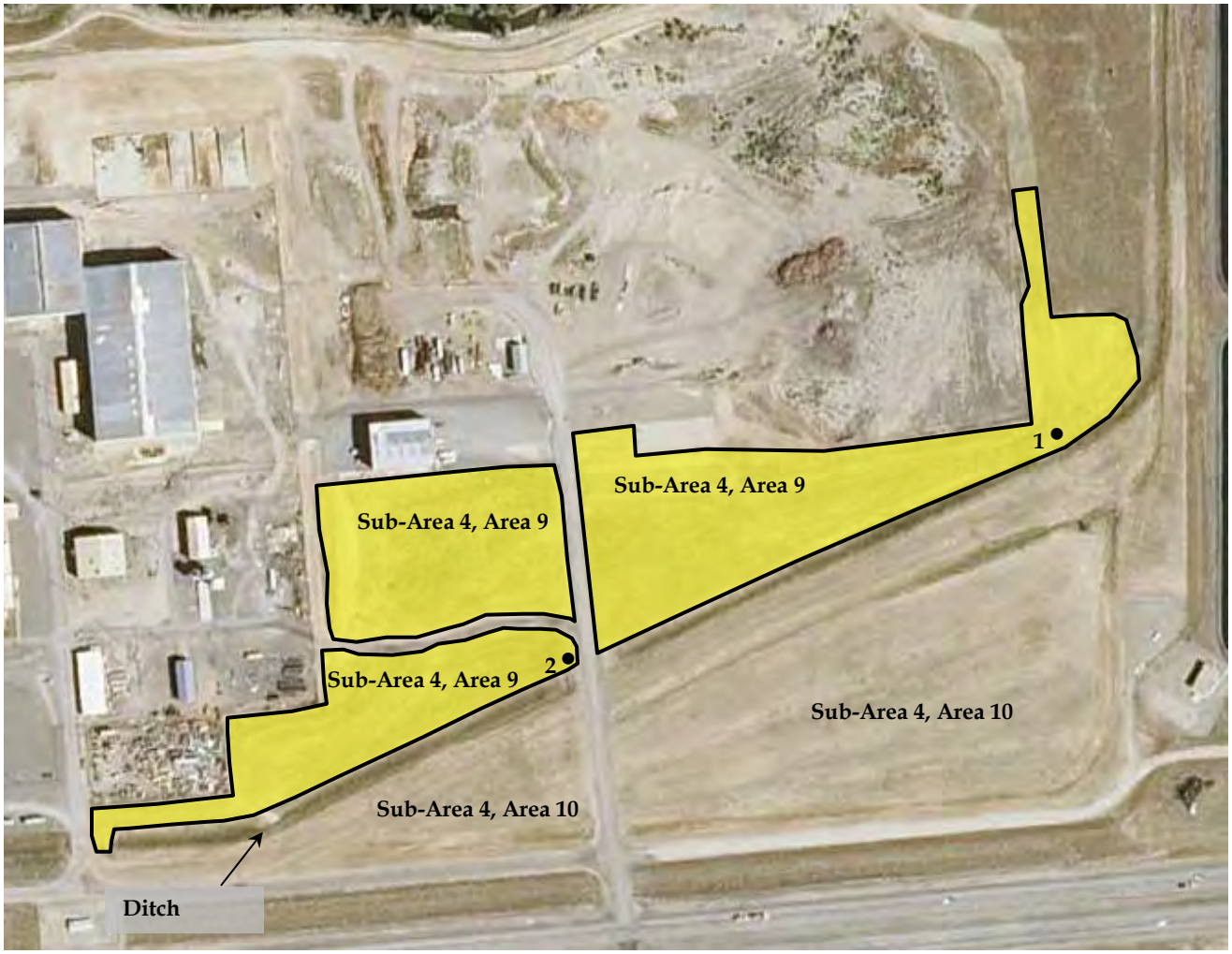
Observed Species Old Works Sub-Area 4, Area 9 (VM_143) 2015-

Old Works Sub-Area 4, Area 9 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I				
Musk Thistle	*Carduus nutans*					
Spotted Knapweed	*Centaurea maculosa*	I				
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*	I				
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		12				
Total Number of Species		17				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 4, Area 9 (VM_143) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• Area 9 consists of two parcels located north of Area 10 and the drainage ditch on either side of the landfill access road. • This is one of the Old Works Temporary cap areas that was re-worked with the addition of more cover soil in 2010. • The north part of the east end includes some older reclamation. Included as part of Area 9 even though it is older. This portion needs control for baby's breath. • Overall, a good stand of seeded species. • Some evidence of vehicle trespass. • There is a utility installation east of the landfill road. This area has good establishment of seeded species, particularly alfalfa. This corridor also crosses Area 10 and Area 11. • This area was evaluated for compliance standards in 2013 and 2014. The performance standards are still being met in 2015. Compliance Status: LTIM.	No obvious signs of erosion.	Rip rap in channels at road crossings is in place.	

Site Aerial Photograph of Old Works Sub-Area 4, Area 9 (VM_143)



•1 Photo Location Point

Old Works Sub-Area 4, Area 9 (VM_143)

Old Works Sub-Area 4, Area 9 (VM_143) 2015-

PHOTO LOCATION 1 - Old Works Sub-Area 4, Area 9		**PHOTO LOCATION 2 - Old Works Sub-Area 4, Area 9**
N46° 07’ 50.1”; W112° 54’ 08.8”, looking West Southwest		N46° 07’ 45.7”; W112° 54’ 21.1”, looking West Southwest
July 29, 2015		July 29, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 9 (VM_143)

Old Works Sub-Area 4, Area 9 (VM_143) 2011-2014				
Year	**2011**	**2012**	**2013**	**2014**
Area (acres)	12.1	12.1	12.1	12.1
Current Land Use	Open Space	Open Space	Open Space	Open Space
Land Owner				
Inspection Date	8/2/11	8/22/12	6/13/13	6/18/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Holly Keammerer (HK) Cathy Seibert (CS)	WK, HK, CS	WK, HK, CS	WK, HK, CS	WK, HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo				
Site Aerial Photo Follows the Transect Summary				
INSPECTION SUMMARY				
Vegetation Inspection		0	0	0
Erosion Inspection		0	0	0
Stormwater BMP Inspection		0	0	0
VEGETATION INSPECTION				
Overall Recommendation		0	0	0
Estimated Canopy Coverage		30-39%	30-39%	30-39%
Uniformity of Vegetation Cover		Varies	Varies	Varies
Litter Accumulation		Light	Light/Mod	Light/Mod
Evidence of Reproduction		Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	37	30	20	15
Total Number of Acceptable Species	18	18	12	11
Ocular Estimate of Extent of Bare Areas		<1-5%	<1-5%	<1-5%
Weed Species Present				
White Top *(Cardaria draba)*	Infrequent	Infrequent	Infrequent	Infrequent
Musk Thistle *(Carduus nutans)*	Infrequent			
Spotted Knapweed *(Centaurea maculosa)*		Infrequent	Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*	Infrequent	Infrequent	Infrequent	Infrequent
Vegetation Comments (See Comments Section)				

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 9 (VM_143)

Old Works Sub-Area 4, Area 9 (VM_143) 2011-2014				
Year	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION				
Average Slope (percent)	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat
Overall Recommendation		0	0	0
Evidence of Soil Movement		None	None	None
Evidence of Surface Litter Movement		None	None	None
Evidence of Coarse Fragment Movement		None	None	None
Presence of Rills		None	None	None
Potential Instability		None	None	None
Presence of Gullies		None	None	None
Erosion Comments (See Comments Section)				
BMP INSPECTION				
Overall Recommendation		0	0	0
Evidence of Check Dam Failure		None	None	None
Evidence of Sediment Accumulation in Check Dams		None	None	None
Condition of Dozer Basins		None	None	None
Condition of Grade Control Structures		None	None	None
Evidence of Brush Barrier Failure or Movement		None	None	None
Condition of Mulch		None	None	None
BMP Comments (See Comments Section)				
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS				
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)			Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?			TRAN (44%)	TRAN (50%)
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.			Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)			Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.			No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.			2	4
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).			No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).			No	No

Observed Species Old Works Sub-Area 4, Area 9 (VM_143) 2011-2014

Old Works Sub-Area 4, Area 9 m = major species; x = other species					
Common Name	**Scientific Name**	**YEAR**			
		2011	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES					
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*	x	x	x	x
Intermediate Wheatgrass	*Agropyron intermedium*	x	m	m	m
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x	
Red Top	*Agrostis alba*	x	x		
Cicer Milkvetch	*Astragalus cicer*	x			
Smooth Brome	*Bromus inermis*	x	x	x	x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*		x		x
Rocky Mountain Bee Plant	*Cleome serrulata*	x			
Great Basin Wildrye	*Elymus cinereus*	x	x		
Russian Wildrye	*Elymus junceus*		x		
Willow Herb	*Epilobium paniculatum*	x			
Wallflower	*Erysimum repandum*	x			
Sheep Fescue	*Festuca ovina*		x	x	x
Foxtail Barley	*Hordeum jubatum*	x	x		
Barley	*Hordeum vulgare*	x	x		
Alfalfa	*Medicago sativa*	x	m	m	m
White Sweetclover	*Melilotus alba*			x	
Yellow Sweetclover	*Melilotus officinalis*	x	x		x
Phacelia	*Phacelia hastata*	x	x		x
Big Bluegrass	*Poa ampla*	x	x	x/m	x/m
Canada Bluegrass	*Poa compressa*	x	x		
Kentucky Bluegrass	*Poa pratensis*			x	
Willowleaf Dock	*Rumex salicifolius*			x	
Green Needle Grass	*Stipa viridula*		x	x	x
UNDESIRABLE WEEDY SPECIES					
Alyssum	*Alyssum desertorum*	x			
Wild Oats	*Avena sativa*	x			
Japanese Brome	*Bromus japonicus*	x			
Cheatgrass	*Bromus tectorum*	x	x	x	
Littleseed Falseflax	*Camelina microcarpa*	x	x	x	
Goosefoot	*Chenopodium album*	x			
Goosefoot	*Chenopodium botrys*	x			
Tansy Mustard	*Descurainia richardsonii*	x	x		
Annual Sunflower	*Helianthus annuus*	x			
Prickly Lettuce	*Lactuca serriola*	x	x		
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x	x	x	
Hedge Mustard	*Sisymbrium loeselii*	x	x		
Thelopody	*Thelypodium integrifolium*	x	x		
Penny Cress	*Thlaspi arvense*	x			
Salsify	*Tragopogon dubius*	x	x	x	

Observed Species Old Works Sub-Area 4, Area 9 (VM_143) 2011-2014

Old Works Sub-Area 4, Area 9 m = major species; x = other species					
Common Name	**Scientific Name**	**YEAR**			
		2011	**2012**	**2013**	**2014**
NOXIOUS WEEDS					
White Top	*Cardaria draba*	I	I	I	I
Musk Thistle	*Carduus nutans*	I			
Spotted Knapweed	*Centaurea maculosa*		I	I	I
Baby's Breath	*Gypsophila paniculata*	I	I	I	I
Kochia	*Kochia scoparia*	I	I	I	I
I=Infrequent; F=Frequent; C=Common; D=Dominant					
Total Number of Acceptable Species		18	18	12	11
Total Number of Species		37	30	20	15

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 4, Area 9 (VM_143) 2011-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2011	• This is one of the Old Works Temporary cap areas that was re-worked with the addition of more cover soil in 2010. • Area 9 consists of two parcels located north of Area 10 and the drainage ditch on either side of the landfill access road. • Mulch Species: Barley was included in the seed mix, but only a few scattered plants were present. • Seedling Evaluation: Seedlings were evident in more or less continuous drill rows. Overall seedling density was more than 40/m2 in most places. The seedlings were robust and well- established many with flowering heads. There should be enough seedlings present for establishment of a good stand of seeded species in 1-2 years. • Weed Abundance: There were a few annual mustards, and a small amount of kochia. • Organic Matter: No organic matter was added. • Mowing: The site was not mowed in 2011. • The area is okay and does not need any maintenance at this time. • There is a new building foundation in the northwest corner of the parcel, east of landfill road.	There were no apparent erosion problems		
2012	• Area 9 consists of two parcels located north of Area 10 and the drainage ditch on either side of the landfill access road. • This is one of the Old Works Temporary cap areas that was re-worked with the addition of more cover soil in 2010. • The north part of the east end includes some older reclamation. Included as part of Area 9 even though it is older. This portion needs control for baby's breath. • Overall, a good stand of seeded species. • Whitetop had been sprayed earlier in the growing season. • There is a new building foundation in the northwest corner of the parcel, east of landfill road.	No obvious signs of erosion.	Rip rap in channels at road crossings is in place.	
2013	• Area 9 consists of two parcels located north of Area 10 and the drainage ditch on either side of the landfill access road. • This is one of the Old Works Temporary cap areas that was re-worked with the addition of more cover soil in 2010. • The north part of the east end includes some older reclamation. Included as part of Area 9 even though it is older. This portion needs control for baby's breath. • Overall, a good stand of seeded species. • There is a new building foundation in the northwest corner of the parcel, east of landfill road. • This area was evaluated for first year compliance standards; these standards were met (44% cover by acceptable species).	No obvious signs of erosion.	Rip rap in channels at road crossings is in place.	

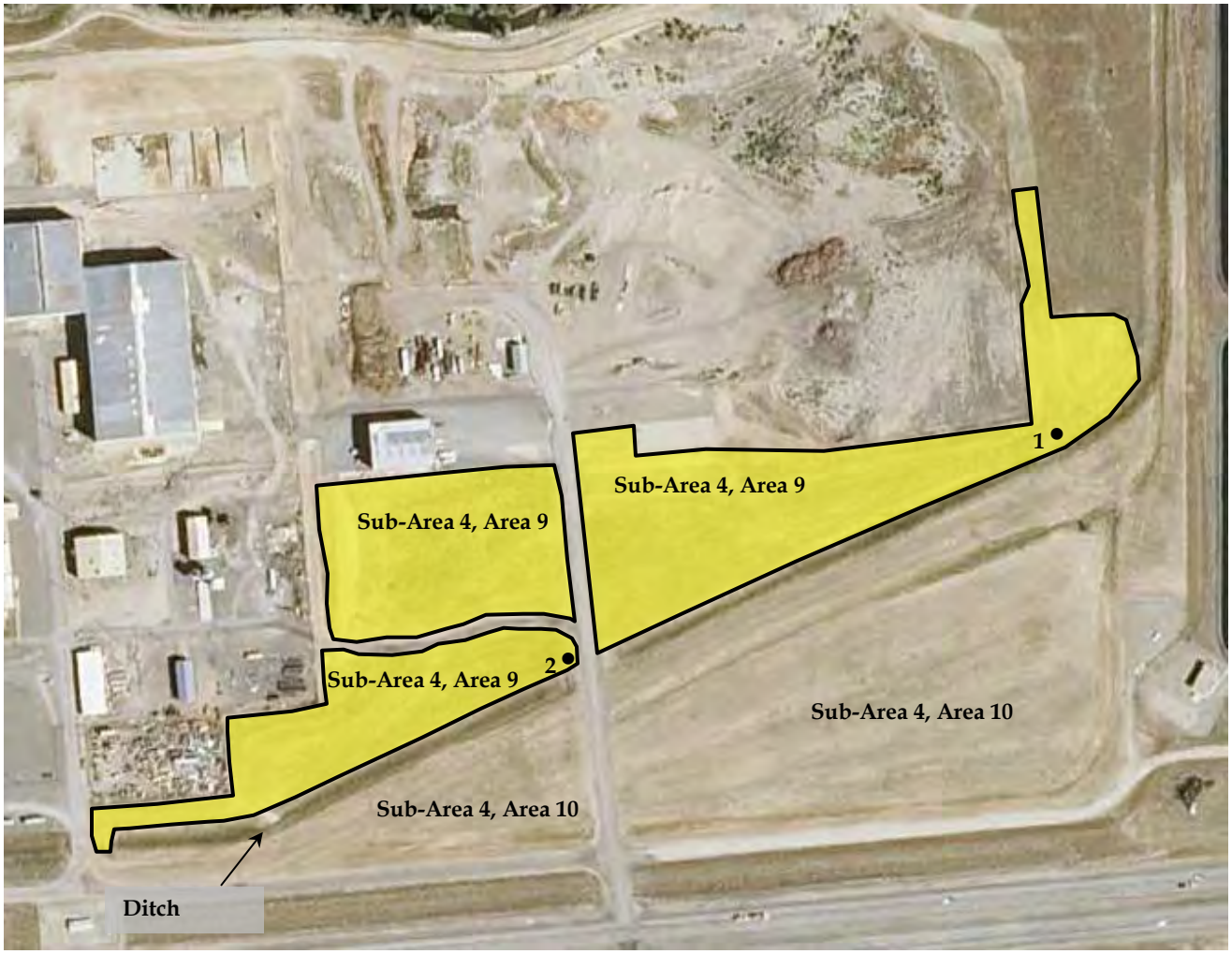
Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 4, Area 9 (VM_143) 2011-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2014	• Area 9 consists of two parcels located north of Area 10 and the drainage ditch on either side of the landfill access road. • This is one of the Old Works Temporary cap areas that was re-worked with the addition of more cover soil in 2010. • The north part of the east end includes some older reclamation. Included as part of Area 9 even though it is older. This portion needs control for baby's breath. • Overall, a good stand of seeded species. • There is a new utility installation east of the landfill road. Newly re-worked as of the sampling date. This corridor also crosses Area 10 and Area 11. • This area was evaluated for second year compliance standards; these standards were met (50% cover by acceptable species).	No obvious signs of erosion.	Rip rap in channels at road crossings is in place.	

Transect Sampling Summary for Old Works Sub-Area 4, Area 9 (VM_143)

Old Works Sub-Area 4, Area 9	Mean Cover (%)	
	2013	**2014**
Number of Transects Sampled	1	1
Total Vegetation Cover (All Species)	44	50
Total Vegetation Cover (Acceptable Species)	44	50
Litter and Rock Combined	48	44
Bare Soil	8	6
Total Cover	92	94
Litter Cover	42	44
Rock Cover	6	0
Acceptable Species		
Agropyron cristatum	<1	<1
Agropyron dasystachyum	8	
Agropyron intermedium	8	2
Agropyron trachycaulum	2	
Bromus inermis	6	
Hordeum jubatum	<1	
Medicago sativa	16	42
Poa ampla	4	6
Undesirable Weedy Species		
None seen		
Noxious Weed Species		
Gypsophila paniculata		<1

Site Aerial Photograph of Old Works Sub-Area 4, Area 9 (VM_143)



•1 Photo Location Point

Old Works Sub-Area 4, Area 9 (VM_143)

Old Works Sub-Area 4, Area 9 (VM_143) 2011-2014

PHOTO LOCATION 1 - Old Works Sub-Area 4, Area 9	**PHOTO LOCATION 2 - Old Works Sub-Area 4, Area 9**
N46° 07’ 50.1”; W112° 54’ 08.8”, looking West Southwest	N46° 07’ 45.7”; W112° 54’ 21.1”, looking West Southwest
August 2, 2011	August 2, 2011
August 22, 2012	August 22, 2012

Old Works Sub-Area 4, Area 9 (VM_143) 2011-2014

PHOTO LOCATION 1 - Old Works Sub-Area 4, Area 9	**PHOTO LOCATION 2 - Old Works Sub-Area 4, Area 9**
N46° 07’ 50.1”; W112° 54’ 08.8”, looking West Southwest	N46° 07’ 45.7”; W112° 54’ 21.1”, looking West Southwest
June 13, 2013	June 13, 2013
June 18, 2014	June 18, 2014

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 10 (VM_144)

Old Works Sub-Area 4, Area 10 (VM_144) 2015-					
Year	**2015**				
Area (acres)	17.5				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/29/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Site Photos and Photo Locations (Evaluation Area Photos Follow the Site Aerial Photo)					
Site Aerial Photo (See Site Aerial Photo Following Transect Data Summary)					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species - See List)	14				
Total Number of Acceptable Species	11				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Musk Thistle *(Carduus nutans)*					
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*					
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 10 (VM_144)

Old Works Sub-Area 4, Area 10 (VM_144) 2015-					
Year					
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	2				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species Old Works Sub-Area 4, Area 10 (VM_144) 2015-

Old Works Sub-Area 4, Area 10 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	x				
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Slender Wheatgrass	*Agropyron trachycaulum*					
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Rocky Mountain Bee Plant	*Cleome serrulata*					
Great Basin Wildrye	*Elymus cinereus*	x				
Sheep Fescue	*Festuca ovina*	x				
Foxtail Barley	*Hordeum jubatum*					
Lewis Flax	*Linum lewisii*					
Alfalfa	*Medicago sativa*	m				
Yellow Sweetclover	*Melilotus officinalis*	x				
Phacelia	*Phacelia hastata*					
Big Bluegrass	*Poa ampla*	x/m				
Green Needlegrass	*Stipa viridula*	x				
UNDESIRABLE WEEDY SPECIES						
Wild Oats	*Avena sativa*					
Japanese Brome	*Bromus japonicus*					
Cheatgrass	*Bromus tectorum*					
Goosefoot	*Chenopodium album*					
Tansy Mustard	*Descurainia richardsonii*					
Annual Sunflower	*Helianthus annuus*					
Prickly Lettuce	*Lactuca serriola*					
Pineapple weed	*Matricaria maritima*					
Devil's Shoestring	*Polygonum aviculare*					
False Bindweed	*Polygonum convolvulus*					
Catchfly	*Silene noctiflora*					
Tumbling Hedge Mustard	*Sisymbrium altissimum*					
Hedge Mustard	*Sisymbrium loeselii*					
Common Dandelion	*Taraxacum officinale*					
Penny Cress	*Thlaspi arvense*					
Salsify	*Tragopogon dubius*					

Observed Species Old Works Sub-Area 4, Area 10 (VM_144) 2015-

Old Works Sub-Area 4, Area 10 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I				
Musk Thistle	*Carduus nutans*					
Spotted Knapweed	*Centaurea maculosa*	I				
Canada Thistle	*Cirsium arvense*					
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*					
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		11				
Total Number of Species		14				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 4, Area 10 (VM_144) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• The ditch that separates Area 10 from Area 9 had approximately 75 percent cover (Photo 4). The major species is intermediate wheatgrass *(Agropyron intermedium)*. Evidence of recent flows in 2015. • This is one of the Old Works Temporary cap areas that was re-worked with the addition of more cover soil in 2010. • Overall a good stand of seeded species. • Some evidence of vehicle trespass in 2015. • Some pocket gopher castings were noted in 2015. • There is a utility installation east of the landfill road. This area has good establishment of seeded species, particularly alfalfa. This corridor also crosses Area 9 and Area 11. • This area was evaluated for compliance standards in 2013 and 2014. The performance standards are still being met in 2015. Compliance Status: LTIM.	Site is flat. No obvious signs of erosion.	Rip rap in channels are the only BMPs installed in this area. All rip rap is in place.	

Site Aerial Photograph for Old Works Sub-Area 4, Area 10 (VM_144)

•1 Photo Location Point

Old Works Sub-Area 4, Area 10 (VM_144)

Old Works Sub-Area 4, Area 10 (VM_144) 2015-

PHOTO LOCATION 1 - Old Works Sub-Area 4, Area 10		**PHOTO LOCATION 2 - Old Works Sub-Area 4, Area 10**
N46° 07’ 47.7”; W112° 54’ 07.2”, looking West Southwest		N46° 07’ 49.5”; W112° 54’ 06.2”, looking West Southwest
July 29, 2015		July 29, 2015

Old Works Sub-Area 4, Area 10 (VM_144) 2015-

PHOTO LOCATION 3 - Old Works Sub-Area 4, Area 10		**PHOTO LOCATION 4 - Old Works Sub-Area 4, Area 10**
N46° 07’ 44.3”; W112° 54’ 20.8”, looking Southwest		N46° 07’ 49.5”; W112° 54’ 08.0”, looking West Southwest
July 29, 2015		July 29, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 10 (VM_144)

Old Works Sub-Area 4, Area 10 (VM_144) 2011-2014				
Year	**2011**	**2012**	**2013**	**2014**
Area (acres)	17.5	17.5	17.5	17.5
Current Land Use	Open Space	Open Space	Open Space	Open Space
Land Owner				
Inspection Date	8/2/11	8/22/12	6/13/13	6/18/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Holly Keammerer (HK) Cathy Seibert (CS)	WK, HK, CS	WK, HK, CS	WK, HK, CS	WK, HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6
Site Photos and Photo Locations (Evaluation Area Photos Follow the Site Aerial Photo)				
Site Aerial Photo (See Site Aerial Photo Following Transect Data Summary)				
INSPECTION SUMMARY				
Vegetation Inspection		0	0	0
Erosion Inspection		0	0	0
Stormwater BMP Inspection		0	0	0
VEGETATION INSPECTION				
Overall Recommendation		0	0	0
Estimated Canopy Coverage		30-39%	30-39%	30-39%
Uniformity of Vegetation Cover		Varies	Varies	Varies
Litter Accumulation		Light	Light/Mod	Light/Mod
Evidence of Reproduction		Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	37	17	14	12
Total Number of Acceptable Species	15	12	10	8
Ocular Estimate of Extent of Bare Areas		<1-5%	<1-5%	<1-5%
Weed Species Present				
White Top *(Cardaria draba)*	Infrequent		Infrequent	Infrequent
Musk Thistle *(Carduus nutans)*	Infrequent			
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*	Infrequent			
Baby's Breath *(Gypsophila paniculata)*	Infrequent	Infrequent		Infrequent
Vegetation Comments (See Comments Section)				

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 10 (VM_144)

Old Works Sub-Area 4, Area 10 (VM_144) 2011-2014				
Year	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION				
Average Slope (percent)	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat
Overall Recommendation		0	0	0
Evidence of Soil Movement		None	None	None
Evidence of Surface Litter Movement		None	None	None
Evidence of Coarse Fragment Movement		None	None	None
Presence of Rills		None	None	None
Potential Instability		None	None	None
Presence of Gullies		None	None	None
Erosion Comments (See Comments Section)				
BMP INSPECTION				
Overall Recommendation		0	0	0
Evidence of Check Dam Failure		None	None	None
Evidence of Sediment Accumulation in Check Dams		None	None	None
Condition of Dozer Basins		None	None	None
Condition of Grade Control Structures		None	None	None
Evidence of Brush Barrier Failure or Movement		None	None	None
Condition of Mulch		None	None	None
BMP Comments (See Comments Section)				
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS				
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)			Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?			TRAN (44%)	TRAN (46%)
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.			Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)			Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.			No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.			2	2
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).			No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).			No	No

Observed Species Old Works Sub-Area 4, Area 10 (VM_144) 2011-2014

Old Works Sub-Area 4, Area 10 m = major species; x = other species					
Common Name	**Scientific Name**	**YEAR**			
		2011	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES					
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*	x	x	x	x
Intermediate Wheatgrass	*Agropyron intermedium*	x	m	m	m
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x	
Smooth Brome	*Bromus inermis*	x	x	x	x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*			x	
Rocky Mountain Bee Plant	*Cleome serrulata*	x			
Great Basin Wildrye	*Elymus cinereus*	x	x		x
Sheep Fescue	*Festuca ovina*	x	x	x	x
Foxtail Barley	*Hordeum jubatum*	x	x		
Lewis Flax	*Linum lewisii*	x			
Alfalfa	*Medicago sativa*	x	m	m	m
Yellow Sweetclover	*Melilotus officinalis*	x	x		
Phacelia	*Phacelia hastata*	x			
Big Bluegrass	*Poa ampla*	x	x	x	x
Dock	*Rumex sp*	x			
Green Needlegrass	*Stipa viridula*		x	x	
UNDESIRABLE WEEDY SPECIES					
Wild Oats	*Avena sativa*	x			
Japanese Brome	*Bromus japonicus*	x			
Cheatgrass	*Bromus tectorum*	x	x	x	x
Goosefoot	*Chenopodium album*	x			
Tansy Mustard	*Descurainia richardsonii*	x			
Annual Sunflower	*Helianthus annuus*	x			
Prickly Lettuce	*Lactuca serriola*	x			
Pineapple weed	*Matricaria maritima*	x			
Devil's Shoestring	*Polygonum aviculare*	x			
False Bindweed	*Polygonum convolvulus*	x			
Catchfly	*Silene noctiflora*	x			
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x			
Hedge Mustard	*Sisymbrium loeselii*	x			
Common Dandelion	*Taraxacum officinale*	x		x	
Penny Cress	*Thlaspi arvense*	x			
Salsify	*Tragopogon dubius*	x	x		

Observed Species Old Works Sub-Area 4, Area 10 (VM_144) 2011-2014

Old Works Sub-Area 4, Area 10 m = major species; x = other species					
Common Name	**Scientific Name**	**YEAR**			
		2011	**2012**	**2013**	**2014**
NOXIOUS WEEDS					
White Top	*Cardaria draba*	I		I	I
Musk Thistle	*Carduus nutans*	I			
Spotted Knapweed	*Centaurea maculosa*	I	I	I	I
Canada Thistle	*Cirsium arvense*	I			
Baby's Breath	*Gypsophila paniculata*	I	I		I
Kochia	*Kochia scoparia*	I	I		
I=Infrequent; F=Frequent; C=Common; D=Dominant					
Total Number of Acceptable Species		15	12	10	8
Total Number of Species		37	17	14	12

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 4, Area 10 (VM_144) 2011-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2011	• The ditch that separates Area 10 from Area 9 had approximately 75 percent cover (Photo 4). The ditch was dry in 2011. The major species along the ditch include intermediate wheatgrass (Agropyron intermedium) and alfalfa (Medicago sativa). • This is one of the Old Works Temporary cap areas that was re-worked with the addition of more cover soil in 2010. • Mulch Species: No mulch species were seeded. • Seedling Evaluation: Seedlings were evident in more or less continuous drill rows. Overall seedling density was more than 40/m2 in most places. The seedlings were robust and well- established many with flowering heads. There should be enough seedlings present for establishment of a good stand of seeded species in 1-2 years. • Weed Abundance: Kochia was present but only at low density. • Organic Matter: No organic matter was added. • Mowing: The site was not mowed in 2011. • The area is okay and does not need any maintenance at this time. • No problems, but a few sparse areas but should be okay in a few years. • Very little kochia.	There were no apparent erosion problems.	Rip rap in channels are the only BMPs installed in this area. All rip rap is in place.	
2012	• The ditch that separates Area 10 from Area 9 had approximately 75 percent cover (Photo 4). The ditch was dry in 2012. The major species along the ditch include intermediate wheatgrass (Agropyron intermedium) and alfalfa (Medicago sativa). • This is one of the Old Works Temporary cap areas that was re-worked with the addition of more cover soil in 2010. • Overall a good stand of seeded species. • Some pocket gopher castings noted.	Site is flat. No obvious signs of erosion.	Rip rap in channels are the only BMPs installed in this area. All rip rap is in place.	
2013	• The ditch that separates Area 10 from Area 9 had approximately 75 percent cover (Photo 4). The ditch was dry in 2013. The major species along the ditch include intermediate wheatgrass (Agropyron intermedium) and alfalfa (Medicago sativa). • This is one of the Old Works Temporary cap areas that was re-worked with the addition of more cover soil in 2010. • Overall a good stand of seeded species. • Some pocket gopher castings noted. • This area was evaluated for first year compliance standards; these standards were met (44% cover by acceptable species).	Site is flat. No obvious signs of erosion.	Rip rap in channels are the only BMPs installed in this area. All rip rap is in place.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 4, Area 10 (VM_144) 2011-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2014	• The ditch that separates Area 10 from Area 9 had approximately 75 percent cover (Photo 4). The ditch was dry in 2014. The major species along the ditch include intermediate wheatgrass (Agropyron intermedium) and alfalfa (Medicago sativa). • This is one of the Old Works Temporary cap areas that was re-worked with the addition of more cover soil in 2010. • Overall a good stand of seeded species. • More pocket gopher castings were noted in 2014. • There is a new utility installation east of the landfill road. Newly re-worked as of the sampling date. This corridor also crosses Area 9 and Area 11. • This area was evaluated for second year compliance standards; these standards were met (46% cover by acceptable species).	Site is flat. No obvious signs of erosion.	Rip rap in channels are the only BMPs installed in this area. All rip rap is in place.	

Transect Sampling Summary for Old Works Sub-Area 4, Area 10 (VM_144)

Old Works Sub-Area 4, Area 10	Mean Cover (%)	
	2013	**2014**
Number of Transects Sampled	1	1
Total Vegetation Cover (All Species)	44	46
Total Vegetation Cover (Acceptable Species)	44	46
Litter and Rock Combined	46	48
Bare Soil	6	6
Total Cover	94	94
Litter Cover	40	46
Rock Cover	6	2
Acceptable Species		
Agropyron cristatum		<1
Agropyron dasystachyum	2	<1
Agropyron intermedium	10	6
Agropyron trachycaulum	2	
Bromus inermis	2	<1
Medicago sativa	26	34
Poa ampla	2	6
Undesirable Weedy Species		
None seen		
Noxious Weed Species		
Centaurea maculosa		<1

Site Aerial Photograph for Old Works Sub-Area 4, Area 10 (VM_144)

•1 Photo Location Point

Old Works Sub-Area 4, Area 10 (VM_144)

Old Works Sub-Area 4, Area 10 (VM_144) 2011-2014

PHOTO LOCATION 1 - Old Works Sub-Area 4, Area 10	**PHOTO LOCATION 2 - Old Works Sub-Area 4, Area 10**
N46° 07’ 47.7”; W112° 54’ 07.2”, looking West Southwest	N46° 07’ 49.5”; W112° 54’ 06.2”, looking West Southwest
August 2, 2011	August 2, 2011
August 22, 2012	August 22, 2012

Old Works Sub-Area 4, Area 10 (VM_144) 2011-2014

PHOTO LOCATION 1 - Old Works Sub-Area 4, Area 10	**PHOTO LOCATION 2 - Old Works Sub-Area 4, Area 10**
N46° 07’ 47.7”; W112° 54’ 07.2”, looking West Southwest	N46° 07’ 49.5”; W112° 54’ 06.2”, looking West Southwest
June 13, 2013	June 13, 2013
June 18, 2014	June 18, 2014

Old Works Sub-Area 4, Area 10 (VM_144) 2011-2014

PHOTO LOCATION 3 - Old Works Sub-Area 4, Area 10	**PHOTO LOCATION 4 - Old Works Sub-Area 4, Area 10**
N46° 07’ 44.3”; W112° 54’ 20.8”, looking Southwest	N46° 07’ 49.5”; W112° 54’ 08.0”, looking West Southwest
August 2, 2011	August 2, 2011
August 22, 2012	August 22, 2012

Old Works Sub-Area 4, Area 10 (VM_144) 2011-2014

PHOTO LOCATION 3 - Old Works Sub-Area 4, Area 10	**PHOTO LOCATION 4 - Old Works Sub-Area 4, Area 10**
N46° 07’ 44.3”; W112° 54’ 20.8”, looking Southwest	N46° 07’ 49.5”; W112° 54’ 08.0”, looking West Southwest
June 13, 2013	June 13, 2013
June 18, 2014	June 18, 2014

Old Works Sub- Area 4, Area 11 A & C Cap (VM_145) 2015 -					
Year	**2015**				
Area (acres)	23.5				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/29/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Heavy/Mod				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	34				
Total Number of Acceptable Species	21				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*					
Leafy Spurge *(Euphorbia esula)*	Infrequent				
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*	Infrequent				
Curly Dock *(Rumex crispus)*					
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 4, Area 11 A and C Cap (VM_145)

Old Works Sub-Area 4, Area 11 A & C Cap (VM_145) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	3				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub-Area 4, Area 11 A and C Cap (VM_145) 2015-

Old Works Sub-Area 4, Area 11 A & C Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Western Yarrow	*Achillea lanulosa*	x				
Crested Wheatgrass	*Agropyron cristatum*	x				
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Western Wheatgrass	*Agropyron smithii*	x				
Bluebunch Wheatgrass	*Agropyron spicatum*	x				
Slender Wheatgrass	*Agropyron trachycaulum*	x				
Red Top	*Agrostis alba*					
Pussytoes	*Antennaria rosea*					
Rock Cress	*Arabis sp.*					
Fringed Sagewort	*Artemisia frigida*	x				
Aster	*Aster adscendens*	x				
Cicer Milkvetch	*Astragalus cicer*					
Milkvetch	*Astragalus sp.*					
Smooth Brome	*Bromus inermis*	x				
Carragana	*Carragana arborescens*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Russian Olive	*Elaeagnus angustifolia*					
Great Basin Wildrye	*Elymus cinereus*	x				
Mammoth Wildrye	*Elymus giganteus*					
Russian Wildrye	*Elymus junceus*					
Sheep Fescue	*Festuca ovina*	m				
Bedstraw	*Galium aparine*					
Curly Cup Gumweed	*Grindelia squarrosa*	x				
Foxtail Barley	*Hordeum jubatum*					
Common Barley	*Hordeum vulgare*					
Lewis Flax	*Linum lewisii*	x				
Machaeranthera	*Machaeranthera canescens*					
Alfalfa	*Medicago sativa*	m				
White Sweet Clover	*Melilotus alba*					
Yellow Sweetclover	*Melilotus officinalis*	x				
White Evening Star	*Mentzelia decapetala*	x				
Yellow Evening Star	*Mentzelia laevicaulis*					
Indian Ricegrass	*Oryzopsis hymenoides*					
Scorpion Weed	*Phacelia hastata*	x				
Timothy	*Phleum pratense*					
Big Bluegrass	*Poa ampla*	x				
Canada Bluegrass	*Poa compressa*					
Interior Bluegrass	*Poa interior*					
Kentucky Bluegrass	*Poa pratensis*					
Common Lilac	*Syringa vulgaris*					
Wheat	*Triticum aestivum*					

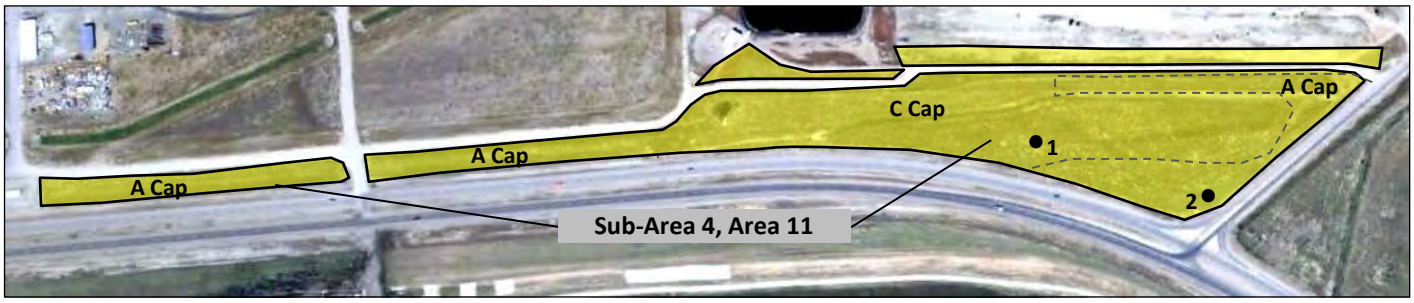
Observed Species in Old Works Sub-Area 4, Area 11 A and C Cap (VM_145) 2015-

Old Works Sub-Area 4, Area 11 A & C Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
UNDESIRABLE WEEDY SPECIES						
Alyssum	*Alyssum alyssoides*					
Alyssum	*Alyssum desertorum*					
Japanese Brome	*Bromus japonicus*	x				
Cheatgrass	*Bromus tectorum*	x				
Littleseed Falseflax	*Camelina microcarpa*	x				
Goosefoot	*Chenopodium album*	x				
Tansy Mustard	*Descurainia richardsonii*	x				
Annual Sunflower	*Helianthus annuus*					
Prickly Lettuce	*Lactuca serriola*					
Clasping Peppergrass	*Lepidium perfoliatum*					
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x				
Common Dandelion	*Taraxacum officinale*	x				
Penny Cress	*Thlaspi arvense*					
Salsify	*Tragopogon dubius*	x				
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I				
Spotted Knapweed	*Centaurea maculosa*	I				
Canada Thistle	*Cirsium arvense*					
Leafy Spurge	*Euphorbia esula*	I				
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*					
Dalmatian Toadflax	*Linaria dalmatica*	I				
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		21				
Total Number of Species		34				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 4, Area 11 A and C Cap (VM_145) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• In 2005, the evaluation of the Type A and Type C Caps was combined because of the similarity of the vegetation. • Vegetation cover in 2015 was similar to what was observed in 2014. • Pocket gopher excavations were observed at the location noted in previous years (N46° 07’ 43.4”; W112° 54’ 00.8”) and westward from this location. Also at N46° 07’ 42.5”; W112° 53’ 51.0” and in other places. The pocket gophers bring red sands material to the surface. • There is some windblown slag in the area close to the landfill access road. • Spotted knapweed is scattered. • A buried utility line was installed along the south side of the area in 2010. There was also some re-disturbance along the north side of the sewage treatment plant road. Both of these areas are okay. • There is a small amount of windblown trash in this area. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met in 2015. Compliance Status: LTIM. • There is a utility installation east of the landfill road. This area has good establishment of seeded species, particularly alfalfa. This corridor also crosses Area 9 and Area 10.	No obvious signs of erosion. Site is mostly flat. BLM erosion score =3.	Rip rap installed in drainage channels is the only BMP installed in this area. Rip rap is in place.	

Site Aerial Photo for Old Works Sub Area 4, Area 11 A and C Caps (VM_145)



•**1** Photo Location Point

Old Works Sub Area 4, Area 11 A and C Caps (VM_145)

Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4, Area 11 A and C Caps		**PHOTO LOCATION 2 - Old Works Sub Area 4, Area 11 A and C Caps**
N46° 07’ 40.4”; W112° 53’ 42.1”, Looking West		N46° 07’ 42.7”; W112° 53’ 53.4”, Looking West
July 29, 2015		July 29, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 11 A and C Caps (VM_145)

Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
Area (acres)	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner								
Inspection Date	7/9/00	7/5/01	7/21/02	7/22/03	8/11/04	8/19/05	8/18/06	6/12/07
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK	WK	WK	WK	WK	WK, KL	WK
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo								
Site Aerial Photo Follows the Transect Summary Table								
INSPECTION SUMMARY*								
Vegetation Inspection						0	0	0
Erosion Inspection						0	0	0
Stormwater BMP Inspection						0	0	0
VEGETATION INSPECTION*								
Overall Recommendation						0	0	0
Estimated Canopy Coverage	25-35%	25-35%	25-35%	25-35%	25-35%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation						Moderate	Moderate	Moderate
Evidence of Reproduction						Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	16	31	29	25	30	27	29	27
Total Number of Acceptable Species	11	17	15	13	14	16	16	16
Ocular Estimate of Extent of Bare Areas						<1-5%	<1-5%	<1-5%
Weed Species Present								
White Top *(Cardaria draba)*								
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*		Infrequent	Infrequent	Infrequent	Infrequent			
Leafy Spurge *(Euphorbia esula)*		Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*		Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Dalmatian Toadflax *(Linaria dalmatica)*								
Curly Dock *(Rumex crispus)*								
Vegetation Comments (See Comments Section)								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 11 A and C Caps (VM_145)

Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
EROSION INSPECTION*								
Average Slope (percent)						0	0	0
Aspect						Flat	Flat	Flat
Overall Recommendation						0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None	None
Evidence of Surface Litter Movement						None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)								
BMP INSPECTION*								
Overall Recommendation						0	0	0
Evidence of Check Dam Failure						None	None	None
Evidence of Sediment Accumulation in Check Dams						None	None	None
Condition of Dozer Basins						None	None	None
Condition of Grade Control Structures						None	None	None
Evidence of Brush Barrier Failure or Movement						None	None	None
Condition of Mulch						None	None	None
BMP Comments (See Comments Section)								
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**								
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS								
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	No	Yes	Yes	Yes	Yes	Yes	Yes (38%)	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST	EST	EST	EST	EST	EST	TRAN	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<45	<45	<45	<45	<45	<45
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No	No

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 11 A and C Caps (VM_145)

O Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner							
Inspection Date	6/17/08	8/21/09	7/14/10	8/2/11	8/22/12	8/4/13	7/14/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK, KL	WK, KL	WK,HK, CS	WK,HK, CS	WK,HK, CS	WK,HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo							
Site Aerial Photo Follows the Transect Summary Table							
INSPECTION SUMMARY*							
Vegetation Inspection	0	0	0	0	0	0	0
Erosion Inspection	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0
VEGETATION INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Moderate	Mod/Heavy	Mod/Heavy	Mod/Heavy	Mod/Heavy	Mod/Heavy	Mod/Heavy
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	29	30	25	42	33	33	34
Total Number of Acceptable Species	17	20	17	28	22	19	21
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present							
White Top *(Cardaria draba)*				Infrequent	Infrequent	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*							
Leafy Spurge *(Euphorbia esula)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Dalmatian Toadflax *(Linaria dalmatica)*				Infrequent	Infrequent		Infrequent
Curly Dock *(Rumex crispus)*							
Vegetation Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 4, Area 11 A and C Caps (VM_145)

Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION*							
Average Slope (percent)	0	0	0	0	0	0	0
Aspect	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)							
BMP INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None	None	None
Condition of Mulch	None	None	None	None	None	None	None
BMP Comments (See Comments Section)							
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**							
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS							
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes (41%)	Yes	Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	TRAN	EST	EST	EST	EST	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	<45	<45	<10	3	3	3	3
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No	No	No

Observed Species in Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

Old Works Sub Area 4, Area 11 A and C Caps m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Western Yarrow	*Achillea lanulosa*												x	x	x	x
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*	x	x	x	x		x	x	x	x	x	x	x	x	x	x
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Western Wheatgrass	*Agropyron smithii*	x	x			x	x	x	x	x	x	x	x	x	x	x
Bluebunch Wheatgrass	*Agropyron spicatum*												x			x
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x	x	x	x	x	x	x	x		x	x	x	x
Red Top	*Agrostis alba*				x			x					x			
Pussytoes	*Antennaria rosea*											x				
Rock Cress	*Arabis sp.*											x				
Fringed Sagewort	*Artemisia frigida*												x	x	x	x
Aster	*Aster adscendens*						x			x	x					x
Cicer Milkvetch	*Astragalus cicer*												x			
Milkvetch	*Astragalus sp.*					x		x	x	x	x					
Smooth Brome	*Bromus inermis*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Carragana	*Carragana arborescens*					x	x	x	x	x	x	x	x	x	x	x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*			x	x	x	x	x	x	x	x		x	x	x	x
Russian Olive	*Elaeagnus angustifolia*														x	x
Great Basin Wildrye	*Elymus cinereus*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Mammoth Wildrye	*Elymus giganteus*		x	x	x	x										
Russian Wildrye	*Elymus junceus*								x		x	x	x	x		
Sheep Fescue	*Festuca ovina*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bedstraw	*Galium aparine*		x													
Curly Cup Gumweed	*Grindelia squarrosa*												x	x	x	
Foxtail Barley	*Hordeum jubatum*	x	x	x	x	x	x	x	x	x	x	x	x			
Common Barley	*Hordeum vulgare*												x			
Lewis Flax	*Linum lewisii*												x	x	x	x
Machaeranthera	*Machaeranthera canescens*										x					
Alfalfa	*Medicago sativa*	m	m	m	m	m	m	m	m	m	m	m	x	x	x/m	m
White Sweet Clover	*Melilotus alba*						x				x					
Yellow Sweetclover	*Melilotus officinalis*		x	x							x	x	x	x	x	x
White Evening Star	*Mentzelia decapetala*												x	x	x	
Yellow Evening Star	*Mentzelia laevicaulis*		x	x									x			
Indian Ricegrass	*Oryzopsis hymenoides*												x			

Observed Species in Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

Old Works Sub Area 4, Area 11 A and C Caps m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES Continued																
Scorpion Weed	*Phacelia hastata*		x	x												
Timothy	*Phleum pratense*									x						
Big Bluegrass	*Poa ampla*												x	x		x
Canada Bluegrass	*Poa compressa*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Interior Bluegrass	*Poa interior*						x					x	x	x		x
Kentucky Bluegrass	*Poa pratensis*	x												x		
Common Lilac	*Syringa vulgaris*							x	x	x	x	x				
Wheat	*Triticum aestivum*		x													
UNDESIRABLE WEEDY SPECIES																
Alyssum	*Alyssum alyssoides*														x	
Alyssum	*Alyssum desertorum*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Japanese Brome	*Bromus japonicus*	x	x	x	x	x	x	x		x	x	x	x	x	x	x
Cheatgrass	*Bromus tectorum*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Littleseed Falseflax	*Camelina microcarpa*		x			x	x	x	x	x	x	x	x	x	x	
Goosefoot	*Chenopodium album*					x										
Tansy Mustard	*Descurainia richardsonii*		x	x		x	x	x	x	x	x		x		x	x
Annual Sunflower	*Helianthus annuus*					x										
Prickly Lettuce	*Lactuca serriola*		x	x	x			x							x	x
Clasping Peppergrass	*Lepidium perfoliatum*					x										
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x	x	x	x	x	x	x	x	x			x	x	x	x
Common Dandelion	*Taraxacum officinale*			x	x			x	x	x	x				x	x
Penny Cress	*Thlaspi arvense*	x	x	x		x	x	x	x	x			x			
Salsify	*Tragopogon dubius*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
NOXIOUS WEEDS																
White Top	*Cardaria draba*												I	I	I	I
Spotted Knapweed	*Centaurea maculosa*	x	x	x	x	x	x	x	x	I	I	I	I	I	I	I
Canada Thistle	*Cirsium arvense*		x	x	x	x										
Leafy Spurge	*Euphorbia esula*		x	x	x	x	x	x	x	I	I	I	I	I	I	I
Baby's Breath	*Gypsophila paniculata*		x	x	x	x	x	x	x	I	I	I	I	I	I	I
Kochia	*Kochia scoparia*	x	x	x	x	x							I			
Dalmatian Toadflax	*Linaria dalmatica*												I	I		I
I=Infrequent; F=Frequent; C=Common; D=Dominant																

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	Type A Cap: Some roadside litter. Total vegetation cover is approximately 25-35 percent, cover by bare soil is approximately 5 percent, rock cover is less than 5 percent and litter cover is approximately 60-80 percent. The berms in this area tend to have less vegetation cover than the flat areas. Type C Cap: Some roadside litter. Total vegetation cover in this area is approximately 15-20 percent, cover by bare soil is approximately 5-25 percent (the west end has less bare soil than the east end), rock cover is less than 5 percent and litter cover is approximately 50-90 percent.	No obvious erosion. Area is mostly flat with a limited potential for run-off. There is enough vegetation and plant litter to protect the surfaces from wind and water erosion.	Riprap at N 46° 07' 43.6"; W 112° 53' 36.4" is in place. Riprap at N 46° 07' 42.4"; W 112° 53' 59.5" is in place.	
2001	Type A Cap: Some roadside litter. On the west end, a few carragana and lilac saplings have been planted on top of the berm. Total vegetation cover is approximately 30-35 percent, cover by bare soil is approximately 10 percent, rock cover is less than 5 percent and litter cover is approximately 60-70 percent. The berms in this area tend to have less vegetation cover than the flat areas. Type C Cap: Some roadside litter. More cover than in 2000. More grasses with flowering stalks. Total vegetation cover in this area is approximately 25 percent, cover by bare soil is approximately 25 percent (the west end has less bare soil than the east end), rock cover is less than 5 percent and litter cover is approximately 40-60 percent.	No obvious erosion. Area is mostly flat with a limited potential for run-off. There is enough vegetation and plant litter to protect the surfaces from wind and water erosion.	Riprap at N 46° 07' 43.6"; W 112° 53' 36.4" is in place. A few Canada thistles in the rip rap. Riprap at N 46° 07' 42.4"; W 112° 53' 59.5" is in place. Little evidence of flow in drainage ditch.	
2002	Type A Cap: Some roadside litter. On the west end, a few carragana and lilac saplings have been planted on top of the berm. Some of these plantings were still alive in 2002. Total vegetation cover is approximately 30-35 percent, cover by bare soil is approximately 10 percent, rock cover is less than 5 percent and litter cover is approximately 60-70 percent. The berms in this area tend to have less vegetation cover than the flat areas. Type C Cap: Some roadside litter. More cover than in 2001. More grasses with flowering stalks. Total vegetation cover in this area is approximately 30-35 percent, cover by bare soil is approximately 15 percent (the west end has less bare soil than the east end), rock cover is less than 5 percent and litter cover is approximately 40-60 percent.	No obvious erosion. Area is mostly flat with a limited potential for run-off. There is enough vegetation and plant litter to protect the surfaces from wind and water erosion.	Riprap at N 46° 07' 43.6"; W 112° 53' 36.4" is in place. A few Canada thistles in the rip rap. Riprap at N 46° 07' 42.4"; W 112° 53' 59.5" is in place. Little evidence of flow in drainage ditch.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2003	Type A Cap: Some roadside litter. On the west end, a few carragana and lilac saplings have been planted on top of the berm. Some of these plantings were still alive in 2003. Total vegetation cover is approximately 30-35 percent, cover by bare soil is approximately 10 percent, rock cover is less than 5 percent and litter cover is approximately 60-70 percent. The berms in this area tend to have less vegetation cover than the flat areas. Type C Cap: Some roadside litter. More cover than in 2001. More cover than in previous years. More grasses with flowering stalks. Open spaces among the alfalfa plants have a greater amount of cover by intermediate wheatgrass than was present in earlier years. Total vegetation cover in this area is approximately 30-35 percent, cover by bare soil is approximately 15 percent (the west end has less bare soil than the east end), rock cover is less than 5 percent and litter cover is approximately 40-60 percent.	No obvious erosion. Area is mostly flat with a limited potential for run-off. There is enough vegetation and plant litter to protect the surfaces from wind and water erosion.	Riprap at N 46° 07' 43.6"; W 112° 53' 36.4" is in place. A few Canada thistles in the rip rap. Riprap at N 46° 07' 42.4"; W 112° 53' 59.5" is in place. Little evidence of flow in drainage ditch.	
2004	Type A Cap: Some roadside litter. On the far west end, a few carragana and lilac saplings have been planted on top of the berm. Some of these plantings were still alive in 2004. Very heavily impacted by grasshoppers. Total vegetation cover is approximately 30-35 percent, cover by bare soil is approximately 10 percent, rock cover is less than 5 percent and litter cover is approximately 60-70 percent. The berms in this area tend to have less vegetation cover than the flat areas. Type C Cap: Site is comparable to 2003. Area could be mowed and fertilized. Many grasshoppers. A few pocket gophers at N46° 07' 43.4"; W112° 54' 00.8". Total vegetation cover in this area is approximately 30-35 percent, cover by bare soil is approximately 15 percent (the west end has less bare soil than the east end), rock cover is less than 5 percent and litter cover is approximately 40-60 percent.	No obvious erosion. Area is mostly flat with a limited potential for run-off. There is enough vegetation and plant litter to protect the surfaces from wind and water erosion.	Riprap at N 46° 07' 43.6"; W 112° 53' 36.4" is in place. A few Canada thistles in the rip rap. Riprap at N 46° 07' 42.4"; W 112° 53' 59.5" is in place. Little evidence of flow in drainage ditch.	
2005	Because of vegetation similarities, the Type A and Type C Cap areas were combined for evaluation purposes in 2005. • Site could be fertilized. • More vegetation cover in 2005 compared to 2004. • Knapweed is not common but is scattered throughout the area. • There has been good recovery of vegetation in a season with near normal precipitation. • On the far west end of this area, a few carragana and lilac saplings have been planted on top of the berm. Some of the carragana plantings were still alive in 2005. Very heavily impacted by grasshoppers. • A few pocket gophers at N46° 07' 43.4"; W112° 54' 00.8".	No obvious signs of erosion.	Riprap at N 46° 07' 43.6"; W 112° 53' 36.4" is in place. A few Canada thistles in the rip rap. Riprap at N 46° 07' 42.4"; W 112° 53' 59.5" is in place.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2006	Because of vegetation similarities, the Type A and Type C Cap areas were combined for evaluation purposes in 2005. • Vegetation cover in 2006 comparable to what was observed in 2005. • Knapweed is not common but is scattered throughout the area. • There has been good recovery of vegetation in a season with better precipitation. • On the far west end of this area, a few carragana (15) and lilac (6) saplings have survived on top of the berm. Mostly these shrubs are quite small. In the past, they have been heavily impacted by grasshoppers, but no grasshoppers were noted in 2006. • Pocket gopher excavations noted in previous years at N46° 07' 43.4"; W112° 54' 00.8" were noted again in 2006. • There is some windblown slag in the area close to the landfill access road.	No obvious signs of erosion.	Rip rap installed in drainage channels is the only BMP installed in this area. Rip rap is in place.	
2007	Because of vegetation similarities, the Type A and Type C Cap areas were combined for evaluation purposes in 2005. • Vegetation cover in 2007 was somewhat greater than what was observed in 2006. • Cover by alfalfa has increased over the past two years, possibly in response to the better precipitation regimes in 2006 and 2007. • Knapweed is not common but is scattered throughout the area. • On the far west end of this area, a few carragana (15) and lilac (6) saplings have survived on top of the berm. Some of the carragana plants are 2.5 -3.5 feet tall. The lilacs are small (mostly <1 foot in height) and are difficult to locate. No grasshoppers were noted at this date in 2007. • No new pocket gopher excavations were observed at the location noted in previous years (N46° 07' 43.4"; W112° 54' 00.8"). • There is some windblown slag in the area close to the landfill access road.	No obvious signs of erosion.	Rip rap installed in drainage channels is the only BMP installed in this area. Rip rap is in place.	
2008	Because of vegetation similarities, the Type A and Type C Cap areas were combined for evaluation purposes in 2005. • Vegetation cover in 2008 was comparable to what was observed in 2007. • Cover by alfalfa has increased over the past two years, possibly in response to the better precipitation regimes in the past few years. • Knapweed is not common but is scattered throughout the area. • On the far west end of this area, a few carragana (23) and lilac (4) saplings have survived on top of the berm. Some of the carragana plants are 2.5 -3.5 feet tall. The lilacs are small (mostly <1 foot in height) and are difficult to locate. No grasshoppers were noted at this date in 2008. • No new pocket gopher excavations were observed at the location noted in previous years (N46° 07' 43.4"; W112° 54' 00.8"). • There is some windblown slag in the area close to the landfill access road. • Cover is somewhat more sparse on the portion of the area that is located on the north side of the wastewater treatment plant access road. Spotted knapweed and leafy spurge are scattered in this area.	No obvious signs of erosion.	Rip rap installed in drainage channels is the only BMP installed in this area. Rip rap is in place.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2009	• In 2005, the evaluation of the Type A and Type C Caps was combined because of the similarity of the vegetation. • Vegetation cover in 2009 was comparable to what was observed in 2008. • Knapweed is not common but is scattered throughout the area. • On the far west end of this area, a few carragana (23) and lilac (7) saplings have survived on top of the berm. Some of the carragana plants are 2.5 -3.5 feet tall. The lilacs are small (mostly <1 foot in height) and are difficult to locate. No grasshoppers were noted at this date in 2009. • New pocket gopher excavations were observed at the location noted in previous years (N46° 07' 43.4"; W112° 54' 00.8"). Also, westward from this location. • There is some windblown slag in the area close to the landfill access road. • Cover is somewhat more sparse on the portion of the area that is located on the north side of the wastewater treatment plant access road. Spotted knapweed and leafy spurge are scattered in this area. • This area was included in the 2009 Compliance Determination Request Report submitted to EPA.	No obvious signs of erosion.	Rip rap installed in drainage channels is the only BMP installed in this area. Rip rap is in place.	
2010	• In 2005, the evaluation of the Type A and Type C Caps was combined because of the similarity of the vegetation. • Vegetation cover in 2010 was comparable to what was observed in 2009, however vegetation cover appeared to be somewhat higher. • New pocket gopher excavations were observed at the location noted in previous years (N46° 07' 43.4"; W112° 54' 00.8"). Also, westward from this location. Also at N46° 07' 42.5"; W112° 53' 51.0" • There is some windblown slag in the area close to the landfill access road. • Cover is somewhat more sparse on the portion of the area that is located on the north side of the wastewater treatment plant access road. Spotted knapweed and leafy spurge are scattered in this area. • A buried utility line was installed along the south side of the area in 2010. The disturbance has been seeded. Many seedlings and some re-growth of established plants were noted. This area should be okay in 1-2 years. There was also some re-disturbance along the north side of the sewage treatment plant road. Fewer seedlings were noted in this area. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring. The performance standards are still being met. • Regarding long-term monitoring: the new disturbance is being considered as an attribute of VM_145 and will not be identified as a separate monitoring area. It will need to be checked annually for the next few years.	No obvious signs of erosion. Site is mostly flat. BLM erosion score = <10.	Rip rap installed in drainage channels is the only BMP installed in this area. Rip rap is in place.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2011	• In 2005, the evaluation of the Type A and Type C Caps was combined because of the similarity of the vegetation. • Vegetation cover in 2011 was comparable to what was observed in 2010. • New pocket gopher excavations were observed at the location noted in previous years (N46° 07' 43.4"; W112° 54' 00.8"). Also, westward from this location. Also at N46° 07' 42.5"; W112° 53' 51.0" • There is some windblown slag in the area close to the landfill access road. • Spotted knapweed and leafy spurge are scattered but need control in this area. • A buried utility line was installed along the south side of the area in 2010. There was also some re-disturbance along the north side of the sewage treatment plant road. Both of these areas are okay. • This area was included in the 2009 Compliance Determination Report. EPA concurred that this site was acceptable for long-term monitoring. The performance standards are still being met. • Regarding long-term monitoring: the new disturbance is being considered as an attribute of VM_145 and will not be identified as a separate monitoring area. It will need to be checked annually for the next few years.	No obvious signs of erosion. Site is mostly flat. BLM erosion score = 3.	Rip rap installed in drainage channels is the only BMP installed in this area. Rip rap is in place.	
2012	• In 2005, the evaluation of the Type A and Type C Caps was combined because of the similarity of the vegetation. • Vegetation cover in 2012 was similar to what was observed in 2011. • Pocket gopher excavations were observed at the location noted in previous years (N46° 07' 43.4"; W112° 54' 00.8"). Also, westward from this location. Also at N46° 07' 42.5"; W112° 53' 51.0" and in other places. • There is some windblown slag in the area close to the landfill access road. • Spotted knapweed is scattered. Control in 2012 killed many of the plants. • A buried utility line was installed along the south side of the area in 2010. There was also some re-disturbance along the north side of the sewage treatment plant road. Both of these areas are okay. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met. • Regarding long-term monitoring: the new disturbance is being considered as an attribute of VM_145 and will not be identified as a separate monitoring area. It will need to be checked annually for the next few years.	No obvious signs of erosion. Site is mostly flat. BLM erosion score = 3.	Rip rap installed in drainage channels is the only BMP installed in this area. Rip rap is in place.	
2013	• In 2005, the evaluation of the Type A and Type C Caps was combined because of the similarity of the vegetation. • Vegetation cover in 2013 was similar to what was observed in 2012. • Pocket gopher excavations were observed at the location noted in previous years (N46° 07' 43.4"; W112° 54' 00.8"). Also, westward from this location. Also at N46° 07' 42.5"; W112° 53' 51.0" and in other places. • There is some windblown slag in the area close to the landfill access road. • Spotted knapweed is scattered. • A buried utility line was installed along the south side of the area in 2010. There was also some re-disturbance along the north side of the sewage treatment plant road. Both of these areas are okay. • There is a small amount of windblown trash in this area. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met.	No obvious signs of erosion. Site is mostly flat. BLM erosion score = 3.	Rip rap installed in drainage channels is the only BMP installed in this area. Rip rap is in place.	

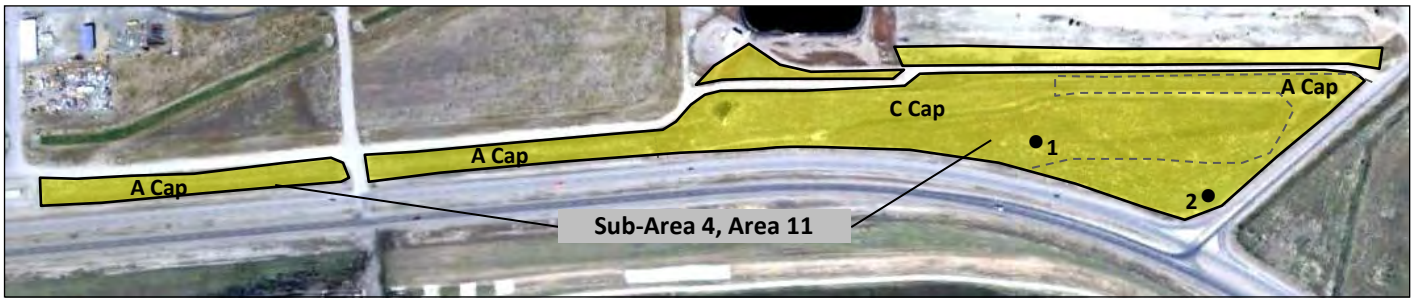
Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2014	• In 2005, the evaluation of the Type A and Type C Caps was combined because of the similarity of the vegetation. • Vegetation cover in 2014 was similar to what was observed in 2013. • Pocket gopher excavations were observed at the location noted in previous years (N46° 07' 43.4"; W112° 54' 00.8") and westward from this location. Also at N46° 07' 42.5"; W112° 53' 51.0" and in other places. The pocket gophers bring red sands material to the surface. • There is some windblown slag in the area close to the landfill access road. • Spotted knapweed is scattered. • A buried utility line was installed along the south side of the area in 2010. There was also some re-disturbance along the north side of the sewage treatment plant road. Both of these areas are okay. • There is a small amount of windblown trash in this area. • This area was included in the 2009 Compliance Determination Report. The performance standards are still being met. Compliance Status: LTIM. • There is a new utility installation east of the landfill road. Newly re-worked as of the sampling date. This corridor also crosses Area 9 and Area 10.	No obvious signs of erosion. Site is mostly flat. BLM erosion score =3.	Rip rap installed in drainage channels is the only BMP installed in this area. Rip rap is in place.	

Transect Sampling Summary for Old Works Sub Area 4, Area 11 A and C Caps (VM_145)

Transects in Old Works Sub Area 4, Area 11 Type A and C Caps	Mean Cover (%)		Frequency (%)	
	2006	**2008**	**2006**	**2008**
Number of Transects Sampled	1	2	1	2
Total Vegetation Cover (All Species)	40	41		
Total Vegetation Cover (Acceptable Species)	38	41		
Litter and Rock Combined	54	52		
Bare Soil	6	7		
Total Cover	94	93		
Litter Cover	54	52		
Rock Cover	0	0		
Acceptable Species				
Agropyron cristatum	<0.1	<0.1	NA	100
Agropyron dasystachyum		<0.1		100
Agropyron intermedium	14	14	NA	100
Agropyron smithii				
Bromus inermis		1		100
Chrysothamnus nauseosus		<0.1		50
Elymus cinereus				
Festuca ovina	6	7	NA	100
Medicago sativa	18	17	NA	100
Mosses				
Poa ampla		1		50
Poa compressa	<1	1	NA	100
Poa pratensis		<0.1		50
Unacceptable Weedy Species				
Alyssum desertorum		<0.1		50
Bromus japonicus	<0.1	<0.1	NA	100
Bromus tectorum	2		NA	
Descurainia richardsonii		<0.1		50
Sisymbrium altissimum		<0.1		50
Thlaspi arvense		<0.1		50
Tragopogon dubius				
Noxious Weeds				
Centaurea maculosa				

Site Aerial Photo for Old Works Sub Area 4, Area 11 A and C Caps (VM_145)



•1 Photo Location Point

Old Works Sub Area 4, Area 11 A and C Caps (VM_145)

Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4, Area 11 A and C Caps	**PHOTO LOCATION 2 - Old Works Sub Area 4, Area 11 A and C Caps**
N46° 07’ 40.7”; W112° 53’ 42”, Looking West	N46° 07’ 42.8”; W112° 53’ 53.4”, Looking West
July 9, 2000	July 9, 2000
July 5, 2001	July 5, 2001

Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4, Area 11 A and C Caps		**PHOTO LOCATION 2 - Old Works Sub Area 4, Area 11 A and C Caps**
N46° 07’ 40.7”; W112° 53’ 42”, Looking West		N46° 07’ 42.8”; W112° 53’ 53.4”, Looking West
July 21, 2002		July 21, 2002
July 22, 2003		July 22, 2003

Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4, Area 11 A and C Caps	**PHOTO LOCATION 2 - Old Works Sub Area 4, Area 11 A and C Caps**
N46° 07’ 40.7”; W112° 53’ 42”, Looking West	N46° 07’ 42.8”; W112° 53’ 53.4”, Looking West
August 11, 2004	August 11, 2004
August 19, 2005	August 19, 2005

Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4, Area 11 A and C Caps	**PHOTO LOCATION 2 - Old Works Sub Area 4, Area 11 A and C Caps**
N46° 07’ 40.7”; W112° 53’ 42”, Looking West	N46° 07’ 42.8”; W112° 53’ 53.4”, Looking West
July 20, 2006	July 20, 2006
June 12, 2007	June 12, 2007

Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4, Area 11 A and C Caps	**PHOTO LOCATION 2 - Old Works Sub Area 4, Area 11 A and C Caps**
N46° 07’ 40.7”; W112° 53’ 42”, Looking West	N46° 07’ 42.8”; W112° 53’ 53.4”, Looking West
June 17, 2008	June 17, 2008
August 21, 2009	August 21, 2009

Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4, Area 11 A and C Caps	**PHOTO LOCATION 2 - Old Works Sub Area 4, Area 11 A and C Caps**
N46° 07’ 40.7”; W112° 53’ 42”, Looking West	N46° 07’ 42.8”; W112° 53’ 53.4”, Looking West
July 14, 2010	July 14, 2010
August 2, 2011	August 2, 2011

Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4, Area 11 A and C Caps		**PHOTO LOCATION 2 - Old Works Sub Area 4, Area 11 A and C Caps**
N46° 07’ 40.7”; W112° 53’ 42”, Looking West		N46° 07’ 42.8”; W112° 53’ 53.4”, Looking West
August 22, 2012		August 22, 2012
August 4, 2013		August 4, 2013

Old Works Sub Area 4, Area 11 A and C Caps (VM_145) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 4, Area 11 A and C Caps		**PHOTO LOCATION 2 - Old Works Sub Area 4, Area 11 A and C Caps**
N46° 07’ 40.7”; W112° 53’ 42”, Looking West		N46° 07’ 42.8”; W112° 53’ 53.4”, Looking West
July 14, 2014		July 14, 2014

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 5, Area 1 (VM_146)

Old Works Sub Area 5, Area 1 (VM_146) 2015 -					
Year	**2015**				
Area (acres)	123.1				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/27/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	1				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	1				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Heavy/Mod				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	52				
Total Number of Acceptable Species	32				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*	Infrequent				
Leafy Spurge *(Euphorbia esula)*	Infrequent				
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*	Infrequent				
Curly Dock *(Rumex crispus)*					
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 5, Area 1 (VM_146)

Old Works Sub Area 5, Area 1 (VM_146)2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	2				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub Area 5, Area 1 (VM_146)2015-

Old Works Sub Area 5, Area 1 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Western Yarrow	*Achillea lanulosa*					
Crested Wheatgrass	*Agropyron cristatum*	m				
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Quackgrass	*Agropyron repens*	x				
Western Wheatgrass	*Agropyron smithii*	x				
Bluebunch Wheatgrass	*Agropyron spicatum*	x				
Slender Wheatgrass	*Agropyron trachycaulum*	x				
Red Top	*Agrostis alba*	x				
Pussytoes	*Antennaria rosea*					
Aster	*Aster adscendens*	x				
White Aster	*Aster falcatus*	x				
Cicer Milkvetch	*Astragalus cicer*	x				
Milkvetch	*Astragalus sp.*					
Milkvetch	*Astragalus tenellus*					
Regar Meadow Brome	*Bromus biebersteinii*					
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Bastard Toadflax	*Comandra umbellata*	x				
Inland Saltgrass	*Distichlis stricta*					
Russian Olive	*Elaeagnus angustifolia*	x				
Great Basin Wildrye	*Elymus cinereus*	m				
Mammoth Wildrye	*Elymus giganteus*	x				
Russian Wildrye	*Elymus junceus*					
Sheep Fescue	*Festuca ovina*	m				
Bedstraw	*Galium aparine*					
Wild Licorice	*Glycyrrhiza lepidota*	x				
Curlycup Gumweed	*Grindelia squarrosa*	x				
Golden Aster	*Heterotheca villosa*					
Foxtail Barley	*Hordeum jubatum*					
Poverty Sumpweed	*Iva axillaris*	x				
Lewis's Flax	*Linum lewisii*	x				
Birdsfoot Trefoil	*Lotus corniculatus*	x				
Alfalfa	*Medicago sativa*	m				
White Sweetclover	*Melilotus alba*					
Yellow Sweetclover	*Melilotus officinalis*	x				
White Evening Star	*Mentzelia decapetala*	x				
Yellow Evening Star	*Mentzelia laevicaulis*	x				
Indian Ricegrass	*Oryzopsis hymenoides*					
Phacelia	*Phacelia hastata*	x				
Timothy	*Phleum pratense*	x				
Big Bluegrass	*Poa ampla*	x				
Canada Bluegrass	*Poa compressa*	m				
Kentucky Bluegrass	*Poa pratensis*					
Prairie Coneflower	*Ratibida columnifera*					
Willowleaf Dock	*Rumex salicifolius*					
Coyote Willow	*Salix exigua*	x				

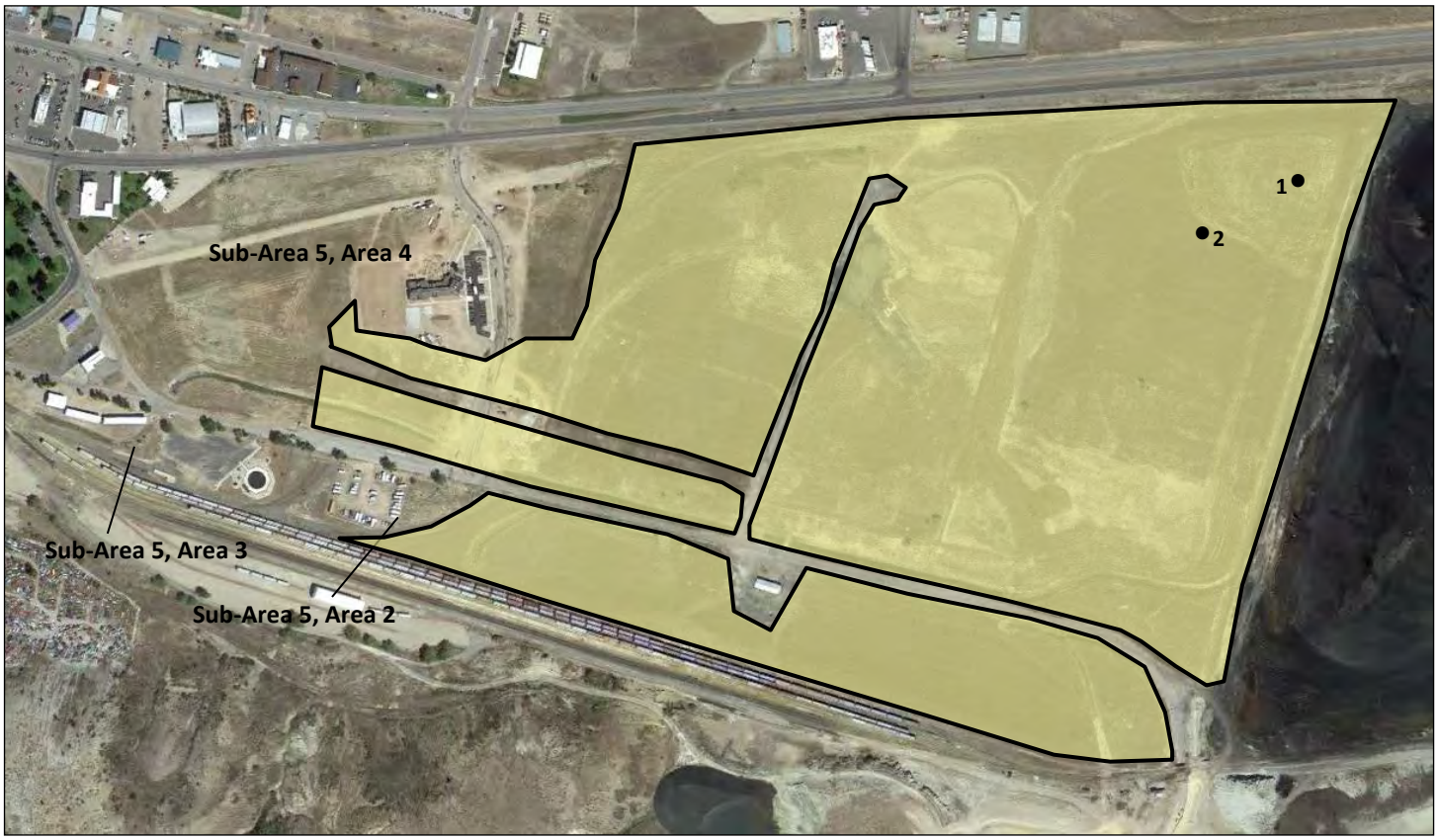
Observed Species in Old Works Sub Area 5, Area 1 (VM_146)2015-

Old Works Sub Area 5, Area 1 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
UNDESIRABLE WEEDY SPECIES						
Alyssum	*Alyssum desertorum*					
Japanese Brome	*Bromus japonicus*					
Annual Brome	*Bromus secalinus*	x				
Cheatgrass	*Bromus tectorum*	x				
Littleseed Falseflax	*Camelina microcarpa*	x				
Shepherd's Purse	*Capsella bursa-pastoris*					
Goosefoot	*Chenopodium sp.*					
Tansy Mustard	*Descurainia richardsonii*	x				
Filaree	*Erodium cicutarium*					
Spurge	*Euphorbia sp. (Chamaesyce)*	x				
Annual Sunflower	*Helianthus annuus*	x				
Prickly Lettuce	*Lactuca serriola*	x				
Clasping Peppergrass	*Lepidium perfoliatum*					
Russian Thistle	*Salsola iberica*	x				
Bladder Campion	*Silene latifolia*					
Catchfly	*Silene noctiflora*	x				
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x				
Hedge Mustard	*Sisymbrium loeselii*	x				
Common Dandelion	*Taraxacum officinale*	x				
Penny Cress	*Thlaspi arvense*					
Salsify	*Tragopogon dubius*	x				
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I				
Musk Thistle	*Carduus nutans*					
Spotted Knapweed	*Centaurea maculosa*	I				
Canada Thistle	*Cirsium arvense*	I				
Leafy Spurge	*Euphorbia esula*	I				
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*	I				
Tall Whitetop	*Lepidium latifolium*					
Dalmatian Toadflax	*Linaria dalmatica*	I				
Curly Dock	*Rumex crispus*					
Common Mullein	*Verbascum thapsus*					
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	32				
	Total Number of Species	52				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 5, Area 1 (VM_146) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• This is a large area including most of the reclaimed areas in the East Anaconda Yards. • Most of this area was reclaimed in 1986; there is quite a bit of litter build-up in some places. • The abundance of spotted knapweed is increasing in this area. It is scattered throughout, but there are some dense patches that need control in the next 1-2 years (see map for approximate locations of weed patches). • Vegetation cover in 2015 was comparable to what was observed in 2014. • There are some areas with sparse vegetation cover, but they tend to be scattered throughout the site. • The beryllium excavation area was re-done in 2010 and is included in a separate monitoring area (VM_209). • Compliance standards were met in this area for two years (2011 and 2012). In 2015, the standards are still being met. Compliance Status: LTIM. • A roadway was constructed through this area in association with the construction of a school building in Area 4 (VM_209). Some of the adjacent disturbance has been re-seeded. The road is a permanent installation. Portions of this area near the school were mowed in 2015.	Site is mostly flat and mostly well-vegetated; no visible signs of erosion. BLM erosion score =2	Rip rap located in various places throughout the site is in place.	

Site Aerial Photo for Old Works Sub Area 5, Area 1 (VM_146)



•1 Photo Location Point

Old Works Sub Area 5, Area 1 (VM_146)

Old Works Sub Area 5, Area 1 (VM_146) 2015-

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 1		**PHOTO LOCATION 2 - Old Works Sub Area 5, Area 1**
N46° 07’ 32.5”; W112° 55’ 01.3”, Looking West		N46° 07’ 32.1”; W112° 55’ 07.3”, Looking West
July 27, 2015		July 27, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 5, Area 1 (VM_146)

Old Works Sub Area 5, Area 1 (VM_146) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
Area (acres)	123.1	123.1	123.1	123.1	123.1	123.1	123.1	123.1
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner								
Inspection Date	7/13/00	7/6/01	7/23/02	7/26/03	8/13/04	8/19/05	7/19/06	8/26/07
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK	WK	WK	WK	WK	WK, KL	WK, KL
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo								
Site Aerial Photo Follows the Transect Summary Table								
INSPECTION SUMMARY*								
Vegetation Inspection	0	0	0	0	0	0 (1)	0 (1)	0 (1)
Erosion Inspection	0	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0	0
VEGETATION INSPECTION*								
Overall Recommendation	0	0	0	0	0	0	0	0
Estimated Canopy Coverage	25-35%	25-35%	25-35%	25-35%	25-35%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation						Mod/Heavy	Mod/Heavy	Mod/Heavy
Evidence of Reproduction						Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	30	45	44	41	46	45	57	52
Total Number of Acceptable Species	22	28	27	28	27	29	36	36
Ocular Estimate of Extent of Bare Areas						<1-5%	<1-5%	<1-5%
Weed Species Present								
White Top *(Cardaria draba)*		Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Musk Thistle (*Carduus nutans*)					Infrequent			
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*			Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Leafy Spurge *(Euphorbia esula)*	Infrequent	Infrequent						
Baby's Breath *(Gypsophila paniculata)*					Infrequent		Infrequent	
Tall Whitetop (*Lepidium latifolium*)							Infrequent	Infrequent
Dalmatian Toadflax *(Linaria dalmatica)*								
Curly Dock *(Rumex crispus)*								
Common Mullein (*Verbascum thapsus*)								
Vegetation Comments (See Comments Section)								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 5, Area 1 (VM_146)

Old Works Sub Area 5, Area 1 (VM_146) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
EROSION INSPECTION*								
Average Slope (percent)	0%	0%	0%	0%	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None	None
Evidence of Surface Litter Movement						None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)								
BMP INSPECTION*								
Overall Recommendation	0	0	0	0	0	0	0	0
Evidence of Check Dam Failure						None	None	None
Evidence of Sediment Accumulation in Check Dams						None	None	None
Condition of Dozer Basins						None	None	None
Condition of Grade Control Structures						None	None	None
Evidence of Brush Barrier Failure or Movement						None	None	None
Condition of Mulch						None	None	None
BMP Comments (See Comments Section)								
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**								
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS								
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)								
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?								
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.								
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)								
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.								
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.								
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).								
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 5, Area 1 (VM_146)

Old Works Sub Area 5, Area 1 (VM_146) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	123.1	123.1	123.1	123.1	123.1	123.1	123.1
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner							
Inspection Date	6/12/08	8/21/09	8/6/10	8/26/11	8/22/12	8/5/13	7/8/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK, PF	WK, KL	WK, KL	WK, HK, CS	WK, HK, CS	WK, HK, CS	WK,HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo							
Site Aerial Photo Follows the Transect Summary Table							
INSPECTION SUMMARY*							
Vegetation Inspection	0 (1)	0 (1)	0 (1)	1	0	0	0
Erosion Inspection	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0
VEGETATION INSPECTION*							
Overall Recommendation	0	0	0	1	0	0	0
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Mod/Heavy	Mod/Heavy	Mod/Heavy	Mod/Heavy	Mod/Heavy	Mod/Heavy	Mod/Heavy
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	45	52	41	54	47	42	45
Total Number of Acceptable Species	29	34	27	36	32	27	27
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present							
White Top *(Cardaria draba)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Musk Thistle (*Carduus nutans*)							
Spotted Knapweed *(Centaurea maculosa)*	Frequent	Infreq/Freq	Infreq/Freq	Frequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*	Infrequent	Infrequent		Infrequent	Infrequent	Infrequent	Infrequent
Leafy Spurge *(Euphorbia esula)*						Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*			Infrequent	Infrequent	Infrequent		
Tall Whitetop (*Lepidium latifolium*)	Infrequent	Infrequent					
Dalmatian Toadflax *(Linaria dalmatica)*				Infrequent	Infrequent	Infrequent	Infrequent
Curly Dock *(Rumex crispus)*				Infrequent			
Common Mullein (*Verbascum thapsus*)				Infrequent			
Vegetation Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 5, Area 1 (VM_146)

Old Works Sub Area 5, Area 1 (VM_146) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION*							
Average Slope (percent)	0%	0%	0%	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	1	0	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None
Potential Instability	None Subsidence	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)							
BMP INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None	None	None
Condition of Mulch	None	None	None	None	None	None	None
BMP Comments (See Comments Section)							
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**							
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS							
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)		Yes	Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?		EST	EST	TRAN (42.8%)	TRAN (35.2%)	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.		Yes	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)		Yes	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.		No	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.		<45	<45	2	2	2	2
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).		No	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).		No	No	No	No	No	No

Observed Species in Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

Old Works Sub Area 5, Area 1 m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Western Yarrow	*Achillea lanulosa*							x	x							x
Crested Wheatgrass	*Agropyron cristatum*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Thickspike Wheatgrass	*Agropyron dasystachyum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Quackgrass	*Agropyron repens*		x		x				x	x	x	x	x	x		x
Western Wheatgrass	*Agropyron smithii*		x			x		x	x	x	x	x	x	x	x	x
Bluebunch Wheatgrass	*Agropyron spicatum*						x	x			x		x			
Slender Wheatgrass	*Agropyron trachycaulum*	x		x				x					x	x		
Red Top	*Agrostis alba*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Pussytoes	*Antennaria rosea*						x		x	x			x			x
Aster	*Aster adscendens*			x	x	x	x	x	x	x	x	x	x	x	x	x
White Aster	*Aster falcatus*										x			x	x	
Milkvetch	*Astragalus sp.*										x					x
Milkvetch	*Astragalus tenellus*				x			x								
Regar Meadow Brome	*Bromus biebersteinii*				x		x					x		x		
Smooth Brome	*Bromus inermis*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Douglas Sedge	*Carex douglasii*							x								
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x	x	x		x	x	x	x	x	x	x	x	x	x	x
Bastard Toadflax	*Comandra umbellata*		x			x			x							x
Orchard Grass	*Dactylis glomerata*		x	x												
Inland Saltgrass	*Distichlis stricta*					x			x	x	x					x
Russian Olive	*Elaeagnus angustifolia*	x	x	x	x	x	x	x	x		x	x	x	x	x	x
Great Basin Wildrye	*Elymus cinereus*	x	x	x	x	x	x	x	x	m	m	m	m	m	m	m
Mammoth Wildrye	*Elymus giganteus*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Russian Wildrye	*Elymus junceus*							x					x	x		
Creeping Wildrye	*Elymus triticoides*							x								
Willow Herb	*Epilobium paniculatum*							x			x					
Field Horsetail	*Equisetum arvense*			x					x	x			x			
Sheep Fescue	*Festuca ovina*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bedstraw	*Galium aparine*		x													
Wild Licorice	*Glycyrrhiza lepidota*					x	x						x			
Curlycup Gumweed	*Grindelia squarrosa*				x	x	x	x	x		x		x		x	
Broom Snakeweed	*Gutierrezia sarothrae*						x									
Golden Aster	*Heterotheca villosa*														x	

Observed Species in Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

Old Works Sub Area 5, Area 1 m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Foxtail Barley	*Hordeum jubatum*		x	x	x	x	x	x	x	x	x	x	x		x	
Common Barley	*Hordeum vulgare*												x			
Poverty Sumpweed	*Iva axillaris*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Lewis's Flax	*Linum lewisii*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Birdsfoot Trefoil	*Lotus corniculatus*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Alfalfa	*Medicago sativa*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
White Sweetclover	*Melilotus alba*			x		x	x		x					x		
Yellow Sweetclover	*Melilotus officinalis*	x	x	x	x	x	x	x	x	x	x	m	m	x	x	x
White Evening Star	*Mentzelia decapetala*			x	x	x	x	x	x	x	x	x	x	x	x	
Yellow Evening Star	*Mentzelia laevicaulis*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Alkali Muhly	*Muhlenbergia asperifolia*								x							
Indian Ricegrass	*Oryzopsis hymenoides*		x					x			x			x		
Phacelia	*Phacelia hastata*								x	x	x	x	x	x	x	x
Timothy	*Phleum pratense*	x									x		x	x	x	
Big Bluegrass	*Poa ampla*		x		x			x	x	x	x	x	x	x		
Canada Bluegrass	*Poa compressa*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Kentucky Bluegrass	*Poa pratensis*								x				x	x		
Prairie Coneflower	*Ratibida columnifera*							x								
Willowleaf Dock	*Rumex salicifolius*				x										x	
Coyote Willow	*Salix exigua*			x				x	x	x	x					x
Missouri Goldenrod	*Solidago missouriensis*				x											
Alsike Clover	*Trifolium hybridum*	x	x	x	x		x						x			
Red Clover	*Trifolium pratense*	x	x	x	x	x	x	x	x	x		x	x			

Observed Species in Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

Old Works Sub Area 5, Area 1 m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
UNDESIRABLE WEEDY SPECIES																
Alyssum	*Alyssum desertorum*										x					x
Absinth Wormwood	*Artemisia absinthium*			x												
Wild Oats	*Avena sativa*						x									
Japanese Brome	*Bromus japonicus*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Annual Brome	*Bromus secalinus*								x			x				
Cheatgrass	*Bromus tectorum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Littleseed Falseflax	*Camelina microcarpa*					x	x	x	x	x	x	x	x	x	x	x
Shepherd's Purse	*Capsella bursa-pastoris*		x													
Goosefoot	*Chenopodium sp.*			x		x		x			x			x		
Tansy Mustard	*Descurainia richardsonii*	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Filaree	*Erodium cicutarium*		x	x		x	x									
Annual Sunflower	*Helianthus annuus*							x			x					
Prickly Lettuce	*Lactuca serriola*		x	x	x	x		x	x	x	x		x		x	
Clasping Peppergrass	*Lepidium perfoliatum*							x		x						
Russian Thistle	*Salsola iberica*	x	x	x	x	x		x								
Bladder Campion	*Silene latifolia*															x
Catchfly	*Silene noctiflora*	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Tumbling Hedge Mustard	*Sisymbrium altissimum*		x	x	x	x	x	x	x	x	x				x	x
Hedge Mustard	*Sisymbrium loeselii*		x				x	x			x	x	x	x	x	x
Common Dandelion	*Taraxacum officinale*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Penny Cress	*Thlaspi arvense*		x	x		x	x	x	x	x		x	x		x	x
Salsify	*Tragopogon dubius*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
NOXIOUS WEEDS																
White Top	*Cardaria draba*		x	x	x	x	x	x	x	I	I	I	I	I	I	I
Musk Thistle	*Carduus nutans*					x										
Spotted Knapweed	*Centaurea maculosa*	x	x	x	x	x	x	x	x	F	I-F	I-F	F	I	I	I
Canada Thistle	*Cirsium arvense*			x	x	x	x	x	x	I	I		I	I	I	I
Leafy Spurge	*Euphorbia esula*	x	x				x								I	I
Baby's Breath	*Gypsophila paniculata*					x		x				I	I	I		
Kochia	*Kochia scoparia*		x	x	x	x		x	x	I	I	I	I	I	I	I
Tall Whitetop	*Lepidium latifolium*							x	x	I	I					
Dalmatian Toadflax	*Linaria dalmatica*												I	I	I	I
Curly Dock	*Rumex crispus*												I			
Common Mullein	*Verbascum thapsus*												I			
I=Infrequent; F=Frequent; C=Common; D=Dominant																

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	•This is a large area including most of the reclaimed areas in the East Anaconda Yards	Site is mostly flat and mostly well-vegetated; no visible signs of erosion.	Riprap at N 46° 07' 14.8"; W 112° 55' 10.9" in place. Riprap at N 46° 07' 17.8"; W 112° 55' 15.4" in place. Culvert clear. Riprap at N 46° 07' 19.6"; W 112° 55' 03.8" in place. Riprap at N 46° 07' 21.4"; W 112° 55' 29.0" in place. Riprap at N 46° 07' 19.0"; W 112° 55' 15.1" in place; a few cobbles in culvert. Riprap at N 46° 07' 16.0"; W 112° 55' 05.5" in place, a small amount of sediment in culvert. Riprap at N 46° 07' 20.8"; W 112° 55' 26.2" in place, sediment in culvert and discharged from culvert. (4-5" of sediment) Riprap at N 46° 07' 21.1"; W 112° 55' 27.5" in place, a small amount of sediment in culvert. Riprap at N 46° 07' 21.1"; W 112° 55' 32.5" in place, riprap extends westward from these coordinates.	
2001	•In 2001 compared to 2000: More cover in 2001, more species noted in 2001, vegetation was taller in 2001 – especially the alfalfa plants, more flowering stalks on the grasses. On the more recently reclaimed areas the perennial grasses were more prevalent.	Site is mostly flat and mostly well-vegetated; no visible signs of erosion.	Riprap at N 46° 07' 14.8"; W 112° 55' 10.9" in place. Riprap at N 46° 07' 17.8"; W 112° 55' 15.4" in place. Culvert clear. Riprap at N 46° 07' 19.6"; W 112° 55' 03.8" in place. Riprap at N 46° 07' 21.4"; W 112° 55' 29.0" in place. Riprap at N 46° 07' 19.0"; W 112° 55' 15.1" in place; a few cobbles in culvert. Riprap at N 46° 07' 16.0"; W 112° 55' 05.5" in place, a small amount of sediment in culvert. Riprap at N 46° 07' 20.8"; W 112° 55' 26.2" in place, sediment in culvert and discharged from culvert. (4-5" of sediment) Riprap at N 46° 07' 21.1"; W 112° 55' 27.5" in place, a small amount of sediment in culvert. Riprap at N 46° 07' 21.1"; W 112° 55' 32.5" in place, riprap extends westward from these coordinates.	
2002	•Overall, 2002 is comparable to 2001. Somewhat greater amounts of cover in 2002.	Site is mostly flat and mostly well-vegetated; no visible signs of erosion.	Riprap at N 46° 07' 14.8"; W 112° 55' 10.9" in place. Riprap at N 46° 07' 17.8"; W 112° 55' 15.4" in place. Culvert clear. Riprap at N 46° 07' 19.6"; W 112° 55' 03.8" in place. Riprap at N 46° 07' 21.4"; W 112° 55' 29.0" in place. Riprap at N 46° 07' 19.0"; W 112° 55' 15.1" in place; a few cobbles in culvert. Riprap at N 46° 07' 16.0"; W 112° 55' 05.5" in place, a small amount of sediment in culvert. Riprap at N 46° 07' 20.8"; W 112° 55' 26.2" in place, sediment in culvert and discharged from culvert. (4-5" of sediment) Riprap at N 46° 07' 21.1"; W 112° 55' 27.5" in place, a small amount of sediment in culvert. Riprap at N 46° 07' 21.1"; W 112° 55' 32.5" in place, riprap extends westward from these coordinates.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2003	•Overall, 2003 is comparable to 2002.	Site is mostly flat and mostly well-vegetated; no visible signs of erosion.	Riprap at N 46° 07' 14.8"; W 112° 55' 10.9" in place. Riprap at N 46° 07' 17.8"; W 112° 55' 15.4" in place. Culvert clear. Riprap at N 46° 07' 19.6"; W 112° 55' 03.8" in place. Riprap at N 46° 07' 21.4"; W 112° 55' 29.0" in place. Riprap at N 46° 07' 19.0"; W 112° 55' 15.1" in place; a few cobbles in culvert. Riprap at N 46° 07' 16.0"; W 112° 55' 05.5" in place, a small amount of sediment in culvert. Riprap at N 46° 07' 20.8"; W 112° 55' 26.2" in place, sediment in culvert and discharged from culvert. (4-5" of sediment) Riprap at N 46° 07' 21.1"; W 112° 55' 27.5" in place, a small amount of sediment in culvert. Riprap at N 46° 07' 21.1"; W 112° 55' 32.5" in place, riprap extends westward from these coordinates.	
2004	•Overall, 2004 is comparable to 2003. Most of this area was reclaimed in 1986. After 20 years there is quite a bit of litter build-up. Site could be mowed and fertilized. This would increase vegetation cover and improve vegetation conditions. Some of the areas dominated by alfalfa have only limited development by perennial grasses.	Site is mostly flat and mostly well-vegetated; no visible signs of erosion.	Riprap at N 46° 07' 14.8"; W 112° 55' 10.9" in place. Riprap at N 46° 07' 17.8"; W 112° 55' 15.4" in place. Culvert clear. Riprap at N 46° 07' 19.6"; W 112° 55' 03.8" in place. Riprap at N 46° 07' 21.4"; W 112° 55' 29.0" in place. Riprap at N 46° 07' 19.0"; W 112° 55' 15.1" in place; a few cobbles in culvert. Riprap at N 46° 07' 16.0"; W 112° 55' 05.5" in place, a small amount of sediment in culvert. Riprap at N 46° 07' 20.8"; W 112° 55' 26.2" in place, sediment in culvert and discharged from culvert. (4-5" of sediment) Riprap at N 46° 07' 21.1"; W 112° 55' 27.5" in place, a small amount of sediment in culvert. Riprap at N 46° 07' 21.1"; W 112° 55' 32.5" in place, riprap extends westward from these coordinates.	
2005	• This is a large area including most of the reclaimed areas in the East Anaconda Yards. • Site could be mowed and fertilized. This would increase vegetation cover and improve vegetation conditions. Some of the areas dominated by alfalfa have only limited development by perennial grasses. • Need to spot spray knapweed, especially on the west end of the site. DO NOT SPRAY ALFALFA PLANTS. • Only a few seedlings were noted in the newly seeded area in the northwest part of the site. This area was seeded in 2005.	Site is mostly flat and mostly well-vegetated; no visible signs of erosion.	Riprap at N 46° 07' 14.8"; W 112° 55' 10.9" in place. Riprap at N 46° 07' 17.8"; W 112° 55' 15.4" in place. Culvert clear. Riprap at N 46° 07' 19.6"; W 112° 55' 03.8" in place. Riprap at N 46° 07' 21.4"; W 112° 55' 29.0" in place. Riprap at N 46° 07' 19.0"; W 112° 55' 15.1" in place; a few cobbles in culvert. Riprap at N 46° 07' 16.0"; W 112° 55' 05.5" in place, a small amount of sediment in culvert. Riprap at N 46° 07' 20.8"; W 112° 55' 26.2" in place, sediment in culvert and discharged from culvert. (4-5" of sediment) Riprap at N 46° 07' 21.1"; W 112° 55' 27.5" in place, a small amount of sediment in culvert. Riprap at N 46° 07' 21.1"; W 112° 55' 32.5" in place, riprap extends westward from these coordinates.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2006	• This is a large area including most of the reclaimed areas in the East Anaconda Yards. • Need to spot spray knapweed, especially on the west end of the site. DO NOT SPRAY ALFALFA PLANTS. • Only a few seedlings were noted in the newly seeded area in the northwest part of the site. This area was seeded in 2005. • There are several areas where the alfalfa plants were sprayed, apparently as part of the weed control effort, but it appeared as though the alfalfa plants were the target species. • There was somewhat more cover in this area compared with 2005. Beryllium Excavation Area (refer to Photo 3) 1. A large pile of soil was left in the construction area. 2. The material that was used for covering the site is very coarse and rocky. Many plants have become established in the seeded area. Most of the plants are small and could benefit from fertilization. 3. About 10-15% cover; negligible litter; flower stalks on grasses present. 4. Area appears to be approximately 2 acres. 5. Observed Species: Medicago sativa, Bromus inermis, Agropyron intermedium, Kochia scoparia, Centaurea maculosa, Hordeum jubatum, Poa ampla, Agropyron trachycaulum, Phacelia hastata, Grindelia squarrosa, Agrostis alba, Mentzelia laevicaulis, Mentzelia decapetala and Lepidium latifolium.	Site is mostly flat and mostly well-vegetated; no visible signs of erosion.	Rip rap located in various places throughout the site is in place.	
2007	• This is a large area including most of the reclaimed areas in the East Anaconda Yards. • Need to spot spray knapweed, but DO NOT SPRAY ALFALFA PLANTS. • There was somewhat more cover in this area compared with 2006. • There are some areas with sparse vegetation cover, but they tend to be scattered throughout the site. Beryllium Excavation Area (refer to Photo 3) 1. A large pile of soil was left in the construction area. 2. The material that was used for covering the site is very coarse and rocky. Many plants have become established in the seeded area. Most of the plants are small and could benefit from fertilization. 3. About 10-15% cover; negligible litter; flower stalks on grasses present. 4. Area appears to be approximately 2 acres. 5. Alfalfa is becoming the major species. 6. More cover in 2007 compared with 2006. Approximately 10-20% cover by acceptable species. 7. Observed Species: Medicago sativa, Bromus inermis, Agropyron intermedium, Kochia scoparia, Centaurea maculosa, Poa ampla, Grindelia squarrosa, Agrostis alba, Mentzelia decapetala, Festuca ovina, Elymus cinereus, Agropyron crisatum, Tragopogon dubius and Lepidium latifolium.	Site is mostly flat and mostly well-vegetated; no visible signs of erosion.	Rip rap located in various places throughout the site is in place.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2008	•There are some un-remediated barren areas that may need to be fixed before the area can move into long-term monitoring. • This is a large area including most of the reclaimed areas in the East Anaconda Yards. • Need to spot spray knapweed, but DO NOT SPRAY ALFALFA PLANTS. • Vegetation cover in 2008 was comparable to what was observed in 2007. • There are some areas with sparse vegetation cover, but they tend to be scattered throughout the site. • See additional comments following the species list regarding reclamation on the beryllium excavation area. • There are several roads and gravel staging areas in the central part of the area that were not remediated with a coversoil cap. • The area east of the beryllium excavation area should be evaluated. Approximately 1-2 acres that do not appear to have been remediated. Beryllium Excavation Area (refer to Photo 3) 1. A large pile of soil was left in the construction area. 2. The material that was used for covering the site is very coarse and rocky. Many plants have become established in the seeded area. Most of the plants are small and could benefit from fertilization. 3. Area appears to be approximately 2 acres. 4. Alfalfa is becoming the major species. 5. More cover in 2008 compared with 2007. Approximately 20-25% cover by acceptable species. 6. Observed Species: Medicago sativa, Bromus inermis, Agropyron intermedium, Centaurea maculosa, Poa ampla, Agrostis alba, Festuca ovina, Elymus cinereus, Agropyron cristatum, Agropyron dasystachyum, Tragopogon dubius and Lepidium latifolium.	Site is mostly flat and mostly well-vegetated; no visible signs of erosion. A small subsidence area at N46° 07' 29.2"; W112° 55' 37.1". This site should be checked and repaired (see Photo 4).	Rip rap located in various places throughout the site is in place.	
2009	There are some un-remediated barren areas that may need to be fixed before the area can move into long-term monitoring. • This is a large area including most of the reclaimed areas in the East Anaconda Yards. • Overall, 2009 was comparable to 2008. Most of this area was reclaimed in 1986. After more than 22 years there is quite a bit of litter build-up in some places. • Need to spot spray knapweed, but DO NOT SPRAY ALFALFA PLANTS. • Vegetation cover in 2009 was comparable to what was observed in 2008. • There are some areas with sparse vegetation cover, but they tend to be scattered throughout the site. • The area east of the beryllium excavation area should be evaluated. Approximately 1-2 acres that do not appear to have been remediated. • In the vicinity of N46° 07' 27.6"; W112° 55' 41.1" there are still numerous piles of waste soil, rock and miscellaneous debris. Apparently a dumping site for waste materials. The materials have been dumped on previously remediated sites. Beryllium Excavation Area (refer to Photo 3) 1. A large pile of waste material was left east of the area. 2. The material that was used for covering the site is very coarse and rocky. Many plants have become established in the seeded area. 3. Area appears to be approximately 2 acres. 4. Alfalfa is becoming the major species. In 2009, some of the alfalfa was sprayed with herbicide. 5. More cover in 2009 compared with 2008. Approximately 25-30% cover by acceptable species. 6. Observed Species: Medicago sativa, Bromus inermis, Agropyron intermedium, Centaurea maculosa, Poa ampla, Agrostis alba, Elymus cinereus, Agropyron cristatum, Agropyron dasystachyum, Lepidium latifolium, Chrysothamnus nauseosus, Kochia scoparia, Agropyron trachycaulum, Mentzelia laevicaulis, Grindelia squarrosa, Poa compressa and Oryzopsis hymenoides.	Site is mostly flat and mostly well-vegetated; no visible signs of erosion. A small subsidence area at N46° 07' 29.2"; W112° 55' 37.1". This site should be checked and repaired (see Photo 4). Still here in 2009, but is probably within the part of the East Anaconda Yards where additional work will be done in 2009.	Rip rap located in various places throughout the site is in place.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2010	•There are some un-remediated barren areas that may need to be fixed before the area can move into long-term monitoring (See notes below). • This is a large area including most of the reclaimed areas in the East Anaconda Yards. • Overall, 2010 was comparable to 2009. Most of this area was reclaimed in 1986. After more than 24 years there is quite a bit of litter build-up in some places. • Need to spot spray knapweed, but DO NOT SPRAY ALFALFA PLANTS. Knapweed is more common on the west end of the area and tends to be widely scattered in other parts. Almost no knapweed in the part of the area south of the access road. • Vegetation cover in 2010 was somewhat higher than what was observed in 2009. • There are some areas with sparse vegetation cover, but they tend to be scattered throughout the site. • The beryllium excavation area was re-done in 2010 and is now included in a new monitoring area (VM_209). • The piles of soil noted in previous years were graded or used in the remediation of VM_209. • Bare areas that need to be checked for possible repair are located at: N46° 07' 23.8"; W112° 55' 38.6" , N46° 07' 25.0"; W112° 55' 42.0", N46° 07' 26.3"; W112° 55' 47.4", N46° 07' 22.9"; W112° 55' 06.8', and N46° 07' 30.0"; W112° 55' 32.1". These areas are not large, but they may be greater than 1000 square feet in area. • The beryllium excavation area that was discussed in previous years was re-done as part of a larger remediation project in the west part of the East Anaconda Yards conducted in later 2009. Also, the small subsidence area was repaired and included in the 2009 remediation work. This new area has been identified as "Sub-Area 5, Area 4" (VM_209).	Site is mostly flat and mostly well-vegetated; no visible signs of erosion. BLM erosion score = <45.	Rip rap located in various places throughout the site is in place. Evidence of flow in the channels was noted in 2010.	
2011	*There are some un-remediated barren areas that may need to be fixed before the area can move into long-term monitoring (See notes below). • This is a large area including most of the reclaimed areas in the East Anaconda Yards. • Overall, 2011 was comparable to 2010. Most of this area was reclaimed in 1986. After more than 24 years there is quite a bit of litter build-up in some places. • Need to spot spray knapweed, but DO NOT SPRAY ALFALFA PLANTS. Knapweed is more common on the east end of the area and tends to be in widely scattered patches in other parts. • Vegetation cover in 2011 was comparable to what was observed in 2010. • There are some areas with sparse vegetation cover, but they tend to be scattered throughout the site. • The beryllium excavation area was re-done in 2010 and is now included in a new monitoring area (VM_209). • The piles of soil noted in previous years were graded or used in the remediation of VM_209. • Bare areas that need to be checked for possible repair are located at: N46° 07' 23.8"; W112° 55' 38.6" , N46° 07' 25.0"; W112° 55' 42.0", N46° 07' 26.3"; W112° 55' 47.4", N46° 07' 22.9"; W112° 55' 06.8', and N46° 07' 30.0"; W112° 55' 32.1". These areas are not large, but they may be greater than 1000 square feet in area. Some of these are slowly filling in, but most are still quite bare. • The beryllium excavation area that was discussed in previous years was re-done as part of a larger remediation project in the west part of the East Anaconda Yards conducted in later 2009. Also, the small subsidence area was repaired and included in the 2009 remediation work. This new area has been identified as "Sub-Area 5, Area 4" (VM_209).	No obvious signs of erosion.	Rip rap located in various places throughout the site is in place.	

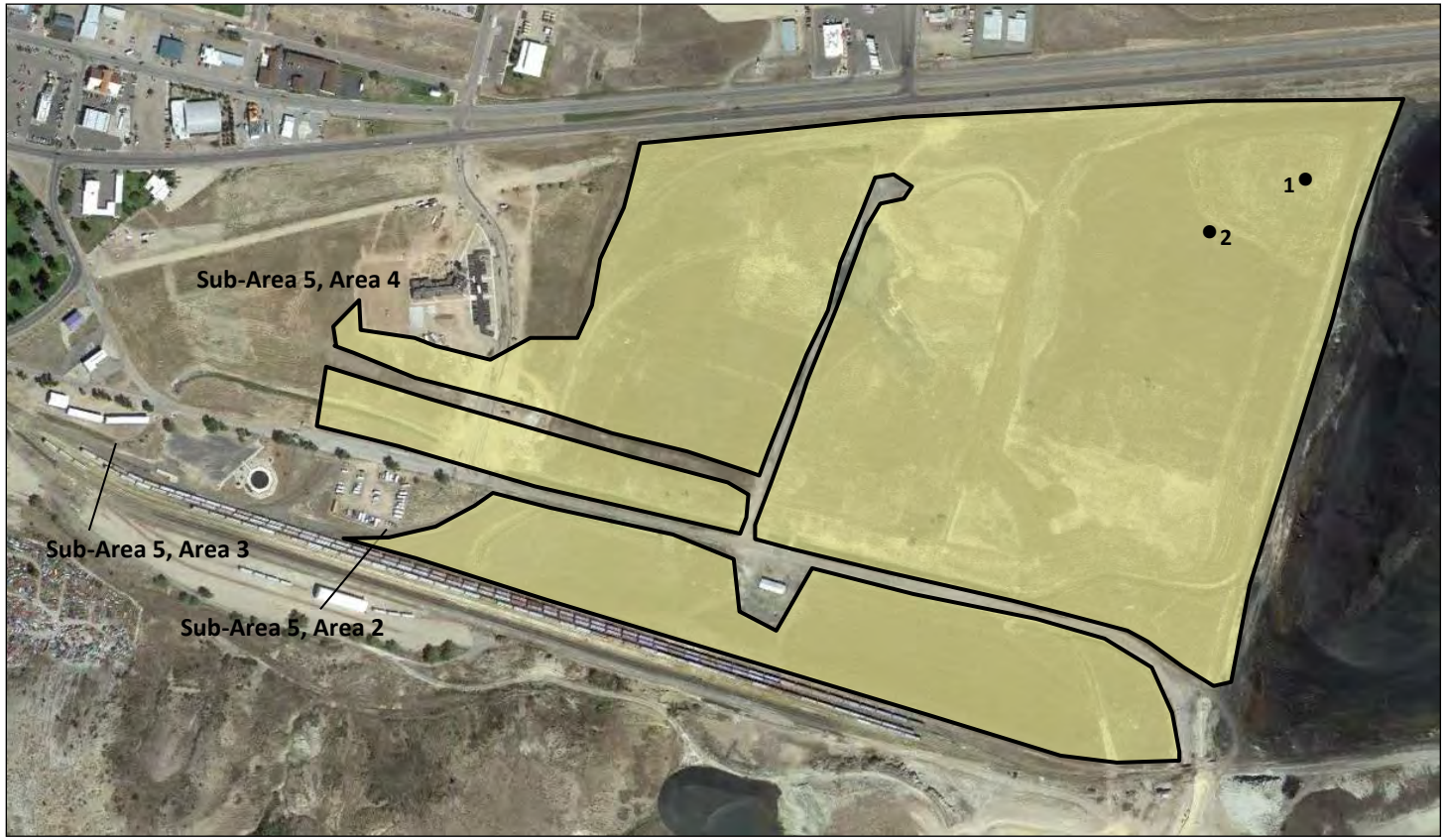
Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2012	*There are some un-remediated barren areas that may need to be fixed before the area can move into long-term monitoring (See notes below). • This is a large area including most of the reclaimed areas in the East Anaconda Yards. • Overall, 2012 was comparable to 2011. Most of this area was reclaimed in 1986. After more than 24 years there is quite a bit of litter build-up in some places. • Very successful control of knapweed; probably 90% kill rate. Plan to check the area in the next 2-3 years and spot spray knapweed as necessary. • Vegetation cover in 2012 was comparable to what was observed in 2011. • There are some areas with sparse vegetation cover, but they tend to be scattered throughout the site. • The beryllium excavation area was re-done in 2010 and is now included in a new monitoring area (VM_209). • There were some backhoe excavations at the west end that have been filled in, but are still bare. • Bare areas that need to be checked for possible repair are located at: N46° 07' 23.8"; W112° 55' 38.6" , N46° 07' 25.0"; W112° 55' 42.0", N46° 07' 26.3"; W112° 55' 47.4", N46° 07' 22.9"; W112° 55' 06.8', and N46° 07' 30.0"; W112° 55' 32.1". These areas are not large, but they may be greater than 1000 square feet in area. Some of these are slowly filling in, but most are still quite bare. • 2012 was the second year of Compliance Determination for this area. Average cover by acceptable species was 35.2%; the standards were met. • The beryllium excavation area that was discussed in previous years was re-done as part of a larger remediation project in the west part of the East Anaconda Yards conducted in later 2009. Also, the small subsidence area was repaired and included in the 2009 remediation work. This new area has been identified as "Sub-Area 5, Area 4" (VM_209).	No obvious signs of erosion.	Rip rap located in various places throughout the site is in place.	
2013	• This is a large area including most of the reclaimed areas in the East Anaconda Yards. • Overall, 2013 was comparable to 2012. Most of this area was reclaimed in 1986. After more than 24 years there is quite a bit of litter build-up in some places. • Very successful control of knapweed. Plan to continue to check the area and spot spray knapweed as necessary. • Vegetation cover in 2013 was comparable to what was observed in 2012. • There are some areas with sparse vegetation cover, but they tend to be scattered throughout the site. • The beryllium excavation area was re-done in 2010 and is now included in a new monitoring area (VM_209). • Compliance standards were met in this area for two years (2011 and 2012). In 2013, the standards are still being met. • A roadway was constructed through this area in association with the construction of a new building in Area 4 (VM_209).	No obvious signs of erosion.	Rip rap located in various places throughout the site is in place.	
2014	• This is a large area including most of the reclaimed areas in the East Anaconda Yards. • Most of this area was reclaimed in 1986; there is quite a bit of litter build-up in some places. • Very successful control of knapweed. Plan to continue to check the area and spot spray knapweed as necessary. • Vegetation cover in 2014 was comparable to what was observed in 2013. • There are some areas with sparse vegetation cover, but they tend to be scattered throughout the site. • The beryllium excavation area was re-done in 2010 and is included in a separate monitoring area (VM_209). • Compliance standards were met in this area for two years (2011 and 2012). In 2014, the standards are still being met. Compliance Status: LTIM. A roadway was constructed through this area in association with the construction of a school building in Area 4 (VM_209). Some of the adjacent disturbance has been re-seeded. The road is a permanent installation.	Site is mostly flat and mostly well-vegetated; no visible signs of erosion. BLM erosion score =2.	Rip rap located in various places throughout the site is in place.	

Transect Sampling Summary for Old Works Sub Area 5, Area 1 (VM_146)

Old Works Sub-Area 5 Area 1 Type A Cap	Mean Cover (%)		Frequency (%)	
	2011	**2012**	**2011**	**2012**
Number of Transect Sampled	5	5	5	5
Total Vegetation Cover (All Species)	42.8	35.6		
Total Vegetation Cover (Acceptable Species)	42.8	35.2		
Litter and Rock Combined	54.9	61.6		
Bare Soil	2.4	2.8		
Total Cover	97.6	97.2		
Litter Cover	53.2	55.6		
Rock Cover	1.6	6		
Acceptable Species				
Agropyron cristatum	15.6	19.6	80	100
Agropyron dasystachyum	<1	<1	20	20
Agropyron intermedium	2.4	0.8	20	60
Agrostis alba		0.8		20
Aster adscendens	<1		20	
Aster falcatus		<1		20
Bromus inermis	6	<1	20	20
Chrysothamnus nauseosus	<1		20	
Elymus cinereus	2.4	<1	20	20
Festuca ovina	6	0.8	40	40
Lotus corniculatus	2.8		20	
Medicago sativa	8.8	13.2	100	100
Melilotus officinalis	2.8	<1	80	60
Mentzelia decapetala		<1		20
Mentzelia laevicaulis		<1		20
Mosses	<1		40	
Phleum pratense	<1		20	
Poa ampla		<1		20
Poa compressa	0.8	<1	60	40
Undesirable Weedy Species				
Camelina microcarpa	<1	<1	20	60
Lactuca serriola		0.4		20
Silene latifolia		<1		20
Taraxacum officinale	<1	<1	40	40
Thlaspi arvense	<1		20	
Tragopogon dubius	<1	<1	100	100
Noxious Weeds				
Centaurea maculosa	<1	<1	80	40
Cirsium arvense	<1		20	
Kochia scoparia		<1		20

Site Aerial Photo for Old Works Sub Area 5, Area 1 (VM_146)



•**1** Photo Location Point

Old Works Sub Area 5, Area 1 (VM_146)

Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 1	**PHOTO LOCATION 2 - Old Works Sub Area 5, Area 1**
N46° 07’ 32.5”; W112° 55’ 01.3”, Looking West	N46° 07’ 32.1”; W112° 55’ 07.3”, Looking West
July 13, 2000	July 13, 2000
July 6, 2001	July 6, 2001

Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 1		**PHOTO LOCATION 2 - Old Works Sub Area 5, Area 1**
N46° 07’ 32.5”; W112° 55’ 01.3”, Looking West		N46° 07’ 32.1”; W112° 55’ 07.3”, Looking West
July 23, 2002		July 23, 2002
July 26, 2003		July 26, 2003

Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 1	**PHOTO LOCATION 2 - Old Works Sub Area 5, Area 1**
N46° 07’ 32.5”; W112° 55’ 01.3”, Looking West	N46° 07’ 32.1”; W112° 55’ 07.3”, Looking West
August 13, 2004	August 13, 2004
August 19, 2005	August 19, 2005

Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 1		**PHOTO LOCATION 2 - Old Works Sub Area 5, Area 1**
N46° 07’ 32.5”; W112° 55’ 01.3”, Looking West		N46° 07’ 32.1”; W112° 55’ 07.3”, Looking West
July 19, 2006		July 19, 2006
August 27, 2007		August 27, 2007

Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 1	**PHOTO LOCATION 2 - Old Works Sub Area 5, Area 1**
N46° 07’ 32.5”; W112° 55’ 01.3”, Looking West	N46° 07’ 32.1”; W112° 55’ 07.3”, Looking West
June 12, 2008	June 12, 2008
August 21, 2009	August 21, 2009

Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 1	**PHOTO LOCATION 2 - Old Works Sub Area 5, Area 1**
N46° 07’ 32.5”; W112° 55’ 01.3”, Looking West	N46° 07’ 32.1”; W112° 55’ 07.3”, Looking West
August 6, 2010	August 6, 2010
August 26, 2011	August 26, 2011

Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 1		**PHOTO LOCATION 2 - Old Works Sub Area 5, Area 1**
N46° 07’ 32.5”; W112° 55’ 01.3”, Looking West		N46° 07’ 32.1”; W112° 55’ 07.3”, Looking West
August 22, 2012		August 22, 2012
August 5, 2013		August 5, 2013

Old Works Sub Area 5, Area 1 (VM_146) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 1		**PHOTO LOCATION 2 - Old Works Sub Area 5, Area 1**
N46° 07’ 32.5”; W112° 55’ 01.3”, Looking West		N46° 07’ 32.1”; W112° 55’ 07.3”, Looking West
July 8, 2014		July 8, 2014

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 5, Area 2 (VM_147)

Old Works Sub Area 5, Area 2 (VM_147) 2015 -					
Year	**2015**				
Area (acres)	2.9				
Current Land Use	Open Space; Storage				
Land Owner					
Inspection Date	7/27/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	24				
Total Number of Acceptable Species	17				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*					
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*					
Leafy Spurge *(Euphorbia esula)*					
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*	Infrequent				
Curly Dock *(Rumex crispus)*					
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 5, Area 2 (VM_147)

Old Works Sub Area 5, Area 2 (VM_147) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	6				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub Area 5, Area 2 (VM_147) 2015-

Old Works Sub Area 5, Area 2 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*					
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Bluebunch Wheatgrass	*Agropyron spicatum*					
Red Top	*Agrostis alba*	x				
Fringed Sagewort	*Artemisia frigida*	x				
Aster	*Aster adscendens*					
Cicer Milkvetch	*Astragalus cicer*					
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Bastard Toadflax	*Comandra umbellata*	x				
Great Basin Wildrye	*Elymus cinereus*	m				
Mammoth Wildrye	*Elymus giganteus*	x				
Sheep Fescue	*Festuca ovina*	m				
Wild Licorice	*Glycyrrhiza lepidota*					
Poverty Sumpweed	*Iva axillaris*	x				
Lewis's Flax	*Linum lewisii*					
Birdsfoot Trefoil	*Lotus corniculatus*	x				
Alfalfa	*Medicago sativa*	x				
Yellow Sweetclover	*Melilotus officinalis*	x				
White Evening Star	*Mentzelia decapetala*	x				
Yellow Evening Star	*Mentzelia laevicaulis*					
Phacelia	*Phacelia hastata*	x				
Canada Bluegrass	*Poa compressa*	x				
UNDESIRABLE WEEDY SPECIES						
Cheatgrass	*Bromus tectorum*					
Littleseed Falseflax	*Camelina microcarpa*	x				
Tumbling Hedge Mustard	*Sisymbrium altissimum*					
Hedge Mustard	*Sisymbrium loeselii*					
Common Dandelion	*Taraxacum officinale*	x				
Salsify	*Tragopogon dubius*	x				
		x				
NOXIOUS WEEDS						
White Top	*Cardaria draba*					
Spotted Knapweed	*Centaurea maculosa*	I				
Canada Thistle	*Cirsium arvense*					
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*					
Dalmatian Toadflax	*Linaria dalmatica*	I				
Common Mullein	*Verbascum thapsus*					
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		17				
Total Number of Species		24				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 5, Area 2 (VM_147) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• Vegetation is well-established and overall is comparable to what was observed in 2014. • The western half to two-thirds of this area has been fenced for use as a storage facility for recreational vehicles, other vehicles and miscellaneous other things. The area inside the fence is mowed. There is about one acre on the east end that is still accessible. • Spotted Knapweed was sprayed in 2012. Overall, the control was very successful; there are still a few mature plants and basal rosettes present, but at very low density. Plan to continue control in the future. • Compliance standards were met for two years and this area was submitted with the 2012 Compliance Determination Report. In 2015, the standards are still being met. Compliance Status: LTIM.	Site is flat and mostly well-vegetated; no visible signs of erosion.	No BMPs installed in this area..	

Site Aerial Photo for Old Works Sub Area 5, Area 2 (VM_147)

•1 Photo Location Point

Old Works Sub Area 5, Area 2 (VM_147)

Old Works Sub Area 5, Area 2 (VM_147) 2015-

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 2
N46° 07’ 22.7”; W112° 55’ 49.3”, looking East
July 27, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 5, Area 2 (VM_147)

Old Works Sub Area 5, Area 2 (VM_147) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
Area (acres)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner								
Inspection Date	7/13/00	7/6/01	7/23/02	7/26/03	8/13/04	8/19/05	7/19/06	8/27/07
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK	WK	WK	WK	WK	WK, KL	WK, KL
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo								
Site Aerial Photo Follows the Transect Summary Table								
INSPECTION SUMMARY*								
Vegetation Inspection	0	0	0	0	0	1	1	0
Erosion Inspection	0	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0	0
VEGETATION INSPECTION*								
Overall Recommendation	0	0	0	0	0	1	1	0
Estimated Canopy Coverage	25-35%	25-35%	25-35%	25-35%	25-35%	20-29% 30-39%	20-29% 30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation						Mod/Heavy	Moderate	Moderate
Evidence of Reproduction						Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	24	26	30	26	26	24	24	25
Total Number of Acceptable Species	18	17	23	19	20	18	18	20
Ocular Estimate of Extent of Bare Areas						<1-5%	<1-5%	<1-5%
Weed Species Present								
White Top *(Cardaria draba)*		Infrequent	Infrequent	Infrequent	Frequent	Present	Present	Present
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Frequent	Present	Present	Present
Canada Thistle *(Cirsium arvense)*	Infrequent	Infrequent	Infrequent	Infrequent	Frequent	Present	Present	Present
Baby's Breath *(Gypsophila paniculata)*								
Dalmatian Toadflax *(Linaria dalmatica)*								
Common Mullein *(Verbascum thapsus)*								
Vegetation Comments (See Comments Section)								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 5, Area 2 (VM_147)

Old Works Sub Area 5, Area 2 (VM_147) 2000-2014								
Year	**2000***	**2001***	**2002***	**2003***	**2004***	**2005**	**2006**	**2007**
EROSION INSPECTION*								
Average Slope (percent)	0%	0%	0%	0%	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None	None
Evidence of Surface Litter Movement						None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)								
BMP INSPECTION*								
Overall Recommendation						0	0	0
Evidence of Check Dam Failure						None	None	None
Evidence of Sediment Accumulation in Check Dams						None	None	None
Condition of Dozer Basins						None	None	None
Condition of Grade Control Structures						Controlling	None	None
Evidence of Brush Barrier Failure or Movement						None	None	None
Condition of Mulch						None	None	None
BMP Comments (See Comments Section)								
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**								
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS								
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)								
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?								
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.								
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)								
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.								
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.								
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).								
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).								

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 5, Area 2 (VM_147)

Old Works Sub Area 5, Area 2 (VM_147) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Current Land Use	Open Space	Open Space; Storage	Open Space; Storage	Open Space; Storage	Open Space; Storage	Open Space; Storage	Open Space; Storage
Land Owner							
Inspection Date	6/12/08	8/21/09	8/6/10	6/17/11	8/22/12	8/5/13	7/8/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Parks Frady (PF) Holly Keammerer (HK) Cathy Seibert (CS)	WK, PF	WK, KL	WK, KL	WK, HK, CS	WK, HK, CS	WK, HK, CS	WK,HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Evaluation Area Photos Follow the Site Aerial Photo							
Site Aerial Photo Follows the Transect Summary Table							
INSPECTION SUMMARY*							
Vegetation Inspection	0	0	0	0	0	0	0
Erosion Inspection	0	0	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0	0	0
VEGETATION INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	24	18	16	23	17	19	24
Total Number of Acceptable Species	19	16	15	18	14	15	19
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present							
White Top *(Cardaria draba)*	Infrequent			Infrequent			
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*							
Baby's Breath *(Gypsophila paniculata)*							Infrequent
Dalmatian Toadflax *(Linaria dalmatica)*					Infrequent	Infrequent	Infrequent
Common Mullein *(Verbascum thapsus)*						Infrequent	
Vegetation Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub Area 5, Area 2 (VM_147)

Old Works Sub Area 5, Area 2 (VM_147) 2000-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION*							
Average Slope (percent)	0%	0%	0%	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None	None	None
Presence of Rills	None	None	None	None	None	None	None
Potential Instability	None	None	None	None	None	None	None
Presence of Gullies	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)							
BMP INSPECTION*							
Overall Recommendation	0	0	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None	None	None
Condition of Mulch	None	None	None	None	None	None	None
BMP Comments (See Comments Section)	0	0	0	0	0	0	0
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**							
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS							
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)			Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?			EST	TRAN (30%)	TRAN (36%)	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.			Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)			Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.			No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.			6	6	6	6	6
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).			No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).			No	No	No	No	No

Observed Species in Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

Old Works Sub Area 5, Area 2 m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES																
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x	x	x		x							x
Thickspike Wheatgrass	*Agropyron dasystachyum*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bluebunch Wheatgrass	*Agropyron spicatum*	x		x				x		x						
Red Top	*Agrostis alba*					x		x	x			x	x	x	x	x
Aster	*Aster adscendens*			x		x		x	x	x	x		x			x
Cicer Milkvetch	*Astragalus cicer*	x	x	x												
Smooth Brome	*Bromus inermis*	x	x	x	x			x	x	x	x		x			x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*			x	x	x	x	x	x	x	x	x	x	x	x	x
Bastard Toadflax	*Comandra umbellata*				x	x				x	x	x	x		x	
Great Basin Wildrye	*Elymus cinereus*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Mammoth Wildrye	*Elymus giganteus*	x	x	x	x	x	x	m	x	x	x	x	x	x	x	x
Sheep Fescue	*Festuca ovina*	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bedstraw	*Galium aparine*			x												
Wild Licorice	*Glycyrrhiza lepidota*				x	x	x	x	x	x		x				x
Curlycup Gumweed	*Grindelia squarrosa*				x		x							x		
Broom Snakeweed	*Gutierrezia sarothrae*			x	x	x	x		x	x						
Foxtail Barley	*Hordeum jubatum*	x	x	x												
Poverty Sumpweed	*Iva axillaris*	x	x	x	x	x	x		x	x	x	x	x	x	x	x
Lewis's Flax	*Linum lewisii*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
Birdsfoot Trefoil	*Lotus corniculatus*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Alfalfa	*Medicago sativa*	x	x	x	x	x	x	x	x	x						
Yellow Sweetclover	*Melilotus officinalis*		x	x	x	x	x	x	x	x	x	x	x	x	x	x
White Evening Star	*Mentzelia decapetala*			x		x	x	x			x	x			x	
Yellow Evening Star	*Mentzelia laevicaulis*	x	x	x	x	x	x	x	x		x		x	x	x	x
Beard Tongue	*Penstemon eriantherus*															x
Phacelia	*Phacelia hastata*												x			x
Timothy	*Phleum pratense*	x														
Canada Bluegrass	*Poa compressa*	m	m	m	m	m	m	m	m	x	x	x	x	x	x	x
Chokecherry	*Prunus virginiana*												x			
Red Clover	*Trifolium pratense*	x	x	x					x	x						
White Clover	*Trifolium repens*	x														

Observed Species in Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

Old Works Sub Area 5, Area 2 m = major species; x = other species																
Common Name	**Scientific Name**	**YEAR**														
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
UNDESIRABLE WEEDY SPECIES																
Absinth Wormwood	*Artemisia absinthium*		x				x									
Cheatgrass	*Bromus tectorum*									x	x					
Russian Thistle	*Salsola iberica*	x	x	x	x											
Tumbling Hedge Mustard	*Sisymbrium altissimum*		x										x			
Common Dandelion	*Taraxacum officinale*	x	x	x	x	x	x	x	x	x			x		x	x
Salsify	*Tragopogon dubius*	x	x	x	x	x	x	x	x	x			x	x		x
NOXIOUS WEEDS																
White Top	*Cardaria draba*		x	x	x	x	x	x	x	I			I			
Spotted Knapweed	*Centaurea maculosa*	x	x	x	x	x	x	x	x	I	I	I	I	I	I	I
Canada Thistle	*Cirsium arvense*	x	x	x	x	x	x	x	x							
Baby's Breath	*Gypsophila paniculata*															I
Kochia	*Kochia scoparia*	x	x	x	x	x		x								
Dalmatian Toadflax	*Linaria dalmatica*													I	I	I
Common Mullein	*Verbascum thapsus*														I	
I=Infrequent; F=Frequent; C=Common; D=Dominant																

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	•Vegetation is well-established and should continue to develop.	Site is mostly flat.	Riprap at N 46° 07' 22.6"; W 112° 55' 41.2" in place. Small amount of sediment in culvert. A few grasses growing at culvert opening.	
2001	•Vegetation is well-established and should continue to develop. •Disturbance fro installation of water line at N46° 07' 23.6", W112° 55' 46.3". Approximately 1000 square feet of disturbance.	Site is mostly flat.	Riprap at N 46° 07' 22.6"; W 112° 55' 41.2" in place. Small amount of sediment in culvert. A few grasses growing at culvert opening.	
2002	•Vegetation is well-established and should continue to develop. •Disturbance from installation of water line at N46° 07' 23.6", W112° 55' 46.3". •Approximately 1000 square feet of disturbance – mostly bare and weedy.	Site is mostly flat.	Riprap at N 46° 07' 22.6"; W 112° 55' 41.2" in place. Small amount of sediment in culvert. A few grasses growing at culvert opening.	
2003	•Vegetation is well-established and should continue to develop. A small part of the west end of this area burned prior to the evaluation date. •Disturbance from installation of water line at N46° 07' 23.6", W112° 55' 46.3". •Approximately 1000 square feet of disturbance – mostly bare and weedy. In 2003, a few perennial plants were noted, and most of the individual kochia plants were small. This area was not as bare as it was in 2002.	Site is mostly flat.	Riprap at N 46° 07' 22.6"; W 112° 55' 41.2" in place. Small amount of sediment in culvert. A few grasses growing at culvert opening.	
2004	•Vegetation is well-established and should continue to develop. A small part of the west end of this area burned in 2003. Disturbance from installation of water line at N46° 07' 23.6", W112° 55' 46.3". Approximately 1000 square feet of disturbance. In 2004, perennial plants were noted, and most of the individual kochia plants were small. Vegetation in this disturbance area is sparse, but the area is not bare. •Site could be mowed and fertilized in 2005 or 2006.	Site is mostly flat.	Riprap at N 46° 07' 22.6"; W 112° 55' 41.2" in place. Small amount of sediment in culvert. A few grasses growing at culvert opening.	
2005	• Disturbance from installation of water line at N46° 07' 23.6", W112° 55' 46.3". Approximately 1000 square feet of disturbance. In 2004, perennial plants were noted, and most of the individual kochia plants were small. Vegetation in this disturbance area is sparse, but the area is not bare. More perennial grasses in this area in 2005. • Site could be mowed and fertilized in 2006. • Weeds need to be spot sprayed. DO NOT SPRAY DESIRABLE SPECIES.	Site is flat and mostly well-vegetated; no visible signs of erosion.	Riprap at N 46° 07' 22.6"; W 112° 55' 41.2" in place. Small amount of sediment in culvert. A few grasses growing at culvert opening.	
2006	• Disturbance from installation of water line at N46° 07' 23.6", W112° 55' 46.3". Approximately 1000 square feet of disturbance. In 2004, perennial plants were noted, and most of the individual kochia plants were small. Vegetation in this disturbance area is sparse, but the area is not bare. More perennial grasses in this area in 2006. About 10-15% cover by acceptable species in 2006. • Weeds need to be spot sprayed. DO NOT SPRAY DESIRABLE SPECIES. • Overall, comparable to what was observed in 2005.	Site is flat and mostly well-vegetated; no visible signs of erosion.	No BMPs installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2007	• Disturbance from installation of water line at N46° 07' 23.6", W112° 55' 46.3". Approximately 1000 square feet of disturbance. In 2004, perennial plants were noted, and most of the individual kochia plants were small. Vegetation in this disturbance area is sparse, but the area is not bare. More perennial grasses in this area in 2006. About 10-15% cover by acceptable species in 2006. Somewhat more cover in 2007. • Overall, vegetation cover is comparable to what was observed in 2006. • Knapweed was sprayed in 2007. Many plants were killed but some were missed. Some additional spot spraying could be done in 2008.	Site is flat and mostly well-vegetated; no visible signs of erosion.	No BMPs installed in this area.	
2008	• Disturbance from installation of water line at N46° 07' 23.6", W112° 55' 46.3". Approximately 1000 square feet of disturbance. In 2004, perennial plants were noted, and most of the individual kochia plants were small. Vegetation in this disturbance area is sparse, but the area is not bare. More perennial grasses in this area in 2006. Vegetation cover in this area in 2008 was comparable to what was observed in 2007. • Overall, vegetation cover is comparable to what was observed in 2007. • Knapweed still occurs in the area and is scattered throughout most of the site. Could be spot sprayed. Do not spray the alfalfa plants.	Site is flat and mostly well-vegetated; no visible signs of erosion.	No BMPs installed in this area.	
2009	• Vegetation is well-established and should continue to develop. • Overall, vegetation cover is comparable to what was observed in 2008, except for change in land use. • Knapweed still occurs in the area and is scattered throughout most of the site. Could be spot sprayed. Do not spray the alfalfa plants. • The western half to two-thirds of this area has been fenced for use as a storage facility for recreational vehicles, other vehicles and miscellaneous other things. There is about one acre on the east end that is still accessible. In the future, it might be best to simply combine this small area with Sub-Area 5, Area 1, or just move this one-acre parcel into long-term monitoring.	Site is flat and mostly well-vegetated; no visible signs of erosion.	No BMPs installed in this area.	
2010	• Vegetation is well-established. • Overall, vegetation cover is comparable to what was observed in 2009. • Knapweed still occurs in the area and is scattered in the areas east of the fenced enclosure. Could be spot sprayed. • The western half to two-thirds of this area has been fenced for use as a storage facility for recreational vehicles, other vehicles and miscellaneous other things. There is about one acre on the east end that is still accessible. In the future, it might be best to simply combine this small area with Sub-Area 5, Area 1, or just move this one-acre parcel into long-term monitoring.	Site is flat and mostly well-vegetated; no visible signs of erosion.	No BMPs installed in this area.	
2011	• Vegetation is well-established. • Overall, vegetation cover is comparable to what was observed in 2010. • Knapweed still occurs in the area and is scattered in the areas east of the fenced enclosure. Could be spot sprayed. • The western half to two-thirds of this area has been fenced for use as a storage facility for recreational vehicles, other vehicles and miscellaneous other things. There is about one acre on the east end that is still accessible. In the future, it might be best to simply combine this small area with Sub-Area 5, Area 1, or just move this one-acre parcel into long-term monitoring. • Spotted Knapweed was sprayed in 2010. There are still some mature plants and basal rosettes present.	Site is flat and mostly well-vegetated; no visible signs of erosion.	No BMPs installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2012	• Vegetation is well-established. • Overall, vegetation cover is comparable to what was observed in 2011. • The western half to two-thirds of this area has been fenced for use as a storage facility for recreational vehicles, other vehicles and miscellaneous other things. There is about one acre on the east end that is still accessible. In the future, it might be best to simply combine this small area with Sub-Area 5, Area 1, or just move this one-acre parcel into long-term monitoring. • Spotted Knapweed was sprayed in 2012. Overall, the control was very successful; there are still a few mature plants and basal rosettes present, but at very low density. Plan to continue control in the future. • 2012 was the second year for compliance determination. Vegetation cover was 36% by acceptable species and all other standards were met.	Site is flat and mostly well-vegetated; no visible signs of erosion.	No BMPs installed in this area.	
2013	• Vegetation is well-established and overall is comparable to what was observed in 2012. • The western half to two-thirds of this area has been fenced for use as a storage facility for recreational vehicles, other vehicles and miscellaneous other things. There is about one acre on the east end that is still accessible. • Spotted Knapweed was sprayed in 2012. Overall, the control was very successful; there are still a few mature plants and basal rosettes present, but at very low density. Plan to continue control in the future. • Compliance standards were met for two years and this area was submitted with the 2012 Compliance Determination Report. • In 2013, the standards are still being met.	Site is flat and mostly well-vegetated; no visible signs of erosion.	No BMPs installed in this area.	
2014	• Vegetation is well-established and overall is comparable to what was observed in 2013. • The western half to two-thirds of this area has been fenced for use as a storage facility for recreational vehicles, other vehicles and miscellaneous other things. The area inside the fence is mowed. There is about one acre on the east end that is still accessible. • Spotted Knapweed was sprayed in 2012. Overall, the control was very successful; there are still a few mature plants and basal rosettes present, but at very low density. Plan to continue control in the future. Compliance standards were met for two years and this area was submitted with the 2012 Compliance Determination Report. In 2014, the standards are still being met. Compliance Status: LTIM.	Site is flat and mostly well-vegetated; no visible signs of erosion.	No BMPs installed in this area.	

Transect Sampling Summary for Old Works Sub Area 5, Area 2 (VM_147)

Old Works **Sub-Area 5 Area 2 Type C Cap**	Mean Cover (%)		Frequency (%)	
	2011	**2012**	**2011**	**2012**
Number of Transect Sampled	1	1	1	1
Total Vegetation Cover (All Species)	30	36		
Total Vegetation Cover (Acceptable Species)	30	36		
Litter and Rock Combined	48	38		
Bare Soil	22	26		
Total Cover	78	74		
Litter Cover	46	38		
Rock Cover	2	0		
Acceptable Species				
Agropyron dasystachyum	<1	<1		
Agropyron intermedium	2	<1		
Chrysothamnus nauseosus	2			
Comandra umbellata	<1	<1		
Elymus cinereus	1	24		
Elymus giganteus	4	2		
Festuca ovina	6	6		
Grindelia squarrosa		<1		
Linum lewisii	<1	<1		
Lotus corniculatus	<1	4		
Melilotus officinalis	2			
Mosses	<1			
Poa compressa	<1	<1		
Undesirable Weedy Species				
None				
Noxious Weeds				
Centaurea maculosa	<1	<1		

Site Aerial Photo for Old Works Sub Area 5, Area 2 (VM_147)

•1 Photo Location Point

Old Works Sub Area 5, Area 2 (VM_147)

Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 2

N46° 07’ 22.7”; W112° 55’ 48.7”, Looking East

July 13, 2000

July 6, 2001

Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 2

N46° 07’ 22.7”; W112° 55’ 48.7”, Looking East

July 23, 2002

July 26, 2003

Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 2
N46° 07’ 22.7”; W112° 55’ 48.7”, Looking East
August 13, 2004
August 19, 2005

Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 2

N46° 07’ 22.7”; W112° 55’ 48.7”, Looking East

July 19, 2006

August 25, 2007

Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 2
N46° 07’ 22.7”; W112° 55’ 48.7”, Looking East
June 12, 2008
August 21, 2009

Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 2
N46° 07’ 22.7”; W112° 55’ 48.7”, Looking East
August 6, 2010
June 17, 2011

Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 2
N46° 07’ 22.7”; W112° 55’ 48.7”, Looking East
August 22, 2012
August 5, 2013

Old Works Sub Area 5, Area 2 (VM_147) 2000-2014

PHOTO LOCATION 1 - Old Works Sub Area 5, Area 2
N46° 07’ 22.7”; W112° 55’ 48.7”, Looking East
July 8, 2014

Annual Monitoring and Maintenance Data Summary for Old Works Dragstrip Demonstration Plot 3 (VM_155)

Old Works Dragstrip Demonstration Plot 3 (VM_155) 2015 -					
Year	**2015**				
Area (acres)	1.4				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/29/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Small Infrequent				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	11				
Total Number of Acceptable Species	8				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*					
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*					
Leafy Spurge *(Euphorbia esula)*					
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*					
Curly Dock *(Rumex crispus)*					
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Dragstrip Demonstration Plot 3 (VM_155)

Old Works Dragstrip Demonstration Plot 3 (VM_155)2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	2				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Dragstrip Demonstration Plot 3 (VM_155) 2015-

Old Works Dragstrip Demonstration Plot 3 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	m				
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Western Wheatgrass	*Agropyron smithii*					
Slender Wheatgrass	*Agropyron trachycaulum*					
Red Top	*Agrostis alba*	x				
Smooth Brome	*Bromus inermis*	m				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*					
Great Basin Wildrye	*Elymus cinereus*	m				
Mammoth Wildrye	*Elymus giganteus*	x				
Russian Wildrye	*Elymus junceus*					
Sheep Fescue	*Festuca ovina*	x				
Foxtail Barley	*Hordeum jubatum*					
Alfalfa	*Medicago sativa*					
Yellow Sweetclover	*Melilotus officinalis*					
Yellow Evening Star	*Mentzelia laevicaulis*					
Indian Ricegrass	*Oryzopsis hymenoides*					
Big Bluegrass	*Poa ampla*					
Canada Bluegrass	*Poa compressa*					
Woods Rose	*Rosa woodsii*					
Coyote Willow	*Salix exigua*					
UNDESIRABLE WEEDY SPECIES						
Tansy Mustard	*Descurainia richardsonii*					
Russian Thistle	*Salsola iberica*					
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x				
Hedge Mustard	*Sisymbrium loeselii*					
Salsify	*Tragopogon dubius*					
NOXIOUS WEEDS						
White Top	*Cardaria draba*					
Spotted Knapweed	*Centaurea maculosa*	I				
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*					
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	8				
	Total Number of Species	11				

Annual Monitoring and Maintenance COMMENTS for Old Works Dragstrip Demonstration Plot 3 (VM_155) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• The treatment in this plot consisted of adding a 2-3 inch veneer of soil obtained from the Stewart Street Borrow. This is the only remaining demonstration plot. The other three plots were covered with soil in 2007. • Overall cover by perennial grasses in 2015 was comparable to what was observed in 2014. • The results from this plot were used in influencing the design of the 2007 reworking of the areas that surround the demonstration plot site. The reworking has been very successful. • This small area was sprayed to control knapweed and baby's breath. Control has been very successful; only a few scattered individuals remain. • For the purpose of performance standard evaluation, this area was combined with the 2007 cover soiled areas and submitted as part of the 2015 Compliance Determination Report. In 2015, the performance standards are still being met.	No obvious signs of erosion. BLM erosion score = 2.	No BMPs installed in this area.	

Site Aerial Photograph for Old Works Dragstrip Demonstration Plot 3 (VM_155)

•1 Photo Location Point

Old Works Dragstrip Demonstration Plot 3 (VM_155)

Old Works Dragstrip Demonstration Plot 3 (VM_155) 2015-

PHOTO LOCATION 1 - Old Works Dragstrip Demo Plot 3		**PHOTO LOCATION 2 - Old Works Dragstrip Demo Plot 3**
N46° 08’ 09.2”; W112° 53’ 37.0”, looking Northwest		N46° 08’ 10.2”; W112° 53’ 37.7”, looking West
July 29, 2015		July 29, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Dragstrip Demonstration Plot 3 (VM_155)

Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014											
Year	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
Inspection Date	8/25/04	7/11/05	7/17/06	8/25/07	6/17/08	8/19/09	8/8/10	8/2/11	8/21/12	8/5/13	7/14/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Wendy Stansbury (WS) Holly Keammerer (HK) Cathy Seibert (CS)	WK	WK, CH	WK, KL	WK, KL	WK, KL	WK, KL	WK, KL	WK, HK, CS	WK, HK, CS	WK, HK, CS	WK, HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6	6	6	6	6
Site Photos and Photo Locations (Evaluation Area Photos Follow the Site Aerial Photo)											
Site Aerial Photo (See Site Aerial Photo Following Transect Data Summary)											
INSPECTION SUMMARY											
Vegetation Inspection		1	1	1	0	0	0	0	0	1	1
Erosion Inspection		0	0	0	0	0	0	0	0	0	0
Stormwater BMP Inspection		0	0	0	0	0	0	0	0	0	0

Annual Monitoring and Maintenance Data Summary for Old Works Dragstrip Demonstration Plot 3 (VM_155)

Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014											
Year	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
VEGETATION INSPECTION											
Overall Recommendation		1	1	1	0	0	0	0	0	1	1
Estimated Canopy Coverage		10-19% 20-29%	20-29%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover		Sm/Infreq	Sm/Infr	Sm/Infreq	Sm/Infreq	Sm/Infr	Sm/Infr	Sm/Infr	Sm/Infr	Sm/Infr	Sm/Infr
Litter Accumulation		Light	Light	Light	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	11	19	15	17	12	18	14	16	18	16	12
Total Number of Acceptable Species	6	16	11	13	10	13	9	10	12	11	9
Ocular Estimate of Extent of Bare Areas		<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present											
White Top *(Cardaria draba)*							Infreq	Infreq	Infreq	Infreq	
Musk Thistle *(Carduus nutans)*	Present	Present	Present	Present		Infreq	Infreq	Infreq	Freq	Freq	Freq
Canada Thistle *(Cirsium arvense)*											
Baby's Breath *(Gypsophila paniculata)*									Infreq	Infreq	Infreq
Vegetation Comments (See Comments Section)											

Annual Monitoring and Maintenance Data Summary for Old Works Dragstrip Demonstration Plot 3 (VM_155)

Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014											
Year	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION											
Average Slope (percent)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Overall Recommendation		0	0	0	0	0	0	0	0	0	0
Evidence of Soil Movement		None	None	None	None	None	None	None	None	None	None
Evidence of Surface Litter Movement		None	None	None	None	None	None	None	None	None	None
Evidence of Coarse Fragment Movement		None	None	None	None	None	None	None	None	None	None
Presence of Rills		None	None	None	None	None	None	None	None	None	None
Potential Instability		None	None	None	None	None	None	None	None	None	None
Presence of Gullies		None	None	None	None	None	None	None	None	None	None
Erosion Comments (See Comments Section)											
BMP INSPECTION											
Overall Recommendation		0	0	0	0	0	0	0	0	0	0
Evidence of Check Dam Failure		None	None	None	None	None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams		None	None	None	None	None	None	None	None	None	None
Condition of Dozer Basins		None	None	None	None	None	None	None	None	None	None
Condition of Grade Control Structures		None	None	None	None	None	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement		None	None	None	None	None	None	None	None	None	None
Condition of Mulch		None	None	None	None	None	None	None	None	None	None
BMP Comments (See Comments Section)											

Annual Monitoring and Maintenance Data Summary for Old Works Dragstrip Demonstration Plot 3 (VM_155)

Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014											
Year	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS											
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)										Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?										EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.										Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)										Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.										No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.										2	2
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).										No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).										No	No

Observed Species in Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014

Old Works Dragstrip Demonstration Plot 3 m = major species; x = other species												
Common Name	**Scientific Name**	**YEAR**										
		2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES												
Crested Wheatgrass	*Agropyron cristatum*		m	x	m	m	m	m	m	m	m	m
Thickspike Wheatgrass	*Agropyron dasystachyum*	x	x	x	x	x	x				x	
Intermediate Wheatgrass	*Agropyron intermedium*	x	x	m	m	m	m	m	m	m	m	m
Western Wheatgrass	*Agropyron smithii*	x	x		x	x	x					
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x	x	x	x		x	x		
Red Top	*Agrostis alba*		x	x	x		x	x	x	x	x	x
Smooth Brome	*Bromus inermis*		m	m	m	m	m	m	m	m	m	m
Rubber Rabbitbrush	*Chrysothamnus nauseosus*									x	x	
Great Basin Wildrye	*Elymus cinereus*	x	x	x	x	x	m	m	m	m	m	m
Mammoth Wildrye	*Elymus giganteus*	x	x	x	x	x	x	x	x	x	x	x
Russian Wildrye	*Elymus junceus*						x			x	x	
Sheep Fescue	*Festuca ovina*		x	x	x	x	x	x	x	x	x	x
Foxtail Barley	*Hordeum jubatum*		x	x								
Alfalfa	*Medicago sativa*		x									
Yellow Sweetclover	*Melilotus officinalis*		x						x			
Yellow Evening Star	*Mentzelia laevicaulis*				x		x	x		x	x	x
Indian Ricegrass	*Oryzopsis hymenoides*				x							
Big Bluegrass	*Poa ampla*			x	x	m	m	x	x	x		x
Canada Bluegrass	*Poa compressa*		x									
Woods Rose	*Rosa woodsii*		x									
Coyote Willow	*Salix exigua*		x									
UNDESIRABLE WEEDY SPECIES												
Tansy Mustard	*Descurainia richardsonii*								x			
Russian Thistle	*Salsola iberica*	x		x	x		x			x		
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x	x	x	x	x	x	x	x		x	
Salsify	*Tragopogon dubius*						x	x	x	x		x

Observed Species in Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014

Old Works Dragstrip Demonstration Plot 3 m = major species; x = other species												
Common Name	**Scientific Name**	**YEAR**										
		2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
NOXIOUS WEEDS												
White Top	*Cardaria draba*							I	I	I	I	
Spotted Knapweed	*Centaurea maculosa*	x	x	x	x		I	I	I	F	F	F
Baby's Breath	*Gypsophila paniculata*									I	I	I
Kochia	*Kochia scoparia*	x	m	x	x	I	I	I	I	I	I	
I=Infrequent; F=Frequent; C=Common; D=Dominant												
Total Number of Acceptable Species		6	16	11	13	10	13	9	10	12	11	9
Total Number of Species		11	19	15	17	12	18	14	16	18	16	12

Annual Monitoring and Maintenance COMMENTS for Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2004	• Prior to the 2004 growing season, four treatment evaluation plots were established in the Type D Cap area in Sub-Area 6 (Dragstrip) of the Old Works area. The plots were located on the south side of Warm Springs Creek just west of the Galen Highway. The purpose of establishing the plots was to evaluate several additional treatments that could possibly be used in the Type D Cap areas as a means of enhancing the vegetation. • Plot 3 (2-3 inch veneer of Stewart Street Borrow). The existing vegetation is mostly dominated by kochia and Russian thistle (Photo 3). Even though some seedling mortality has occurred, the seedling density is considerably higher in this plot compared with Plots 1 and 2. All of the seedlings tend to be small (several inches in height).			
2005	• Overall cover by perennial grasses is somewhat low, but there are many established plants. • This is the best of the three treatments that were tested. • The kochia has been sprayed. Most of the plants are small.	No obvious signs of erosion.	No BMPs installed in this area.	
2006	• The treatment in this plot consisted of adding a 2-3 inch veneer of soil obtained from the Stewart Street Borrow. • Overall cover by perennial grasses is quite a bit higher in 2006 compared with 2005. • This is the best of the three treatments that were tested. • The area would benefit from the addition of nitrogen fertilizer.	No obvious signs of erosion.	No BMPs installed in this area.	
2007	• The treatment in this plot consisted of adding a 2-3 inch veneer of soil obtained from the Stewart Street Borrow. • Overall cover by perennial grasses is quite a bit higher in 2007 compared with 2006. • This is the best of the three treatments that were tested. • This is the only remaining demonstration plot. The other three plots were covered with soil in 2007.	No obvious signs of erosion.	No BMPs installed in this area.	
2008	• The treatment in this plot consisted of adding a 2-3 inch veneer of soil obtained from the Stewart Street Borrow. • Overall cover by perennial grasses in 2008 was comparable to what was observed in 2007. • This is the best of the three treatments that were tested. • The “barren areas” are small spots that have less than 10 percent cover by perennial species. • This is the only remaining demonstration plot. The other three plots were covered with soil in 2007. • The results from this plot were used in influencing the design of the 2007 reworking of the areas that surround the demonstration plot site. The reworking has been very successful. Seedling establishment in the re-worked areas is better that what was originally observed in Plot 3.	No obvious signs of erosion.	No BMPs installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2009	• The treatment in this plot consisted of adding a 2-3 inch veneer of soil obtained from the Stewart Street Borrow. • Overall cover by perennial grasses in 2009 was comparable to what was observed in 2008. • This is the best of the three treatments that were tested. • The "barren areas" are small spots that have less than 10 percent cover by perennial species. • This is the only remaining demonstration plot. The other three plots were covered with soil in 2007. • The results from this plot were used in influencing the design of the 2007 reworking of the areas that surround the demonstration plot site. The reworking has been very successful. Seedling establishment in the re-worked areas is better that what was originally observed in Plot 3. • This small area needs control for knapweed. Spot spray and do not spray desirable species. • For the purpose of performance standard evaluation, this area will be combined with the 2007 cover soiled areas.	No obvious signs of erosion. BLM erosion score was not evaluated in 2009, but it is <45.	No BMPs installed in this area.	
2010	• The treatment in this plot consisted of adding a 2-3 inch veneer of soil obtained from the Stewart Street Borrow. • Overall cover by perennial grasses in 2010 was comparable to what was observed in 2009. • This is the best of the three treatments that were tested. • The "barren areas" are small spots that have less than 10 percent cover by perennial species. • This is the only remaining demonstration plot. The other three plots were covered with soil in 2007. • The results from this plot were used in influencing the design of the 2007 reworking of the areas that surround the demonstration plot site. The reworking has been very successful. Vegetation establishment in the re-worked areas is better that what was originally observed in Plot 3. • This small area needs control for knapweed. Spot spray and do not spray desirable species. • For the purpose of performance standard evaluation, this area will be combined with the 2007 cover soiled areas.	No obvious signs of erosion. BLM erosion score = 2.	No BMPs installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2011	• The treatment in this plot consisted of adding a 2-3 inch veneer of soil obtained from the Stewart Street Borrow. • Overall cover by perennial grasses in 2011 was comparable to what was observed in 2010. • This is the best of the three treatments that were tested. • The "barren areas" are small spots that have less than 10 percent cover by perennial species. • This is the only remaining demonstration plot. The other three plots were covered with soil in 2007. • The results from this plot were used in influencing the design of the 2007 reworking of the areas that surround the demonstration plot site. The reworking has been very successful. Vegetation establishment in the re-worked areas is better that what was originally observed in Plot 3. • This small area needs control for knapweed, more was present in 2011. Spot spray and do not spray desirable species. • For the purpose of performance standard evaluation, this area will be combined with the 2007 cover soiled areas.	No obvious signs of erosion. BLM erosion score = 2.	No BMPs installed in this area.	
2012	• The treatment in this plot consisted of adding a 2-3 inch veneer of soil obtained from the Stewart Street Borrow. • Overall cover by perennial grasses in 2012 was comparable to what was observed in 2011. • This is the best of the three treatments that were tested. • This is the only remaining demonstration plot. The other three plots were covered with soil in 2007. • The results from this plot were used in influencing the design of the 2007 reworking of the areas that surround the demonstration plot site. The reworking has been very successful. • This small area needs control for knapweed and baby's breath; more was present in 2012. Spot spray and do not spray desirable species. • For the purpose of performance standard evaluation, this area will be combined with the 2007 cover soiled areas.	No obvious signs of erosion. BLM erosion score = 2.	No BMPs installed in this area.	
2013	• The treatment in this plot consisted of adding a 2-3 inch veneer of soil obtained from the Stewart Street Borrow. This is the only remaining demonstration plot. The other three plots were covered with soil in 2007. • Overall cover by perennial grasses in 2013 was comparable to what was observed in 2012. • The results from this plot were used in influencing the design of the 2007 reworking of the areas that surround the demonstration plot site. The reworking has been very successful. • This small area needs control for knapweed and baby's breath; more was present in 2013. Spot spray and do not spray desirable species. • For the purpose of performance standard evaluation, this area will be combined with the 2007 cover soiled areas.	No obvious signs of erosion. BLM erosion score = 2.	No BMPs installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2014	• The treatment in this plot consisted of adding a 2-3 inch veneer of soil obtained from the Stewart Street Borrow. This is the only remaining demonstration plot. The other three plots were covered with soil in 2007. • Overall cover by perennial grasses in 2014 was comparable to what was observed in 2013. • The results from this plot were used in influencing the design of the 2007 reworking of the areas that surround the demonstration plot site. The reworking has been very successful. • This small area needs control for knapweed and baby's breath. Spot spray and do not spray desirable species. • For the purpose of performance standard evaluation, this area has been combined with the 2007 cover soiled areas and submitted as part of the 2015 Compliance Determination Report.	No obvious signs of erosion. BLM erosion score = 2.	No BMPs installed in this area.	

Transect Sampling Summary for Old Works Dragstrip Demonstration Plot 3 (VM_155)

Old Works **Dragstrip Demonstration Plot 3**
Refer to Transect data from Old Works Sub-Area 6 Dragstrip 2007 Coversoil (VM_158)

Site Aerial Photograph for Old Works Dragstrip Demonstration Plot 3 (VM_155)

•1 Photo Location Point

Old Works Dragstrip Demonstration Plot 3 (VM_155)

Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014

PHOTO LOCATION 1 - Old Works Dragstrip Demo Plot 3		**PHOTO LOCATION 2 - Old Works Dragstrip Demo Plot 3**
N46° 08’ 09.2”; W112° 53’ 37.0”, looking Northwest		N46° 08’ 10.2”; W112° 53’ 37.7”, looking West
		No Photo Taken at this Location until 2005
August 25, 2004		August 25, 2004
July 11, 2005		July 11, 2005

Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014

PHOTO LOCATION 1 - Old Works Dragstrip Demo Plot 3		**PHOTO LOCATION 2 - Old Works Dragstrip Demo Plot 3**
N46° 08’ 09.2”; W112° 53’ 37.0”, looking Northwest		N46° 08’ 10.2”; W112° 53’ 37.7”, looking West
July 17, 2006		July 17, 2006
August 25, 2007		August 25, 2007

Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014

PHOTO LOCATION 1 - Old Works Dragstrip Demo Plot 3		**PHOTO LOCATION 2 - Old Works Dragstrip Demo Plot 3**
N46° 08’ 09.2”; W112° 53’ 37.0”, looking Northwest		N46° 08’ 10.2”; W112° 53’ 37.7”, looking West
June 17, 2008		June 17, 2008
August 19, 2009		August 19, 2009

Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014

PHOTO LOCATION 1 - Old Works Dragstrip Demo Plot 3	**PHOTO LOCATION 2 - Old Works Dragstrip Demo Plot 3**
N46° 08’ 09.2”; W112° 53’ 37.0”, looking Northwest	N46° 08’ 10.2”; W112° 53’ 37.7”, looking West
August 8, 2010	August 8, 2010
August 3, 2011	August 3, 2011

Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014

PHOTO LOCATION 1 - Old Works Dragstrip Demo Plot 3	**PHOTO LOCATION 2 - Old Works Dragstrip Demo Plot 3**
N46° 08’ 09.2”; W112° 53’ 37.0”, looking Northwest	N46° 08’ 10.2”; W112° 53’ 37.7”, looking West
August 21, 2012	August 21, 2012
August 5, 2013	August 5, 2013

Old Works Dragstrip Demonstration Plot 3 (VM_155) 2004-2014

PHOTO LOCATION 1 - Old Works Dragstrip Demo Plot 3		**PHOTO LOCATION 2 - Old Works Dragstrip Demo Plot 3**
N46° 08’ 09.2”; W112° 53’ 37.0”, looking Northwest		N46° 08’ 10.2”; W112° 53’ 37.7”, looking West
June 14, 2014		June 14, 2014

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156) 2015-					
Year	**2015**				
Area (acres)	8.2				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/29/15				
RDU	OWEADA				
Evaluators: Warren Keammerer (WK) Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Site Photos and Photo Locations Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species - See List)	20				
Total Number of Acceptable Species	14				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No. Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	2				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2015-

(m = major species; x = other species. For noxious weeds: I=Infrequent; F=Frequent; C=Common; D=Dominant)

Old Works Sub Area 6 Dragstrip Type A Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	m				
Thickspike Wheatgrass	*Agropyron dasystachyum*	m				
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Western Wheatgrass	*Agropyron smithii*	x				
Slender Wheatgrass	*Agropyron trachycaulum*	x				
Red Top	*Agrostis alba*	x				
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Great Basin Wildrye	*Elymus cinereus*	x				
Russian Wildrye	*Elymus junceus*	x				
Sheep Fescue	*Festuca ovina*	x				
Poverty Sumpweed	*Iva axillaris*	x				
Alfalfa	*Medicago sativa*	m				
Canada Bluegrass	*Poa compressa*	x				
UNDESIRABLE WEEDY SPECIES						
Alyssum	*Alyssum desertorum*	x				
Salsify	*Tragopogon dubius*	x				
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I				
Spotted Knapweed	*Centaurea maculosa*	I				
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*	I				
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	14				
	Total Number of Species	20				

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2015 -

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• There are three parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap areas is mostly well-established. There are very few weeds in these areas. There are also several small patches of Type A Cap that were installed on the Dragstrip facilities property. • Vegetation establishment in this area has been very successful. In 2009 and 2010, the area was evaluated relative to meeting the performance criteria for waste management areas. Standards were met in both years. Compliance standards are still being met in 2015. Compliance Status: LTIM. • Baby's Breath is increasing in abundance in the Type A Cap area on the south side of Warm Springs Creek. Treatment is needed in this area and adjacent areas.	No obvious signs of erosion. Site is mostly flat.	No storm water BMPs in this area.	

SITE AERIAL PHOTOGRAPH

•1 Photo Location Point

OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

Photographs for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2015 -

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type A Cap		**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type A Cap**
N46° 08’ 01.5”; W112° 54’ 28.1” looking Northeast		N46° 08’ 00.2”; W112° 54’ 11.2” looking West
July 29, 2015		July 29, 2015

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156) 2010 - 2014					
Year	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	8.2	8.2	8.2	8.2	8.2
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner					
Inspection Date	6/8/10	8/2/11 8/3/11	8/21/12	8/1/13 8/5/13	7/14/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Holly Keammerer (HK) Cindy Hoschouer (CH) Karen LaClair (KL) Cathy Seibert (CS) Sarah Cusser (SC)	WK, KL	WK, HK, CS	WK, HK, CS	WK, HK, CS	WK, HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6
Site Photos and Photo Locations Follow the Site Aerial Photograph					
Site Aerial Photo Follows the Transect Sampling Summary					
INSPECTION SUMMARY					
Vegetation Inspection	0	0	0	0	0
Erosion Inspection	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0
VEGETATION INSPECTION					
Overall Recommendation	0	0	0	0	0
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	21	24	18	22	16
Total Number of Acceptable Species	13	17	13	13	10
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present					
White Top *(Cardaria draba)*				Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156) 2010 - 2014					
Year	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION					
Average Slope (percent)	0%	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None
Presence of Rills	None	None	None	None	None
Potential Instability	None	None	None	None	None
Presence of Gullies	None	None	None	None	None
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None
Condition of Mulch	None	None	None	None	None
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes	Yes	Yes	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	TRAN (62%)	EST	EST	EST	EST
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes	Yes	Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes	Yes	Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No. Bare areas are defined as having <10% live vegetation cover.	No	No	No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	2	2	2	2	2
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No	No	No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No	No	No	No	No

Observed Species in OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2010 - 2014

(m = major species; x = other species. For noxious weeds: I=Infrequent; F=Frequent; C=Common; D=Dominant)

Old Works Sub Area 6 Dragstrip Type A Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2010	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	m	m	m	m	m
Thickspike Wheatgrass	*Agropyron dasystachyum*	m	m	m	m	m
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m
Western Wheatgrass	*Agropyron smithii*				x	
Slender Wheatgrass	*Agropyron trachycaulum*		x	x		
Rockcress	*Arabis sp.*		x			
Aster	*Aster adscendens*	x	x	x	x	
Smooth Brome	*Bromus inermis*	x	x	x	x	x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x		x	x	x
Great Basin Wildrye	*Elymus cinereus*	x	x	x	x	x
Mammoth Wildrye	*Elymus giganteus*	x	x		x	
Russian Wildrye	*Elymus junceus*	x	x	x	x	x
Sheep Fescue	*Festuca ovina*	x	x	x	x	
Poverty Sumpweed	*Iva axillaris*	x	x			
Alfalfa	*Medicago sativa*	m	m	m	m	m
Yellow Sweetclover	*Melilotus officinalis*			x		
Phacelia	*Phacelia hastata*					x
Big Bluegrass	*Poa ampla*		x			
Canada Bluegrass	*Poa compressa*	x	x	x	x	x
Cottonwood	*Populus trichocarpa*		x			
Coyote Willow	*Salix exigua*		x			
UNDESIRABLE WEEDY SPECIES						
Alyssum	*Alyssum desertorum*	x	x	x	x	x
Japanese Brome	*Bromus japonicus*		x		x	
Cheatgrass	*Bromus tectorum*	x	x	x	x	x
Littleseed Falseflax	*Camelina microcarpa*	x	x		x	
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x			x	x
Hedge Mustard	*Sisymbrium loeselii*	x				
Salsify	*Tragopogon dubius*	x	x	x	x	
NOXIOUS WEEDS						
White Top	*Cardaria draba*				I	I
Spotted Knapweed	*Centaurea maculosa*	I	I	I	I	I
Baby's Breath	*Gypsophila paniculata*	I	I	I	I	I
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	13	17	13	13	10
	Total Number of Species	21	24	18	22	16

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2010 - 2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2010	• The Baby's Breath is located at the east end of the part of the Type A Cap area on the south side of Warm Springs Creek. Control in 2006-2008 has greatly reduced the number of plants. The herbicide has been applied very carefully with little or no damage to desirable species. • There are three separate parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap areas is mostly well-established. The north parcel of the Type A cap is dominated by alfalfa. There are very few weeds in these areas. • Vegetation establishment in this area has been very successful. In 2009 and 2010, the area was evaluated relative to meeting the performance criteria for waste management areas. Standards were met in both years.	No obvious signs of erosion. Site is mostly flat.	No storm water BMPs in this area.	
2011	• The Baby's Breath is located at the east end of the part of the Type A Cap area on the south side of Warm Springs Creek. Control in 2006-2008 has greatly reduced the number of plants. Plants have recovered and additional treatment is needed in this area and adjacent areas. • There are three separate parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap areas is mostly well-established. The north parcel of the Type A cap is dominated by alfalfa. There are very few weeds in these areas. • Vegetation establishment in this area has been very successful. In 2009 and 2010, the area was evaluated relative to meeting the performance criteria for waste management areas. Standards were met in both years. • Compliance standards are still being met in 2011.	No obvious signs of erosion. Site is mostly flat.	No storm water BMPs in this area.	
2012	• The Baby's Breath is located at the east end of the part of the Type A Cap area on the south side of Warm Springs Creek. Treatment is needed in this area and adjacent areas. • There are three separate parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap areas is mostly well-established. The north parcel of the Type A cap is dominated by alfalfa. There are very few weeds in these areas. • Vegetation establishment in this area has been very successful. In 2009 and 2010, the area was evaluated relative to meeting the performance criteria for waste management areas. Standards were met in both years. • Compliance standards are still being met in 2012.	No obvious signs of erosion. Site is mostly flat.	No storm water BMPs in this area.	

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2010 - 2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2013	• The Baby's Breath is located at the east end of the part of the Type A Cap area on the south side of Warm Springs Creek. Treatment is needed in this area and adjacent areas. • There are two separate parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap areas is mostly well-established. The north parcel of the Type A cap is dominated by alfalfa. There are very few weeds in these areas. • Vegetation establishment in this area has been very successful. In 2009 and 2010, the area was evaluated relative to meeting the performance criteria for waste management areas. Standards were met in both years. • Compliance standards are still being met in 2013.	No obvious signs of erosion. Site is mostly flat.	No storm water BMPs in this area.	
2014	• The Baby's Breath is located at the east end of the part of the Type A Cap area on the south side of Warm Springs Creek. Treatment is needed in this area and adjacent areas. • There are three parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap areas is mostly well-established. The western parcel of the Type A cap is dominated by alfalfa. There are very few weeds in these areas. There are also several small patches of Type A Cap that were installed on the Dragstrip facilities property. • Vegetation establishment in this area has been very successful. In 2009 and 2010, the area was evaluated relative to meeting the performance criteria for waste management areas. Standards were met in both years. • Compliance standards are still being met in 2014. Compliance Status: LTIM.	No obvious signs of erosion. Site is mostly flat.	No storm water BMPs in this area.	

Transect Sampling Summary for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

Old Works Sub Area 6 Dragstrip Type A Cap	Mean Cover (%)	
	2009	**2010**
Number of Transects Sampled	1	1
Total Vegetation Cover (All Species)	44	64
Total Vegetation Cover (Acceptable Species)	42	62
Litter and Rock Combined	56	34
Bare Soil	0	2
Total Cover	100	98
Litter Cover	56	34
Rock Cover	0	0
Acceptable Species		
Agropyron cristatum	<1	20
Agropyron dasystachyum	10	<1
Agropyron intermedium	14	14
Bromus inermis		<1
Elymus cinereus	<1	<1
Medicago sativa	18	28
Poa compressa	<1	
Undesirable Weedy Species		
Alyssum desertorum	<1	
Bromus japonicus	<1	
Bromus tectorum	2	2
Noxious Weed Species		
None		

SITE AERIAL PHOTOGRAPH

•1 Photo Location Point

OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

Photographs for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2010 - 2014

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type A Cap	**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type A Cap**
N46° 08’ 01.5”; W112° 54’ 28.1” looking Northeast	N46° 08’ 00.2”; W112° 54’ 11.2” looking West
June 8, 2010	June 8, 2010
August 2, 2011	August 2, 2011

Photographs for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2010 - 2014

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type A Cap		**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type A Cap**
N46° 08’ 01.5”; W112° 54’ 28.1” looking Northeast		N46° 08’ 00.2”; W112° 54’ 11.2” looking West
August 21, 2012		August 21, 2012
August 5, 2013		August 5, 2013

Photographs for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2010 - 2014

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type A Cap		**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type A Cap**
N46° 08’ 01.5”; W112° 54’ 28.1” looking Northeast		N46° 08’ 00.2”; W112° 54’ 11.2” looking West
July 14, 2014		July 14, 2014

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156) 2005 - 2009					
Year	**2005**	**2006**	**2007**	**2008**	**2009**
Area (acres)	8.2	8.2	8.2	8.2	8.2
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner					
Inspection Date	7/11/05	7/18/06	8/24/07	6/16/08	8/19/09
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Holly Keammerer (HK) Cindy Hoschouer (CH) Karen LaClair (KL) Cathy Seibert (CS) Sarah Cusser (SC)	WK, CH	WK, KL	WK, KL	WK, PF	WK, KL
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6
Site Photos and Photo Locations Follow the Site Aerial Photograph					
Site Aerial Photo Follows the Transect Sampling Summary					
INSPECTION SUMMARY					
Vegetation Inspection	0	1	1	0	0
Erosion Inspection	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0
VEGETATION INSPECTION					
Overall Recommendation	0	1	1	0	0
Estimated Canopy Coverage	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies
Litter Accumulation	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	19	20	18	17	24
Total Number of Acceptable Species	12	15	11	9	14
Ocular Estimate of Extent of Bare Areas	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present					
White Top *(Cardaria draba)*			Present	Infrequent	
Spotted Knapweed *(Centaurea maculosa)*	Present	Present	Present	Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*		Present	Present	Infrequent	Infrequent
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156) 2010 - 2014					
Year	**2005**	**2006**	**2007**	**2008**	**2009**
EROSION INSPECTION					
Average Slope (percent)	0%	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None
Presence of Rills	None	None	None	None	None
Potential Instability	None	None	None	None	None
Presence of Gullies	None	None	None	None	None
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None
Condition of Mulch	None	None	None	None	None
BMP Comments (See Comments Section)					
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)					Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?					TRAN (42%)
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.					Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)					Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No. Bare areas are defined as having <10% live vegetation cover.					No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.					2
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).					No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).					No

Observed Species in OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2005 - 2009

(m = major species; x = other species. For noxious weeds: I=Infrequent; F=Frequent; C=Common; D=Dominant)

Old Works Sub Area 6 Dragstrip Type A Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2005	**2006**	**2007**	**2008**	**2009**
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	m	m	m	m	m
Thickspike Wheatgrass	*Agropyron dasystachyum*	m	m	m	m	m
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m
Western Wheatgrass	*Agropyron smithii*		x			
Slender Wheatgrass	*Agropyron trachycaulum*	x	x			
Aster	*Aster adscendens*					x
Smooth Brome	*Bromus inermis*	x	x	x		x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*			x	x	x
Great Basin Wildrye	*Elymus cinereus*	x	x	x	x	x
Mammoth Wildrye	*Elymus giganteus*	x	x			x
Russian Wildrye	*Elymus junceus*	x	x	x	x	x
Sheep Fescue	*Festuca ovina*	x	x	x	x	x
Poverty Sumpweed	*Iva axillaris*	x	x			
Alfalfa	*Medicago sativa*	m	m	m	m	m
Yellow Sweetclover	*Melilotus officinalis*					x
Yellow Evening Star	*Mentzelia laevicaulis*		x			
Phacelia	*Phacelia hastata*					
Big Bluegrass	*Poa ampla*		x			x
Canada Bluegrass	*Poa compressa*	x	x	x	x	x
Cottonwood	*Populus trichocarpa*			x		
UNDESIRABLE WEEDY SPECIES						
Alyssum	*Alyssum desertorum*	x	x	x	x	x
Japanese Brome	*Bromus japonicus*					x
Cheatgrass	*Bromus tectorum*	x	x	x	x	x
Littleseed Falseflax	*Camelina microcarpa*			x	x	x
Tansy Mustard	*Descurainia richardsonii*	x				x
Prickly Lettuce	*Lactuca serriola*					x
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x		x	x	x
Hedge Mustard	*Sisymbrium loeselii*	x			x	
Salsify	*Tragopogon dubius*	x	x			x
NOXIOUS WEEDS						
White Top	*Cardaria draba*			x	I	
Spotted Knapweed	*Centaurea maculosa*	x	x	x	I	I
Baby's Breath	*Gypsophila paniculata*		x	x	I	I
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	12	15	11	9	14
	Total Number of Species	19	20	18	17	24

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2005 - 2009

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2005	• There are five separate parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap areas is mostly well-established. The north parcel of the Type A cap is dominated by alfalfa. • The Type A capped areas located around the Dragstrip parking area are dominated by crested wheatgrass. These areas show quite a bit of disturbance from vehicles and trash. The current landowner does not appear to maintain these areas. Trash needs to be picked up and spotted knapweed needs to be sprayed. Undisturbed areas have more cover. It appears that some of the knapweed was sprayed. Areas could be mowed and fertilized. • Any weed control should be done carefully so that desirable species are not adversely affected by the herbicide.	No obvious signs of erosion. Site is mostly flat.	No storm water BMPs in this area.	
2006	• The Baby's Breath is located at the east end of the part of the Type A Cap area on the south side of Warm Springs Creek. It needs to be controlled in this area before it spreads. 2006 was the first year that it was noted in this area. • There are several separate parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap areas is mostly well-established. The north parcel of the Type A cap is dominated by alfalfa. • The Type A capped areas located around the Dragstrip parking area are dominated by crested wheatgrass. These areas show quite a bit of disturbance from vehicles and trash. The current landowner does not appear to maintain these areas. Trash needs to be picked up and spotted knapweed needs to be sprayed. Undisturbed areas have more cover. It appears that some of the knapweed was sprayed. Areas could be mowed and fertilized. • Any weed control should be done carefully so that desirable species are not adversely affected by the herbicide. This is especially true for alfalfa.	No obvious signs of erosion. Site is mostly flat.	No storm water BMPs in this area.	

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2005 - 2009

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2007	• The Baby's Breath is located at the east end of the part of the Type A Cap area on the south side of Warm Springs Creek. It needs to be controlled in this area before it spreads. In 2007, there were not as many plants as were noted in 2006. • There are several separate parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap areas is mostly well-established. The north parcel of the Type A cap is dominated by alfalfa. • Any weed control should be done carefully so that desirable species are not adversely affected by the herbicide. This is especially true for alfalfa.	No obvious signs of erosion. Site is mostly flat.	No storm water BMPs in this area.	
2008	• The Baby's Breath is located at the east end of the part of the Type A Cap area on the south side of Warm Springs Creek. Control in 2006 and 2007 has greatly reduced the number of plants. In 2008, there were not as many plants as were noted in 2007. This area should be checked again in 2009, and any observed baby's breath plants should be spot sprayed. • There are several separate parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap areas is mostly well-established. The north parcel of the Type A cap is dominated by alfalfa. • Any weed control should be done carefully so that desirable species are not adversely affected by the herbicide. This is especially true for alfalfa.	No obvious signs of erosion. Site is mostly flat.	No storm water BMPs in this area.	
2009	• The Baby's Breath is located at the east end of the part of the Type A Cap area on the south side of Warm Springs Creek. Control in 2006-2008 has greatly reduced the number of plants. This area treated again in 2009. There herbicide has been applied very carefully with little or no damage to desirable species. • There are three separate parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap areas is mostly well-established. The north parcel of the Type A cap is dominated by alfalfa. There are very few weeds in these areas. • Any weed control should be done carefully so that desirable species are not adversely affected by the herbicide. This is especially true for alfalfa. • Most of the alfalfa plants on the north side of Warm Springs Creek have been browsed by deer. • Vegetation establishment in this area has been very successful. In 2009, the area was evaluated relative to meeting the performance criteria for waste management areas.	No obvious signs of erosion. Site is mostly flat.	No storm water BMPs in this area.	

Transect Sampling Summary for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

Old Works Sub Area 6 Dragstrip Type A Cap	Mean Cover (%)	
	2009	**2010**
Number of Transects Sampled	1	1
Total Vegetation Cover (All Species)	44	64
Total Vegetation Cover (Acceptable Species)	42	62
Litter and Rock Combined	56	34
Bare Soil	0	2
Total Cover	100	98
Litter Cover	56	34
Rock Cover	0	0
Acceptable Species		
Agropyron cristatum	<1	20
Agropyron dasystachyum	10	<1
Agropyron intermedium	14	14
Bromus inermis		<1
Elymus cinereus	<1	<1
Medicago sativa	18	28
Poa compressa	<1	
Undesirable Weedy Species		
Alyssum desertorum	<1	
Bromus japonicus	<1	
Bromus tectorum	2	2
Noxious Weed Species		
None		

SITE AERIAL PHOTOGRAPH

•1 Photo Location Point

OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

Photographs for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2005 - 2009

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type A Cap	**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type A Cap**
N46° 08’ 01.5”; W112° 54’ 28.1” looking Northeast	N46° 08’ 00.2”; W112° 54’ 11.2” looking West
July 11, 2005	July 11, 2005
July 18, 2006	July 18, 2006

Photographs for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2005 - 2009

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type A Cap	**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type A Cap**
N46° 08’ 01.5”; W112° 54’ 28.1” looking Northeast	N46° 08’ 00.2”; W112° 54’ 11.2” looking West
August 24, 2007	August 24, 2007
June 16, 2008	June 16, 2008

Photographs for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2005 - 2009

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type A Cap		**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type A Cap**
N46° 08’ 01.5”; W112° 54’ 28.1” looking Northeast		N46° 08’ 00.2”; W112° 54’ 11.2” looking West
August 19, 2009		August 19, 2009

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156) 2000 - 2004					
Year	**2000**	**2001**	**2002**	**2003**	**2004**
Area (acres)	8.2	8.2	8.2	8.2	8.2
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner					
Inspection Date	7/7/00	7/3/01	7/20/02	7/21/03	8/12/04
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Holly Keammerer (HK) Cindy Hoschouer (CH)	WK	WK	WK	WK	WK
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6
Site Photos and Photo Locations Follow the Site Aerial Photograph					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY*					
Vegetation Inspection					
Erosion Inspection					
Stormwater BMP Inspection					
VEGETATION INSPECTION*					
Overall Recommendation					
Estimated Canopy Coverage	15-25%	25-35%	>35%	>35%	>35%
Uniformity of Vegetation Cover	Varies	Varies	Varies	Varies	Varies
Litter Accumulation					
Evidence of Reproduction					
Species Richness (Total Number of Species - See List)	16	26	22	14	14
Total Number of Acceptable Species	11	15	14	9	9
Ocular Estimate of Extent of Bare Areas					
Weed Species Present					
Spotted Knapweed *(Centaurea maculosa)*	Present	Present	Present	Present	Present
Canada Thistle *(Cirsium arvense)*					Present
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156) 2000 - 2004					
Year	**2000**	**2001**	**2002**	**2003**	**2004**
EROSION INSPECTION*					
Average Slope (percent)	0%	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0
Evidence of Soil Movement					
Evidence of Surface Litter Movement					
Evidence of Coarse Fragment Movement	None	None	None	None	None
Presence of Rills	None	None	None	None	None
Potential Instability	None	None	None	None	None
Presence of Gullies	None	None	None	None	None
Erosion Comments (See Comments Section)					
BMP INSPECTION*					
Overall Recommendation					
Evidence of Check Dam Failure					
Evidence of Sediment Accumulation in Check Dams					
Condition of Dozer Basins					
Condition of Grade Control Structures					
Evidence of Brush Barrier Failure or Movement					
Condition of Mulch					
BMP Comments (See Comments Section)					
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)					
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?					
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.					
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)					
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No. Bare areas are defined as having <10% live vegetation cover.					
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.					
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).					
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).					

Observed Species in OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2000 - 2004

(m = major species; x = other species. For noxious weeds: I=Infrequent; F=Frequent; C=Common; D=Dominant)

Old Works Sub Area 6 Dragstrip Type A Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2000	**2001**	**2002**	**2003**	**2004**
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	m	m	m	m	m
Thickspike Wheatgrass	*Agropyron dasystachyum*	m	m	m	m	m
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m
Slender Wheatgrass	*Agropyron trachycaulum*	x	x			
Smooth Brome	*Bromus inermis*		x	x	x	x
Mountain Brome	*Bromus marginatus*	x	x	x		
Great Basin Wildrye	*Elymus cinereus*	x	x	x	x	x
Mammoth Wildrye	*Elymus giganteus*		x	x	x	
Russian Wildrye	*Elymus junceus*			x		
Sheep Fescue	*Festuca ovina*				x	
Foxtail Barley	*Hordeum jubatum*	x				
Poverty Sumpweed	*Iva axillaris*		x	x		x
Alfalfa	*Medicago sativa*	m	m	m	m	m
Yellow Sweetclover	*Melilotus officinalis*	x	x			
Yellow Evening Star	*Mentzelia laevicaulis*	x	x			
Canada Bluegrass	*Poa compressa*			x	x	x
Cottonwood	*Populus trichocarpa*	x	x	x		
Coyote Willow	*Salix exigua*		x	x		x
Wheat	*Triticum aestivum*		x	x		
UNDESIRABLE WEEDY SPECIES						
Alyssum	*Alyssum desertorum*	x	x	x	x	x
Cheatgrass	*Bromus tectorum*	x	x	x	x	x
Littleseed Falseflax	*Camelina microcarpa*		x	x		
Tansy Mustard	*Descurainia richardsonii*			x		
Prickly Lettuce	*Lactuca serriola*		x			
Russian Thistle	*Salsola iberica*		x	x		
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x	x		x	x
Hedge Mustard	*Sisymbrium loeselii*		x			
Common Dandelion	*Taraxacum officinale*		x			
Salsify	*Tragopogon dubius*	x	x	x		
NOXIOUS WEEDS						
Spotted Knapweed	*Centaurea maculosa*	x	x	x	x	x
Canada Thistle	*Cirsium arvense*					x
Kochia	*Kochia scoparia*		x	x	x	
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	11	15	14	9	9
	Total Number of Species	16	26	22	14	14

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2000 - 2004

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	• Vegetation in the Type A Cap area is well-established and will continue to develop over the next few years. • Herbicide control for knapweed needed in the Type A Cap area along the south side of Warm Springs Creek • Total vegetation cover is approximately 15-25 percent, cover by bare soil is approximately 20 percent, cover by rock is approximately 10 percent and plant litter cover is approximately 50-60 percent.	No obvious signs of erosion. Site is mostly flat.	No storm water BMPs in this area.	
2001	• Vegetation in the Type A Cap area is well-established and will continue to develop over the next few years. The Type A capped areas located around the Dragstrip parking area are dominated by crested wheatgrass. The vegetation cover in these areas tends to be somewhat less than in other Type A cap areas • Herbicide control for knapweed needed in the Type A Cap area along the south side of Warm Springs Creek • Total vegetation cover is approximately 20-35 percent, cover by bare soil is approximately 20 percent, cover by rock is approximately 10 percent and plant litter cover is approximately 50-60 percent. The Type A cap areas are quite variable. The areas around the Dragstrip parking and access areas tend to be somewhat disturbed by vehicle traffic. Also, some lumber and debris are piled on parts of the area.	No obvious evidence of erosion in the Type A Cap areas. Site is stable – mostly flat.	No storm water BMPs in this area.	
2002	• There are five separate parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap area is mostly well-established. The Type A capped areas located around the Dragstrip parking area are dominated by crested wheatgrass. The vegetation cover in these areas tends to be somewhat less than in other Type A cap areas. • Herbicide control for knapweed needed in the Type A Cap area along the south side of Warm Springs Creek. Knapweed appears to be increasing in abundance in portions of the Type A Cap areas. • Total vegetation cover is approximately 30-35 percent, cover by bare soil is approximately 20 percent, cover by rock is approximately 10 percent and plant litter cover is approximately 50-60 percent. The Type A cap areas are quite variable. The areas around the Dragstrip parking and access areas tend to be somewhat disturbed by vehicle traffic. Also, some lumber and debris are piled on parts of the area.	No obvious evidence of erosion in the Type A Cap areas. Site is stable – mostly flat.	No storm water BMPs in this area.	

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2000 - 2004

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2003	• There are five separate parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap area is mostly well-established. The Type A capped areas located around the Dragstrip parking area are dominated by crested wheatgrass. These areas show quite a bit of disturbance from vehicles and trash. Spotted knapweed needs to be sprayed. Undisturbed areas have more cover. The north parcel of the Type A cap is dominated by alfalfa. • Total vegetation cover is approximately 30-35 percent, cover by bare soil is approximately 15-20 percent, cover by rock is approximately 10 percent and plant litter cover is approximately 50-60 percent. The Type A cap areas are quite variable. The areas around the Dragstrip parking and access areas tend to be somewhat disturbed by vehicle traffic. Also, some lumber and debris are piled on parts of the area. • Herbicide control for knapweed needed in the Type A Cap area along the south side of Warm Springs Creek. Knapweed appears to be increasing in abundance in portions of the Type A Cap areas.	No obvious evidence of erosion in the Type A Cap areas. Site is stable – mostly flat.	No storm water BMPs in this area.	
2004	• There are five separate parcels of Type A in Sub Area 6. While the species composition varies relative to dominant species, the vegetation in the Type A Cap area is mostly well-established. The north parcel of the Type A cap is dominated by alfalfa. • The Type A capped areas located around the Dragstrip parking area are dominated by crested wheatgrass. These areas show quite a bit of disturbance from vehicles and trash. The current landowner does not appear to maintain these areas. Trash needs to be picked up and spotted knapweed needs to be sprayed. Undisturbed areas have more cover. It appears that some of the knapweed was sprayed, but the dose seems to have been too low. Plants were affected, but not killed. Areas could be mowed and fertilized. • Herbicide control for knapweed needed in the Type A Cap area along the south side of Warm Springs Creek. Knapweed appears to be increasing in abundance in portions of the Type A Cap areas • Total vegetation cover is approximately 30-35 percent, cover by bare soil is approximately 15-20 percent, cover by rock is approximately 10 percent and plant litter cover is approximately 50-60 percent. The Type A cap areas are quite variable. The areas around the Dragstrip parking and access areas tend to be somewhat disturbed by vehicle traffic. Also, some lumber and debris are piled on parts of the area.	No obvious evidence of erosion in the Type A Cap areas. Site is stable – mostly flat.	No storm water BMPs in this area.	

SITE AERIAL PHOTOGRAPH

•1 Photo Location Point

OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156)

Photographs for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2000 - 2004

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type A Cap	**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type A Cap**
N46° 08’ 01.5”; W112° 54’ 28.1” looking Northeast	N46° 08’ 00.2”; W112° 54’ 11.2” looking West
July 7, 2000	July 7, 2000
July 3, 2001	July 3, 2001

Photographs for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2000 - 2004

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type A Cap	**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type A Cap**
N46° 08’ 01.5”; W112° 54’ 28.1” looking Northeast	N46° 08’ 00.2”; W112° 54’ 11.2” looking West
July 20, 2002	July 20, 2002
July 21, 2003	July 21, 2003

Photographs for OWEADA Sub Area 6 Dragstrip Type A Cap (VM_156): 2000 - 2004

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type A Cap		**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type A Cap**
N46° 08’ 01.5”; W112° 54’ 28.1” looking Northeast		N46° 08’ 00.2”; W112° 54’ 11.2” looking West
August 12, 2004		August 12, 2004

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157) 2015-					
Year	**2015**				
Area (acres)	63.9				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/29/15				
RDU	OWEADA				
Evaluators: Warren Keammerer (WK) Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	LRES				
Long Term Monitoring Category	4				
Site Photos and Photo Locations Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Sm/Infreq				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species - See List)	28				
Total Number of Acceptable Species	19				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Field Bindweed (*Convolvulus arvensis*)	Infrequent				
Leafy Spurge *(Euphorbia esula)*	Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*	Infrequent				
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR UPLAND, NON-STEEP SLOPE AREAS OUTSIDE WASTE MANAGEMENT AREAS					
Land Reclamation Evaluation System (LRES) score must be equal to or greater than 115 points. Enter LRES Score.					
LRES Evaluation Date					

Observed Species in OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2015 -

(m = major species; x = other species. For noxious weeds: I=Infrequent; F=Frequent; C=Common; D=Dominant)

Old Works Sub Area 6 Dragstrip Type D Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	x				
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Western Wheatgrass	*Agropyron smithii*	x				
Slender Wheatgrass	*Agropyron trachycaulum*	x				
Red Top	*Agrostis alba*	m				
Smooth Brome	*Bromus inermis*	x				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Great Basin Wildrye	*Elymus cinereus*	m				
Mammoth Wildrye	*Elymus giganteus*	x				
Poverty Sumpweed	*Iva axillaris*	x				
Baltic Rush	*Juncus balticus*	x				
Alfalfa	*Medicago sativa*	x				
Yellow Evening Star	*Mentzelia laevicaulis*	x				
Scorpion Weed	*Phacelia hastata*	x				
Canada Bluegrass	*Poa compressa*	x				
Cottonwood	*Populus trichocarpa*	x				
Woods Rose	*Rosa woodsii*	x				
Scarlet Globe Mallow	*Sphaeralcea coccinea*	x				
UNDESIRABLE WEEDY SPECIES						
Cheatgrass	*Bromus tectorum*	x				
Tansy Mustard	*Descurainia richardsonii*	x				
Salsify	*Tragopogon dubius*	x				
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I				
Spotted Knapweed	*Centaurea maculosa*	I				
Field Bindweed	*Convolvulus arvensis*	I				
Leafy Spurge	*Euphorbia esula*	I				
Kochia	*Kochia scoparia*	I				
Dalmatian Toadflax	*Linaria dalmatica*	I				
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	19				
	Total Number of Species	28				

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2015 -

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. These evaluation forms pertain only to the parts of the Type D Cap Dragstrip areas that were not cover soiled in 2007. • Rocky areas have had limited vegetation development but many of these areas are filling in with red top and Great Basin wildrye. • A haul road was installed at the approximate southern edge of the Type D cap on the north end. The road connected the borrow pit at the east end of Stucky Ridge with the Galen Highway. This area has filled in with perennial grasses to some extent, but is still dominated by low growing kochia in places. • The Type D Dragstrip includes areas both within and outside the waste management area (WMA) boundary. The north end of this area is part of a non-waste management, non-steep slope area (LRES evaluation); the area along Warm Springs Creek is in a waste management area (cover evaluation). The in-situ treatment of this area also makes the use of LRES evaluation appropriate even for the acres that fall within the WMA. • Four LRES points were sampled in this area as part of the 2011 Vegetation-Soils study. • The area met the performance standards for two years (2011, 2013). Performance standards are still being met in 2015. Compliance Status: LTIM. • Weed control was conducted in portions of the area after the evaluation date in 2015. Weed abundance estimates are based on pre-control observations. Evaluate weed status in 2016.	No obvious signs of erosion. Also, rocky at the surface in many places. BLM erosion score <5	No storm water BMPs installed in this area.	

SITE AERIAL PHOTOGRAPH

•1 Photo Location Point

OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2015 -

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type D Cap		**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type D Cap**
N46° 08’ 02.3”; W112° 54’ 17.9”, looking Southwest		N46° 08’ 11.0”; W112° 54’ 12.1”, looking north-northeast
July 29, 2015		July 29, 2015

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2015 -

PHOTO LOCATION 3 - OWEADA Sub Area 6 Dragstrip Type D Cap
N46° 08’ 39.5”; W112° 53’ 46.1”, looking south
July 29, 2015

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157) 2010 - 2014					
Year	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	63.9	63.9	63.9	63.9	63.9
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner					
Inspection Date	6/8/10 8/7/10	8/3/11	8/21/12	8/1/13 8/5/13	7/14/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Holly Keammerer (HK) Cindy Hoschouer (CH) Karen LaClair (KL) Cathy Seibert (CS) Sarah Cusser (SC)	WK, KL	WK, CS	WK, HK, CS	WK, HK, CS	WK, HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	LRES	LRES	LRES	LRES	LRES
Long Term Monitoring Category	4	4	4	4	4
Site Photos and Photo Locations Follow the Site Aerial Photograph					
Site Aerial Photo Follows the LRES Summary					
INSPECTION SUMMARY					
Vegetation Inspection	3	3	0	0	0
Erosion Inspection	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0
VEGETATION INSPECTION					
Overall Recommendation	3	3	0	0	0
Estimated Canopy Coverage	30-39% 10-19%	30-39% 10-19%	30-39% 20-29%	30-39%	30-39%
Uniformity of Vegetation Cover	Sm/Freq	Sm/Freq	Sm/Freq	Sm/Infreq	Sm/Infreq
Litter Accumulation	Moderate	Moderate	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	34	35	35	35	27
Total Number of Acceptable Species	25	26	26	23	20
Ocular Estimate of Extent of Bare Areas	5-10%	5-10%	<1-5%	<1-5%	<1-5%
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Common	Common	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*	Infrequent	Infrequent	Infrequent	Infrequent	
Field Bindweed (*Convolvulus arvensis*)	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Leafy Spurge *(Euphorbia esula)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Dalmatian Toadflax *(Linaria dalmatica)*		Infrequent	Infrequent	Infrequent	Infrequent
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157) 2010 - 2014					
Year	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION					
Average Slope (percent)	0%	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None
Presence of Rills	None	None	None	None	None
Potential Instability	None	None	None	None	None
Presence of Gullies	None	None	None	None	None
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None
Condition of Mulch	None	None	None	None	None
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR UPLAND, NON-STEEP SLOPE AREAS OUTSIDE WASTE MANAGEMENT AREAS					
Land Reclamation Evaluation System (LRES) score must be equal to or greater than 115 points. Enter LRES Score.		135.5		139.5	
LRES Evaluation Date		8/17/2011 8/18/2011		8/1/2013	

Observed Species in OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2010 - 2014

(m = major species; x = other species. For noxious weeds: I=Infrequent; F=Frequent; C=Common; D=Dominant)

Old Works Sub Area 6 Dragstrip Type D Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2010	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*	x	x	x	x	x
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m
Western Wheatgrass	*Agropyron smithii*	x	x	x	x	x
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x	x	x
Red Top	*Agrostis alba*	m	m	m	m	m
Aster	*Aster adscendens*	x	x	x	x	
Smooth Brome	*Bromus inermis*	x	x	x	x	x
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x	x	x	x	x
Rocky Mountain Bee Plant	*Cleome serrulata*			x	x	x
Bastard Toadflax	*Comandra umbellata*	x				
Inland Saltgrass	*Distichlis stricta*	x		x		
Great Basin Wildrye	*Elymus cinereus*	m	m	m	m	m
Mammoth Wildrye	*Elymus giganteus*	x	x	x	x	x
Russian Wildrye	*Elymus junceus*	x	x	x		
Creeping Wildrye	*Elymus triticoides*		x			
Willowherb	*Epilobium paniculatum*		x			
Sheep Fescue	*Festuca ovina*		x	x	x	x
Curlycup Gumweed	*Grindelia squarrosa*	x				
Foxtail Barley	*Hordeum jubatum*		x			
Poverty Sumpweed	*Iva axillaris*	x	x	x	x	x
Baltic Rush	*Juncus balticus*	x		x	x	
Skeleton Weed	*Lygodesmia juncea*	x				
Machaeranthera	*Machaeranthera canescens*		x	x	x	
Alfalfa	*Medicago sativa*	x	x	x	x	x
Yellow Evening Star	*Mentzelia laevicaulis*	x	x	x	x	x
Scorpion Weed	*Phacelia hastata*	x	x	x	x	x
Canada Bluegrass	*Poa compressa*	x	x	x	x	x
Cottonwood	*Populus trichocarpa*	x	x	x	x	x
Woods Rose	*Rosa woodsii*	x	x	x	x	x
Coyote Willow	*Salix exigua*	x	x	x		
Silver Buffaloberry	*Shepherdia argentea*		x			
Scarlet Globe Mallow	*Sphaeralcea coccinea*			x	x	x
UNDESIRABLE WEEDY SPECIES						
Cheatgrass	*Bromus tectorum*	x	x			
Annual Sunflower	*Helianthus annuus*	x		x	x	
Bladder Campion	*Silene latifolia*				x	
Tumbling Hedge Mustard	*Sisymbrium altissimum*				x	
Hedge Mustard	*Sisymbrium loeselii*				x	
Salsify	*Tragopogon dubius*	x	x	x	x	x

Observed Species in OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2010 - 2014

(m = major species; x = other species. For noxious weeds: I=Infrequent; F=Frequent; C=Common; D=Dominant)

Old Works Sub Area 6 Dragstrip Type D Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2010	**2011**	**2012**	**2013**	**2014**
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I	I	I	I	I
Spotted Knapweed	*Centaurea maculosa*	C	C	I	I	I
Canada Thistle	*Cirsium arvense*	I	I	I	I	
Field Bindweed	*Convolvulus arvensis*	I	I	I	I	I
Leafy Spurge	*Euphorbia esula*	I	I	I	I	I
Kochia	*Kochia scoparia*	I	I	I	I	I
Dalmatian Toadflax	*Linaria dalmatica*		I	I	I	I
Curly Dock	*Rumex crispus*					
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	25	26	26	23	20
	Total Number of Species	34	35	35	35	27

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2010 - 2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2010	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. These evaluation forms pertain only to the parts of the Type D Cap Dragstrip areas that were not cover soiled in 2007. • Rocky areas have limited vegetation development. • The old borrow areas and retention areas need to be sprayed for knapweed control. Knapweed occurs throughout the area. Need to continue knapweed control. It would be best to not spray desirable species, but because of the abundance of knapweed a general spraying approach will likely be needed. • Knapweed has increased and has become abundant throughout almost all of the northern area (areas not covered with soil in 2007). The knapweed needs control as soon as possible. • A new haul road was installed at the approximate southern edge of the Type D cap on the north end. The road connects the borrow pit at the east end of Stucky Ridge with the Galen Highway. Weeds were sprayed along the haul road.	Even though the vegetation cover is heterogeneous, erosion is not a problem in the Dragstrip area. The Type D areas are essentially flat with no obvious signs of erosion. Also, rocky at the surface in many places. BLM erosion score <45.	No storm water BMPs in this area.	
2011	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. These evaluation forms pertain only to the parts of the Type D Cap Dragstrip areas that were not cover soiled in 2007. • Rocky areas have limited vegetation development. • Knapweed occurs throughout the area. Need to continue knapweed control. It would be best to not spray desirable species, but because of the abundance of knapweed a general spraying approach will likely be needed (helicopter). • Knapweed has increased and has become abundant throughout almost all of the northern area (areas not covered with soil in 2007). The knapweed needs control as soon as possible. • A new haul road was installed at the approximate southern edge of the Type D cap on the north end. In 2010, the road connected the borrow pit at the east end of Stucky Ridge with the Galen Highway. In 2011, this area had been revegetated. Seedling density was >40m2. The area should be okay in 2-3 years. • The Type D Dragstrip was sampled as part of the 2011 Vegetation-Soils study. The average LRES score of the four sampled points was 135.5.	Even though the vegetation cover is heterogeneous, erosion is not a problem in the Dragstrip area. The Type D areas are essentially flat with no obvious signs of erosion. Also, rocky at the surface in many places. BLM erosion score <45.	No storm water BMPs in this area.	

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2010 – 2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2012	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. These evaluation forms pertain only to the parts of the Type D Cap Dragstrip areas that were not cover soiled in 2007. • Rocky areas have limited vegetation development. • A new haul road was installed at the approximate southern edge of the Type D cap on the north end. In 2010, the road connected the borrow pit at the east end of Stucky Ridge with the Galen Highway. In 2011, this area had been revegetated. Seedling density was >40m2. The area should be okay in 1-2 years. In 2012, this area was still sparse. • The Type D Dragstrip was sampled as part of the 2011 Vegetation-Soils study. The average LRES score of the four sampled points was 135.5. The north end of this area is part of a non-waste management, non-steep slope area (LRES evaluation); the area along Warm Springs Creek is in a waste management area (cover transect evaluation). • Knapweed control was very successful. About 95% of the plants were killed. Some additional work may be needed in 2013	Even though the vegetation cover is heterogeneous, erosion is not a problem in the Dragstrip area. The Type D areas are essentially flat with no obvious signs of erosion. Also, rocky at the surface in many places. BLM erosion score <45.	No storm water BMPs in this area.	

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2010 – 2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2013	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. These evaluation forms pertain only to the parts of the Type D Cap Dragstrip areas that were not cover soiled in 2007. • Rocky areas have limited vegetation development but many of these areas are filling in with red top and Great Basin wildrye. • A new haul road was installed at the approximate southern edge of the Type D cap on the north end. The road connected the borrow pit at the east end of Stucky Ridge with the Galen Highway. In 2013, this area was filling in with perennial grasses, but is still dominated by low growing kochia in places. • Knapweed control in 2012 was very successful. Some additional work is necessary and should be done in 2014 if no additional work was done in 2013. • The Type D Dragstrip includes areas both within and outside the waste management area (WMA) boundary. The north end of this area is part of a non-waste management, non-steep slope area (LRES evaluation); the area along Warm Springs Creek is in a waste management area (cover evaluation). The in-situ treatment of this area also makes the use of LRES evaluation appropriate even for the acres that fall within the WMA. • In 2011, four LRES points were sampled as part of the 2011 Vegetation-Soils study. The mean LRES score was 135.5. The three LRES points outside the WMA had a mean score of 131.3. The single LRES point within the WMA had a LRES score of 148 and 41% cover by acceptable species. Standards were met for all sites. • In 2013, two LRES points (one within and one outside the WMA) were sampled for compliance. The mean LRES score was 139.5. The site within the WMA met standards both in terms of the LRES score (133) and 34% cover by acceptable species.	No obvious signs of erosion. Also, rocky at the surface in many places. BLM erosion score <5	No storm water BMPs in this area.	

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2010 – 2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2014	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. These evaluation forms pertain only to the parts of the Type D Cap Dragstrip areas that were not cover soiled in 2007. • Rocky areas have had limited vegetation development but many of these areas are filling in with red top and Great Basin wildrye. • A haul road was installed at the approximate southern edge of the Type D cap on the north end. The road connected the borrow pit at the east end of Stucky Ridge with the Galen Highway. This area has filled in with perennial grasses to some extent, but is still dominated by low growing kochia in places. • Knapweed control in 2012 was very successful. Some additional work is necessary and should be done in the next 1-2 years (especially north of the haul road). • The Type D Dragstrip includes areas both within and outside the waste management area (WMA) boundary. The north end of this area is part of a non-waste management, non-steep slope area (LRES evaluation); the area along Warm Springs Creek is in a waste management area (cover evaluation). The in-situ treatment of this area also makes the use of LRES evaluation appropriate even for the acres that fall within the WMA. • Four LRES points were sampled in this area as part of the 2011 Vegetation-Soils study. • The area met the performance standards for two years (2011, 2013). Performance standards are still being met in 2014. Compliance Status: LTIM.	No obvious signs of erosion. Also, rocky at the surface in many places. BLM erosion score <5	No storm water BMPs installed in this area.	

LRES Sampling Summary for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

Old Works Sub Area 6 Dragstrip Type D Cap								
Year	2011					2013		
	LRES-1	LRES-2	LRES-3	LRES-4		LRES-1	LRES-2	
VEGETATION COMMUNITY (100 Points Maximum)								
1. Percent Vegetation Cover (25 pts)	13	1	13	12		12	15	
2. Uniformity of Vegetation (10 pts)	8	5	9	8		8	8	
3. Evidence of Reproduction (15 pts)	15	7	13	13		13	12	
4. Plant Litter Accumulation (15 pts)	12	13	13	13		12	12	
5. Community Dominance Evenness (5 pts)	4	1	2	2		2	3	
6. Estimated Plant Density (10 pts)	10	8	10	10		10	10	
7. Community Richness (20 pts)	13	8	12	8		5	17	
LRES Vegetation Total	75	43	72	66		62	74	
POTENTIAL FOR COC TRANSPORT (75 points Max)								
8. Current Water Erosion (40 pts)	39	38	38	37		39	39	
9. Soil pH (20 pts)	19	19	20	19		19	19	
10. Wind Erosion (15 pts)	15	14	14	14		13	24	
11. Surface Tailings/Metals Salts (-15 pts)	0	0	0	0		0	0	
LRES COC Transport Total	73	71	72	70		71	72	
					MEAN			**MEAN**
TOTAL LRES SCORE	148	114	144	136	**135.5**	133	146	**139.5**

SITE AERIAL PHOTOGRAPH

•1 Photo Location Point

OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2010 - 2014

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type D Cap	**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type D Cap**
N46° 08’ 02.3”; W112° 54’ 17.9”, looking Southwest	N46° 08’ 11.0”; W112° 54’ 12.1”, looking north-northeast
June 8, 2010	June 8, 2010
August 3, 2011	August 3, 2011

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2010 - 2014

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type D Cap		**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type D Cap**
N46° 08’ 02.3”; W112° 54’ 17.9”, looking Southwest		N46° 08’ 11.0”; W112° 54’ 12.1”, looking north-northeast
August 21, 2012		August 21, 2012
August 1, 2013		August 1, 2013

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2010 - 2014

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type D Cap		**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type D Cap**
N46° 08’ 02.3”; W112° 54’ 17.9”, looking Southwest		N46° 08’ 11.0”; W112° 54’ 12.1”, looking north-northeast
July 14, 2014		July 14, 2014

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2010 - 2014

PHOTO LOCATION 3 - OWEADA Sub Area 6 Dragstrip Type D Cap

N46° 08’ 39.5”; W112° 53’ 46.1”, looking south

August 7, 2010

August 3, 2011

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2010 - 2014

PHOTO LOCATION 3 - OWEADA Sub Area 6 Dragstrip Type D Cap
N46° 08’ 39.5”; W112° 53’ 46.1”, looking south
August 21, 2012
August 1, 2013

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2010 - 2014

PHOTO LOCATION 3 - OWEADA Sub Area 6 Dragstrip Type D Cap
N46° 08’ 39.5”; W112° 53’ 46.1”, looking south
July 14, 2014

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157) 2005 - 2009					
Year	**2005**	**2006**	**2007**	**2008**	**2009**
Area (acres)	63.9	63.9	63.9	63.9	63.9
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner					
Inspection Date	7/11/05	7/17/06	8/24/07	8/19/08	8/18/09
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Holly Keammerer (HK) Cindy Hoschouer (CH) Karen LaClair (KL)	WK, CH	WK, KL	WK, KL	WK, KL	WK, KL
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	LRES	LRES	LRES	LRES	LRES
Long Term Monitoring Category	4	4	4	4	4
Site Photos and Photo Locations Follow the Site Aerial Photograph					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	3	3	1	1	3
Erosion Inspection	0	0	0	0	0
Stormwater BMP Inspection	0	0	0	0	0
VEGETATION INSPECTION					
Overall Recommendation	3	3	1	1	3
Estimated Canopy Coverage	0-39%	0-39%	30-39% 20-29%	30-39%	30-39% 20-29%
Uniformity of Vegetation Cover	Lrg/Freq	Lrg/Freq	Sm/Freq	Sm/Freq	Sm/Freq
Litter Accumulation	Light/ Mod	Light/ Mod	Moderate	Moderate	Moderate
Evidence of Reproduction	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	44	43	39	40	35
Total Number of Acceptable Species	33	29	27	27	23
Ocular Estimate of Extent of Bare Areas	<1-5%	5-10%	5-10%	<1-5%	<1-5%
Weed Species Present					
White Top *(Cardaria draba)*	Present	Present	Present	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Present	Present	Present	Frequent	Common
Canada Thistle *(Cirsium arvense)*	Present	Present	Present	Infrequent	Infrequent
Field Bindweed (*Convolvulus arvensis*)	Present	Present	Present	Infrequent	Infrequent
Leafy Spurge *(Euphorbia esula)*	Present	Present	Present	Infrequent	Infrequent
Baby's Breath *(Gypsophila paniculata)*	Present			Infrequent	Infrequent
Dalmatian Toadflax *(Linaria dalmatica)*		Present			Infrequent
Curly Dock (*Rumex crispus*)			Present		
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157) 2010 - 2014					
Year	**2005**	**2006**	**2007**	**2008**	**2009**
EROSION INSPECTION					
Average Slope (percent)	0%	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat	Flat
Overall Recommendation	0	0	0	0	0
Evidence of Soil Movement	None	None	None	None	None
Evidence of Surface Litter Movement	None	None	None	None	None
Evidence of Coarse Fragment Movement	None	None	None	None	None
Presence of Rills	None	None	None	None	None
Potential Instability	None	None	None	None	None
Presence of Gullies	None	None	None	None	None
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0	0	0	0	0
Evidence of Check Dam Failure	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams	None	None	None	None	None
Condition of Dozer Basins	None	None	None	None	None
Condition of Grade Control Structures	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement	None	None	None	None	None
Condition of Mulch	None	None	None	None	None
BMP Comments (See Comments Section)					
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**					
PERFORMANCE STANDARDS FOR UPLAND, NON-STEEP SLOPE AREAS OUTSIDE WASTE MANAGEMENT AREAS					
Land Reclamation Evaluation System (LRES) score must be equal to or greater than 115 points. Enter LRES Score.					
LRES Evaluation Date					

Observed Species in OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2005 - 2009

(m = major species; x = other species. For noxious weeds: I=Infrequent; F=Frequent; C=Common; D=Dominant)

Old Works Sub Area 6 Dragstrip Type D Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2005	**2006**	**2007**	**2008**	**2009**
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*	x	x	x	x	x
Intermediate Wheatgrass	*Agropyron intermedium*	m	m	m	m	m
Western Wheatgrass	*Agropyron smithii*	x	x	x	x	x
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x	x	x
Red Top	*Agrostis alba*	x	m	m	m	m
Aster	*Aster adscendens*	x		x	x	x
Smooth Brome	*Bromus inermis*	x	x	x	x	x
Douglas Sedge	*Carex douglasii*	x	x			
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x	x	x	x	x
Rocky Mountain Bee Plant	*Cleome serrulata*	x				
Bastard Toadflax	*Comandra umbellata*				x	
Red-osier Dogwood	*Cornus stolonifera*		x	x	x	x
Inland Saltgrass	*Distichlis stricta*	x		x	x	
Great Basin Wildrye	*Elymus cinereus*	x	m	m	m	m
Mammoth Wildrye	*Elymus giganteus*	x	x	x	x	x
Russian Wildrye	*Elymus junceus*	x	x	x	x	
Scouring Rush	*Equisetum laevigatum*	x				
Sheep Fescue	*Festuca ovina*	x	x	x		
Curlycup Gumweed	*Grindelia squarrosa*	x	x	x	x	x
Broom Snakeweed	*Gutierrezia sarothrae*					x
Foxtail Barley	*Hordeum jubatum*	x	x	x		
Poverty Sumpweed	*Iva axillaris*	x	x	x	x	x
Baltic Rush	*Juncus balticus*	x				x
Skeleton Weed	*Lygodesmia juncea*	x		x	x	
Machaeranthera	*Machaeranthera canescens*	x	x			x
Alfalfa	*Medicago sativa*	x	x	x	x	x
Yellow Evening Star	*Mentzelia laevicaulis*	x	x	x	x	x
Alkali Muhly	*Muhlenbergia asperifolia*		x			
Scorpion Weed	*Phacelia hastata*	x	x	x	x	x
Canada Bluegrass	*Poa compressa*	x	x	x	x	x
Interior Bluegrass	*Poa interior*	x			x	
Cottonwood	*Populus trichocarpa*	x	x	x	x	
Douglas-fir	*Pseudotsuga menziesii*				x	
Woods Rose	*Rosa woodsii*	x	x	x	x	x
Willowleaf Dock	*Rumex salicifolius*					
Coyote Willow	*Salix exigua*	x	x	x		x
Missouri Goldenrod	*Solidago missouriensis*		x			
Scarlet Globe Mallow	*Sphaeralcea coccinea*	x	x	x	x	
Western Snowberry	*Symphoricarpos occidentalis*	x	x			

Observed Species in OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2005 - 2009

(m = major species; x = other species. For noxious weeds: I=Infrequent; F=Frequent; C=Common; D=Dominant)

Old Works Sub Area 6 Dragstrip Type D Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2005	**2006**	**2007**	**2008**	**2009**
UNDESIRABLE WEEDY SPECIES						
Cheatgrass	*Bromus tectorum*	x	x	x	x	x
Annual Sunflower	*Helianthus annuus*	x	x			
Prickly Lettuce	*Lactuca serriola*			x		
Clasping Peppergrass	*Lepidium perfoliatum*				x	
Russian Thistle	*Salsola iberica*	x	x	x		
Catchfly	*Silene noctiflora*		x		x	
Campion	*Silene vulgaris*		x			
Tumbling Hedge Mustard	*Sisymbrium altissimum*		x	x	x	x
Hedge Mustard	*Sisymbrium loeselii*				x	x
Salsify	*Tragopogon dubius*	x	x	x	x	x
NOXIOUS WEEDS						
White Top	*Cardaria draba*	x	x	x	I	I
Spotted Knapweed	*Centaurea maculosa*	x	x	x	F	C
Canada Thistle	*Cirsium arvense*	x	x	x	I	I
Field Bindweed	*Convolvulus arvensis*	x	x	x	I	I
Leafy Spurge	*Euphorbia esula*	x	x	x	I	I
Baby's Breath	*Gypsophila paniculata*	x			I	I
Kochia	*Kochia scoparia*	x	x	x	I	I
Dalmatian Toadflax	*Linaria dalmatica*		x			I
Curly Dock	*Rumex crispus*			x		
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	33	29	27	27	23
	Total Number of Species	44	43	39	40	35

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2005 - 2009

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2005	• Vegetation cover in 2005 was greatly improved over much of the area. Some areas have vegetation cover by acceptably species >40%. The established plants are very robust. • There was more red top than in previous years. Both cover and density are increasing for this species. • Rocky areas have limited vegetation development. Even though the overall vegetation cover is sparse in places, observations suggest that the vegetation is continuing to develop. Many new seedlings were noted in 2005. • The old borrow areas and retention areas need to be sprayed for knapweed control. Use of a boom sprayer is acceptable in these areas. Knapweed is becoming more common throughout the area. Need to continue knapweed control, but do not spray desirable species. Knapweed is the most troublesome weed species in the area. On the south side of Warm Springs Creek, south of the open space path, both adult and rosette forms of knapweed are very common. • From N46° 08' 31.2"northwards, the vegetation cover is approximately 30-45%. Some patches with less cover, but many seedlings in the sparse areas. • From N46° 08' 31.3" southwards, the vegetation cover decreases and surface rock content increases. Seedlings occur in the rocky areas suggesting that vegetation is continuing to develop. Cover ranges between 20-30%; but areas dominated by rock on the surface have cover values of 3-10%. These are approximate boundaries for gradually changing cover values.	Even though the vegetation cover is heterogeneous, erosion is not a problem in the Dragstrip area. The Type D areas are essentially flat with no obvious signs of erosion.	No storm water BMPs in this area.	

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2005 - 2009

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2006	• Vegetation cover in 2005 was greatly improved over much of the area. Some areas have vegetation cover by acceptably species >40%. The established plants are very robust. • There was more red top than in previous years. Both cover and density are increasing for this species. • Rocky areas have limited vegetation development. Even though the overall vegetation cover is sparse in places, observations suggest that the vegetation is continuing to develop. Many new seedlings were noted in 2006. • The old borrow areas and retention areas need to be sprayed for knapweed control. Use of a boom sprayer is acceptable in these areas. Knapweed is becoming more common throughout the area. Need to continue knapweed control, but do not spray desirable species. Knapweed is the most troublesome weed species in the area. On the south side of Warm Springs Creek, south of the open space path, both adult and rosette forms of knapweed are very common. • From N46° 08' 31.2"northwards, the vegetation cover is approximately 30-45%. Some patches with less cover, but many seedlings in the sparse areas. • From N46° 08' 31.3" southwards, the vegetation cover decreases and surface rock content increases. Seedlings occur in the rocky areas suggesting that vegetation is continuing to develop. Cover ranges between 20-30%; but areas dominated by rock on the surface have cover values of 3-10%. These are approximate boundaries for gradually changing cover values. • There is a large beaver dam in Warm Springs Creek at N46° 08' 11.1"; W112° 53' 51.4". • There was quite a bit of Yellow Evening Star throughout the area in 2006.	Even though the vegetation cover is heterogeneous, erosion is not a problem in the Dragstrip area. The Type D areas are essentially flat with no obvious signs of erosion.	No storm water BMPs in this area.	
2007	• Rocky areas have limited vegetation development. Even though the overall vegetation cover is sparse in places, observations suggest that the vegetation is continuing to develop. • The old borrow areas and retention areas need to be sprayed for knapweed control. Use of a boom sprayer is acceptable in these areas. Knapweed occurs throughout the area. Need to continue knapweed control, but do not spray desirable species. • From N46° 08' 31.2"northwards, the vegetation cover is approximately 30-45%. Some patches with less cover.	Even though the vegetation cover is heterogeneous, erosion is not a problem in the Dragstrip area. The Type D areas are essentially flat with no obvious signs of erosion.	No storm water BMPs in this area.	

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2005 - 2009

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2008	• Rocky areas have limited vegetation development. Even though the overall vegetation cover is sparse in places, observations suggest that the vegetation is continuing to develop. • The old borrow areas and retention areas need to be sprayed for knapweed control. Knapweed occurs throughout the area. Need to continue knapweed control, but do not spray desirable species. • Weeds on the north end of the area were sprayed. Overall, it appears that the treatment was effective, however some knapweed plants have survived. Plan on repeating the treatment in 2009.	Even though the vegetation cover is heterogeneous, erosion is not a problem in the Dragstrip area. The Type D areas are essentially flat with no obvious signs of erosion.	No storm water BMPs in this area.	
2009	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. These evaluation forms pertain only to the parts of the Type D Cap Dragstrip areas that were not cover soiled in 2007. • Rocky areas have limited vegetation development. • The old borrow areas and retention areas need to be sprayed for knapweed control. Knapweed occurs throughout the area. Need to continue knapweed control, but do not spray desirable species. • White top was treated in the northern part of the area and in the area just north of Warm Springs Creek. • Knapweed has increased and has become abundant throughout almost all of the northern area (areas not covered with soil in 2007). The knapweed needs control as soon as possible.	Even though the vegetation cover is heterogeneous, erosion is not a problem in the Dragstrip area. The Type D areas are essentially flat with no obvious signs of erosion.	No storm water BMPs in this area.	

SITE AERIAL PHOTOGRAPH

•1 Photo Location Point

OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2005 - 2009

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type D Cap	**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type D Cap**
N46° 08’ 02.3”; W112° 54’ 17.9”, looking Southwest	N46° 08’ 11.0”; W112° 54’ 12.1”, looking north-northeast
July 11, 2005	July 11, 2005
July 17, 2006	July 17, 2006

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2005 - 2009

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type D Cap	**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type D Cap**
N46° 08’ 02.3”; W112° 54’ 17.9”, looking Southwest	N46° 08’ 11.0”; W112° 54’ 12.1”, looking north-northeast
August 24, 2007	August 24, 2007
August 19, 2008	August 19, 2008

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2005 - 2009

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type D Cap		**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type D Cap**
N46° 08’ 02.3”; W112° 54’ 17.9”, looking Southwest		N46° 08’ 11.0”; W112° 54’ 12.1”, looking north-northeast
August 18, 2009		August 18, 2009

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2005 - 2009

PHOTO LOCATION 3 - OWEADA Sub Area 6 Dragstrip Type D Cap

N46° 08’ 39.5”; W112° 53’ 46.1”, looking south

July 11, 2005

July 17, 2006

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2005 - 2009

PHOTO LOCATION 3 - OWEADA Sub Area 6 Dragstrip Type D Cap

N46° 08’ 39.5”; W112° 53’ 46.1”, looking south

August 24, 2007

August 19, 2008

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2005 - 2009

PHOTO LOCATION 3 - OWEADA Sub Area 6 Dragstrip Type D Cap
N46° 08’ 39.5”; W112° 53’ 46.1”, looking south
August 18, 2009

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157) 2000 - 2004					
Year	**2000**	**2001**	**2002**	**2003**	**2004**
Area (acres)	63.9	63.9	63.9	63.9	63.9
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner					
Inspection Date	7/7/00	7/3/01	7/20/02	7/21/03	8/12/04
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Holly Keammerer (HK) Cindy Hoschouer (CH)	WK	WK	WK	WK	WK
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	LRES	LRES	LRES	LRES	LRES
Long Term Monitoring Category	4	4	4	4	4
Site Photos and Photo Locations Follow the Site Aerial Photograph					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY*					
Vegetation Inspection					
Erosion Inspection					
Stormwater BMP Inspection					
VEGETATION INSPECTION*					
Overall Recommendation					
Estimated Canopy Coverage	<5%	<5%	<5%	<5%	0-25%
Uniformity of Vegetation Cover	Lrg/Freq	Lrg/Freq	Lrg/Freq	Lrg/Freq	Lrg/Freq
Litter Accumulation					
Evidence of Reproduction					
Species Richness (Total Number of Species - See List)	15	22	35	42	35
Total Number of Acceptable Species	9	15	22	27	24
Ocular Estimate of Extent of Bare Areas					
Weed Species Present					
White Top *(Cardaria draba)*	Present	Present	Present	Present	Present
Spotted Knapweed *(Centaurea maculosa)*	Present	Present	Present	Present	Present
Canada Thistle *(Cirsium arvense)*	Present	Present	Present	Present	Present
Field Bindweed (*Convolvulus arvensis*)	Present	Present	Present	Present	Present
Leafy Spurge *(Euphorbia esula)*	Present	Present	Present	Present	Present
Baby's Breath *(Gypsophila paniculata)*			Present	Present	Present
Curly Dock (*Rumex crispus*)					Present
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for
OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157) 2000 - 2004					
Year	**2000**	**2001**	**2002**	**2003**	**2004**
EROSION INSPECTION*					
Average Slope (percent)	0%	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat	Flat
Overall Recommendation					
Evidence of Soil Movement	None	None	None	None	None
Evidence of Surface Litter Movement					
Evidence of Coarse Fragment Movement	None	None	None	None	None
Presence of Rills	None	None	None	None	None
Potential Instability	None	None	None	None	None
Presence of Gullies	None	None	None	None	None
Erosion Comments (See Comments Section)					
BMP INSPECTION*					
Overall Recommendation					
Evidence of Check Dam Failure					
Evidence of Sediment Accumulation in Check Dams					
Condition of Dozer Basins					
Condition of Grade Control Structures					
Evidence of Brush Barrier Failure or Movement					
Condition of Mulch					
BMP Comments (See Comments Section)					
***Note VEG-1, ERO-1 and BMP-1 Forms were not used until 2005**					
PERFORMANCE STANDARDS FOR UPLAND, NON-STEEP SLOPE AREAS OUTSIDE WASTE MANAGEMENT AREAS					
Land Reclamation Evaluation System (LRES) score must be equal to or greater than 115 points. Enter LRES Score.					
LRES Evaluation Date					

Observed Species in OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2000 - 2004

(m = major species; x = other species. For noxious weeds: I=Infrequent; F=Frequent; C=Common; D=Dominant)

Old Works Sub Area 6 Dragstrip Type D Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2000	**2001**	**2002**	**2003**	**2004**
ACCEPTABLE SPECIES						
Crested Wheatgrass	*Agropyron cristatum*			x	x	x
Thickspike Wheatgrass	*Agropyron dasystachyum*		x	x	x	x
Intermediate Wheatgrass	*Agropyron intermedium*		m	m	m	m
Western Wheatgrass	*Agropyron smithii*			x		
Slender Wheatgrass	*Agropyron trachycaulum*		x	x	x	x
Red Top	*Agrostis alba*	x	x	x	x	x
Aster	*Aster adscendens*				x	x
Smooth Brome	*Bromus inermis*			x	x	
Rocky Mountain Bee Plant	*Cleome serrulata*					x
Inland Saltgrass	*Distichlis stricta*			x	x	x
Great Basin Wildrye	*Elymus cinereus*		x	x	x	x
Mammoth Wildrye	*Elymus giganteus*		x	x	x	x
Russian Wildrye	*Elymus junceus*			x	x	x
Scouring Rush	*Equisetum laevigatum*	x	x		x	x
Foxtail Barley	*Hordeum jubatum*				x	
Poverty Sumpweed	*Iva axillaris*	x	x	x	x	x
Baltic Rush	*Juncus balticus*	x	x	x	x	
Machaeranthera	*Machaeranthera canescens*					x
Alfalfa	*Medicago sativa*			x	x	x
Yellow Evening Star	*Mentzelia laevicaulis*		x	x	x	x
Alkali Muhly	*Muhlenbergia asperifolia*					x
Indian Ricegrass	*Oryzopsis hymenoides*				x	
Scorpion Weed	*Phacelia hastata*		x	x	x	x
Canada Bluegrass	*Poa compressa*			x	x	x
Cottonwood	*Populus trichocarpa*	x	x	x	x	x
Woods Rose	*Rosa woodsii*	x	x	x	x	x
Willowleaf Dock	*Rumex salicifolius*				x	
Coyote Willow	*Salix exigua*	x	x	x	x	x
Giant Goldenrod	*Solidago gigantea*				x	
Missouri Goldenrod	*Solidago missouriensis*				x	x
Western Snowberry	*Symphoricarpos occidentalis*	x	x	x	x	x
Wheat	*Triticum aestivum*	x		x		
UNDESIRABLE WEEDY SPECIES						
Cheatgrass	*Bromus tectorum*		x	x	x	x
Bull Thistle	*Cirsium vulgare*				x	
Annual Sunflower	*Helianthus annuus*			x	x	
Russian Thistle	*Salsola iberica*	x	x	x	x	x
Catchfly	*Silene noctiflora*				x	
Tumbling Hedge Mustard	*Sisymbrium altissimum*			x	x	
Hedge Mustard	*Sisymbrium loeselii*			x	x	
Salsify	*Tragopogon dubius*			x	x	x

Observed Species in OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2000 - 2004

(m = major species; x = other species. For noxious weeds: I=Infrequent; F=Frequent; C=Common; D=Dominant)

Old Works Sub Area 6 Dragstrip Type D Cap m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2000	**2001**	**2002**	**2003**	**2004**
NOXIOUS WEEDS						
White Top	*Cardaria draba*	x	x	x	x	x
Spotted Knapweed	*Centaurea maculosa*	x	x	x	x	x
Canada Thistle	*Cirsium arvense*	x	x	x	x	x
Field Bindweed	*Convolvulus arvensis*	x	x	x	x	x
Leafy Spurge	*Euphorbia esula*	x	x	x	x	x
Baby's Breath	*Gypsophila paniculata*			x	x	x
Kochia	*Kochia scoparia*			m	m	m
Curly Dock	*Rumex crispus*					x
I=Infrequent; F=Frequent; C=Common; D=Dominant						
	Total Number of Acceptable Species	9	15	22	27	24
	Total Number of Species	15	22	35	42	35

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2000 - 2004

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2000	•The Type D Areas at the Drag Strip were seeded in the Fall of 1999. Because of drought conditions there has been limited germination and seedling establishment in these areas. •Total vegetation cover in these areas is less than 5 percent. Most of the area has high rock and bare soil cover. •Spotted Knapweed, White Top, Leafy Spurge and Canada Thistle. The old borrow areas and retention areas need to be sprayed for knapweed control. Use of a boom sprayer is acceptable in these areas	These areas are essentially flat with no obvious signs of erosion.	No storm water BMPs in this area.	
2001	•The Type D Areas at the Drag Strip were seeded in the Fall of 1999. Because of drought conditions there was limited germination and seedling establishment in 2000. The areas were re-seeded in the fall of 2001. There were many more seedlings noted in 2001 compared to 2000. Seedling establishment is not uniform. Areas of limited seedling establishment may need to be re-seeded in the future. Area needs time to develop in order to identify possible re-seeding areas • Spotted Knapweed, White Top, Leafy Spurge and Canada Thistle. The old borrow areas and retention areas need to be sprayed for knapweed control. Use of a boom sprayer is acceptable in these areas. Russian thistle is a major problem on portions of the area. Growth by this species may be greatly reduced in 2002	These areas are essentially flat with no obvious signs of erosion.	No storm water BMPs in this area.	
2002	•The Type D Areas at the Drag Strip were seeded in the Fall of 1999. Because of drought conditions there was limited germination and seedling establishment in 2000. The areas were re-seeded in the fall of 2000. There were many more seedlings noted in 2001 compared to 2000. Seedling establishment is not uniform. Areas of limited seedling establishment may need to be re-seeded in the future. • Area needs time to develop in order to identify possible re-seeding areas. Need to review the status of the project relative to potential future revegetation actions •Total vegetation cover in these areas is mostly less than 5 percent, however, there are some localized areas where the vegetation cover is greater. Annual weed species [Russian thistle (*Salsola iberica*) and kochia *(Kochia scoparia*)] continue to be the most prevalent species. It is interesting to note that the distribution and amount of the weed species is quite uniform. Prior to treatment, many large bare sites existed in the Type D Cap area. • Seeded perennial grasses (mostly intermediate wheatgrass) occur as scattered individuals throughout the weedy areas. While scattered and occurring at low densities, the individual grass plants tend to be robust. Much of the area has high rock and bare soil cover (see photo). Numerous species were observed in the Type D cap areas • Spotted Knapweed, White Top, Leafy Spurge and Canada Thistle. The old borrow areas and retention areas need to be sprayed for knapweed control. Use of a boom sprayer is acceptable in these areas. Russian thistle is a major problem on portions of the area	These areas are essentially flat with no obvious signs of erosion.	No storm water BMPs in this area.	

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2000 – 2004

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2003	•While the overall vegetation cover is still sparse over much of the area, there are some areas where the vegetation cover is approximately 20 percent and other areas where the established plants are very robust but are widely scattered. •Rocky areas have limited vegetation development. •In 2003, a more complete diagnostic monitoring study was conducted in the Type D Dragstrip areas. Refer to that study for more detail on conditions in the Type D areas. Overall, even though the overall vegetation cover is sparse, observations suggest that the vegetation is continuing to develop Total vegetation cover in these areas is mostly less than 5 percent, however, there are some localized areas where the vegetation cover is greater. Annual weed species [kochia (Kochia scoparia)] continue to be the most prevalent species. It is interesting to note that the distribution and amount of the weed species is quite uniform. Prior to treatment, many large bare sites existed in the Type D Cap area. • Seeded perennial grasses (mostly intermediate wheatgrass) occur as scattered individuals throughout the weedy areas. While scattered and occurring at low densities, the individual grass plants tend to be robust. Much of the area has high rock and bare soil cover (see photo). Numerous species were observed in the Type D cap areas • Spotted Knapweed, White Top, Leafy Spurge and Canada Thistle. The old borrow areas and retention areas need to be sprayed for knapweed control. Use of a boom sprayer is acceptable in these areas. Knapweed is becoming more common throughout the area	Even though the vegetation cover is sparse, erosion is not a problem in the Dragstrip area. The Type D areas are essentially flat with no obvious signs of erosion.	No storm water BMPs in this area.	

Annual Monitoring and Maintenance COMMENTS for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2000 – 2004

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2004	•While the overall vegetation cover is still sparse over much of the area, there are some areas where the vegetation cover is approximately 20 percent and other areas where the established plants are very robust but are widely scattered. •There was more red top than in previous years. •Rocky areas have limited vegetation development. •In 2003, a more complete diagnostic monitoring study was conducted in the Type D Dragstrip areas. Refer to that study for more detail on conditions in the Type D areas. •Overall, even though the overall vegetation cover is sparse, observations suggest that the vegetation is continuing to develop. The density of plants is increasing, especially for red top. •Spotted Knapweed, White Top, Leafy Spurge and Canada Thistle. The old borrow areas and retention areas need to be sprayed for knapweed control. Use of a boom sprayer is acceptable in these areas. Knapweed is becoming more common throughout the area. Need to continue/implement knapweed control •Total vegetation cover in these areas is mostly less than 10 percent, however, there are some localized areas where the vegetation cover is greater. Annual weed species [kochia (Kochia scoparia)] continue to be the most prevalent species, however the cover by perennial grasses is increasing. •Seeded perennial grasses (mostly intermediate wheatgrass) occur as scattered individuals throughout the weedy areas. While scattered and occurring at low densities, the individual grass plants tend to be robust. Much of the area has high rock and bare soil cover (see photo). Numerous species were observed in the Type D cap areas. • While the vegetation is still sparse, cover values by acceptable species have been increasing over the past three years	Even though the vegetation cover is sparse, erosion is not a problem in the Dragstrip area. The Type D areas are essentially flat with no obvious signs of erosion.	No storm water BMPs in this area.	

SITE AERIAL PHOTOGRAPH

•1 Photo Location Point

OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157)

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2000 - 2004

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type D Cap		**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type D Cap**
N46° 08’ 02.3”; W112° 54’ 17.9”, looking Southwest		N46° 08’ 11.0”; W112° 54’ 12.1”, looking north-northeast
No Photo Taken at this Location until 2001		No Photo Taken at this Location until 2003
		No Photo Taken at this Location until 2003
July 3, 2001		

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2000 - 2004

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type D Cap		**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type D Cap**
N46° 08’ 02.3”; W112° 54’ 17.9”, looking Southwest		N46° 08’ 11.0”; W112° 54’ 12.1”, looking north-northeast
		No Photo Taken at this Location until 2003
July 20, 2002		
July 21, 2003		July 21, 2003

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2000 - 2004

PHOTO LOCATION 1 - OWEADA Sub Area 6 Dragstrip Type D Cap		**PHOTO LOCATION 2 - OWEADA Sub Area 6 Dragstrip Type D Cap**
N46° 08’ 02.3”; W112° 54’ 17.9”, looking Southwest		N46° 08’ 11.0”; W112° 54’ 12.1”, looking north-northeast
August 12, 2004		August 12, 2004

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2000 - 2004

PHOTO LOCATION 3 - OWEADA Sub Area 6 Dragstrip Type D Cap
N46° 08’ 39.5”; W112° 53’ 46.1”, looking south
No Photo Taken at this Location until 2003
No Photo Taken at this Location until 2003

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2000 - 2004

PHOTO LOCATION 3 - OWEADA Sub Area 6 Dragstrip Type D Cap
N46° 08’ 39.5”; W112° 53’ 46.1”, looking south
No Photo Taken at this Location until 2003
July 21, 2003

Photographs for OWEADA Sub Area 6 Dragstrip Type D Cap (VM_157): 2000 - 2004

PHOTO LOCATION 3 - OWEADA Sub Area 6 Dragstrip Type D Cap
N46° 08’ 39.5”; W112° 53’ 46.1”, looking south
August 12, 2004

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2015 -					
Year	**2015**				
Area (acres)	148.5				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/29/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	1				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	1				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Varies				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species – See List)	39				
Total Number of Acceptable Species	26				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*	Infrequent				
Field Bindweed *(Convolvulus arvensis)*					
Leafy Spurge *(Euphorbia esula)*	Infrequent				
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Dalmatian Toadflax *(Linaria dalmatica)*	Infrequent				
Vegetation Comments (See Comments Section)					

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	Yes				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	2				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2015-

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Western Yarrow	*Achillea lanulosa*					
Crested Wheatgrass	*Agropyron cristatum*	m				
Thickspike Wheatgrass	*Agropyron dasystachyum*	x				
Tall Wheatgrass	*Agropyron elongatum*					
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Western Wheatgrass	*Agropyron smithii*					
Slender Wheatgrass	*Agropyron trachycaulum*	x				
Red Top	*Agrostis alba*	x				
Rockcress	*Arabis sp.*	x				
Fringed Sagewort	*Artemisia frigida*	x				
Aster	*Aster adscendens*	x				
Milkvetch	*Astragalus sp.*	x				
Smooth Brome	*Bromus inermis*	m				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Bastard Toadflax	*Comandra umbellata*					
Great Basin Wildrye	*Elymus cinereus*	x				
Mammoth Wildrye	*Elymus giganteus*	x				
Russian Wildrye	*Elymus junceus*	x				
Creeping Wildrye	*Elymus triticoides*					
Scouring Rush	*Equisetum laevigatum*					
Sheep Fescue	*Festuca ovina*	x				
Wild Licorice	*Glycyrrhiza lepidota*					
Foxtail Barley	*Hordeum jubatum*					
Annual Barley	*Hordeum vulgare*					
Poverty Sumpweed	*Iva axillaris*	x				
Lewis Flax	*Linum lewisii*					
Skeleton Weed	*Lygodesmia juncea*					
Machaeranthera	*Machaeranthera canescens*					
Alfalfa	*Medicago sativa*	x				
White Sweetclover	*Melilotus alba*	x				
Yellow Sweetclover	*Melilotus officinalis*	x				
Yellow Evening Star	*Mentzelia laevicaulis*					
Indian Ricegrass	*Oryzopsis hymenoides*	x				
Scorpion Weed	*Phacelia hastata*	x				
Timothy	*Phleum pratense*					
Big Bluegrass	*Poa ampla*	m				
Canada Bluegrass	*Poa compressa*	x				
Inland Bluegrass	*Poa interior*					
Woods Rose	*Rosa woodsii*	x				
Coyote Willow	*Salix exigua*	x				
Willow	*Salix sp.*					
Western Snowberry	*Symphoricarpos occidentalis*	x				

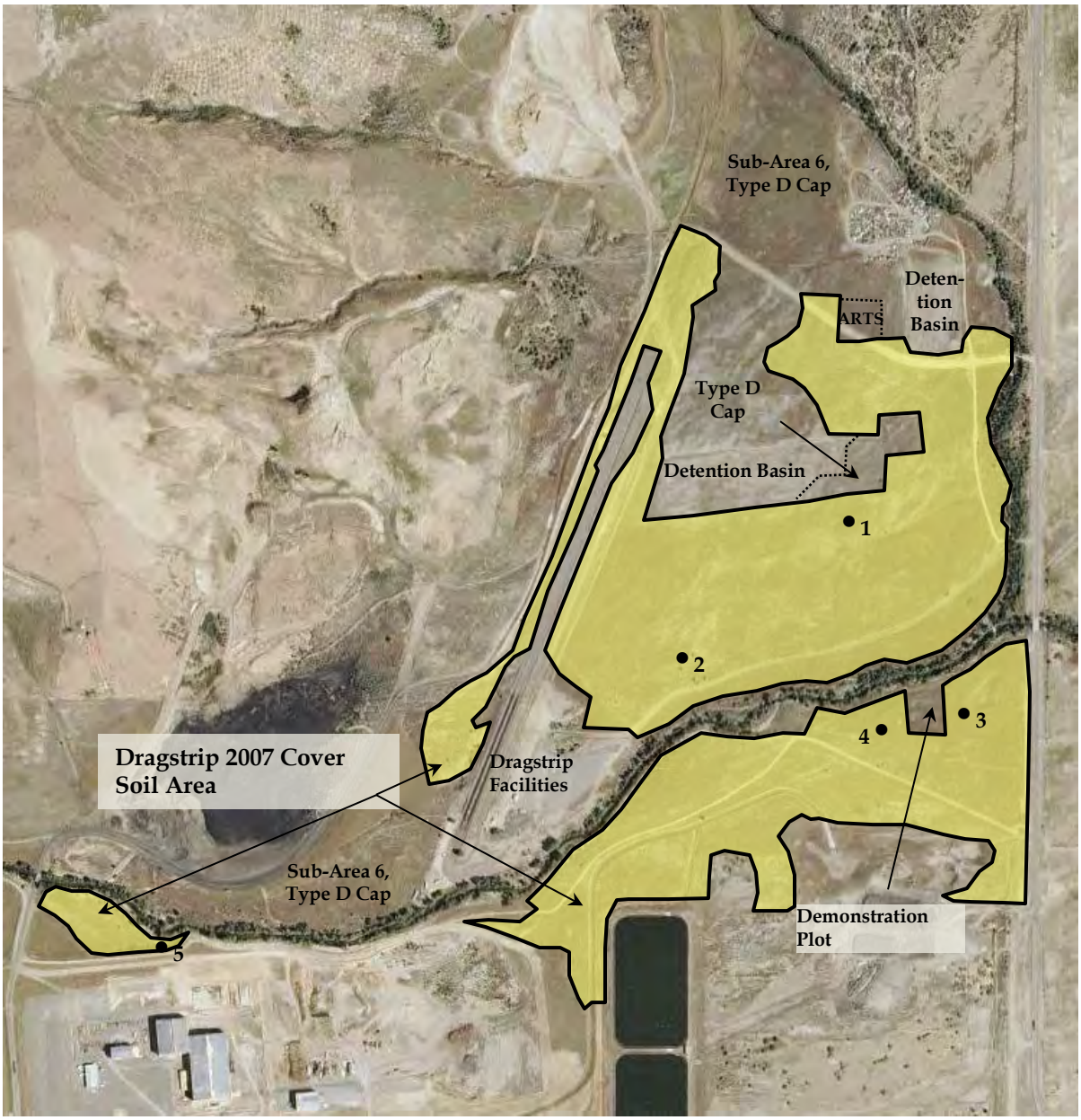
Observed Species in Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2015-

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
UNDESIRABLE WEEDY SPECIES						
Wild Oats	*Avena sativa*					
Japanese Brome	*Bromus japonicus*					
Cheatgrass	*Bromus tectorum*	x				
Littleseed Falseflax	*Camelina microcarpa*					
Tansy Mustard	*Descurainia richardsonii*	x				
Annual Sunflower	*Helianthus annuus*					
Prickly Lettuce	*Lactuca serriola*					
Tatarian Honeysuckle	*Lonicera tatarica*					
Devil's Shoestrings	*Polygonum aviculare*					
Russian Thistle	*Salsola iberica*					
Campion	*Silene latifolia*	x				
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x				
Hedge Mustard	*Sisymbrium loeselii*					
Common Dandelion	*Taraxacum officinale*	x				
Salsify	*Tragopogon dubius*	x				
NOXIOUS WEEDS						
White Top	*Cardaria draba*	I				
Spotted Knapweed	*Centaurea maculosa*	I				
Canada Thistle	*Cirsium arvense*	I				
Field Bindweed	*Convolvulus arvensis*					
Leafy Spurge	*Euphorbia esula*	I				
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*	I				
Dalmatian Toadflax	*Linaria dalmatica*	I				
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		26				
Total Number of Species		39				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. • North Side of Warm Springs Creek. Overall good establishment of perennial grasses. Weed control in this area has been successful, but there are still some dense patches of spotted knapweed that need control. These are primarily south of the detention basin as well as west of the drag strip along the access road. • South side of Warm Springs Creek. Herbicide applications have reduced the amount of noxious weeds. The area was sprayed in 2014 for control of spotted knapweed and baby's breath. Most of the control was very successful, but the portion of the area west of the sewage lagoon needs additional weed control for baby's breath. • Most of the area has >30% cover by acceptable species. • Once the existing haul road is no longer required, it will need to be ripped, disked and seeded. • Even though the overall rating for the area is a "1", weed control for spotted knapweed and baby's breath needs to be continued in 2016. Spot spray to the extent possible. • This area was sampled for compliance determination in 2013 and 2014. In 2015, the performance standards were still being met. Compliance Status: LTIM.	No obvious signs of erosion. BLM erosion score = 2.	No storm water BMPs installed in this area.	

Site Aerial Photograph for Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158)



•1 Photo Location Point

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158)

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2015-

PHOTO LOCATION 1 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil		**PHOTO LOCATION 2 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil**
N46° 08’ 20.2”; W 112° 53’ 46.2”, looking South		N46° 08’ 13.2”; W 112° 53’ 55.1”, looking north
July 29, 2015		July 29, 2015

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2015-

PHOTO LOCATION 3 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil		**PHOTO LOCATION 4 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil**
N46° 08’ 10.9”; W 112° 53’ 35.8”, looking South-southeast		N46° 08’ 09.8”; W 112° 53’ 40.8”, looking West-southwest
July 29, 2015		July 29, 2015

PHOTO LOCATION 5 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil

N46° 07’ 57.9”; W 112° 54’ 38.0”, looking West-northwest

July 29, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 6 Dragstrip 2007Coversoiled Areas (VM_158)

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	144.1	144.1	144.1	144.1	144.1	144.1	144.1
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner	AR	AR	AR	AR	AR	AR	AR
Inspection Date	8/19/08	8/18/09	6/8/10 8/7/10	8/2/11 8/3/11	8/21/12	8/5/13	7/14/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Cindy Hoschouer (CH) Karen LaClair (KL) Wendy Stansbury (WS) Holly Keammerer (HK) Cathy Seibert (CS)	WK, KL	WK, KL	WK, KL	WK, HK, CS	WK, HK, CS	WK, HK, CS	WK, HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	6	6	6	6	6	6	6
Site Photos and Photo Locations (Evaluation Area Photos Follow the Site Aerial Photo)							
Site Aerial Photo (See Site Aerial Photo Following Transect Data Summary)							
INSPECTION SUMMARY							
Vegetation Inspection		1	1	2	1	1	1
Erosion Inspection		0	0	0	0	0	0
Stormwater BMP Inspection		0	0	0	0	0	0

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158)

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
VEGETATION INSPECTION							
Overall Recommendation		1	1	2	1	1	1
Estimated Canopy Coverage		20-29% 30-39%	30-39%	30-39%	30-39%	30-39%	30-39%
Uniformity of Vegetation Cover		Varies	Varies	Varies	Varies	Varies	Varies
Litter Accumulation		Light	Light	Light/Mod	Moderate	Moderate	Moderate
Evidence of Reproduction		Yes	Yes	Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	24	34	34	43	39	28	25
Total Number of Acceptable Species	12	25	26	32	26	21	17
Ocular Estimate of Extent of Bare Areas		<1-5%	<1-5%	<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present							
White Top *(Cardaria draba)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infreq/Freq	Infrequent	Frequent	Infreq/Freq	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*		Infrequent	Infrequent		Infrequent		
Field Bindweed *(Convolvulus arvensis)*	Infrequent	Infrequent			Infrequent	Infrequent	
Leafy Spurge *(Euphorbia esula)*	Infrequent				Infrequent		Infrequent
Baby's Breath *(Gypsophila paniculata)*		Infrequent	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Dalmatian Toadflax *(Linaria dalmatica)*							Infrequent
Vegetation Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158)

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION							
Average Slope (percent)		0%	0%	0%	0%	0%	0%
Aspect		Flat	Flat	Flat	Flat	Flat	Flat
Overall Recommendation							
Evidence of Soil Movement		0	0	0	0	0	0
Evidence of Surface Litter Movement		None	None	None	None	None	None
Evidence of Coarse Fragment Movement		None	None	None	None	None	None
Presence of Rills		None	None	None	None	None	None
Potential Instability		None	None	None	None	None	None
Presence of Gullies		None	None	None	None	None	None
Erosion Comments (See Comments Section)							
BMP INSPECTION							
Overall Recommendation		0	0	0	0	0	0
Evidence of Check Dam Failure		None	None	None	None	None	None
Evidence of Sediment Accumulation in Check Dams		None	None	None	None	None	None
Condition of Dozer Basins		None	None	None	None	None	None
Condition of Grade Control Structures		None	None	None	None	None	None
Evidence of Brush Barrier Failure or Movement		None	None	None	None	None	None
Condition of Mulch		None	None	None	None	None	None
BMP Comments (See Comments Section)							

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158)

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014							
Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS						Yes	Yes
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)						TRAN (40.3%)	TRAN (36.3%)
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?						Yes	Yes
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.						Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)						No	No
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.						2	2
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.						No	No
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).						No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).						Yes	Yes

Observed Species in Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

Old Works Sub-Area 6 Dragstrip 2007 Coversoil m = major species; x = other species								
Common Name	**Scientific Name**	**YEAR**						
		2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES								
Western Yarrow	*Achillea lanulosa*			x	x			
Crested Wheatgrass	*Agropyron cristatum*	x	x	x	x	m	m	m
Thickspike Wheatgrass	*Agropyron dasystachyum*			x	x	x		x
Tall Wheatgrass	*Agropyron elongatum*		x	x	x			
Intermediate Wheatgrass	*Agropyron intermedium*	x	m	m	m	m	m	m
Western Wheatgrass	*Agropyron smithii*			x	x	x	x	x
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x	x	x		
Red Top	*Agrostis alba*		x	x	x	x	x	x
Aster	*Aster adscendens*	x		x	x	x	x	
Smooth Brome	*Bromus inermis*	x	m	m	m	m	m	m
Rubber Rabbitbrush	*Chrysothamnus nauseosus*		x	x	x	x	x	x
Bastard Toadflax	*Comandra umbellata*						x	
Great Basin Wildrye	*Elymus cinereus*	x	x	x	x	x	x	x
Mammoth Wildrye	*Elymus giganteus*		x	x	x	x	x	x
Russian Wildrye	*Elymus junceus*		x	x	x			x
Creeping Wildrye	*Elymus triticoides*				x			
Scouring Rush	*Equisetum laevigatum*	x				x		
Sheep Fescue	*Festuca ovina*		x	x	x	x	x	x
Wild Licorice	*Glycyrrhiza lepidota*							x
Foxtail Barley	*Hordeum jubatum*				x	x		
Annual Barley	*Hordeum vulgare*	x						
Poverty Sumpweed	*Iva axillaris*	x	x	x	x	x	x	
Lewis Flax	*Linum lewisii*				x	x		
Skeleton Weed	*Lygodesmia juncea*		x	x				
Machaeranthera	*Machaeranthera canescens*		x	x	x	x	x	
Alfalfa	*Medicago sativa*	x	x	x	x	x	x	x
White Sweetclover	*Melilotus alba*		x		x			
Yellow Sweetclover	*Melilotus officinalis*		x	x	x		x	x
Yellow Evening Star	*Mentzelia laevicaulis*	x	x	x	x	x	x	x
Indian Ricegrass	*Oryzopsis hymenoides*		x					
Scorpion Weed	*Phacelia hastata*		x	x	x	x		
Timothy	*Phleum pratense*				x			
Big Bluegrass	*Poa ampla*		x	m	m	m	m	m
Canada Bluegrass	*Poa compressa*				x	x		
Inland Bluegrass	*Poa interior*						x	
Woods Rose	*Rosa woodsii*	x	x	x	x	x	x	
Coyote Willow	*Salix exigua*		x	x	x	x	x	
Willow	*Salix sp.*		x	x	x	x		
Western Snowberry	*Symphoricarpos occidentalis*		x		x	x	x	x

Observed Species in Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

Old Works Sub-Area 6 Dragstrip 2007 Coversoil m = major species; x = other species								
Common Name	**Scientific Name**	**YEAR**						
		2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
UNDESIRABLE WEEDY SPECIES								
Wild Oats	*Avena sativa*		x					
Japanese Brome	*Bromus japonicus*	x			x			
Cheatgrass	*Bromus tectorum*	x		x	x	x	x	
Littleseed Falseflax	*Camelina microcarpa*					x		
Tansy Mustard	*Descurainia richardsonii*			x	x	x		
Annual Sunflower	*Helianthus annuus*	x						
Prickly Lettuce	*Lactuca serriola*	x						
Tatarian Honeysuckle	*Lonicera tatarica*				x			
Devil's Shoestrings	*Polygonum aviculare*	x						
Russian Thistle	*Salsola iberica*	x	x					
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x			x	x		x
Hedge Mustard	*Sisymbrium loeselii*				x	x		
Common Dandelion	*Taraxacum officinale*						x	
Salsify	*Tragopogon dubius*		x	x	x	x		x
NOXIOUS WEEDS								
White Top	*Cardaria draba*	I	I	I	I	I	I	I
Spotted Knapweed	*Centaurea maculosa*	I	I-F	I	F	I-F	I*	I
Canada Thistle	*Cirsium arvense*		I	I		I		
Field Bindweed	*Convolvulus arvensis*	I	I			I	I	
Leafy Spurge	*Euphorbia esula*	I				I		I
Baby's Breath	*Gypsophila paniculata*		I	I	I	I	I	I
Kochia	*Kochia scoparia*	C	I	I	I	I	I	I
Dalmatian Toadflax	*Linaria dalmatica*							I
I=Infrequent; F=Frequent; C=Common; D=Dominant								
Total Number of Acceptable Species		12	25	26	32	26	21	17
Total Number of Species		24	34	34	43	39	28	25

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2008	• Construction of the Dragstrip cover soiled areas was completed in the fall of 2007. Once the cover soil had been placed, the areas were amended and drill seeded. The summer of 2008 was the first growing season for this area. Evaluation consisted of an assessment of seedling establishment and identification of any erosion in the area. • Good seedling establishment was noted throughout the area. More than 40 seedlings per square meter. There should be enough seedlings to establish a good stand of perennial grasses in 1-2 years. • The seedling vigor was better in some areas than in other, but overall the seedlings seemed to be doing well. Many of the new plants had flowering stalks. • Rows of seedlings were evident in most places. • Kochia was scattered throughout the area and will be mostly gone by the next growing season. • Overall, the seeding and the approach to seeding this area have been successful	No rills or gullies were noted.	No stormwater BMP's were installed.	
2009	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. • North Side of Warm Springs Creek. Overall good establishment of perennial grasses and alfalfa. The only problem is knapweed. It occurs commonly, but is more prevalent in areas adjacent to the old Type D cap areas. It has become established as isolated plants throughout the most of the area. Careful control is needed for this species as soon as possible. While the current densities are low, it will take only 2-3 years for this species to become abundant if it is not controlled. Do not use a broad scale treatment approach – this will kill all the alfalfa plants and will create future problems related to meeting the performance standards for waste management areas. • South side of Warm Springs Creek. Spotted knapweed and baby' breath were spot sprayed and the job was done very well. Some of the smaller plants that were not in bloom were missed. Repeat treatment in 2010. It should not take as much time in 2010. Some knapweed plants remain on the south side of the bike path at the east end. • The area on the west side of the dragstrip fence appears to have been re-disturbed in the fall of 2008 or spring of 2009. The area was re-seeded. Drill rows are evident; many seedlings occur. Also, kochia is common. Some larger grass plants that developed from the fall 2007 seeding. The north part of this area has fewer seedlings.	No obvious signs of erosion. BLM erosion score was not determined in 2009.	No storm water BMPs installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2010	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. • North Side of Warm Springs Creek. Overall good establishment of perennial grasses and alfalfa. The only problem is knapweed. It occurs commonly, but is more prevalent in areas adjacent to the old Type D cap areas. It has become established as isolated plants throughout the most of the area. Careful control is needed for this species as soon as possible. While the current densities are low, it will take only 2-3 years for this species to become abundant if it is not controlled. Do not use a broad scale treatment approach – this will kill all the alfalfa plants and will create future problems related to meeting the performance standards for waste management areas. There is a small patch of white top at N46° 08' 17.0"; W112° 53' 43.1". • South side of Warm Springs Creek. Herbicide applications have reduced the amount of noxious weeds. Some knapweed and white top plants remain on the south side of the bike path at the east end. Mostly very few knapweed plants were seen. Any future weed control should be done with back pack sprayers. • The area on the west side of the dragstrip fence was re-disturbed in 2010 in association with the construction of haul road that connects the Stucky Ridge borrow area with the Type B cap sites (Areas 9 and 10) in Sub-Area 4. This road will need to be ripped, disked and seeded when it is no longer needed • The part of the area south of Warm Springs Creek has excellent establishment of seeded species. This part of the area meets the performance standards for waste management areas.	No obvious signs of erosion. BLM erosion score = 2.	No storm water BMPs installed in this area.	
2011	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. • North Side of Warm Springs Creek. Overall good establishment of perennial grasses and alfalfa. The only problem is knapweed. The species has become more common and will probably need to be treated with a helicopter. This will kill all the alfalfa plants and may create future problems related to meeting the performance standards for waste management areas, but the knapweed is widely scattered. • There is also a small patch of white top at N46° 08' 17.0"; W112° 53' 43.1". • South side of Warm Springs Creek. Herbicide applications have reduced the amount of noxious weeds. Some knapweed, white top and baby's breath plants remain on the south side of the bike path at the east end. Mostly very few knapweed plants were seen. Any future weed control should be done with back pack sprayers. • The area on the west side of the dragstrip fence was re-disturbed in 2010 in association with the construction of haul road that connects the Stucky Ridge borrow area with the Type B cap sites (Areas 9 and 10) in Sub-Area 4. This road will need to be ripped, disked and seeded when it is no longer needed • The part of the area south of Warm Springs Creek has excellent establishment of seeded species. This part of the area meets the performance standards for waste management areas. • ATV tracks were present in the area south of dragstrip access road and Warm Springs Creek.	No obvious signs of erosion. BLM erosion score = 2.	No storm water BMPs installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2012	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. • North Side of Warm Springs Creek. Overall good establishment of perennial grasses and alfalfa. The only problem is knapweed. Spraying in 2011 was about 75% successful. • South side of Warm Springs Creek. Herbicide applications have reduced the amount of noxious weeds. Some knapweed, white top and baby's breath plants remain on the south side of the bike path at the east end. More spotted knapweed and baby's breath in 2012; the area needs control. • The area on the west side of the dragstrip fence was re-disturbed in 2010 in association with the construction of haul road that connects the Stucky Ridge borrow area with the Type B cap sites (Areas 9 and 10) in Sub-Area 4. This road will need to be ripped, disked and seeded when it is no longer needed. Road was still in place at the time of evaluation in 2012. • Most of the area has >30% cover by acceptable species. • Even though the overall rating for the area is a "1", weed control for spotted knapweed and baby's breath needs to be continued in 2013. Spot spray to the extent possible.	No obvious signs of erosion. BLM erosion score = 2.	No storm water BMPs installed in this area.	
2013	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. • North Side of Warm Springs Creek. Overall good establishment of perennial grasses. The only problem is knapweed. • The area was generally sprayed for spotted knapweed in 2013; most of the alfalfa was also sprayed. There are still some mature knapweed plants and basal rosettes primarily between the Dragstrip access road and Warm Springs Creek and just north of the access road near the dragstrip facilities and the southern portion of the strip west of the Dragstrip. • South side of Warm Springs Creek. Herbicide applications have reduced the amount of noxious weeds. Some knapweed, white top and baby's breath plants remain on the south side of the bike path at the east end. More spotted knapweed and baby's breath in 2013; the area needs control. SPOT SPRAY; do not spray the desirable species. • The area on the west side of the dragstrip fence was re-disturbed in 2010 in association with the construction of haul road that connects the Stucky Ridge borrow area with the Type B cap sites (Areas 9 and 10) in Sub-Area 4. This road will need to be ripped, disked and seeded when it is no longer needed. Road was still in place at the time of evaluation in 2013. • Most of the area has >30% cover by acceptable species. • Even though the overall rating for the area is a "1", weed control for spotted knapweed and baby's breath needs to be continued in 2014. Spot spray to the extent possible. • This area was sampled for first year compliance determination in 2013; the standards were met (40.3% mean cover by acceptable species).	No obvious signs of erosion. BLM erosion score = 2.	No storm water BMPs installed in this area.	

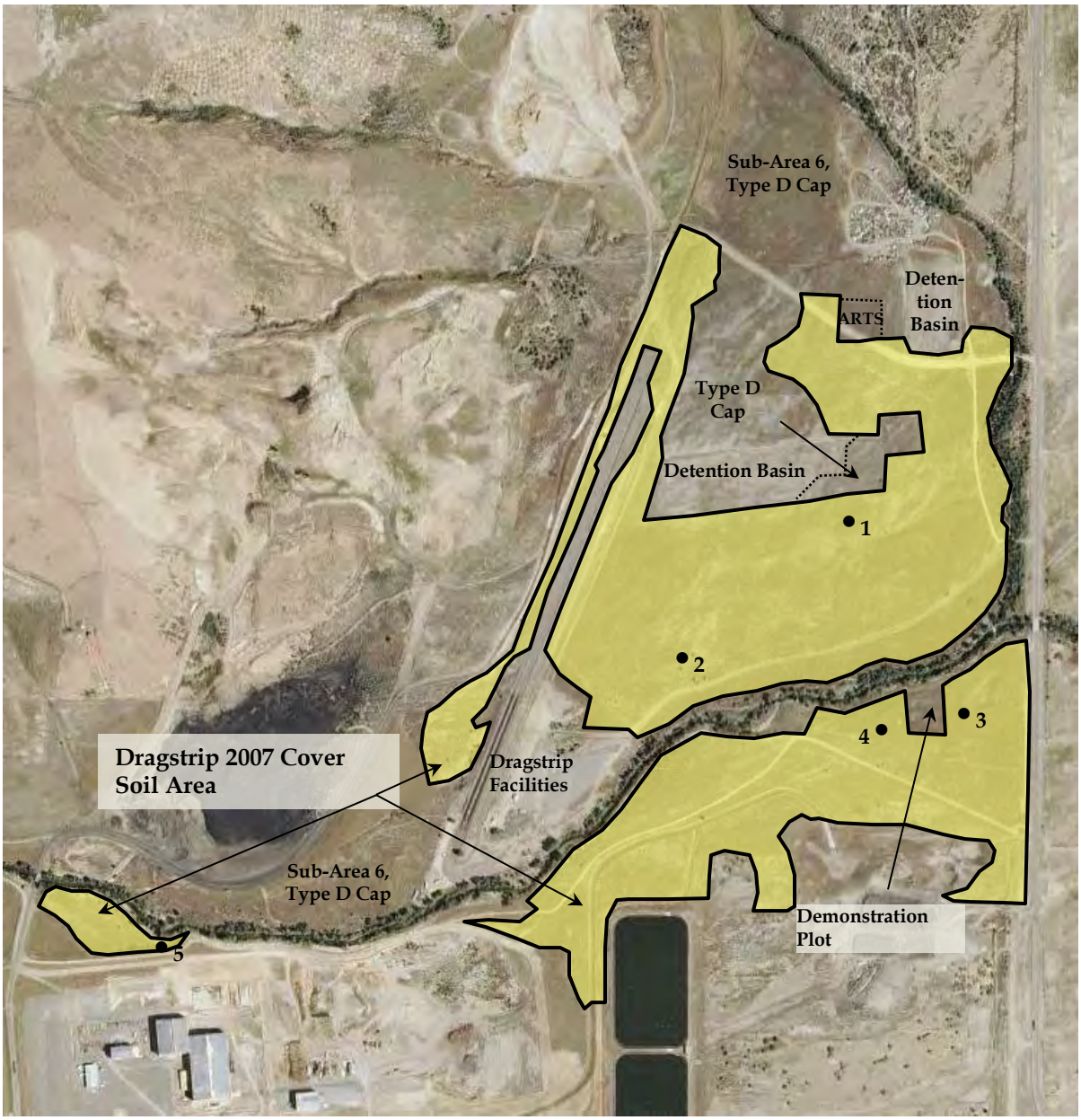
Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2014	• In 2007, approximately 60 percent of the Type D Dragstrip areas on both the north and south sides of Warm Springs Creek were covered with soil derived from a borrow area at the base of the east end of Stucky Ridge. • North Side of Warm Springs Creek. Overall good establishment of perennial grasses. The only problem is knapweed. • The area was generally sprayed for spotted knapweed in 2013; most of the alfalfa was also sprayed. There are still some mature knapweed plants and basal rosettes primarily between the Dragstrip access road and Warm Springs Creek and just north of the access road near the dragstrip facilities and the southern portion of the strip west of the Dragstrip. • South side of Warm Springs Creek. Herbicide applications have reduced the amount of noxious weeds. Some knapweed, white top and baby's breath plants remain on the south side of the bike path at the east end. More spotted knapweed and baby's breath in 2013; the area needs control. SPOT SPRAY; do not spray the desirable species. • Most of the area has >30% cover by acceptable species. • Even though the overall rating for the area is a "1", weed control for spotted knapweed and baby's breath needs to be continued in 2014. Spot spray to the extent possible. • This area was sampled for second year compliance determination in 2014; the standards were met (36.3% mean cover by acceptable species).	No obvious signs of erosion. BLM erosion score = 2.	No storm water BMPs installed in this area.	

Transect Sampling Summary for Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158)

Old Works Sub-Area 6 Dragstrip 2007 Coversoil	Mean Cover (%)		Frequency (%)	
	2013	**2014**	**2013**	**2014**
Number of Transects Sampled	6	6	6	6
Total Vegetation Cover (All Species)	40.3	36.3		
Total Vegetation Cover (Acceptable Species)	40.3	62.3		
Litter and Rock Combined	57	1.3		
Bare Soil	2.7	98.7		
Total Cover	97.3			
Litter Cover	57	62.3		
Rock Cover	0.3	0		
Acceptable Species				
Agropyron cristatum	1	0.3	83	83
Agropyron dasystachyum	1.3	<1	67	33
Agropyron intermedium	24.7	13.7	100	100
Bromus inermis	0.7	1	67	83
Chrysothamnus nauseosus	0.7	<1	33	67
Elymus cinereus	8.3	12.7	100	100
Elymus giganteus	0.3	0.3	33	17
Festuca ovina	1.7	6.7	83	83
Medicago sativa	1	1	33	50
Poa ampla	0.7	0.7	67	67
Undesirable Weedy Species				
Taraxacum officinale	<1	<1	17	17
Noxious Weed Species				
Cardaria draba	<1	<1	17	17
Centaurea maculosa	<1	<1	17	17
Euphorbia esula		<1		17

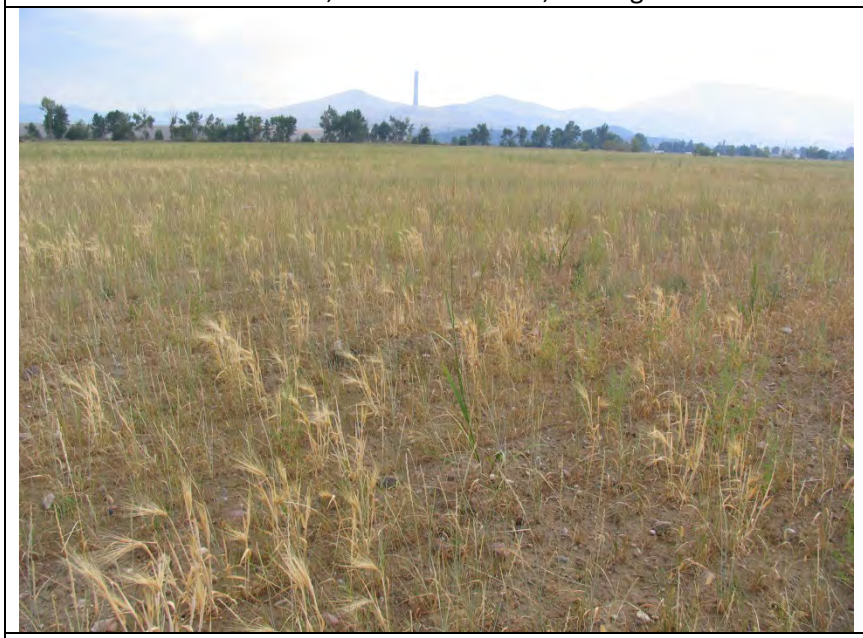
Site Aerial Photograph for Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158)



•1 Photo Location Point

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158)

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

PHOTO LOCATION 1 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil	**PHOTO LOCATION 2 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil**
N46° 08’ 20.2”; W 112° 53’ 46.2”, looking South	N46° 08’ 13.2”; W 112° 53’ 55.1”, looking north
	
August 19, 2008	August 19, 2008
August 18, 2009	August 18, 2009

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

PHOTO LOCATION 1 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil	**PHOTO LOCATION 2 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil**
N46° 08’ 20.2”; W 112° 53’ 46.2”, looking South	N46° 08’ 13.2”; W 112° 53’ 55.1”, looking north
August 7, 2010	August 7, 2010
August 3, 2011	August 3, 2011

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

PHOTO LOCATION 1 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil	**PHOTO LOCATION 2 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil**
N46° 08’ 20.2”; W 112° 53’ 46.2”, looking South	N46° 08’ 13.2”; W 112° 53’ 55.1”, looking north
August 21, 2012	August 21, 2012
August 5, 2013	August 5, 2013

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

PHOTO LOCATION 1 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil		**PHOTO LOCATION 2 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil**
N46° 08’ 20.2”; W 112° 53’ 46.2”, looking South		N46° 08’ 13.2”; W 112° 53’ 55.1”, looking north
June 14, 2014		June 14, 2014

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

PHOTO LOCATION 3 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil		**PHOTO LOCATION 4 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil**
N46° 08’ 10.9”; W 112° 53’ 35.8”, looking South-southeast		N46° 08’ 09.8”; W 112° 53’ 40.8”, looking West-southwest
No Photo Taken at this Location until 2009		No Photo Taken at this Location until 2009
August 18, 2009		August 18, 2009

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

PHOTO LOCATION 3 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil	**PHOTO LOCATION 4 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil**
N46° 08’ 10.9”; W 112° 53’ 35.8”, looking South-southeast	N46° 08’ 09.8”; W 112° 53’ 40.8”, looking West-southwest
August 7, 2010	August 7, 2010
August 3, 2011	August 3, 2011

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

PHOTO LOCATION 3 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil	**PHOTO LOCATION 4 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil**
N46° 08’ 10.9”; W 112° 53’ 35.8”, looking South-southeast	N46° 08’ 09.8”; W 112° 53’ 40.8”, looking West-southwest
August 21, 2012	August 21, 2012
August 5, 2013	August 5, 2013

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

PHOTO LOCATION 3 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil		**PHOTO LOCATION 4 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil**
N46° 08’ 10.9”; W 112° 53’ 35.8”, looking South-southeast		N46° 08’ 09.8”; W 112° 53’ 40.8”, looking West-southwest
June 14, 2014		June 14, 2014

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

PHOTO LOCATION 5 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil
N46° 07’ 57.9”; W 112° 54’ 38.0”, looking West-northwest
No Photo Taken at this Location until 2009
August 19, 2008
August 18, 2009

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

PHOTO LOCATION 5 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil

N46° 07’ 57.9”; W 112° 54’ 38.0”, looking West-northwest

August 7, 2010

August 3, 2011

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

PHOTO LOCATION 5 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil

N46° 07’ 57.9”; W 112° 54’ 38.0”, looking West-northwest

August 21, 2012

August 5, 2013

Old Works Sub-Area 6 Dragstrip 2007 Coversoiled Areas (VM_158) 2008-2014

PHOTO LOCATION 5 - Old Works Sub-Area 6 Dragstrip 2007 Coversoil
N46° 07’ 57.9”; W 112° 54’ 38.0”, looking West-northwest
June 14, 2014

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 5, Area 4 (VM_209)

Old Works Sub-Area 5, Area 4 (VM_209) 2015-					
Year	**2015**				
Area (acres)	23.8				
Current Land Use	Open Space				
Land Owner					
Inspection Date	7/27/15				
RDU	OWEADA				
Evaluators: Holly Keammerer (HK) Cindy Hoschouer (CH) Sarah Cusser (SC)	HK, CH, SC				
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA				
Long Term Monitoring Category	6				
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection	0				
Erosion Inspection	0				
Stormwater BMP Inspection	0				
VEGETATION INSPECTION					
Overall Recommendation	0				
Estimated Canopy Coverage	30-39%				
Uniformity of Vegetation Cover	Sm/Infreq				
Litter Accumulation	Moderate				
Evidence of Reproduction	Yes				
Species Richness (Total Number of Species - See List)	34				
Total Number of Acceptable Species	22				
Ocular Estimate of Extent of Bare Areas	<1-5%				
Weed Species Present					
White Top *(Cardaria draba)*	Infrequent				
Spotted Knapweed *(Centaurea maculosa)*	Infrequent				
Canada Thistle *(Cirsium arvense)*	Infrequent				
Baby's Breath *(Gypsophila paniculata)*	Infrequent				
Tall Whitetop *(Lepidium latifolium)*					
Curly Dock *(Rumex crispus)*	Infrequent				
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 5, Area 4 (VM_209)

Old Works Sub-Area 5, Area 4 (VM_209) 2015-					
Year	**2015**				
EROSION INSPECTION					
Average Slope (percent)	0%				
Aspect	Flat				
Overall Recommendation	0				
Evidence of Soil Movement	None				
Evidence of Surface Litter Movement	None				
Evidence of Coarse Fragment Movement	None				
Presence of Rills	None				
Potential Instability	None				
Presence of Gullies	None				
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation	0				
Evidence of Check Dam Failure	None				
Evidence of Sediment Accumulation in Check Dams	None				
Condition of Dozer Basins	None				
Condition of Grade Control Structures	None				
Evidence of Brush Barrier Failure or Movement	None				
Condition of Mulch	None				
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)	No				
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?	EST				
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.	Yes				
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)	Yes				
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.	No				
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.	4				
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).	No				
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).	No				

Observed Species in Old Works Sub-Area 5, Area 4 (VM_209) 2015-

Old Works Sub-Area 5, Area 4 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
ACCEPTABLE SPECIES						
Western Yarrow	*Achillea lanulosa*					
Macouns Wildrye	*Agrohordeum X macounii*					
Crested Wheatgrass	*Agropyron cristatum*	m				
Thickspike Wheatgrass	*Agropyron dasystachyum*					
Tall Wheatgrass	*Agropyron elongatum*					
Intermediate Wheatgrass	*Agropyron intermedium*	m				
Bluebunch Wheatgrass	*Agropyron spicatum*	x				
Slender Wheatgrass	*Agropyron trachycaulum*					
Red Top	*Agrostis alba*	x				
Fringed Sagewort	*Artemisia frigida*					
Louisiana Sagewort	*Artemisia ludoviciana*	x				
Aster	*Aster adscendens*	x				
White Aster	*Aster falcatus*					
Smooth Brome	*Bromus inermis*	x/m				
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	x				
Rocky Mountain Bee Plant	*Cleome serrulata*					
Great Basin Wildrye	*Elymus cinereus*	m				
Mammoth Wildrye	*Elymus giganteus*	x				
Russian Wildrye	*Elymus junceus*					
Creeping Wildrye	*Elymus triticoides*					
Sheep Fescue	*Festuca ovina*	x				
Curlycup Gumweed	*Grindelia squarrosa*	x				
Foxtail Barley	*Hordeum jubatum*					
Barley	*Hordeum vulgare*					
Poverty Sumpweed	*Iva axillaris*	x				
Birdsfoot Trefoil	*Lotus corniculatus*	x				
Alfalfa	*Medicago sativa*	m				
White Sweetclover	*Melilotus alba*	x				
Yellow Sweetclover	*Melilotus officinalis*	x				
White Evening Star	*Mentzelia decapetala*	x				
Yellow Evening Star	*Mentzelia laevicaulis*	x				
Phacelia	*Phacelia hastata*	x				
Big Bluegrass	*Poa ampla*	x				
Canada Bluegrass	*Poa compressa*	x				
Willowleaf Dock	*Rumex salicifolius*					
Green Needlegrass	*Stipa viridula*					
Red Clover	*Trifolium pratense*					

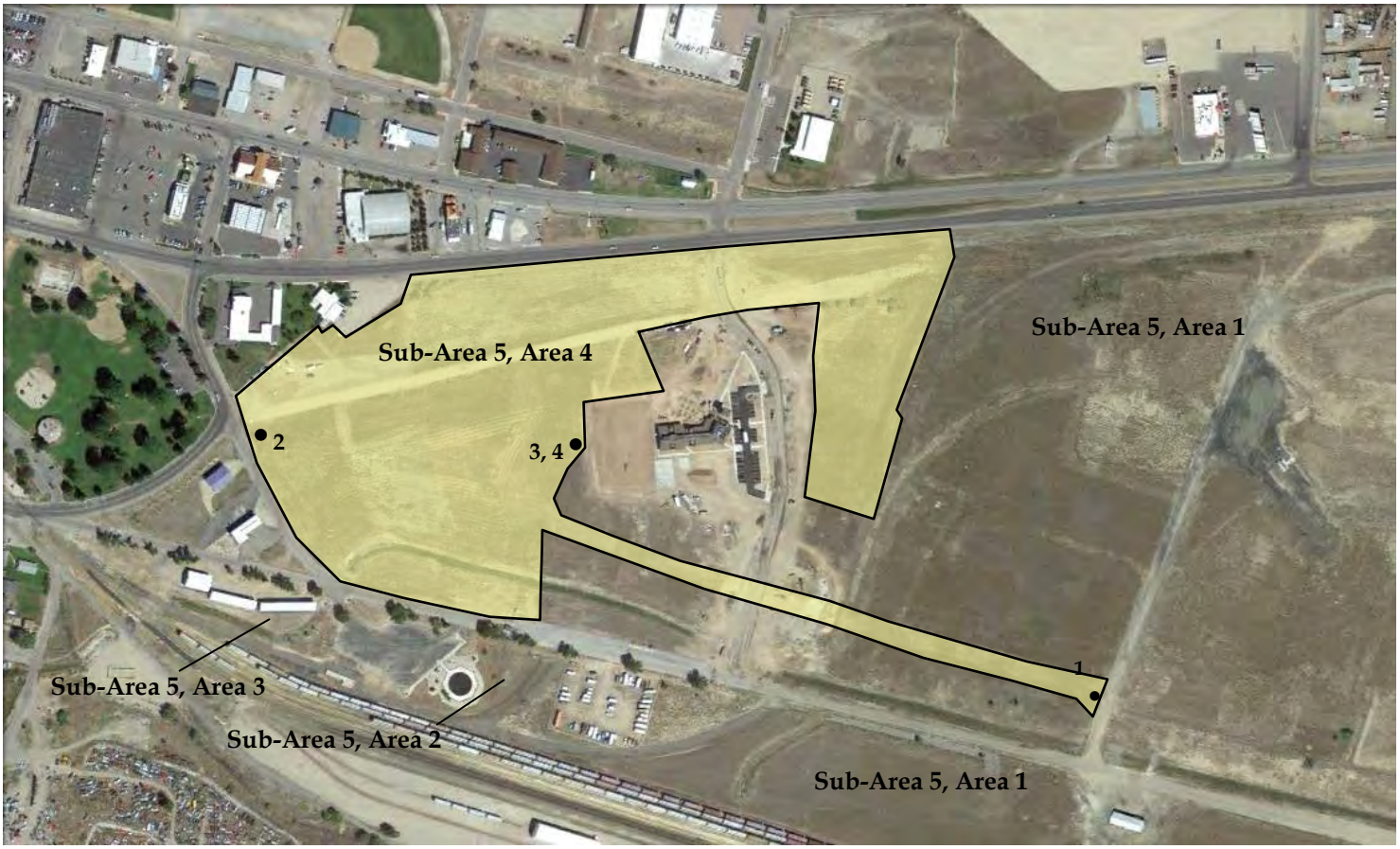
Observed Species in Old Works Sub-Area 5, Area 4 (VM_209) 2015-

Old Works Sub-Area 5, Area 4 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2015				
UNDESIRABLE WEEDY SPECIES						
Wild Oats	*Avena sativa*					
Japanese Brome	*Bromus japonicus*					
Cheatgrass	*Bromus tectorum*	x				
LIttleseed Falseflax	*Camelina microcarpa*	x				
Goosefoot	*Chenopodium album*					
Tansy Mustard	*Descurainia richardsonii*	x				
Devil's Shoestrings	*Polygonum aviculare*					
Russian Thistle	*Salsola iberica*					
Campion	*Silene vulgaris*	x				
Tumbling Hedge Mustard	*Sisymbrium altissimum*					
Hedge Mustard	*Sisymbrium loeselii*					
Common Dandelion	*Taraxacum officinale*	x				
Pennycress	*Thlaspi arvense*					
Salsify	*Tragopogon dubius*	x				
NOXIOUS WEED SPECIES						
White Top	*Cardaria draba*	I				
Spotted Knapweed	*Centaurea maculosa*	I				
Canada Thistle	*Cirsium arvense*	I				
Baby's Breath	*Gypsophila paniculata*	I				
Kochia	*Kochia scoparia*	I				
Tall Whitetop	*Lepidium latifolium*					
Curly Dock	*Rumex crispus*	I				
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		22				
Total Number of Species		34				

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 5, Area 4 (VM_209) 2015-

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2015	• Sub-Area 5, Area 4 includes the west part of the East Anaconda Yards. The area was cover soiled, seeded and fertilized in the fall of 2009. • There are some drill skips and small areas that were apparently not seeded. Some perennial grasses in the drill skips, but overall sparse. They will probably fill in over time. Certainly <1% of the area. More of a nuisance than a long term problem. • Some parts of the area were covered with very coarse rocky material. Vegetation cover in these areas is slowly increasing. • The non-rocky areas have good stands of seeded species. • There was a small amount of windblown trash in the western part of the area. • A large building (school) was constructed in the northeast portion of the area. The school grounds are now sod and are no longer monitored as part of the remediated area. Approximately 8 acres of reclaimed area around the school was mowed in 2015. • The area was sampled for compliance in 2013 and 2014. The performance standards are still being met in 2015. Compliance Status: LTIM.	No obvious signs of erosion. BLM Score = 4	There were no BMPs installed in this area.	

Site Aerial Photograph for Old Works Sub-Area 5, Area 4 (VM_209)



•1 Photo Location Point

Old Works Sub-Area 5, Area 4 (VM_209)

Old Works Sub-Area 5, Area 4 (VM_209) 2015-

PHOTO LOCATION 1 – Old Works Sub-Area 5, Area 4		**PHOTO LOCATION 2 – Old Works Sub-Area 5, Area 4**
N46° 07’ 22.8”; W112° 55’ 28.1”, looking west		N46° 07’ 29.0”; W112° 55’ 59.6”, looking east
July 27, 2015		July 27, 2015

PHOTO LOCATION 3 – Old Works Sub-Area 5, Area 4		**PHOTO LOCATION 4 – Old Works Sub-Area 5, Area 4**
N46° 07’ 29.6”; W112° 55’ 47.4”, looking northeast		N46° 07’ 29.6”; W112° 55’ 47.4”, looking southwest
July 27, 2015		July 27, 2015

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 5, Area 4 (VM_209)

Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014					
Year	**2010**	**2011**	**2012**	**2013**	**2014**
Area (acres)	23.8	23.8	23.8	23.8	23.8
Current Land Use	Open Space	Open Space	Open Space	Open Space	Open Space
Land Owner					
Inspection Date	8/6/10	8/4/11	8/22/12	8/4/13	7/8/14
RDU	OWEADA	OWEADA	OWEADA	OWEADA	OWEADA
Evaluators: Warren Keammerer (WK) Holly Keammerer (HK) Cindy Hoschouer (CH) Karen LaClair (KL) Cathy Seibert (CS)	WK, KL	WK, KL	WK, HK, CS	WK, HK, CS	WK, HK, CS
Evaluation Procedure for moving to Long Term Monitoring. WMA = Waste Management Area Procedure LRES = Upland Non-steep slope LRES Method SS = Upland Steep Slope Procedure	WMA	WMA	WMA	WMA	WMA
Long Term Monitoring Category	2	2	2	2	2
Evaluation Area Photos Follow the Site Aerial Photo					
Site Aerial Photo Follows the Comments Section					
INSPECTION SUMMARY					
Vegetation Inspection		0	0	0	0
Erosion Inspection		0	0	0	0
Stormwater BMP Inspection		0	0	0	0
VEGETATION INSPECTION					
Overall Recommendation		0	0	0	0
Estimated Canopy Coverage		20-29%	20-29%	30-39%	30-39%
Uniformity of Vegetation Cover		Sm/Infreq	Sm/Infreq	Sm/Infreq	Sm/Infreq
Litter Accumulation		Light	Moderate	Moderate	Moderate
Evidence of Reproduction		Yes	Yes	Yes	Yes
Species Richness (Total Number of Species - See List)	21	45	35	29	20
Total Number of Acceptable Species	11	30	23	18	16
Ocular Estimate of Extent of Bare Areas		<1-5%	<1-5%	<1-5%	<1-5%
Weed Species Present					
White Top *(Cardaria draba)*		Infrequent	Infrequent		
Spotted Knapweed *(Centaurea maculosa)*	Infrequent	Infrequent	Infrequent	Infrequent	Infrequent
Canada Thistle *(Cirsium arvense)*		Infrequent	Infrequent		Infrequent
Baby's Breath *(Gypsophila paniculata)*				Infrequent	
Tall Whitetop *(Lepidium latifolium)*		Infrequent			
Vegetation Comments (See Comments Section)					

Annual Monitoring and Maintenance Data Summary for Old Works Sub-Area 5, Area 4 (VM_209)

Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014					
Year	**2010**	**2011**	**2012**	**2013**	**2014**
EROSION INSPECTION					
Average Slope (percent)	0%	0%	0%	0%	0%
Aspect	Flat	Flat	Flat	Flat	Flat
Overall Recommendation		0	0	0	0
Evidence of Soil Movement		None	None	None	None
Evidence of Surface Litter Movement		None	None	None	None
Evidence of Coarse Fragment Movement		None	None	None	None
Presence of Rills		None	None	None	None
Potential Instability		None	None	None	None
Presence of Gullies		None	None	None	None
Erosion Comments (See Comments Section)					
BMP INSPECTION					
Overall Recommendation		0	0	0	0
Evidence of Check Dam Failure		None	None	None	None
Evidence of Sediment Accumulation in Check Dams		None	None	None	None
Condition of Dozer Basins		None	None	None	None
Condition of Grade Control Structures		None	None	None	None
Evidence of Brush Barrier Failure or Movement		None	None	None	None
Condition of Mulch		None	None	None	None
BMP Comments (See Comments Section)					
PERFORMANCE STANDARDS FOR WASTE MANAGEMENT AREAS					
Is acceptable, live, herbaceous vegetation cover > or equal to 30% canopy cover? (Yes or No)			No	Yes	Yes
Is the herbaceous vegetation cover value based on an estimate (EST) or on transect (TRAN) data?			EST	TRAN (35%)	TRAN (44%)
Are noxious weeds widely spaced and infrequently encountered and contribute <5% of the total live vegetation cover within the area? (Yes or No). Note: This is a goal without a numeric standard.			Yes	Yes	Yes
Is the bare ground less than or equal to 10% of the monitoring area? (Yes or No)			Yes	Yes	Yes
Do any bare areas greater than 1000 square feet occur in the monitoring area? (Yes or No) Bare areas are defined as having <10% live vegetation cover.			No	No	No
Erosion - BLM Score must be less than or equal to 45. Enter BLM score.			4	4	4
Erosion - Do any actively eroding gullies deeper than 6 inches occur in the evaluation area? (Yes or No).			No	No	No
Erosion - Do any rills deeper than 1 inch and spaced at intervals over 10 feet occur in the evaluation area? (Yes or No).			No	No	No

Observed Species in Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014

Old Works Sub-Area 5, Area 4 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2010	**2011**	**2012**	**2013**	**2014**
ACCEPTABLE SPECIES						
Western Yarrow	*Achillea lanulosa*				x	x
Macouns Wildrye	*Agrohordeum X macounii*			x		
Crested Wheatgrass	*Agropyron cristatum*		x	x	x/m	x/m
Thickspike Wheatgrass	*Agropyron dasystachyum*		x	x	x	x
Tall Wheatgrass	*Agropyron elongatum*		x	x		
Intermediate Wheatgrass	*Agropyron intermedium*	x	m	m	m	m
Bluebunch Wheatgrass	*Agropyron spicatum*		x			
Slender Wheatgrass	*Agropyron trachycaulum*	x	x	x		x
Red Top	*Agrostis alba*	x	x	x		x
Fringed Sagewort	*Artemisia frigida*		x			
Aster	*Aster adscendens*					x
White Aster	*Aster falcatus*			x		
Smooth Brome	*Bromus inermis*	x	x	x	x/m	x/m
Rubber Rabbitbrush	*Chrysothamnus nauseosus*		x	x	x	x
Rocky Mountain Bee Plant	*Cleome serrulata*	x				
Great Basin Wildrye	*Elymus cinereus*		x	x	x	x
Mammoth Wildrye	*Elymus giganteus*		x			x
Russian Wildrye	*Elymus junceus*		x			
Creeping Wildrye	*Elymus triticoides*		x			
Sheep Fescue	*Festuca ovina*		x	x	x	
Curlycup Gumweed	*Grindelia squarrosa*		x	x	x	
Foxtail Barley	*Hordeum jubatum*	x	x	x	x	
Barley	*Hordeum vulgare*	x	x			
Poverty Sumpweed	*Iva axillaris*		x	x	x	x
Birdsfoot Trefoil	*Lotus corniculatus*		x	x		
Alfalfa	*Medicago sativa*	x	x	m	m	m
White Sweetclover	*Melilotus alba*		x			
Yellow Sweetclover	*Melilotus officinalis*		x	x	x	x
White Evening Star	*Mentzelia decapetala*		x		x	
Yellow Evening Star	*Mentzelia laevicaulis*	x	x	x		
Phacelia	*Phacelia hastata*	x	x	x	x	x
Big Bluegrass	*Poa ampla*	x	x	x	x	x
Canada Bluegrass	*Poa compressa*			x	x	
Willowleaf Dock	*Rumex salicifolius*		x			
Green Needlegrass	*Stipa viridula*		x	x	x	
Red Clover	*Trifolium pratense*		x			

Observed Species in Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014

Old Works Sub-Area 5, Area 4 m = major species; x = other species						
Common Name	**Scientific Name**	**YEAR**				
		2010	**2011**	**2012**	**2013**	**2014**
UNDESIRABLE WEEDY SPECIES						
Wild Oats	*Avena sativa*	x				
Japanese Brome	*Bromus japonicus*				x	
Cheatgrass	*Bromus tectorum*	x	x	x	x	x
LIttleseed Falseflax	*Camelina microcarpa*		x	x	x	
Goosefoot	*Chenopodium album*	x				
Tansy Mustard	*Descurainia richardsonii*	x	x		x	
Devil's Shoestrings	*Polygonum aviculare*	x	x	x		
Russian Thistle	*Salsola iberica*	x	x	x		
Campion	*Silene vulgaris*		x	x		
Tumbling Hedge Mustard	*Sisymbrium altissimum*	x	x	x	x	
Hedge Mustard	*Sisymbrium loeselii*				x	
Common Dandelion	*Taraxacum officinale*		x	x	x	
Pennycress	*Thlaspi arvense*	x	x			
Salsify	*Tragopogon dubius*		x	x	x	
NOXIOUS WEED SPECIES						
White Top	*Cardaria draba*		I	I		
Spotted Knapweed	*Centaurea maculosa*	I	I	I	I	I
Canada Thistle	*Cirsium arvense*		I	I		I
Baby's Breath	*Gypsophila paniculata*				I	
Kochia	*Kochia scoparia*	I	I	I	I	I
Tall Whitetop	*Lepidium latifolium*		I			
I=Infrequent; F=Frequent; C=Common; D=Dominant						
Total Number of Acceptable Species		11	30	23	18	16
Total Number of Species		21	45	35	29	20

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2010	• Sub-Area 5, Area 4 includes the west part of the East Anaconda Yards. The area was cover soiled late in 2009. The area was fertilized and seeded either in the Fall of 2009 or Spring 2010. • Mulch Species: Barley plants well established in more or less continuous rows. • Seedling Evaluation: Seedlings were common throughout the area (See Photos) and were more or less continuous in drill rows. Overall seedling density was more than 40/m2 in most places. The seedlings were robust and well established with flowering stalks on many of the new plants. On rocky sites, the seedlings were somewhat less robust. There should be enough seedlings present for establishment of a good stand of seeded species in 1-2 years. • Weed Abundance: Kochia occurred as scattered individuals throughout the area. A few spotted knapweed plants were observed. Russian thistle and tumbling hedge mustard were present in minor amounts. • Organic Matter: If organic matter was added to the are, it was well-integrated into the soil. • Mowing: The site was not mowed in 2010. • No management needed at this time. • This area should be well established with seeded species in 2011. • A few drill skips were noted in several places.	The area is essentially flat and there were no obvious signs of erosion.		
2011	• Sub-Area 5, Area 4 includes the west part of the East Anaconda Yards. The area was cover soiled late in 2009. The area was fertilized and seeded either in the Fall of 2009 or Spring 2010. • There are some drill skips and apparently missed areas. Some perennial grasses in the areas, but overall sparse. They will probably fill in over time. Certainly <1% of the area. More of a nuisance than a long term problem. • Some parts of the area were covered with very coarse rocky material. Rounded pebbles and small to medium sized cobbles. Vegetation cover in these areas is <1%. Cover will likely slowly increase overtime. • The non-rocky areas have good stands of seeded species. Should be okay in 1-2 years (except for drill skips).	No obvious signs of erosion. BLM Score = 4	There were no BMPs installed in this area.	

Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2012	• Sub-Area 5, Area 4 includes the west part of the East Anaconda Yards. The area was cover soiled late in 2009. The area was fertilized and seeded either in the Fall of 2009 or Spring 2010. • There are some drill skips and apparently missed areas. Some perennial grasses in the areas, but overall sparse. They will probably fill in over time. Certainly <1% of the area. More of a nuisance than a long term problem. • Some parts of the area were covered with very coarse rocky material. Rounded pebbles and small to medium sized cobbles. Vegetation cover in these areas is <1%. Cover will likely slowly increase overtime. • The non-rocky areas have good stands of seeded species. Should be okay in 1-2 years (except for drill skips). • There was some windblown trash in the western part of the area. • Weed control for spotted knapweed was very successful in this area. There are still a few scattered individuals. Plan to check this area and spot spray in the next 2-3 years.	No obvious signs of erosion. BLM Score = 4	There were no BMPs installed in this area.	
2013	• Sub-Area 5, Area 4 includes the west part of the East Anaconda Yards. The area was cover soiled late in 2009. The area was fertilized and seeded either in the Fall of 2009 or Spring 2010. • There are some drill skips and small areas that were apparently not seeded. Some perennial grasses in the drill skips, but overall sparse. They will probably fill in over time. Certainly <1% of the area. More of a nuisance than a long term problem. • Some parts of the area were covered with very coarse rocky material. Vegetation cover in these areas is sparse but will likely slowly increase overtime. • The non-rocky areas have good stands of seeded species. • There was a small amount of windblown trash in the western part of the area. • A large building was constructed in the northeast portion of the area. There was vehicle disturbance in the seeded area.	No obvious signs of erosion. BLM Score = 4	There were no BMPs installed in this area.	

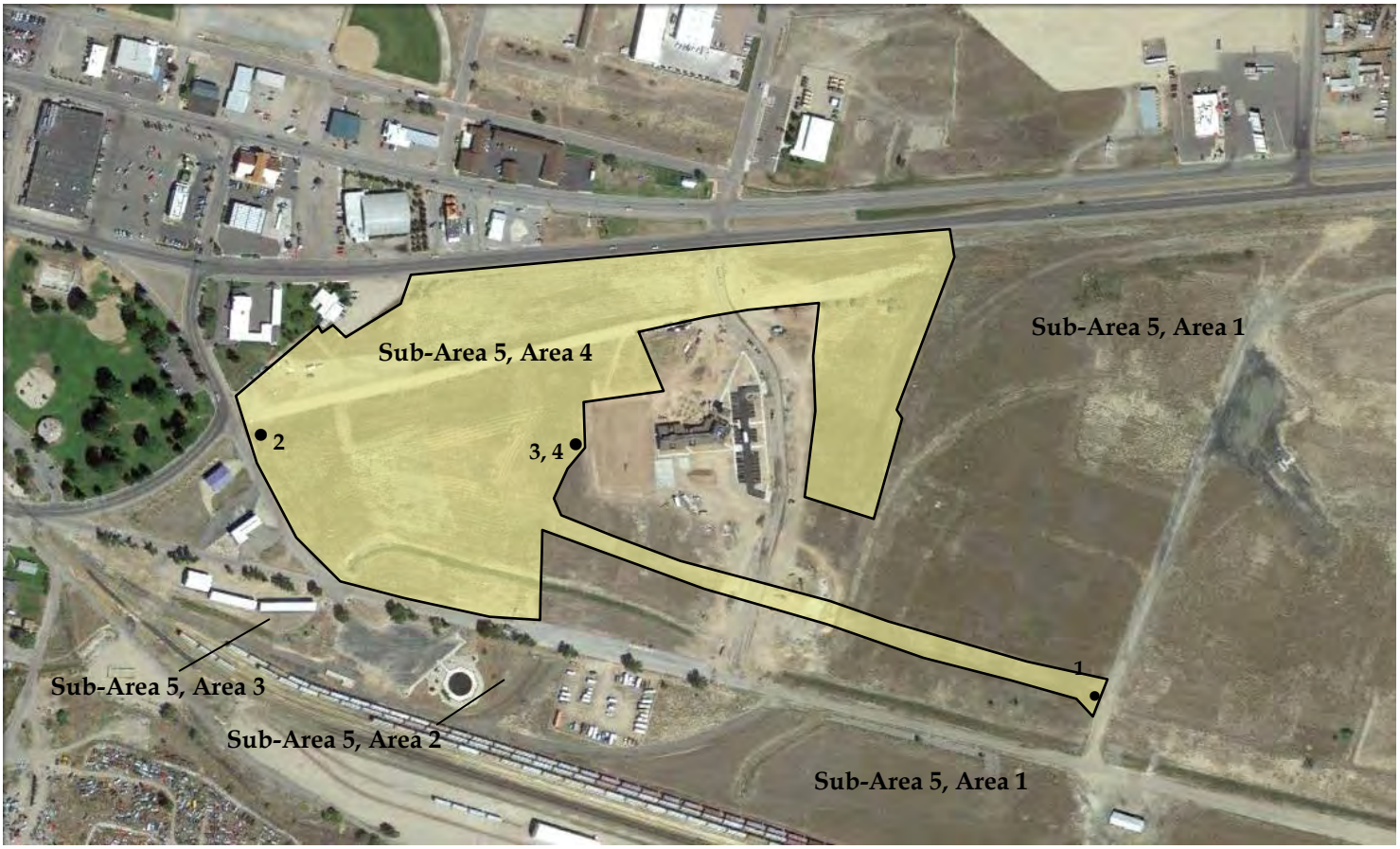
Annual Monitoring and Maintenance COMMENTS for Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014

YEAR	VEGETATION COMMENTS	EROSION COMMENTS	BMP COMMENTS	MANAGEMENT ACTIVITIES
2014	• Sub-Area 5, Area 4 includes the west part of the East Anaconda Yards. The area was cover soiled late in 2009. The area was fertilized and seeded either in the Fall of 2009 or Spring 2010. • There are some drill skips and small areas that were apparently not seeded. Some perennial grasses in the drill skips, but overall sparse. They will probably fill in over time. Certainly <1% of the area. More of a nuisance than a long term problem. • Some parts of the area were covered with very coarse rocky material. Vegetation cover in these areas is slowly increasing. • The non-rocky areas have good stands of seeded species. • There was a small amount of windblown trash in the western part of the area. • A large building (school) was constructed in the northeast portion of the area. Some of the areas disturbed during construction have been seeded, other appear not to have been. The school grounds are now sod and are no longer monitored as part of the remediated area. • Field observations suggest that a general LRES assessment for this area would be >130. • The area was sampled for second year compliance in 2014. The standards are being met (44% mean cover by acceptable species).	No obvious signs of erosion. BLM Score = 4	There were no BMPs installed in this area.	

Transect Sampling Summary for Old Works Sub-Area 5, Area 4 (VM_209)

Old Works Sub-Area 5, Area 4	Mean Cover (%)		Frequency (%)	
	2013	**2014**	**2013**	**2014**
Number of Transects Sampled	2	2	2	2
Total Vegetation Cover (All Species)	35	44		
Total Vegetation Cover (Acceptable Species)	35	44		
Litter and Rock Combined	46	43		
Bare Soil	19	14		
Total Cover	81	86		
Litter Cover	43	37		
Rock Cover	3	6		
Acceptable Species				
Agropyron cristatum	4		50	
Agropyron dasystachyum	2	2	100	100
Agropyron intermedium	5	4	100	100
Agropyron smithii	<1		50	
Agropyron trachycaulum		<1		50
Bromus inermis	4	1	100	100
Chrysothamnus nauseosus		1		50
Elymus cinereus	7	4	100	100
Festuca ovina	1	<1	50	50
Hordeum jubatum		<1		50
Iva axillaris		<1		50
Medicago sativa	12	28	100	100
Poa ampla	<1	3	100	100
Poa compressa	<1		50	
Stipa viridula	<1	<1	50	50
Undesirable Weedy Species				
Taraxacum officinale	<1		50	
Noxious Weed Species				
Centaurea maculosa	<1	<1	100	50

Site Aerial Photograph for Old Works Sub-Area 5, Area 4 (VM_209)



•1 Photo Location Point

Old Works Sub-Area 5, Area 4 (VM_209)

Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014

PHOTO LOCATION 1 – Old Works Sub-Area 5, Area 4	**PHOTO LOCATION 2 – Old Works Sub-Area 5, Area 4**
N 46° 07’ 22.8”; W 112° 55’ 28.1”, looking west	N 46° 07’ 29.0”; W 112° 55’ 59.6”, looking east
August 6, 2010	August 6, 2010
August 4, 2011	August 4, 2011

Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014

PHOTO LOCATION 1 – Old Works Sub-Area 5, Area 4	**PHOTO LOCATION 2 – Old Works Sub-Area 5, Area 4**
N 46° 07’ 22.8”; W 112° 55’ 28.1”, looking west	N 46° 07’ 29.0”; W 112° 55’ 59.6”, looking east
August 22, 2012	August 22, 2012
August 4, 2013	August 4, 2013

Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014

PHOTO LOCATION 1 – Old Works Sub-Area 5, Area 4		**PHOTO LOCATION 2 – Old Works Sub-Area 5, Area 4**
N 46° 07’ 22.8”; W 112° 55’ 28.1”, looking west		N 46° 07’ 29.0”; W 112° 55’ 59.6”, looking east
July 8, 2014		July 8, 2014

Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014

PHOTO LOCATION 3 – Old Works Sub-Area 5, Area 4	**PHOTO LOCATION 4 – Old Works Sub-Area 5, Area 4**
N 46° 07’ 29.6”; W 112° 55’ 47.4”, looking northeast	N 46° 07’ 29.6”; W 112° 55’ 47.4”, looking southwest
August 6, 2010	August 6, 2010
August 4, 2011	August 4, 2011

Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014

PHOTO LOCATION 3 – Old Works Sub-Area 5, Area 4	**PHOTO LOCATION 4 – Old Works Sub-Area 5, Area 4**
N 46° 07’ 29.6”; W 112° 55’ 47.4”, looking northeast	N 46° 07’ 29.6”; W 112° 55’ 47.4”, looking southwest
August 22, 2012	August 22, 2012
August 4, 2013	August 4, 2013

Old Works Sub-Area 5, Area 4 (VM_209) 2010-2014

PHOTO LOCATION 3 – Old Works Sub-Area 5, Area 4		**PHOTO LOCATION 4 – Old Works Sub-Area 5, Area 4**
N 46° 07’ 29.6”; W 112° 55’ 47.4”, looking northeast		N 46° 07’ 29.6”; W 112° 55’ 47.4”, looking southwest
July 8, 2014		July 8, 2014

ATTACHMENT 3

ACCESS INSPECTION FORMS

ACCESS POINT INSPECTION

1. **Inspector(s) – Name and Affiliation:**

2. **Date:**

3. **Location(s) Inspected.**

4. **Fences / Locks / Gates**

5. **Signage**

6. **Vehicle Barriers**

7. **Type of Disturbance Present** (check all that apply)
   [ ] No significant disturbance observed
   [ ] Vehicle tracks on site surface
   [ ] Foot/bike paths
   [ ] Other_____
   [ ] Evidence of domestic livestock grazing
   [ ] Evidence of wildlife usage
   [ ] Apparent vandalism at site

8. **Actions Required to Repair Disturbance**

9. **Actions Required to Prevent Redisturbance**
   [ ] No actions required
   [ ] Fencing
   [ ] Other_____
   [ ] Post signs
   [ ] Fencing and signs

10. **Debris/Garbage On Site**
    [ ] No material present
    [ ] Small amount of easily removed material
    [ ] Significant amount of material to be removed
    [ ] Material requiring immediate removal (detailed below)

11. **Comments** (materials to be removed, action required, etc.)**:**
    _____
    _____

12. **Recommendations:**
    [ ] 0. No Action, Site completed
    [ ] 1. Minor action, site stable
    [ ] 2. Small areas on site require some action
    [ ] 3. Significant action required

_____ Date:_____
Evaluator Signature

Exhibit 6
(ADLC Parcels Superfund O&M Annual Performance Evaluation Report Form)

Anaconda Smelter NPL Site
Anaconda-Deer Lodge County Parcels Superfund O&M
Annual Performance Evaluation Report
(Reporting Period 20__ to 20__)

1.0 Did ADLC fully implement all activities required of ADLC pursuant to the ADLC Parcels Superfund O&M Plan?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies
Corrective Actions
Corrective Actions Completed by ADLC
Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

2.0 Did ADLC comply with all reporting requirements under the ADLC Parcels Superfund O&M Plan?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies

Anaconda Smelter NPL Site
Anaconda-Deer Lodge County Parcels Superfund O&M
Annual Performance Evaluation Report
(Reporting Period 20__ to 20__)

Corrective Actions
Corrective Actions Completed by ADLC
Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

☐ **All Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____
Annual Review Completed By:
Reviewer: Signature: _____ Date:_____

Exhibit 7
(ADLC Parcels Superfund O&M Initial Budget)

ADLC Superfund Parcels O&M Budget

TASK DESCRIPTION		UNIT PRICE	UNITS	QTY	PRICE
TASK 1. Inspections					
Task 1A: Annual Inspection of Storm Water Channels (67,000 linear ft)					
Staff Engineer I		$80.00	HOUR	36	$2,880.00
Staff Engineer I		$80.00	HOUR	36	$2,880.00
Task 1B: Annual Inspection of Storm Water Ponds					
Staff Engineer I		$80.00	HOUR	16	$1,280.00
Staff Engineer I		$80.00	HOUR	16	$1,280.00
Task 1C: Annual Pond Sediment Survey					
Surveyor		$90.00	HOUR	8	$720.00
Survey Tech		$75.00	HOUR	8	$600.00
Survey Equipment		$500.00	DAY	1	$500.00
Task 1D: Annual Inspection of ADLC Industrial Engineered Cover Areas					
Staff Engineer I		$80.00	HOUR	2	$160.00
Staff Engineer I		$80.00	HOUR	2	$160.00
Task 1E: Annual Inspection of Vegetative Cover Areas (Cat 5&6 in LTIM) 437.5 acres					
Staff Engineer I		$80.00	HOUR	24	$1,920.00
Biologist		$75.00	HOUR	24	$1,800.00
Task 1F: Semi-annual Inspection of Access Controls (53,793 linear ft)					
Staff Engineer I		$80.00	HOUR	16	$1,280.00
Staff Engineer I		$80.00	HOUR	16	$1,280.00
Task 1G: Semi-annual Historic Feature Inspections					
Staff Engineer I		$80.00	HOUR	16	$1,280.00
Staff Engineer I		$80.00	HOUR	16	$1,280.00
Task 1H: Quarterly Pond Inspections					
Staff Engineer I		$80.00	HOUR	20	$1,600.00
Staff Engineer I		$80.00	HOUR	20	$1,600.00
Task 1I: Event Inspection of Storm Water Channels					
Staff Engineer I		$80.00	HOUR	8	$640.00
Staff Engineer I		$80.00	HOUR	8	$640.00
Task 1JI: Event Pond Inspections					
Staff Engineer I		$80.00	HOUR	8	$640.00
Staff Engineer I		$80.00	HOUR	8	$640.00
				TASK 1. SUBTOTAL:	*$25,060.00*
Task 2. Development of Scope of Work					
Staff Engineer I		$80.00	HOUR	40	$3,200.00
GIS Specialist		$75.00	HOUR	8	$600.00
				TASK 2. SUBTOTAL:	*$3,800.00*
Task 3. Annual Budget Meeting					
Project Engineer II		$80.00	HOUR	2	$160.00
				TASK 3. SUBTOTAL:	*$160.00*
Task 4. Reporting					
Staff Engineer I		$80.00	HOUR	40	$3,200.00
GIS Specialist		$75.00	HOUR	40	$3,000.00
				TASK 6. SUBTOTAL:	*$6,200.00*
				TOTAL:	*$35,220.00*

Exhibit 8
(Golf Course Superfund O&M Plan)

317 Anaconda Road
Butte, MT 59701
Main: (406) 782-9964

Atlantic Richfield Company

April 15, 2016

CERTIFIED – RECEIPT REQUESTED

Mr. Charlie Coleman
U.S. EPA, Region VIII
Federal Building, 10 West 15th Street
Helena, MT 59626-0096

Mr. Joel Chavez
DEQ
Remediation Division
P.O. Box 200901
Helena, MT 59620-0901

RE: ***Final Old Works Golf Course Operations and Maintenance Plan (O&M) Plan***

Dear Charlie and Joel:

On behalf of the Atlantic Richfield Company, enclosed for your review and approval please find 2 copies and 2 CDs of the *Final Old Works Golf Course Operations and Maintenance (O&M) Plan*. This O&M Plan has been reviewed with Anaconda-Deer Lodge County (ADLC) and incorporates comments received during ADLC review of the O&M Plan. If you have questions or concerns, please do not hesitate to call me at (406) 723-1813.

Sincerely,

Shannon Dunlap
Operations Project Manager
Remediation Management Services Company
An affiliate of Atlantic Richfield Company

cc: Julie DalSoglio/EPA (w/o enc.)
Joe Vranka/EPA (w/o enc.)
Andy Lensink/EPA (1 CD)
Katherine Haque-Hausrath/DEQ (1 CD)
Connie Ternes-Daniels/ADLC (1 hard copy and 1 CD)
Rob Jordan/Atlantic Richfield (1 hard copy and 1 CD)
Cord Harris/Atlantic Richfield (1 CD)
Jean Martin/Atlantic Richfield (w/o enc.)
Tim Hilmo/Atlantic Richfield (1 CD)
Gunner Emilsson/CDM (1 hard copy and 1 CD)
Kevin Bethke/TREC (1 hard copy and 1 CD)

Duane Logan/Pioneer (1 hard copy and 1 CD)
Don Booth/Booth Consulting (1 CD)
John Davis/PRRL (1 CD)

File: 72.03.110.1 (w/certs)
MiningSharePoint@bp.com

ANACONDA SMELTER NPL SITE
OLD WORKS/EAST ANACONDA DEVELOPMENT AREA OPERABLE UNIT

Final

Old Works Golf Course
Operations and Maintenance (O&M) Plan

Atlantic Richfield Company

April 15, 2016

ANACONDA SMELTER NPL SITE
OLD WORKS/EAST ANACONDA DEVELOPMENT AREA OPERABLE UNIT

Final

Old Works Golf Course
Operations and Maintenance (O&M) Plan

Prepared for:

Atlantic Richfield Company
317 Anaconda Road
Butte, Montana 59701

Prepared by:

Pioneer Technical Services, Inc.
P.O. Box 3445
Butte, Montana 59702

April 15, 2016

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I. INTRODUCTION

This Operations and Maintenance (O&M) Plan is a revision to the *Final Old Works Golf Course Operation and Maintenance (O&M) Plan* (AERL, 1998a) and has been prepared to describe and specify the procedures necessary for operating and maintaining environmental remedy components within the Old Works Golf Course (OWGC).

The OWGC was constructed as part of the environmental cleanup remedy for the historic Old Works Smelter, which is part of the Old Works/East Anaconda Development Area (OW/EADA) Operable Unit (OU). The remediation was completed pursuant to the standards and in compliance with the *OW/EADA OU Unilateral Administrative Order (UAO) EPA Docket No. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) VIII-94-08* (EPA, 1994). Construction of the OWGC and remediation of surrounding areas were necessary to cleanup large volumes of mine waste materials that resulted mainly from smelter operations at the Old Works site from 1883 to 1902.

This document discusses O&M components of the OWGC related to environmental cleanup of the golf course. The O&M components described herein include brief summaries of applicable environmental remediation measures that were constructed on the site, as well as requirements for monitoring, maintaining, and when necessary, repairing specific elements of the OWGC to maintain the environmental remedy. All O&M activities discussed in this document are presented with the assumption that the property is operated and maintained as a golf course. If future operation of the property changes, i.e., the property is no longer operated as a golf course, vegetative O&M activities within the property will be conducted to meet the requirements set forth in the *Anaconda Smelter NPL Site Anaconda Regional Water, Waste, and Soils Operable Unit Final Vegetation Management Plan (Revision 1)* (Atlantic Richfield Company, 2013), Section 2.1: Waste Management Areas and Section 2.4: Performance Standards.

Components of the OWGC that are unique to this site and not common features for most golf courses (the "Golf Course Remedial Structures") are provided below.

1. High density polyethylene (HDPE) liners beneath Lakes #1 and #2; and polyvinyl chloride (PVC) liners beneath greens, tees, and formal bunkers. These liners minimize infiltration of surface water into the underlying soil waste materials.

2. Soil cap beneath all areas of the golf course (fairways, rough, etc.) generally excluding tees and greens. The high clay content of the cap, in conjunction with surface contouring, drainage and vegetation, reduces infiltration of surface water into the underlying waste soils.

3. An extensive underdrain piping system (over 31,000 linear feet of piping) with surface collection nodes was installed (113 manholes and 133 drainage grate inlets), which routes water to golf course Lakes #1 and #2, Sediment Pond 6, and the 1996 Remedial Action (RA) Channel 3A.

4. Bank erosion protection is located on both banks of Warm Springs Creek, which consists of riprap and vegetation. These materials are necessary to protect the golf course from bank

erosion, and to protect the creek from contamination from the waste materials located beneath the golf course.

Further details regarding the Golf Course Remedial Structures are described in the appropriate sections of this O&M Plan and on As-Built Drawings provided in the *Final Old Works Remedial Action Completion Report Subareas 1 and 2* (AERL, 1998b) and the *Draft Final Old Works Golf Course Lake #2 Liner Repair Construction Completion Report (CCR)* (Atlantic Richfield Company, 2014).

II. GENERAL GOLF COURSE O&M PROCEDURES

General OWGC O&M procedures are related to the maintenance and protection of vegetative covers within the OWGC site. The vegetative cover is designed to reduce infiltration due to precipitation and irrigation within the OWGC. All vegetative covers within the OWGC must, at a minimum, meet the requirements set forth in the *Anaconda Smelter NPL Site Anaconda Regional Water, Waste, and Soils Operable Unit Final Vegetation Management Plan (Revision 1)* (Atlantic Richfield Company, 2013), Section 2.1: Waste Management Areas. Current operations and maintenance of the property as a golf course are anticipated to meet the vegetation requirements for Waste Management Areas. Vegetation management within the golf course is discussed further in Part IV: Vegetation Management of this O&M Plan.

III. OPERATIONS PLAN DETAIL

This section provides specific details for maintaining the features of the golf course that are related to the environmental remedy. In addition, a brief description of the components that make up each feature is presented to make the maintenance crews aware of the key elements of the features, and to assist in planning future reconstruction/repairs that may become necessary.

Construction As-Built information, including detailed drawings and data forms describing components and quantities for all of the features for each hole have been compiled for the entire golf course. This As-Built information is referred to throughout this section, and is provided in Appendix D of the *Final Old Works Remedial Action Completion Report Subareas 1 and 2* (AERL, 1998b), and the *Draft Final Old Works Golf Course Lake #2 Liner Repair Construction Completion Report (CCR)* (Atlantic Richfield Company, 2014). The OWGC O&M Checklist and Inspection Forms pertaining to specific maintenance items, as outlined in Table 1, are provided in Attachment A.

1) Maintaining effectiveness of the remedy will be held paramount when completing any maintenance activities within the site which will require disturbing the soil cap and excavating mine waste. The following is a general summary of excavation procedures required to maintain effectiveness of the remedy:

    - Cover soil material will first be removed and segregated.
    - The underlying soils will then be removed and segregated to prevent contamination of the cover soil materials.
    - The excavation area will then be backfilled in reverse order.

- Any excess excavated underlying soils will be transported and disposed of in the Anaconda Smelter Development Repository.

2) A Work Plan will be completed for any non-routine activities or major construction on the golf course (complete reconstruction of a green, expansion of the Clubhouse, expansion of the nursery area, etc.).

1. GREENS

Components: The golf course greens were constructed in a manner to minimize the amount of infiltration that occurs into the underlying waste material due to irrigation and precipitation. Figure 1 provides a cross-sectional view of a typical green at the OWGC. Note that each green on the golf course, including clubhouse practice greens, (excluding the driving range greens which are discussed in Part III, Section 5: Driving Range Target Greens) includes 12 inches (30.5 centimeter [cm]) of greensmix underlain by 4 inches (10 cm) of drainage gravel, non-woven geotextile, a geomembrane, and a perforated pipe drainage system that routes infiltrating water into the golf course underdrain system.

The vertical component of the geomembrane, as shown on Figure 1, has been surveyed at ground surface, and corresponds with the perimeter wire installed around the green. The top of this vertical liner is located just below ground surface. For a complete description of each green constructed on the course, refer to the As-Built information provided in Appendix D of the *Final Old Works Remedial Action Completion Report Subareas 1 and 2* (AERL, 1998b). (As-Built Drawings are provided in Appendix D of the *Final Old Works Remedial Action Completion Report Subareas 1 and 2* [AERL, 1998b]).

Maintenance: If major repair or reconstruction of a green is required, formal report procedures must be initiated, as described in Part V: Repair and Reporting Procedures. Major work includes, but is not limited to, major repairs to the liner, reshaping of a green which could impact the underlying liner or drainage control components, or constructing a new green.

2. TEE BOXES

Components: The golf course tee boxes were constructed in a manner to minimize the amount of infiltration that occurs into the underlying waste material due to irrigation and precipitation. Figure 2 provides a cross-sectional view of a typical tee at the OWGC. The tees, with the exception of the driving range tees, were constructed with similar components as the greens, except that the greensmix is only 6 inches (15.2 cm) thick, the geomembrane does not extend vertically around the perimeter of the tee, and only 1 perforated drain line was placed, which is located down the center of the tee. For a complete description of each tee constructed on the golf course refer to the As-Built information provided in Appendix D of the *Final Old Works Remedial Action Completion Report Subareas 1 and 2* (AERL, 1998b).

The driving range tee boxes differ from all other tee boxes on the golf course due to the following: 1) the driving range tee boxes were built over the top of Type A cover soil (other tee boxes were built directly on top of existing subgrade waste/soils); and 2) irrigation in these areas is not considered high volume like conventional tee or green areas, but is irrigated like the fairways.

Figure 3 provides a cross-sectional view of the driving range tee boxes constructed at the OWGC. The driving range tee boxes consist of 6 inches (15.2 cm) of greensmix, underlain by a 2-foot (0.6 meter [m]) thickness of Type A cover soil. Positive drainage is provided on the top of the Type A cover soil, and the tee boxes were installed with subdrainage piping similar to informal bunkers (as described in Part III, Section 7 – Bunkers).

Maintenance: If major repairs or reconstruction of a tee is required, formal report procedures must be initiated, as described in Part V: Repair and Reporting Procedures. Examples of major work include major repairs to the liner or drainage system, reshaping of a tee which could impact the underlying liner or drainage control components, or constructing a new tee.

3. FAIRWAYS AND DRIVING RANGE

Components: The fairways, driving range, and rough areas were constructed of several different soil types and thicknesses, depending on whether the particular area that was covered contained waste soils or relatively clean ("elevated-metals") soils. Figure 3 shows typical sections for the different soil profiles for fairways and the driving range. Figures 4 and 5 show the locations where different soil profiles were constructed. In general, the soil profile consists of three components (from the top, down):

a. **Type H soil:** 6 inches (15.2 cm) of 1-inch (2.54 cm) minus sandy loam mixed with 2% (by dry weight) 3/8-inch (9.5 mm) minus compost.
b. **Type A soil:** 6-inch (15.2 cm) minus clayey gravel obtained from the East Knob Borrow Source; thickness varies (refer to Figures 3 through 5).
c. **Lime rock:** 350 tons/acre (78.5 kilogram/square meter [kg/m^2]) of lime rock (approximately 2 inches [5 cm] thick) was placed directly on waste materials. No lime rock was placed in the areas on which the driving range and the fairways were constructed over relatively clean soils.

If the fairways or driving range are altered in the future, the cover system must be reconstructed as described above and shown on Figures 3 through 5.

Maintenance: If major repairs or reconstruction of the cover soil components is required, formal report procedures must be initiated, as described in Part V: Repair and Reporting Procedures. This would include reshaping fairways, repairs to the cover soil due to surface erosion, or other work that will require significant reconstruction of the fairway/driving range cover system.

4. ROUGH MAINTENANCE

Components: As described above for the fairways, the rough areas were also constructed of several different soil types and thicknesses, depending on whether the particular area contained waste soils or relatively clean material. Figures 4 and 5 show the locations where different soil profiles were constructed. Figure 6 shows two typical sections for the different soil profiles for non-irrigated rough areas. In general, the soil profile consists of three components:

a. **Sandy Loam/Compost:** 1-inch (2.5 cm) minus sandy loam mixed with 2% (by dry weight) 2-inch (5 cm) minus compost; thickness varies (refer to Figure 6).

b. **Type A cover soil:** 6-inch (15.2 cm) minus clayey gravel obtained from the East Knob Borrow Source; thickness varies (refer to Figure 6).

c. **Lime rock:** 350 tons/acre (78.5 kg/m^2) of lime rock (approximately 2 inches [5 cm] thick) was placed directly on waste materials. No lime rock was applied in areas where the cover soils were placed over relatively clean soils.

If the rough areas are regraded or altered in the future, it will be important to reconstruct the cover system to As-Built conditions as described above and shown on Figures 3 through 6.

Maintenance: If major repairs or reconstruction of the cover soil components is required, formal report procedures must be initiated, as described in Part V: Repair and Reporting Procedures. This includes reshaping mounds, repairs to the cover soil due to surface erosion, or other work that will require significant reconstruction of the cover system.

5. DRIVING RANGE TARGET GREENS

Components: The cover soil system for the driving range target greens was constructed in the same manner as fairways. Refer to Section III.3: Fairways and Driving Range for a description of the fairway components.

Maintenance: The turf type used on the driving range target greens is the same as found on the tees and greens, and will receive the same type and frequency of maintenance as outlined in Section III.2: Tee Maintenance.

6. NURSERY AREA

Components: The nursery covers an area of approximately 1.5 acres (0.61 hectare) and consists of space for growing both fairway and green/tee grasses. Approximately 0.5 acres (0.20 hectare) of the nursery area is used as a growing area for green/tee grasses and 1.0 acre (0.40 hectare) is used for growing fairway grasses.

The 0.5 acre (0.20 hectare) green/tee growing area was constructed with a soil cover that includes 350 tons per acre (78.5 kg/m^2) of lime rock that is overlain by 18 inches (45.7 cm) of compacted Type A material and 6 inches (15.2 cm) of greensmix. Two underdrain lines were installed and surface grading was completed to control storm water and excessive irrigation infiltration.

The 1.0 acre (0.40 hectare) fairway grass portion of the nursery has a soil cover that includes 350 tons per acre (78.5 kg/m2) of lime rock (approximately 2 inches [5 cm] thick) that is overlain by 18 inches (45.7 cm) of dozer-tracked Type A cover soil and 12 inches (30.5 cm) of Type H soil. The depth of the Type H soil will be monitored/replenished in order to maintain the 12-inch cover thickness whenever sod is cut/removed from the nursery area. Water infiltration is controlled with surface slopes graded at 2% toward centralized drainage swales. Drainage nodes constructed on the north side of the nursery are used to collect surface flows for routing to 1996 RA Channel 3A.

Maintenance: If major repairs or reconstruction of the nursery area is required, formal report procedures must be initiated, as described in Part V: Repair and Reporting Procedures. Examples of major work include expansion of the nursery area which could impact the underlying soils or drainage control components, or other work that will require significant reconstruction of the cover system. The following minimum requirements will be used during maintenance of the nursery area:

a. **Sod Cutting:** When removing sod from the nursery area is required, special care will be taken to ensure that sod cutting activities do not compromise the overall thickness of the corresponding cap types within the nursery area. If sod cutting results in a decrease of the soil cap thickness, the areas of concern will be reported to the OWGC Superintendent and restored to As-Built conditions.

   Areas within the nursery where sod removal has been completed will be revegetated as soon as possible to limit infiltration and meet the vegetation requirements discussed in Part II: General Golf Course O&M Procedures and Part IV: Vegetation Management.

7. BUNKERS

Components: Two types of golf course bunkers were constructed on the site: informal (low maintenance) bunkers, and formal (high maintenance) bunkers. Informal bunkers are located in non-irrigated, capped areas, which are positively graded or include drainage within/below the cap. Formal bunkers are located in areas that could potentially receive higher irrigation rates, such as areas adjacent to greens; therefore, these bunkers include PVC liners and subdrainage piping. For a complete description of each bunker constructed on the golf course refer to the As-Built information provided in Appendix D of the *Final Old Works Remedial Action Completion Report Subareas 1 and 2* (AERL, 1998b). In general, the bunkers consist of the following components:

a. **Bunker Slag:** Black slag material obtained from northeastern corner of the Main Granulated Slag Pile as shown on Figure 7.

b. **Type H soil:** 6 inches (15.2 cm) of 1-inch (2.54 cm) minus sandy loam mixed with 2% (by dry weight) 3/8-inch (9.5 mm) minus compost.

c. **Type A soil:** 6-inch (15.2 cm) minus clayey gravel obtained from the East Knob Borrow Source.

d. **Lime rock:** 350 tons/acre (78.5 kg/m^2) of lime rock (approximately 2 inches [5 cm] thick) was placed directly on waste materials. No lime rock was applied in areas where relatively clean soils existed.

<u>Informal Bunkers:</u> Typical informal bunkers consist of 6 inches (15.2 cm) of bunker slag over 18 inches (45.7 cm) of compacted Type A cover soil. A 4-inch (10 cm) diameter perforated drainpipe system was constructed throughout most of the informal bunkers in a herringbone pattern to route flow from the bunkers into the subdrainage system. The drainpipe system is underlain by 60-mil HDPE to minimize flow into the cap and/or subgrade soils. See Figure 8 for details of components used for constructing the informal bunkers.

Formal Bunkers: Bunkers that are subject to overspray from the irrigation system generally consist of 4 inches (10 cm) to 6 inches (15.2 cm) of bunker slag underlain by 40-mil PVC liner, 4 inches of Type H soil, and 18 inches (45.7 cm) of compacted Type A cover soil. A 4-inch diameter perforated drainpipe system has been constructed throughout the formal bunkers in a herringbone pattern to route flow from the bunkers into the subdrainage system. The drainpipe system is underlain by 60-mil HDPE in a similar fashion to the informal bunkers. See Figure 9 for details of components used for constructing formal bunkers.

After grow-in, it became necessary to enlarge (flash) all formal bunkers to provide increased visibility from the fairways. The formal bunkers were expanded from between 0.5 feet (15.2 cm) and 3 feet (0.9 m) around the outer perimeter of the bunkers at locations where the surface grade exceeds 3 to 5%. The slag in the expanded area was placed directly over Type A cover soil, with positive surface drainage toward the bunker. The portion of PVC liner material located at the top of the bunker was keyed into the Type A cover soil to allow for direct flow from the expanded area into the PVC-lined area which minimizes the potential for flow beneath the PVC. See Figure 10 for details of components used for constructing flashed formal bunkers.

Maintenance: If major repairs or reconstruction of a bunker is required, formal report procedures must be initiated, as described in Part V: Repair and Reporting Procedures. This would include major repairs to the bunker liner, cover soil or drainage system, or constructing a new bunker. The following minimum requirements will be used during maintenance of the golf course bunkers:

a. **Raking:** Check to make sure that the PVC liner is completely covered with bunker slag.

b. **Slag Replacement:** Slag of the same type and quality as used in the original construction will be used as replacement for that lost due to wind, erosion, or play. Slag replacement material will be obtained from the northeastern corner of the Main Granulated Slag Pile as shown on Figure 7, and as described in the Slag Agreement between Anaconda-Deer Lodge County (ADLC) and the Atlantic Richfield Company. Inspections of slag depths will be conducted on a monthly basis throughout the playing season. The depth should be maintained to at least a uniform depth of 4 inches (10 cm) in all areas except the green side slag faces. Surveying or hand digging will be used to confirm that the depth of the slag is maintained to a uniform depth of 4 inches (10 cm). If more slag is required on the faces, it should be pulled from the existing material in the center of the bunker to ensure firmness.

c. **Winter Fencing:** If winter fencing is placed around the perimeter of formal bunkers, the posts must be placed far enough away from the bunker so as not to puncture the PVC liner that underlies the bunkers.

d. **Irrigation:** Irrigation around informal bunkers must be monitored to ensure that overspray is not landing on the bunkers.

8. TREES, SHRUBS AND OTHER LANDSCAPED AREAS

Components: Various trees, shrubs, and landscaped areas are present within the golf course. These features are present throughout the golf course and are constructed in areas with varying soil

cap construction components. Figures 4 and 5 show the locations where different soil profiles were constructed.

Maintenance: Refer to Figure 11 for details on planting new trees.

9. IRRIGATION SYSTEM

Components: The irrigation system for the golf course was designed to provide the most effective and efficient distribution of water required to minimize the potential for infiltration into the soil cap and to sustain healthy plant growth. Irrigation heads have been installed in a manner that limits overspray of unlined bunkers, historic areas, and rough/native vegetation areas. In addition, low-pressure automatic recirculation control valves (LARCs) have been installed in irrigation lines that are located near Warm Springs Creek. They are designed to shut down flow through a particular line if a break in the pipeline has occurred. Complete As-Built Drawings for the irrigation system, including piping and head locations are included in Appendix D of the *Final Old Works Remedial Action Completion Report Subareas 1 and 2* (AERL, 1998b).

Operation and Maintenance: Golf course maintenance will be responsible for operating and maintaining the irrigation system, and completing necessary repairs. Replacing or repairing irrigation system components which are not typical to normal golf course operations or completion of irrigation system components which require soil cap removal will be reported as described in Part V: Repair and Reporting Procedures. To meet the requirements of the irrigation system, it should be operated and maintained as described below:

a. Operation:

1. Irrigation will be scheduled using the information provided by the on-site weather station, the irrigation computer control software, and using best judgment from daily field observations. Adequate soil moisture levels will be determined by visual observation, plant resiliency, turgidity, examining soil cores, moisture sensor devices, and weather station data. Adjustments to the schedule programs should be made daily prior to leaving the site.

2. Consideration must be given to soil texture, porosity, water holding capacity, drainage, compaction, precipitation, runoff, prevailing wind condition, time of day or night, type of grass, and plant and root structure. Daily irrigation may include syringing during the day and hand watering during periods of windy weather and high stress.

3. In areas where wind creates problems of spraying onto private property or road rights-of-way, the controllers will be set to operate during the period of lowest wind velocity, which would normally occur at night.

4. Irrigation will be monitored around informal bunkers to ensure that overspray is not landing on the bunkers.

5. Operation of the irrigation system should be conducted in a manner to maintain effectiveness of the remedy and meet vegetation requirements set forth in the *Anaconda*

Smelter NPL Site Anaconda Regional Water, Waste, and Soils Operable Unit Final Vegetation Management Plan (Revision 1) (Atlantic Richfield Company, 2013), Section 2.1: Waste Management Areas. Current operations of the property as a golf course are anticipated to meet these requirements.

6. The quality of the water in Lake #2 will be monitored for total copper to evaluate loading impact on the golf course vegetation when use of the irrigation wells is required to supplement creek diversion inflows.

b. Maintenance:

1. The entire irrigation system should be inspected for proper operation and leaks on a continuous basis, with a complete inspection tour at least once a week. The golf course should be traversed each morning to identify leaks, distribution anomalies, and problems with pump plant operation. The following additional monitoring tasks will also be performed:

a. Monitor all systems within the design parameters and take corrective action for problems in coverage caused by improper sprinkler head adjustment, clogged or leaking heads, pipes and fittings, and remove obstacles including plant materials which obstruct the trajectory of the spray stream.

b. Checking, adjusting, and/or repairing any sprinkler heads causing excessive runoff, including sloped areas or areas which throw directly onto roadway, paving, or walkways.

c. Inspecting and interpreting all irrigation run time logs on a daily basis, as well as inspecting all field controllers for proper operation on a weekly basis, and making adjustments as required to ensure the proper execution of the program.

d. Checking, adjusting, and/or cleaning the Warm Springs Creek diversion on a daily basis. The golf course is allowed to divert 1.4 cubic feet (ft^3) (0.04 cubic meters [m^3]) per second or 345 acre-feet (425,385 m^3) per year under water right No. 76G-W-32342 and water right No 76G-W-32350. Any additional irrigation water required will be obtained from the supplemental irrigation wells.

2. All leaking or defective heads, pipes and valves will be repaired as soon as possible and within 24 hours of discovery.

10. LAKE, POND AND CREEK MAINTENANCE

Components: Golf Course Lakes #1 and #2 collect surface water runoff and drainage from the subsurface collection system. Lake #2 also serves as the water supply reservoir for the golf course irrigation system, and is the collection point for the irrigation supply wells and Warm Springs Creek water diversion. Each lake is lined with an HDPE liner, geotextile, and cover soil. The perimeter of each lake is covered with riprap within the normal operating pool elevations. An

emergency spillway is located at the southern end of each lake to control outflow from the lakes during large storm events.

Lake #1: Lake #1 has a manually operated valve near the southern side of the lake for routing lake water into the underdrain system and eventually into Lake #2. This allows for periodic recirculation of the lake water which could otherwise become stagnant. Lake water is refilled by use of an irrigation system blow-off valve located near the #5 Fairway. To minimize the potential for Lake #1 water to pass through the emergency spillway into Warm Springs Creek, routing Lake #1 flow to Lake #2 through the underdrain system is required during the non-operational period of the irrigation system and during storm events when the pool level rises above the riprap protection. Prior to routing storm water through the emergency spillway, the U. S. Environmental Protection Agency (EPA) will be notified.

Lake #2: Lake #2 also has a manually operated valve on the east side of the lake for routing storm flows out of Lake #2, into the underdrain system, and eventually to Sediment Pond 6. As with Lake #1, routing Lake #2 flow to Sediment Pond 6 through the underdrain system is required during the non-operational period of the irrigation system and during storm events when the pool level rises above the riprap. Additional capacity for routing Lake #2 flow to Sediment Pond 6 during the non-operational period of the irrigation system and during storm events is provided through the auxiliary pumping system. The auxiliary system is designed to discharge into the C-1 underdrain system and includes a 3-inch portable gas pump and 300 feet of flexible discharge hose. Prior to routing storm water through the emergency spillway, the EPA will be notified. In 2011, high groundwater levels beneath the lake caused an upward bulging and rupture of the liner. Construction activities included replacing a portion of the HDPE liner, installing a perforated pipe drain system beneath the south bay of Lake #2, installing two Reinforced Concrete Pipe (RCP) manholes, and installing dewatering pumps. Operation and monitoring is required for the system to provide protection of the Lake #2 liner system during high groundwater events. A level transducer in the influent lift station manhole can be set to automatically turn on the pumps or turn on pumps manually to control the groundwater. Additional operational requirements are as follows:

- Existing piezometers and dewatering wells installed around the perimeter of the Lake #2 can be used to verify and interpolate groundwater elevations in the proximity of Lake #2.

- A hoist can be placed in one of the stainless steel socket basins installed on both the north and south side of the influent lift station manhole and used to pull pumps along the guide rails and through the manhole lid hatch.

- A 6-inch submersible pump can be placed in the 18-inch sump on the south side of the influent lift station manhole to reduce or eliminate the water flowing into the manhole.

- If access into the influent lift station manhole is required, an inflatable plug can be installed in the 18-inch underdrain pipe entering the manhole and residual water within the manhole can be removed with a small suction pump.

- The system is set up to automatically turn on at an elevation of 5,202 feet (transducer level reading of 10.0 feet) and has a target operating elevation of 5,200 feet (transducer level reading of 8.0 feet). The transducer reading elevation (transducer level reading of 0.0 feet) is set at 5,192 feet. Pumping will automatically turn off (low water level alarm float) at an elevation of 5,192.5 feet (transducer level reading of 0.5 feet). The high water level alarm float is set at an elevation of 5,206 feet (transducer level reading of 14.0 feet). A "Do Not Exceed" elevation of 5,207 feet (transducer level reading of 15.0 feet) has been established for normal lake operating water level to ensure that the liner does not bulge upward due to the hydrostatic pressure exerted by the groundwater.

- Gate valves on the discharge lines from each pump within the influent lift station manhole can be used for additional throttling and head/flow control for each pump prior to where both of the discharge lines manifold together at the valve assembly east of the influent lift station manhole (As-Built Construction Drawings are provided in Attachment C). The butterfly valves can be used to control the amount of water flowing to the existing underdrain network tie-in at Node #14 and the amount of water recirculated back into Lake #2. The downgradient underdrain network pipe at Node #14 has an approximate capacity of 1,200 gallons per minute (gpm). The flow released to the discharge line that ties into Node #14 must be regulated, depending on runoff from the other underdrain network pipes upgradient of Node #14, to allow for adequate storm water conveyance to minimize unwanted ponding or surface drain overflow.

  a. Sediment Ponds 1, 2, and 3: Sediment Ponds 1, 2, and 3 are located north of the golf course boundary at the base of Stucky Ridge. The ponds collect sediment and control runoff onto the golf course from Stucky Ridge. The drainage collection system, including surface flow measures and underdrains are sized and installed to route flows from the sediment ponds to golf course Lakes #1 and #2, and Sediment Pond 6.

  b. Sediment Pond 6: Sediment Pond 6, which is located north of Warm Springs Creek and just outside of the eastern boundary of the golf course, collects drainage from Lake #2 and from all areas of the golf course east of Lake #2. There is a manually operated valve on the east side of the Sediment Pond 6 for routing storm flows out of Sediment Pond 6 to Sediment Pond 5.
  The valve will be operated during the annual inspection and the backflow prevention valve will be inspected annually. Prior to routing storm water through the emergency spillway, the EPA will be notified.

  c. Stucky Ridge Sediment Pond: The Stucky Ridge Sediment Pond is located in a depression north of the golf course boundary. The ponds collect sediment and control runoff from Stucky Ridge above the golf course. Storm water runoff is conveyed through the Stucky Ridge Sediment Pond outlet structure to Sediment Pond 5. Annual flushing of the Stucky Ridge Sediment Pond outlet piping is required via the irrigation quick coupler installed northwest of Sediment Pond 5.

d. **1996 RA Channel 3A:** The 1996 RA Channel 3A is located south of Warm Springs Creek and just outside of the eastern boundary of the golf course and collects subsurface drainage from Hole #11, the portion of Hole #10 that is located on the south side of the creek, and the nursery area.

e. **Warm Springs Creek:** Warm Springs Creek flows along the southern edge of the golf course. Bank erosion protection is located on both banks of the creek, which consists of riprap and vegetation. These materials are necessary to protect the golf course from bank erosion, and to protect the creek from contamination from the waste materials located beneath the golf course.

Attachment B contains a summary of the hydraulic performance of the storm water management system in and around the golf course. Included are the capacities and interactions of the various components.

Maintenance: Replacement or repair of lake, sediment pond, or creek components will be reported as described in Part V: Repair and Reporting Procedures. This includes, but is not limited to, the following:

a. **Lakes:** Lakes #1 and #2 must be monitored on a daily basis to check the integrity of the riprap and soil cover. It is important to maintain the pool level in each of the lakes within the riprap to protect the soil cover and liner materials. The Lake #2 auxiliary pump and piping system should also be inspected and inventoried annually.

b. **Sediment Ponds:** The manually operated valve on the east side of Sediment Pond 6 for routing storm flows out of Sediment Pond 6 to Sediment Pond 5 will be operated and the backflow prevention valve inspected annually. Also, annual flushing of the Stucky Ridge Sediment Pond outlet piping is required via the irrigation quick coupler installed northwest of Sediment Pond 5.

   During routine maintenance procedures, care should be taken to identify any noticeable changes in outlying areas, including the sediments ponds, which may impact the golf course.

c. **Warm Springs Creek:** Care will be taken at all times to prevent sediment and chemical runoff outside the golf course boundaries and along Warm Spring Creek. Live trees and shrubs within the creek corridor will not be removed or trimmed unless approved by EPA, except for routine trimming of the following:

   - Green #1 area of play;
   - Line of sight between starter's window and #1 and #10 Tees;
   - Areas where play crosses creek on Holes #1, #10, and #11; and
   - Vegetation that encroaches on the bridges.

All of these areas will require yearly trimming, but no removal of entire plants.

Warm Springs Creek will be routinely inspected for damage to riparian vegetation and the 100-year riprap erosion protection; damage will be reported immediately to the EPA. If any trees grow to within 15 feet (4.6 m) of the power lines NorthWestern Energy will be notified and be responsible for trimming of the trees.

11. SUBSURFACE DRAINS

Components: Infiltration through cover soils on the golf course is controlled by use of an extensive subsurface (underdrain) and surface drainage system. Eleven underdrain networks were constructed to route collected flows, with pipe diameters ranging from 4 inches (10 cm) to 30 inches (76.2 cm). Appendix D of the *Final Old Works Remedial Action Completion Report Subareas 1 and 2* (AERL, 1998b) includes the locations of all subsurface drain networks and inlets. As-Built Drawings showing the locations of subsurface drain networks and inlets are also provided in Attachment C of this O&M Plan. Pipe used for the underdrain system was primarily PVC, with limited HDPE pipe used for the downgradient end of Network G and the Lake #2 groundwater dewatering system. Inlet nodes for the underdrain system were constructed of concrete manholes with HDPE grated inlets mounted on top of concrete covers or HDPE/PVC risers with grated inlets. Pipe bedding for the underdrain system consists of black slag obtained from the Main Granulated Slag Pile. The bedding was installed as shown on the As-Built Drawings provided in Appendix D of the *Final Old Works Remedial Action Completion Report Subareas 1 and 2* (AERL, 1998b)

Perforated drain lines, in addition to those used for tees, greens and bunkers, were constructed and attached to the underdrain system to collect seepage and/or surface water flows from several areas on the golf course. A minor seepage collection line was constructed adjacent to the green at Hole #4 to collect a small, localized seep that flows out of the hillside, this collection line then flows into the underdrain system. A perforated drain line was constructed on the south side of Hole #11 to prevent irrigation water from flowing into Warm Springs Creek. The perforated section at this location is approximately 110 feet long and drains into Network F1. Additional perforated pipe collection areas were also constructed to collect surface water drainage near the #8 Tee, and in fairways where shallow ponding occurs near underdrain inlets.

On the south side of Warm Springs Creek at the tee box for Hole #1, it was not practical to route collected flow to the underdrain system. Due to the limited amount of anticipated flow from this area, a dry well was constructed for collecting and monitoring the flows, and to allow for seepage of collected water into the previous natural sands and gravels that underlie the excavated waste soils. The bottom of the dry well is filled with a 2.5-foot (0.762 m) thickness of lime rock as an additional measure to treat the seepage prior to flowing into the natural soils.

A second dry well was installed at the foot of the heap roast pile along the #8 Fairway to collect surface water runoff from the fairway that covers an area of approximately 0.8 acre (0.32 hectare). The dry well consists of a 36-inch (0.91 m) corrugated metal pipe (CMP) with manhole lid and 12-inch (30.5 cm) grated inlet. The CMP is approximately 6 feet (1.8 m) deep and the bottom ties into existing alluvial soils. The 1½-inch (3.8 cm) drain rock was placed around the base of the CMP to improve the contact between the bottom of the CMP and the alluvium.

The third dry well was installed to collect runoff from the roof of the clubhouse. This dry well is located in the grass near the northwest corner of the clubhouse patio, and consists of a 48-inch (1.2 m) CMP which extends 12 feet (3.7 m) below grade into existing alluvial soils. The 1½-inch (3.8 cm) drain rock was placed around the base of the CMP to improve the contact between the bottom of the CMP and the alluvium.

Maintenance: Replacing or repairing subsurface drains or surface drainage components will be reported as described in Part V: Repair and Reporting Procedures. This includes, but is not limited to, the following:

a. All surface drain inlets will be kept free of debris, including leaves, grass clippings, dirt, and litter.

b. Periodic edging will be done to keep inlets from being grown over with sod.

c. Any drain found to be malfunctioning is to be repaired as soon as possible after discovery.

d. Complete inspection of the underdrain node network will be completed annually. When this inspection is completed, it should be documented and reported as described in Part V: Repair and Reporting Procedures.

e. Any area that requires additional drainage to be installed for excess water problems will be completed as soon as possible after discovery. Perforated drainage piping will be installed as shown on Figure 12. It is also acceptable to daylight the new drainage pipe outlet for overland flow to an existing underdrain inlet.

f. The repair of broken pipelines or addition of new pipelines will require reconstructing the cover soil system. Replace and compact the waste material up to the bottom level of the cover soil, then use clean fill material for backfill, with Type H soil on the top 6 inches (15.2 cm) per the original cover soil design.

g. Flushing the drains for the greens will be completed annually and as warranted based on system malfunctions. Each green has a clean-out for this purpose. Refer to the As-Built Drawings and As-Built data sheets for the locations of the clean-outs (As-Built Drawings are provided in Appendix D of the *Final Old Works Remedial Action Completion Report Subareas 1 and 2* [AERL, 1998b]). If clean-outs cannot be located, an acceptable method for verifying that green drains are functioning is to monitor greens during precipitation events and visually inspect and document if adequate drainage is taking place.

h. Flushing all other drainage nodes and piping will be completed on an annual basis and as warranted based on system malfunctions. When this flushing is completed, it should be documented and reported as described in Part V: Repair and Reporting Procedures.

i. Periodic monitoring and maintenance should be completed for the three dry wells. This includes removing sediment that could accumulate in the bottom of the wells which could restrict infiltration and watching for overflow of the wells.

12. MAINTENANCE FACILITY AND OUT-BUILDING CARE

Components: Various features including, buildings, service roads, parking lots, sidewalks, and cart paths are discussed in this section. These features limit infiltration of surface water through underlying soil cap materials, and therefore, must be maintained to protect effectiveness of the remedy.

Maintenance: Maintenance of the above described components includes, but is not limited to, the following:

a. Parking Lots, Sidewalks, Cart Paths and Service Roads:

Potholes, broken pavement or curbing, etc., will be repaired as soon as possible after discovery as these features provide additional protection for the underlying cover materials.

All repairs needed for paved areas will be completed in a manner that restores the protectiveness. All unpaved roadways or paths will be graded smooth as needed to maintain drainage and limit infiltration due to precipitation and irrigation. Coarse slag that is used for pedestrian paths around the driving range will be obtained from the West Stack ¾-inch (1.9 cm) minus Slag Pile at the location shown on Figure 13.

The five bridges that cross Warm Springs Creek have load limits which must be followed by the maintenance personnel. The narrow, arched bride located at the clubhouse is designated for pedestrians only. Of the 4 golf cart bridges, only Bridge #2, near the #10 Tee, has a load limit that is acceptable for use by maintenance equipment (an 8-ton limit [7.3 metric tons]). The other 3 bridges, near #1 Tee, #10 Green and #11 Green, have a 5-ton (4.5 metric tons) load limit (i.e., cart-use only).

The bridges on the golf course will be monitored to ensure that there is nothing hanging off of any of the bridges, columns, or abutments that could impede creek flow.

b. Maintenance Facility:

Potholes, broken pavement or curbing, etc., will be repaired as soon as possible after discovery as these features provide additional protection for the underlying cover materials. All repairs needed for paved areas will be completed in a manner that restores the protectiveness.

13. HISTORIC FEATURES

The condition of the perimeter fence will be monitored, and any damage immediately repaired. The following historic features located on the golf course will be monitored:

- The Upper Works foundations located below the Upper Historic Trail, along the north side of #3 Fairway and south side of #4 Fairway;

- Portions of the Upper Works foundations at the north approach to #3 Green;
- Portions of the Heap Roast piles along #6 Fairway and #7 Fairway;
- Klinker's brick areas along #5 Fairway and Tee Boxes;
- Wooden flumes located on the south side of #5 Tee Boxes;
- Slag piles along #1, #3, #4, and #5 Fairways;
- Granite block wall along the south side of Warm Springs Creek at #10 Green;
- Lower Works foundations along #16 and #17 Fairways;
- Granite block wall along the north edge of Lake #2 (the blocks were incorporated into the riprap band of the lake); and
- Copper ladles and steam crane.

Should any of the historic features become damaged, the EPA will be notified as described in Part V: Repair and Reporting Procedures.

IV. VEGETATION MANAGEMENT

Current operation of the property as a golf course meets the vegetation requirements for Waste Management Areas; therefore, no additional monitoring or reporting is required. If future use of the property changes, i.e., the property is no longer operated as a golf course, all vegetation management within the property will be conducted to meet the requirements set forth in the *Anaconda Smelter NPL Site Anaconda Regional Water, Waste, and Soils Operable Unit Final Vegetation Management Plan (Revision 1)* (Atlantic Richfield Company, 2013), Section 2.1: Waste Management Areas and Section 2.4: Performance Standards.

V. REPAIR AND REPORTING PROCEDURES

An annual report will be provided to to the EPA and Montana Department of Environmental Quality (DEQ). Maintenance, repairs, and reconstruction elements that are not typical to normal golf course operations will be documented and reported to EPA prior to initiating work. Procedures for documenting and submitting the information required are provided in this section. Examples of repairs and/or reconstruction procedures requiring documentation and reporting prior to initiating work include, but are not limited to, the following:

- Modification or non-routine repairs to irrigation main-line or sub-drainage system;
- Pond liner repairs or modifications;
- New structures or modifications to existing structures (buildings, bridges, etc.);
- Non-routine liner repairs in bunkers;

- Modifications or non-routine repairs to greens, tees, bunkers, fairways, and driving range; and

- Modifications to Warm Springs Creek streambank protection (trees, riprap, etc.).

Table 1 lists the items that must be reported to the EPA as well as the time frame required for when the reporting must be completed (the OWGC O&M Maintenance Checklist and associated inspection forms provided in Attachment A must also be completed). Whenever notice to EPA is required pursuant to Table 1, the parties listed in Table 2 will also be notified. A form for documenting and reporting changes, modifications, or additions to the OWGC is provided in Attachment A. In addition, the construction As-Built Drawings provided in Appendix D of the *Final Old Works Remedial Action Completion Report Subareas 1 and 2* (AERL, 1998b) must be kept up to date as changes are made to the OWGC.

VI. OPERATION AND MAINTENANCE PLAN MODIFICATION PROCEDURES

All proposed modifications to this O&M Plan must be approved in writing by ADLC, Old Works Golf Course, Inc., Atlantic Richfield Company, EPA and DEQ.

VII. REFERENCES

AERL, 1998a. Final Old Works Golf Course Operations and Maintenance (O&M) Plan. April 1, 1998.

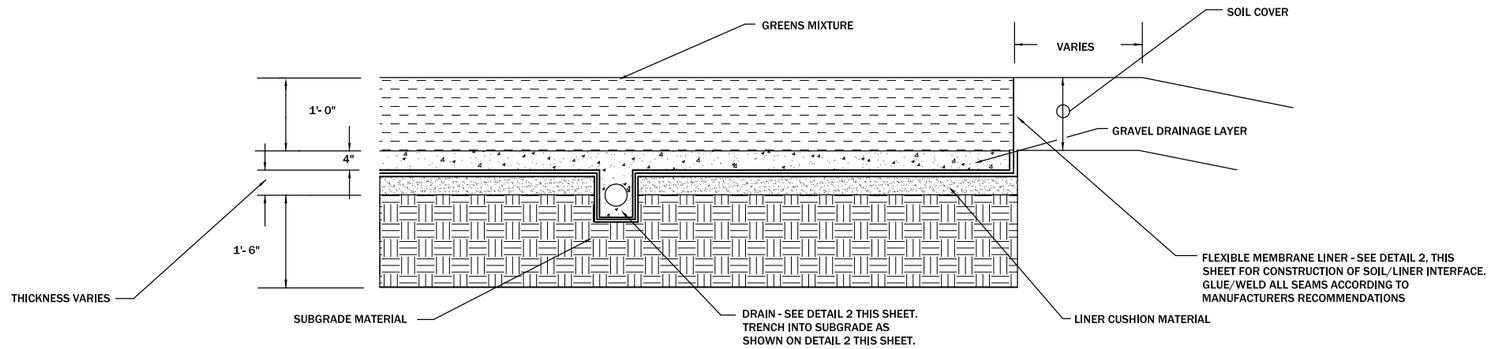
AERL, 1998b. Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit, Final Old Works Remedial Action Completion Report Subareas 1 and 2. April 1, 1998.

Atlantic Richfield Company, 2014. Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit, Draft Final Old Works Golf Course Lake #2 Liner Repair Construction Completion Report (CCR). December 17, 2014.

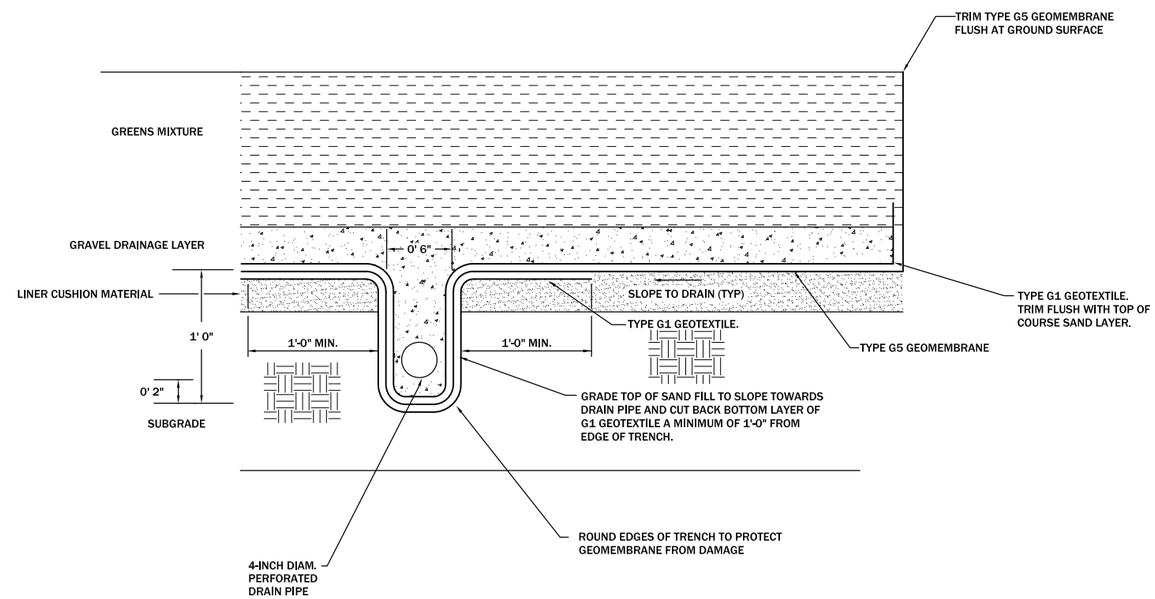
Atlantic Richfield Company, 2013. Anaconda Smelter NPL Site Anaconda Regional Water, Waste, & Soils Operable Unit, Final Vegetation Management Plan (Revision 1). January, 2013.

EPA, 1994. Anaconda Smelter NPL Site, Old Works/East Anaconda Development Area Operable Unit. Unilateral Administrative Order (UAO) EPA Docket No. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) VIII-94-08.

FIGURES



DETAIL 1
GREEN CONSTRUCTION
NO SCALE



DETAIL 2
DRAIN / LINER CONSTRUCTION (GREENS)
NO SCALE

GREENS MIXTURE

PEA GRAVEL DRAINAGE LAYER - MATERIAL GRADATION AND PLACEMENT METHODS IN ACCORDANCE WITH THE FDR SPECIFICATIONS.

SUBGRADE MATERIAL - MATERIAL IS EXISTING SUBGRADE.

LINER CUSHION MATERIAL - INSTALL LINER CUSHION IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

DISPLAYED AS:
COORD SYS/ZONE: NA
DATUM: NA
UNITS: NTS
SOURCE: PIONEER

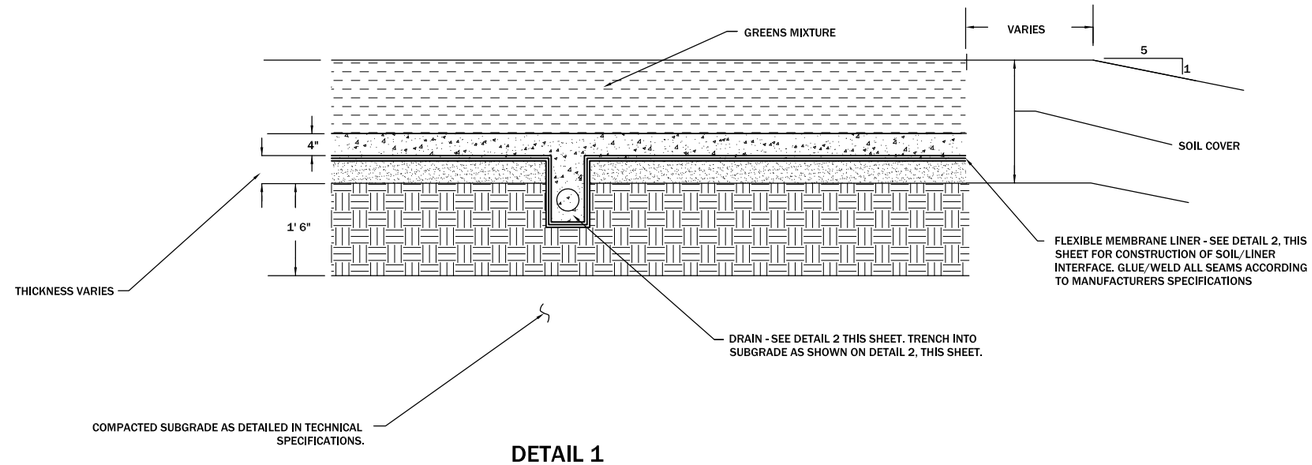
SCALE IN FEET
0 NTS NTS

FIGURE 1

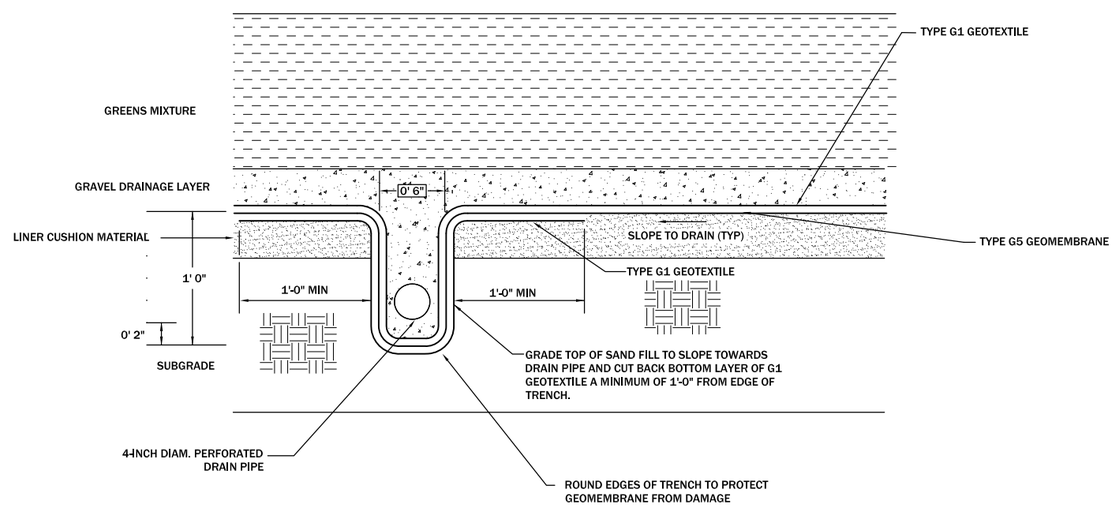
OWGC
TYPICAL GREEN

PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

DATE: 1/22/2014



DETAIL 1
TEE CONSTRUCTION
NO SCALE



DETAIL 2
DRAIN / LINER CONSTRUCTION (TEES)
NO SCALE

GREENS MIXTURE

PEA GRAVEL DRAINAGE LAYER - MATERIAL GRADATION AND PLACEMENT METHODS IN ACCORDANCE WITH THE FDR SPECIFICATIONS.

SUBGRADE MATERIAL - MATERIAL IS EXISTING SUBGRADE.

LINER CUSHION MATERIAL - INSTALL LINER CUSHION MATERIAL IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS

DISPLAYED AS:
COORD SYS/ZONE:
DATUM:
UNITS:
SOURCE:

SCALE IN FEET
0 NTS NTS

FIGURE 2

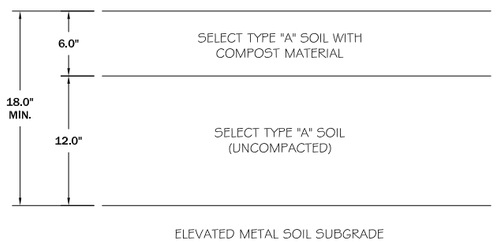
OWGC
TYPICAL TEE

PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

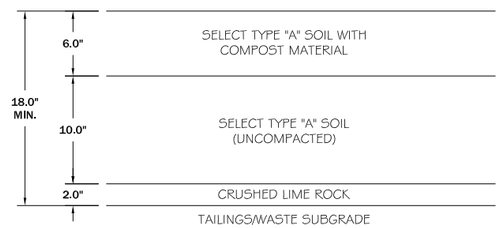
DATE: 1/22/2014

CAPPING SCENARIOS PRIOR TO FEBRUARY 1995

1. ELEVATED METAL SOIL (NON-IRRIGATED AREAS)

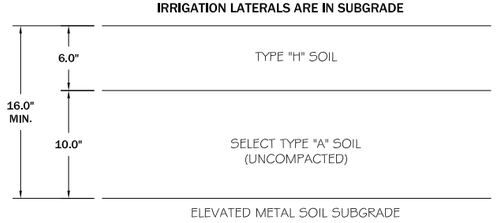


2. TAILINGS/WASTE (NON-IRRIGATED AREAS)



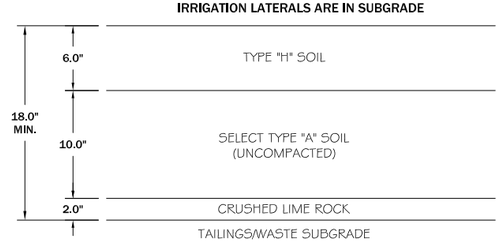
3. ELEVATED METAL SOIL (IRRIGATED AREAS)

IRRIGATION LATERALS ARE IN SUBGRADE



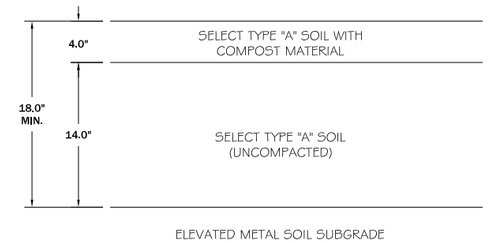
4. TAILINGS/WASTE (IRRIGATED AREAS)

IRRIGATION LATERALS ARE IN SUBGRADE

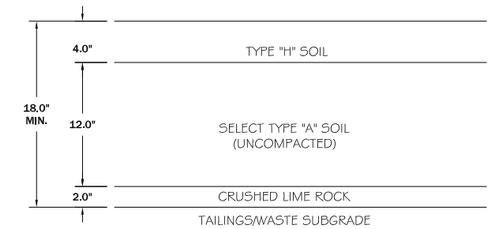


CAPPING SCENARIOS AFTER FEBRUARY 1995

1. ELEVATED METAL SOIL (NON-IRRIGATED AREAS)

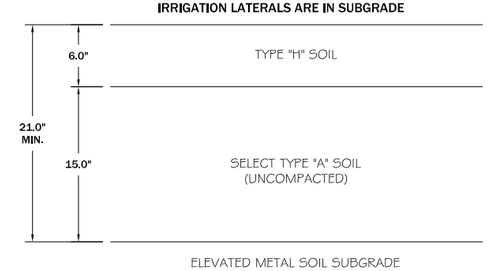


2. TAILINGS/WASTE (NON-IRRIGATED AREAS)



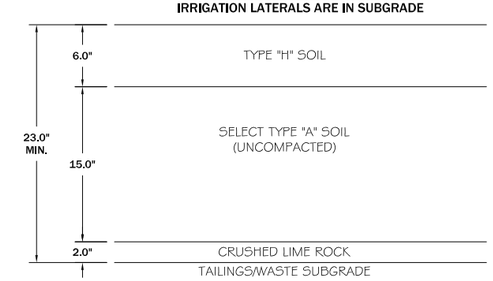
3. ELEVATED METAL SOIL (IRRIGATED AREAS)

IRRIGATION LATERALS ARE IN SUBGRADE



4. TAILINGS/WASTE (IRRIGATED AREAS)

IRRIGATION LATERALS ARE IN SUBGRADE



SPECIFICATIONS

SELECT TYPE "A" SOIL IS SCREENED EAST KNOB BORROW MATERIAL.

DIMENSIONS MARKED "MIN" ARE AFTER SETTLEMENT MINIMUMS.

DISPLAYED AS:
COORD SYS/ZONE: N/A
DATUM: N/A
UNITS: FEET
SOURCE: PIONEER

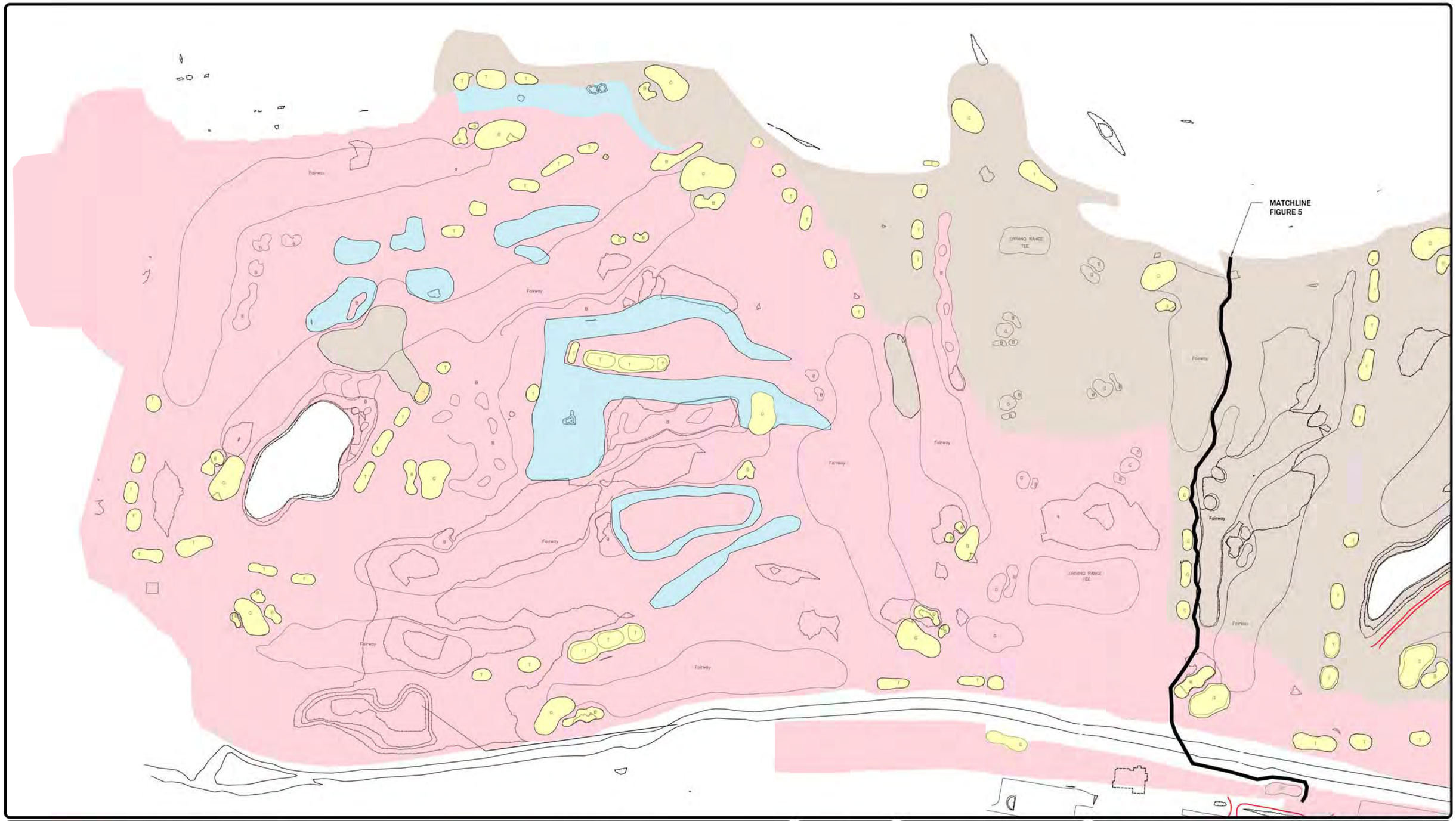
SCALE IN FEET
0 NTS NTS

FIGURE 3

CAPPING SCENARIOS FOR FAIRWAYS AND DRIVING RANGE

PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

DATE: 6/26/2013



TEES, GREENS, FORMAL BUNKERS

HISTORICAL FEATURES

TYPE A CAP

LIMEROCK AND TYPE A CAP

N

DISPLAYED AS:
COORD SYS/ZONE: NA
DATUM: NA
UNITS: FEET
SOURCE: PIONEER

SCALE IN FEET
0 125 250

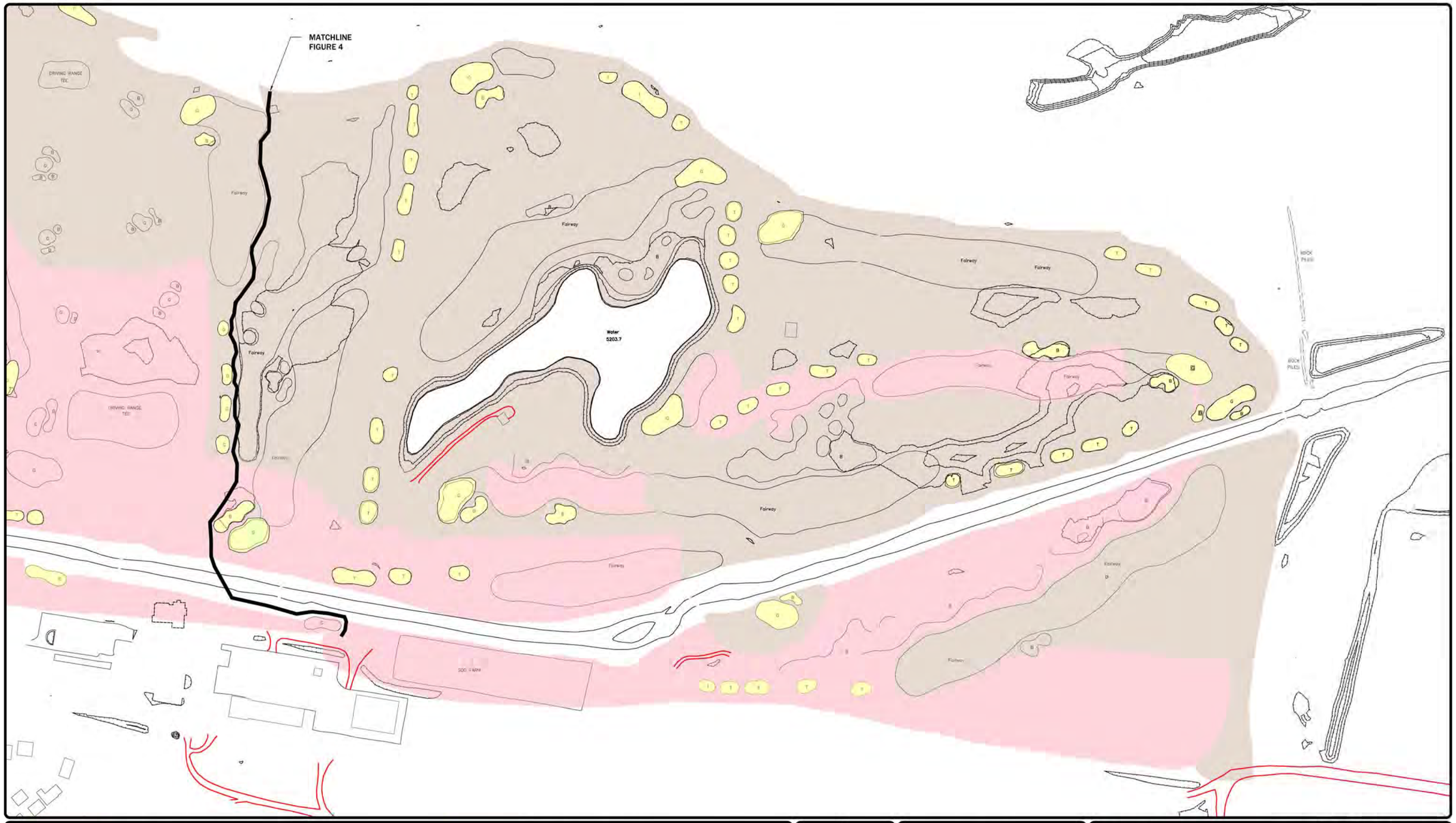
FIGURE 4

PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

AS-BUILT
ENGINEERED COVERS
SUB AREA 2
WEST HALF

DATE: 01/29/2014

2/6/2014 2:39:17 PM P:\ANADATA\AR\OLD WORKS\1994 CONVEYED PROPERTY O&M PLANS\OWGC O&M PLAN\DWGS\OW-AB-ENGINEERED-FIG-004-14.DWG



TEES, GREENS, FORMAL BUNKERS

HISTORICAL FEATURES

TYPE A CAP

LIMEROCK AND TYPE A CAP

N

	DISPLAYED AS:
COORD SYS/ZONE:	NA
DATUM:	NA
UNITS:	FEET
SOURCE:	PIONEER

SCALE IN FEET
0 125 250

FIGURE 5

PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

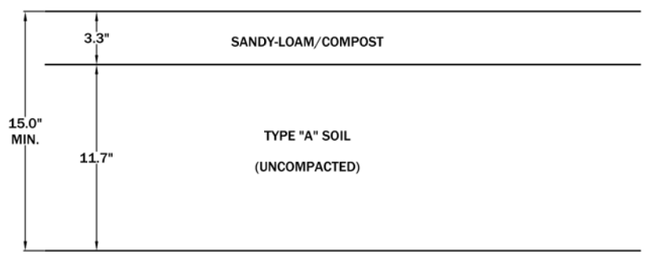
AS-BUILT
ENGINEERED COVERS
SUB AREA 2
EAST HALF

DATE: 1/29/2014

2/6/2014 3:17:06 PM P:\ANADATA\AR\OLD WORKS\1994 CONVEYED PROPERTY O&M PLANS\OWGC O&M PLAN\DWGS\OW-AB-ENGINEERED-FIG-004-14.DWG

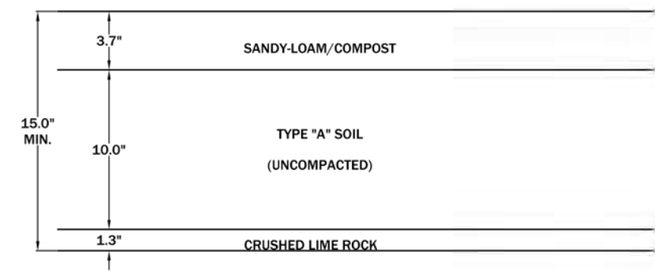
CAPPING SCENARIOS FOR ROUGH AREAS
IRRIGATION LATERALS IN SUBGRADE

1. CLEAN SOIL - NATIVE GRASS (NON-IRRIGATED) PRIOR TO 2-1-95



CLEAN SOIL SUBGRADE

2. TAILINGS/WASTE - NATIVE GRASS (NON-IRRIGATED) PRIOR TO 2-1-95



TAILINGS/WASTE SUBGRADE

SPECIFICATIONS

TYPE "A" SOIL IS PIT RUN EAST KNOB BARROW BASICALLY 6" MINUS.

TYPE "H" SOIL

1. FAIRWAYS = 1" MINUS SANDY LOAM MIXED WITH COMPOST (3/8" MINUS).
2. ROUGHS = 1" MINUS SANDY LOAM MIXED WITH COMPOST (2" MINUS).
3. DIMENSIONS MARKED "MIN" ARE AFTER SETTLEMENT MINIMUMS

DISPLAYED AS:
COORD SYS/ZONE: NA
DATUM: NA
UNITS: NA
SOURCE: PIONEER

SCALE IN FEET
0 NTS NTS

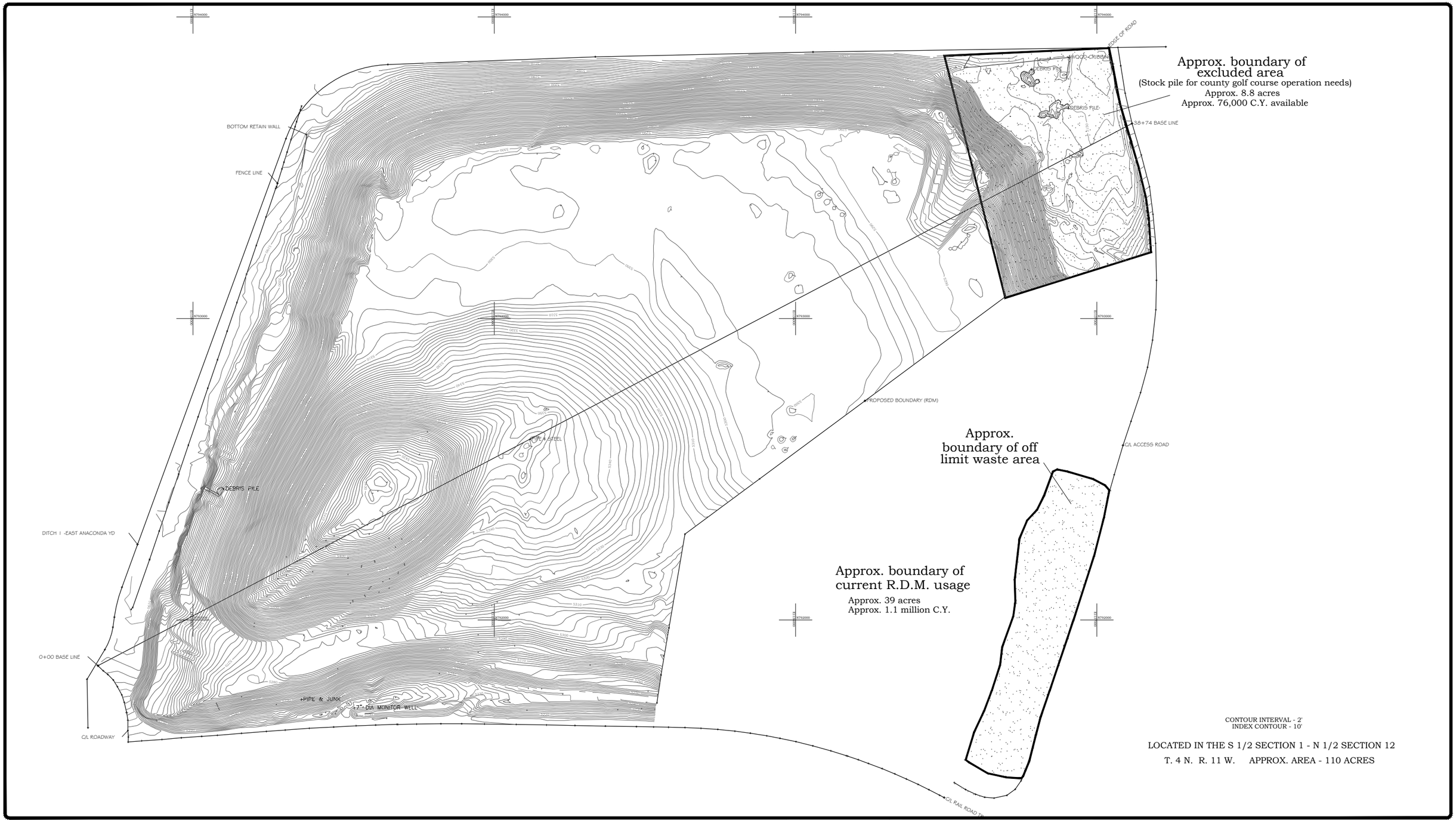
FIGURE 6

PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

CAPPING SCENARIOS FOR ROUGH AREAS

DATE: 01/25/2014

2/6/2014 3:28:35 PM P:\ANADATA\AR\OLD WORKS\1994 CONVEYED PROPERTY O&M PLANS\OWGC O&M PLAN\DWGS\OW-TYP-CAPPING-FIG-006-14.DWG



N

DISPLAYED AS:

COORD SYS/ZONE: NA

DATUM: NA

UNITS: FEET

SOURCE: PIONEER

SCALE IN FEET

0 75 150

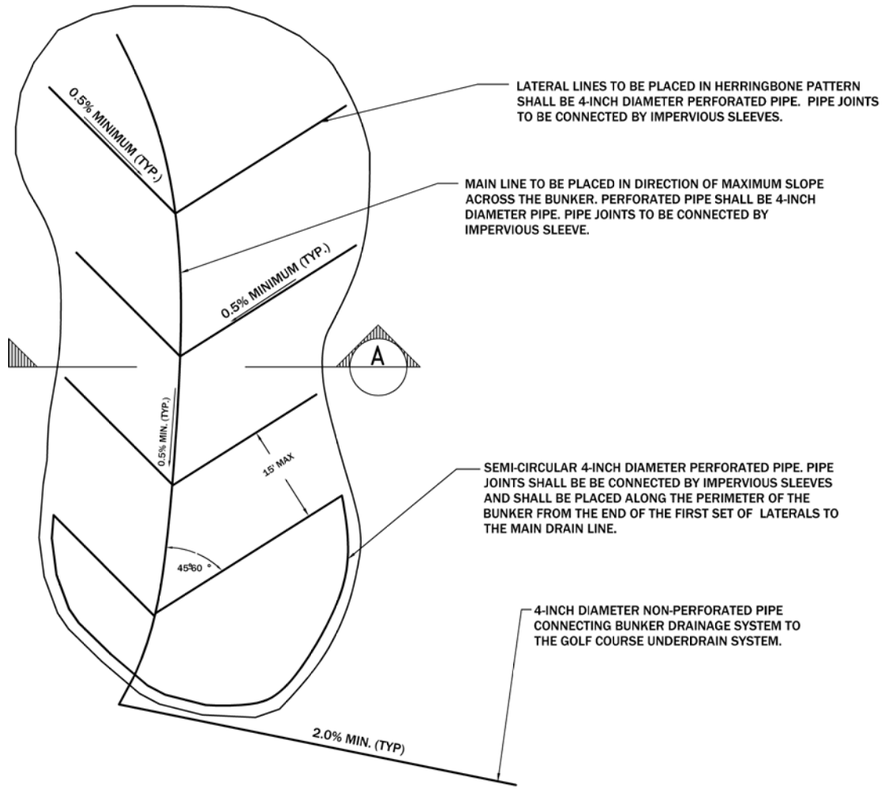
FIGURE 7

ARCO TOPO
BLACK SLAG PILE

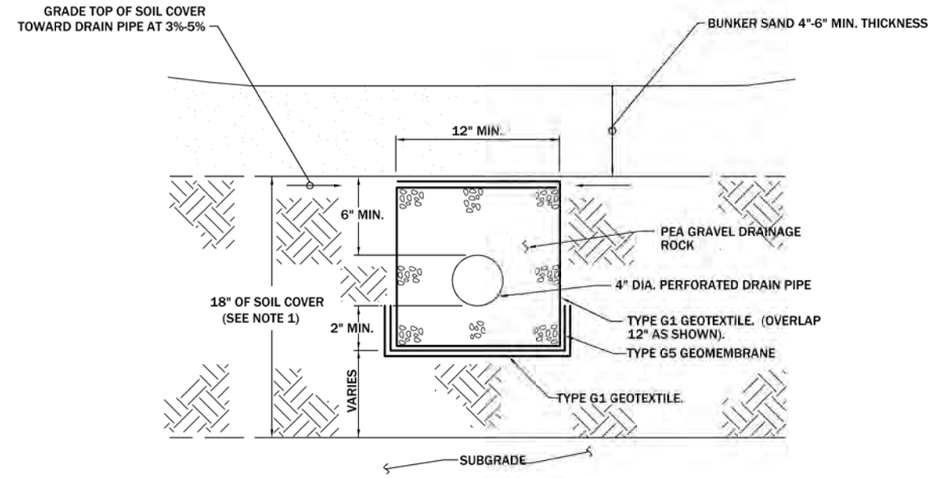
PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

DATE: 01/27/2014

2/6/2014 3:40:37 PM P:\ANADATA\AR\OLD WORKS\1994 CONVEYED PROPERTY O&M PLANS\OWGC O&M PLAN\DWGS\OW-BLK-SLAG-FIG-007-14.DWG



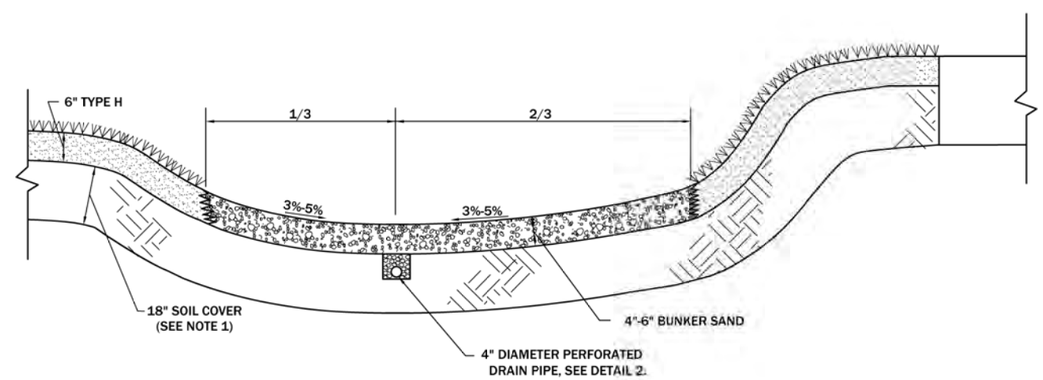
DETAIL 1
INFORMAL BUNKER DRAINAGE PLAN
NO SCALE



DETAIL 2
TYPICAL SECTION
INFORMAL BUNKER DRAINAGE
NO SCALE

NOTES:

1) SMOOTH DRUM ROLL AND COMPACT SOIL COVER THAT IS WITHIN LIMITS OF BUNKER.



SECTION A
INFORMAL BUNKER
NO SCALE

DISPLAYED AS:
COORD SYS/ZONE: NA
DATUM: NA
UNITS: FEET
SOURCE: PIONEER

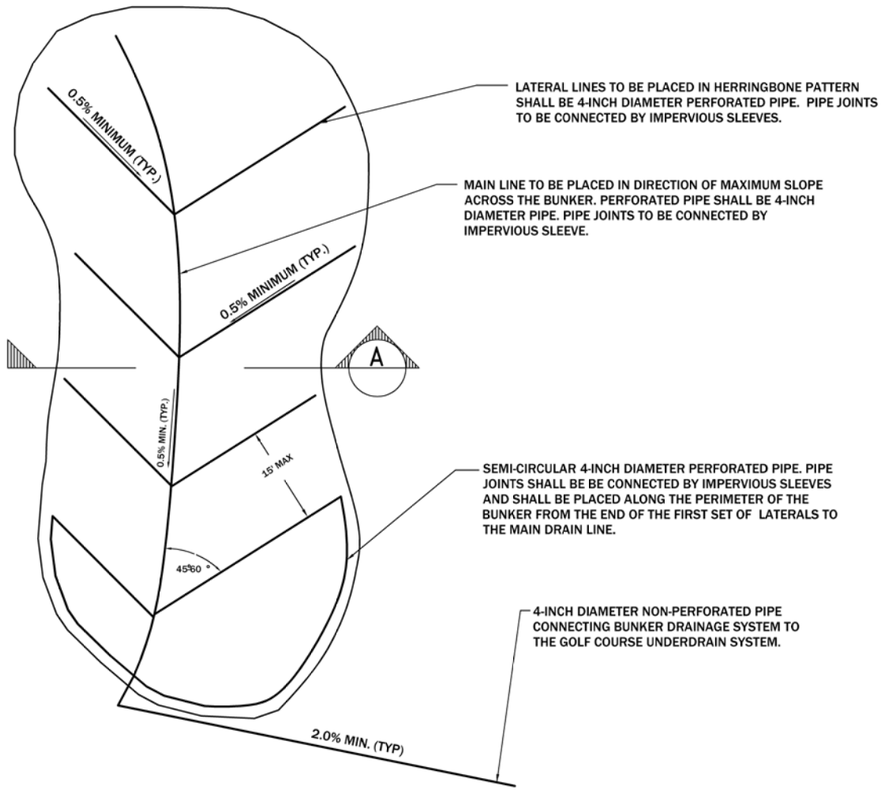
SCALE IN FEET
0 NTS NTS

FIGURE 8

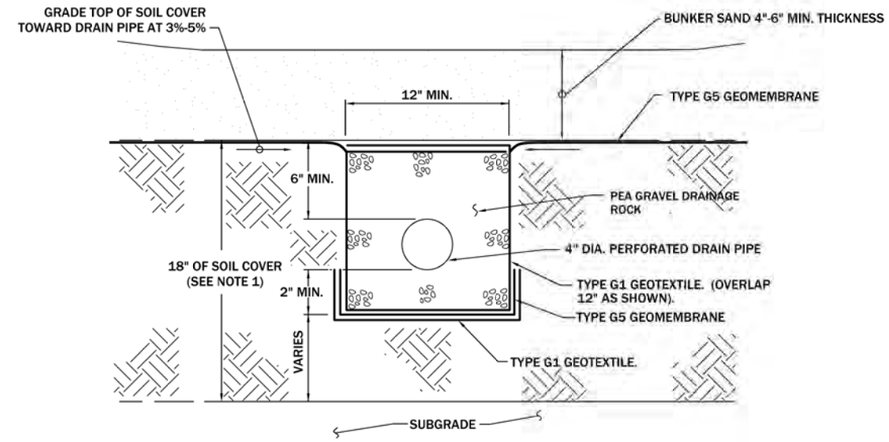
PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

INFORMAL BUNKER DRAINAGE

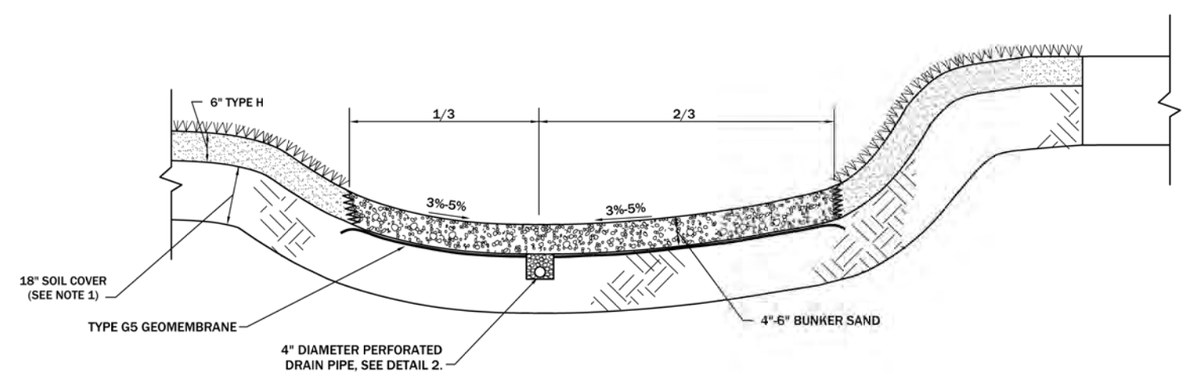
DATE: 1/29/2014



DETAIL 1
FORMAL BUNKER DRAINAGE PLAN
NO SCALE



DETAIL 2
TYPICAL SECTION
FORMAL BUNKER DRAINAGE
NO SCALE



SECTION A
FORMAL BUNKER
NO SCALE

NOTES:

1) SMOOTH DRUM ROLL AND COMPACT SOIL COVER THAT IS WITHIN LIMITS OF BUNKER.

DISPLAYED AS:
COORD SYS/ZONE: NA
DATUM: NA
UNITS: FEET
SOURCE: PIONEER

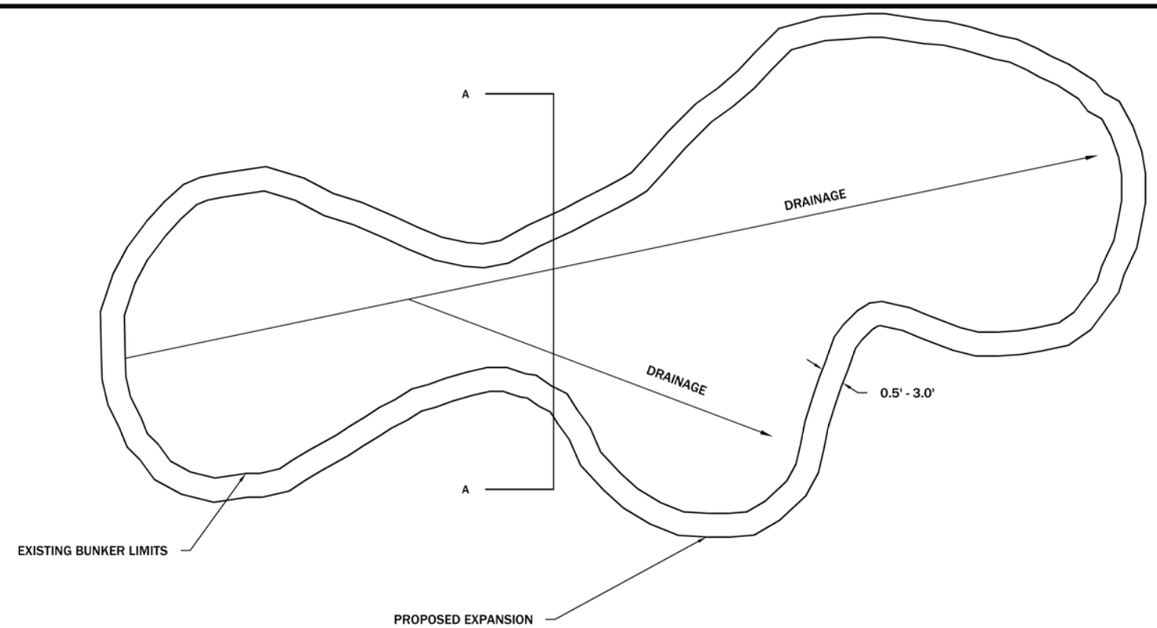
SCALE IN FEET
0 NTS NTS

FIGURE 9

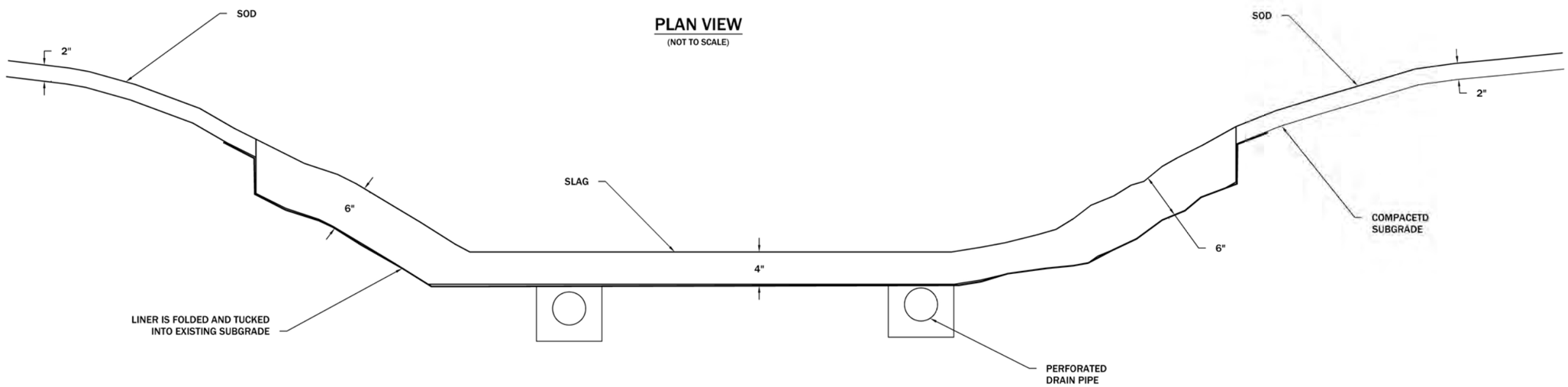
PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

FORMAL BUNKER DRAINAGE

DATE: 1/29/2014



PLAN VIEW
(NOT TO SCALE)



SECTION A-A
(NOT TO SCALE)

DESIGN ELEMENTS

1.) CUT & REMOVE SOD PER THE MAINTENANCE CREW.

2.) FOLD THE LINER EDGE, AND BURY (TUCK) BENEATH SUBGRADE

3.) COMPACT TYPE "A" SOIL WITH PLATE TAMPER (MAY REQUIRE TYPE "H" REMOVAL)

4.) REPLACE SLAG AND MOVE THE SLAG UP THE SLOPE TO SOD EDGE

DISPLAYED AS:
COORD SYS/ZONE: NA
DATUM: NA
UNITS:
SOURCE: PIONEER

SCALE IN FEET
0 NTS NTS

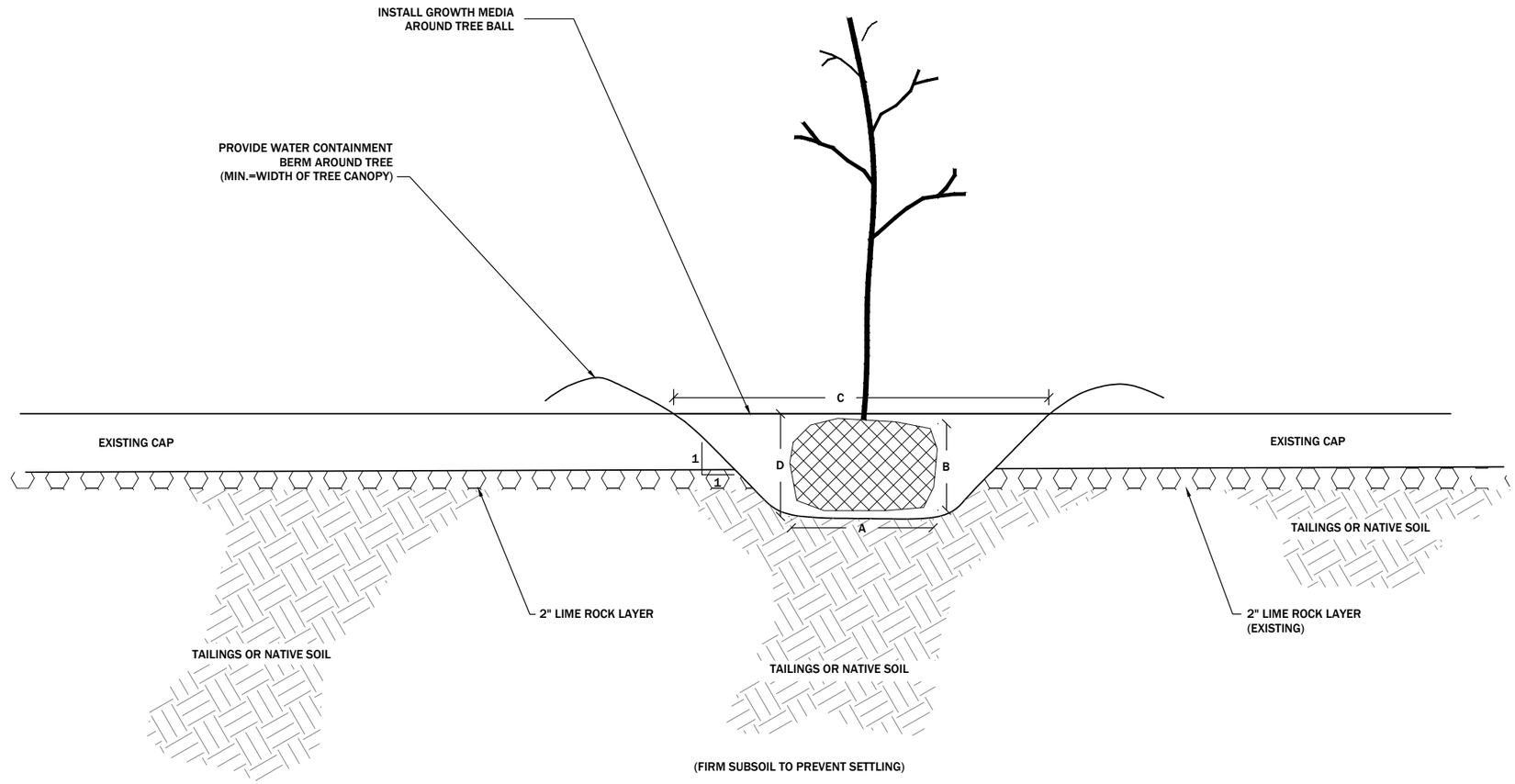
FIGURE 10

FLASHED BUNKER

PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

DATE: 01-27-2014

TREE ROOT BALL SIZE CODE			
WIDTH	HEIGHT	TOP WIDTH	DEPTH
A	B	C	D
A	B	3A	2B



DETAIL
TREE PLANTING
NO SCALE

DISPLAYED AS:
COORD SYS/ZONE: NA
DATUM: NA
UNITS: NTS
SOURCE: PIONEER

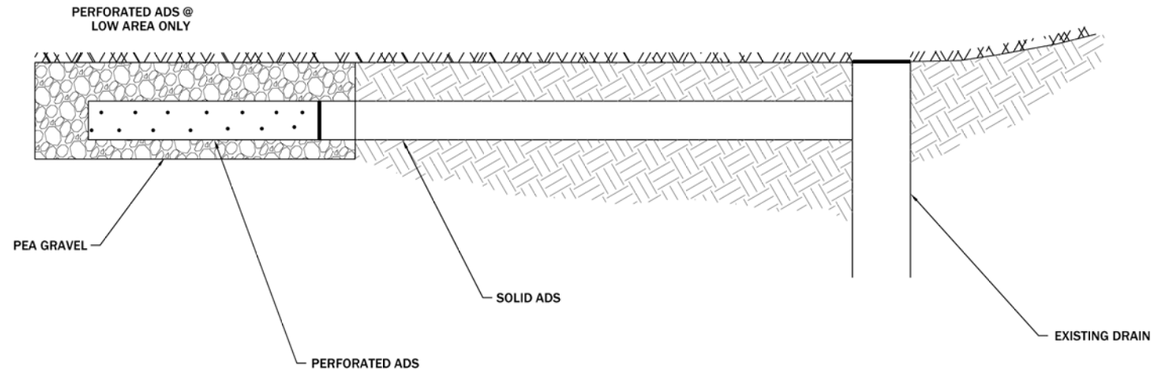
SCALE IN FEET
0 NTS NTS

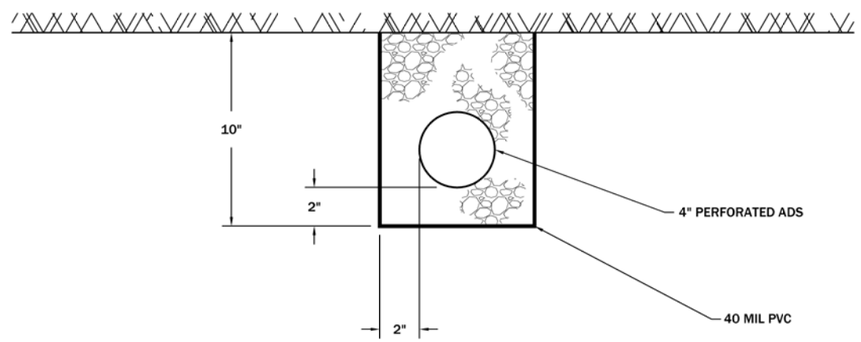
FIGURE 11

TREE PLANTING

PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

DATE: 4/11/2016





DETAIL

DISPLAYED AS:
COORD SYS/ZONE: NA
DATUM: NA
UNITS:
SOURCE: PIONEER

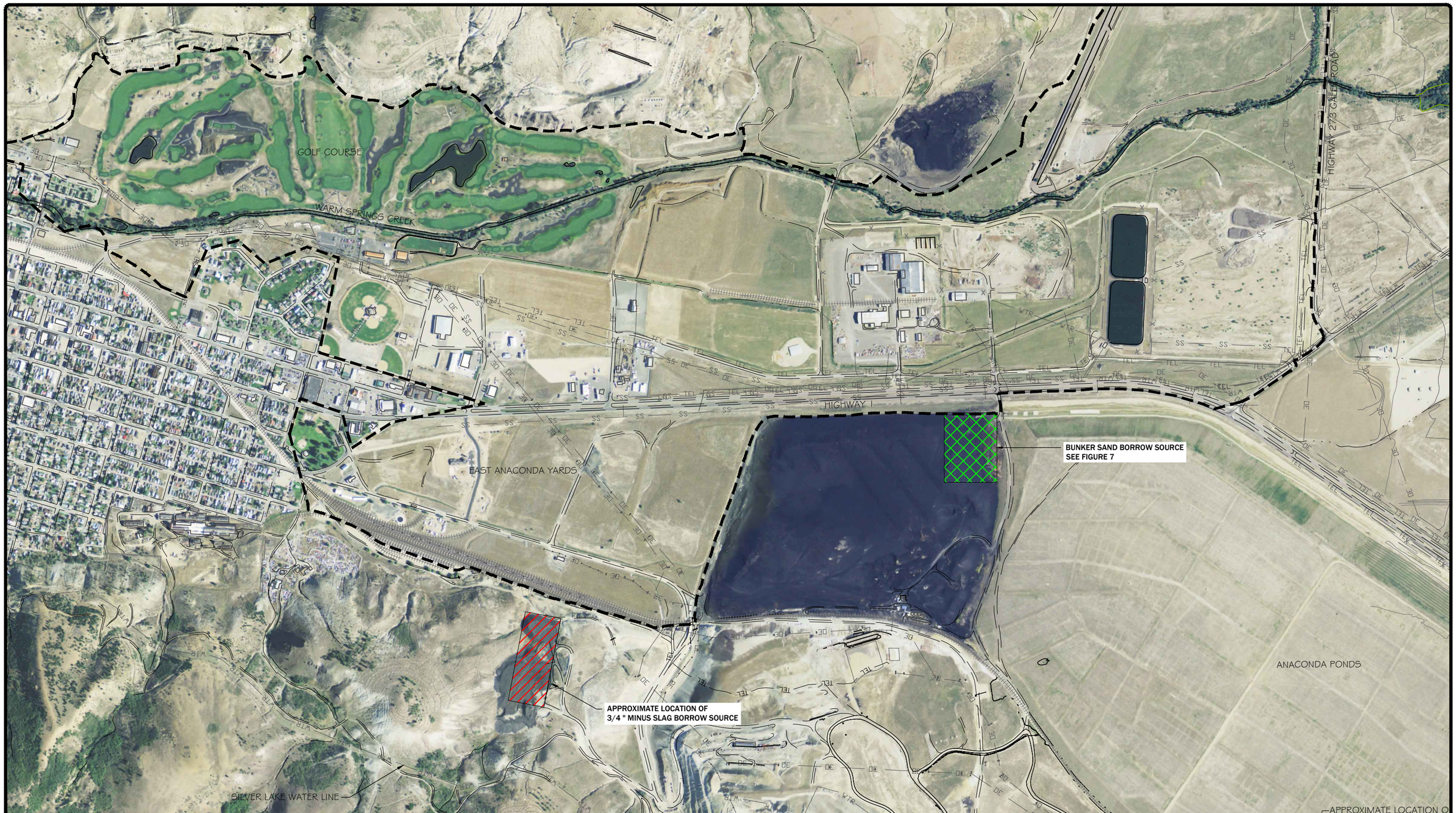
SCALE IN FEET
0 NTS NTS

FIGURE 12

FRENCH DRAIN INSTALLATION

PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

DATE: 1/25/2014



3/4" MINUS SLAG BORROW SOURCE

BUNKER SAND BORROW SOURCE

N

DISPLAYED AS:

COORD SYS/ZONE:

DATUM:

UNITS: FEET

SOURCE: PIONEER

SCALE IN FEET

0 500 1000

FIGURE 13

GENERAL INFORMATION
SLAG BORROW SOURCE
3/4" MINUS

PIONEER TECHNICAL SERVICES, INC.
307 E. PARK AVE., SUITE 421
ANACONDA, MONTANA 59711
(406) 563-9371

DATE: 1/25/2014

2/12/2014 3:43:36 PM P:\ANADATA\AR\OLD WORKS\,1994 CONVEYED PROPERTY O&M PLANS\OWGC O&M PLAN\DWGS\OW-GEN-JGM-013-14.DWG

TABLES

TABLE 1:
MAINTENANCE RECORDING AND DOCUMENTATION PROCEDURES

Item	Report Format	Reporting Schedule*
Modification or non routine repairs to irrigation main-line or sub-drainage system	Written	Prior to work
Pond liner repairs or modifications	Written	Prior to work
New structures or modifications to existing structures (buildings, bridges, etc.)	Written	Prior to work
Non-routine liner repairs in bunkers (pre-approved by EPA, ADLC, Atlantic Richfield Company)	Written	Prior to Work
Routine maintenance or repairs to irrigation system that require cap removal	Written	Annual Report
Routine maintenance or repairs to greens, tees, bunkers, nursery area, fairways and driving range that require cap removal (use Cap Alteration Form in Attachment A)	Written	Annual Report
Modification or non-routine repairs to greens, tees, bunkers, fairways, nursery area, and driving range	Written	Prior to work
Soil analysis results of annual sampling of greens tees and fairways.	Written	Annual Report
Tree planting	Written	Annual Report
French drain installation	Written	Annual Report
Yearly gallons of water diverted through the Warm Springs Creek diversion structure	Written	To ADLC monthly during diversion period and Annual Report
Modifications to Warm Springs Creek stream bank protection (trees, riprap, etc.)	Written	Prior to work
Repairs or maintenance to Warm Springs Creek stream bank protection (trees, riprap, etc.)	Written	Annual Report
Any noticeable changes on outlying area that may impact the golf course (sediment pond, trails, etc.)	Written	As soon as possible
Lake 2 air vents – inspect annually	Written	Annual Report
Flushing underdrain lines (greens – annually; other areas – periodically/as needed)	Written	Annual Report
Flushing of the Stucky Ridge Sediment Pond discharge piping	Written	Annual Report
Inspection of the Sediment Pond 6 to Sediment Pond 5 bypass piping system	Written	Annual Report
Inspect and inventory Lake 2 auxiliary pump and piping system	Written	Annual Report
Irrigation lake water quality during use of irrigation wells	Written	Annual Report
Annual dry well inspection/debris removal	Written	Annual Report

TABLE 2:
CONTACT INFORMATION FOR O&M ITEMS THAT REQUIRE FORMAL DOCUMENTATION AND REPORTING

PARTY
Atlantic Richfield Company Attention: ARWW&S Project Manager Address: 317 Anaconda Road Butte, MT 59701 Phone: (406) 723-1822
U.S. Environmental Protection Agency (EPA) Attention: Charles Coleman Address: U.S EPA Region VIII 10 West 15th Street, Suite 3200 Helena, MT 59626 Phone: (406) 457-5038
Montana Department of Environmental Quality (DEQ) Attention: Joel Chavez Address: Remediation Division P.O. Box 200901 Helena, MT 59620-0901 Phone: (406) 841-5000
Anaconda – Deer Lodge County (ADLC) Attention: Chief Executive Address: 800 Main St. Anaconda MT 59711 Phone: (406) 563-5571

ATTACHMENT A

OWGC O&M CHECKLIST, CAP ALTERATION FORM, AND INSPECTION FORMS

Old Works Golf Course Operations and Maintenance Tasks

Superfund Remedy Maintenance Requirements Checklist

Anaconda Smelter NPL Site Old Works/East Anaconda Development Area Operable Unit, Final Old Works Golf Course Operations and Maintenance (O&M) Plan, Revision 2. February 26, 2014, Atlantic Richfield Company.

The O&M tasks described are the responsibility of Anaconda-Deer Lodge County (ADLC) through the Golf Course Authority Board (GCAB) and their selected golf course management company.

Task	OWGC O&M Plan Reference	Frequency	Responsible Party	Report to	Report Format and Schedule	Inspection and Maintenance Form Required	Frequency	Notes	As-Built Drawing Reference
Greens, Tees, Fairways, Roughs and Driving Range									
Keep free of weeds and minimize all grasses other than those in the original seeding.	Greens - Section III.1 (p 3) Tees - Section III.2 (p 4) Fairways - Section III.3 (p 4) Roughs - Section III.4 (p 5)	Daily	Superintendent	Not Required					
Report soil analysis results of annual sampling of greens, tees, and fairways to ADLC.	Table 1	Annually	Superintendent	ADLC	Written, Annual Report	Soil Analysis Form	Annual		
Report any routine maintenance or repairs to greens, tees, bunkers, fairways and driving range that require cap removal.	Table 1	Annually	Superintendent	ADLC	Written, Annual Report	Cap Alteration Form (Attachment A to the O&M Plan)	As Needed, Report all Annually	Note descriptions of cap configurations for greens in Section III.1, tees in Section III.2, fairways and driving range in Section III.3 and roughs in Section III.4	
Report any non-routine repairs to greens, tees, bunkers, fairways, or driving range.	Greens - Section III.1 (p 3) Tees - Section III.2 (p 4) Fairways - Section III.3 (p 4) Roughs - Section III.4 (p 5)	As Needed	Superintendent	ADLC, EPA, Atlantic Richfield	Written, Prior to Work	Non-Routine Maintenance Form	Prior to Work, Report all Annually	Major work includes, but is not limited to, major repairs to the liner or drainage system, reshaping of a green which could impact underlying liner or drainage control components, or construction of a new green. Reporting requirements are described in Section V. Repair and Reporting Procedures.	
Rough areas monitored for erosion with areas of soil erosion reported to OWGC Superintendent and restored to as-built conditions.	Roughs - Section III.4 (p 5)	As Needed	Maintenance Crew	Superintendent					Sheets 5-1, and 8-1 through 8-25
Bunkers									
Ensure that the PVC liner is completely covered with bunker sand on formal bunkers	Bunkers - Section III.7 (p 7)	Daily (when raking)	Groundskeeper	ADLC	Written, Annual Report	Bunker Liner Inspection Form	As Needed for Non-Routine Liner Repairs, Report all Annually		
Irrigation around informal bunkers must be monitored to ensure that overspray is not landing on the bunkers.	Bunkers - Section III.7 (p 7)	Daily	Superintendent/ Groundskeeper	Not Required					
Inspect slag depth in bunkers to maintain a uniform depth of at least 4-inches.	Bunkers - Section III.7 (p 7)	Annually	Groundskeeper	ADLC	Written, Annual Report		Annual	Descriptions of formal bunkers, including their cap components, are provided in Section III.7. Slag depth shall be verified through survey and/or hand digging.	
Replacement slag used to replace slag lost from wind, erosion, or play will be obtained from the northweastern corner of the Main Granulated Slag Pile as described in the Slag Agreement.	Bunkers - Section III.7 (p 7)	As Needed	Groundskeeper	Not Required					
If winter fencing is needed around formal bunkers, the posts must be placed away from the bunker so as not to puncture the PVC liner.	Bunkers - Section III.7 (p 7)	As Needed	Groundskeeper	Not Required				Groundskeeper must verify liner location prior to placing posts.	Sheet 5-5A, 5-5B
Non-routine bunker liner repairs must be approved prior to work	Bunkers - Section III.7 (p 7)	As Needed	Superintendent	ADLC, EPA, Atlantic Richfield	Written, Prior to Work	Bunker Liner Inspection Form	As Needed for Non-Routine Liner Repairs, Report all Annually	Reporting requirements are described in Section V. Repair and Reporting Procedures	

Task	OWGC O&M Plan Reference	Frequency	Responsible Party	Report to	Report Format and Schedule	Inspection and Maintenance Form Required	Frequency	Notes	As-Built Drawing Reference
Trees, Shrubs, and Other Landscaped Areas									
Replacement trees or new trees shall be installed in a manner that minimizes damage to the coil cover system	Section III.8 (p 9)	As Needed	Groundskeeper	Not Required				Refer to Figure 11 for details on planting new trees.	
Report all tree planting efforts in the annual report.	Section III.8. Table 1.	Annually	Superintendent	ADLC	Written, Annual Report	Tree Planting Form	As Needed, Report all Annually	Reporting requirements are described in Section V. Repair and Reporting Procedures	
Contact NorthWestern Energy if Trees grow to within 15 feet of the power lines at the southwestern end of the golf course.	Section III.10 (p 11)	As Needed	Superintendent	NW Energy, ADLC	Oral, As Needed				
Irrigation System									
Irrigation schedule should be determined by information provided by the weather station, the irrigation computer control software, and field observations to prevent excessive infiltration.	Section III.9 (p 9)	Continuous	Superintendent	Not Required					
Complete inspection of entire irrigation system to inspect for proper operation and evidence of leaking	Section III.9 (p 9)	Annually	Superintendent	ADLC	Written, Annual Report	Irrigation Main-line of Sub-Drainage Inspection Form	As Needed, Report all Annually		Old Works Golf Course Irrigation System As-Built Sheets
Traverse property each morning to identify leaks, distribution anomalies, and pump plant operational problems.	Section III.9 (p 9)	Daily	Superintendent	Not Required					
Check, adjust, repair any sprinkler heads causing excessive runoff	Section III.9 (p 9)	Daily	Superintendent	Not Required					
Check, adjust, and clean the Warm Springs Creek diversion. The golf course is allowed a maximum flow 1.4 ft^3/sec or 345 acre-feet/year.	Section III.9 (p 9)	Daily	Superintendent	Not Required				See reporting requirements described in Table 1. County to complete water rights transfer.	
When repairing broken heads or pipelines, the cover soil system must be reconstructed. Use clean fill material for backfill with Type H soil on the top 6-inches per the original cover design.	Section III.9 (p 9)	As Needed	Superintendent	ADLC	Written, Annual Report	Routine Maintenance Form	As Needed, Report all Annually		
French Drain Installation	Table 1	As Needed	Superintendent	ADLC	Written, Annual Report	French Drain Installation Form	As Needed, Report all Annually		Sheet 5-22 of the As-Built Drawings, Figure 12 of this O&M plan.
Report any routine maintenance or repairs to the irrigation system that require cap removal to ADLC.	Table 1	Annually	Superintendent	ADLC	Written, Annual Report	Routine Maintenance Form	As Needed, Report all Annually		
Document and report any plans for modifications or non-routine repairs to the main-line irrigation system prior to initiation of the work.	Table 1	As Needed	Superintendent	ADLC, EPA, Atlantic Richfield	Written, Prior to Work	Non-Routine Maintenance Form	Prior to Work, Report all Annually	Reporting requirements are described in Section V. Repair and Reporting Procedures	

Task	OWGC O&M Plan Reference	Frequency	Responsible Party	Report to	Report Format and Schedule	Inspection and Maintenance Form Required	Frequency	Notes	As-Built Drawing Reference
Lakes, Ponds, and Creeks									
Monitor Lakes #1 and #2 to check integrity of the riprap, soil cover, and HDPE liner materials. Maintain pool level within the riprap.	Section III.10 (p 11)	Daily	Superintendent or Designated Technician	Not Required				Refer to description of pond liner, water management and routing in Section III.10	Sheets 5-7, 5-8, 5-20
Report pond liner repairs or modifications prior to work.	Table 1	As Needed	Superintendent	ADLC	Written, Prior to Work	Pond Liner Inspection Form	Prior to Work, Report all Annually	Requires records of annual inspections, as well as daily inspection of liner and air vents in the event repair is not required.	
Monitor water quality in Lake #2 when use of irrigation wells is required to supplement creek diversion flows.	Section III.9 (p 9)	When irrigation wells are in use	Superintendent, ADLC, Superfund Coordinator	ADLC	Written, Annual Report	Golf Course Lake 2 Water Quality Form	Report all Annually	Lake 2 water will be monitored for total copper and other parameters required for evaluation of water quality for golf course vegetation. Parameters may include field chemistry, major ion analysis, nutrients, and other metals and metalloids at the discretion of the Superintendent.	
								Sample collection and analysis will be completed by the ADLC Superfund Coordinator. Superintendent shall notify ADLC of plans to supplement Irrigation water drawn from Lake 2 with the groundwater with as much advanced notice as possible to schedule water quality sample collection.	
								Water quality data from irrigation wells IW-01 and IW-05 can be retrieved from GWIC, and should be used to evaluate groundwater quality conditions in supplemental irrigation wells.	
Inspect the air vents of the southwestern end of Lake #2. Remove any debris from the outlet end and ensure that the backflow prevention valve is working properly. Include in Annual Report.	Section III.9 (p 9)	Annually	Superintendent or Designated Technician	ADLC	Written, Annual Report	Pond Liner Inspection Form	Report all Annually	Requires records of annual inspections, as well as daily inspection of liner and air vents.	RFI #62 for Air Vent Work.
Inspect and inventory lake 2 auxiliary pump and piping system	Table 1	Annually	Superintendent or Designated Technician	ADLC	Written, Annual Report	Golf Course Lake 2 Pumping and Piping System Inspection Form	Report all Annually	Requires record of annual inspection in addition to daily requirements.	
Inspect the bypass piping system that routes water from Sediment Pond 6 to Sediment Pond 5 including inspection of the manual valve and the backflow prevention valve.	Section III.10 (p11)	Annually	Superintendent or Designated Technician	ADLC	Written, Annual Report	Golf Course Lake 2 Pumping and Piping System Inspection Form	Report all Annually		Refer to RFI #64 and Sheets 2-6, 2-7
Flush the Stucky Ridge Sediment Pond outlet structure to Sediment Pond 5	Table 1	Annually	Superintendent or Designated Technician	ADLC	Written, Annual Report	Stucky Ridge Sediment Pond Discharge Piping Flushing and Inspection Form	Report all Annually		Sheets 2-9 through 2-22
Inspect the integrity of the riprap along Warm Springs Creek. Report any erosion, damage to trees/vegetation, or riprap erosion protection reports to ADLC	Section III.10 (p 11)	Continuous	Superintendent or Designated Technician	ADLC	Written, Annual Report	Warm Springs Creek Stream Bank Protection Modification Form	As Needed, Report all Annually		Sheets 3-1 through 3-12
Inspect to ensure no sediment or chemical runoff occurs along the golf course boundaries and Warm Springs Creek	Section III.10 (p 11)	Continuous	Superintendent or Designated Technician	Not Required					
Do not remove or trim trees or shrubs within the Warm Springs Creek corridor except for routine trimming of: Green #1 area of play, line of sight between starter's window and #1 and #10 tees, areas where play crosses creek on holes 1, 10 and 11 and vegetation that encroaches the bridge	Section III.10 (p 11)	Continuous	Superintendent/ Groundskeeper	Not Required					
Report any modifications to the Warm Springs Creek stream bank protection (riprap, trees, etc.).	Table 1	As Needed	Superintendent	ADLC, EPA, Atlantic Richfield	Written, Prior to Work	Warm Springs Creek Stream Bank Protection Modification Form	Prior to Work, Report all Annually		Sheets 3-1 through 3-12
Report any repairs or maintenance to Warm Springs Creek stream bank protection.	Table 1	Annually	Superintendent	ADLC	Written, Annual Report	Warm Springs Creek Stream Bank Protection Modification Form	Prior to Work, Report all Annually		Sheets 3-1 through 3-12
Report yearly gallons of water diverted through the Warm Springs Creek diversion structure.	Table 2	Monthly and Annually	Superintendent	ADLC	Written, Annual Report	Record of Yearly Gallons of Water Diverted through the Warm Springs Creek Diversion Structure	Monthly during WSC Diversion, Report all Annually	Monthly reporting required to ADLC during diversion period in addition to the annual report.	
Contact ADLC in the event that repairs or maintenance are required on any lake, pond, or creek.	Section III.10 (p 11)	Prior to Work	Superintendent	ADLC	Written, Prior to Work	Non-Routine Maintenance Form	Prior to Work, Report all Annually	Reporting requirements are described in Section V. Repair and Reporting Procedures	

Task	OWGC O&M Plan Reference	Frequency	Responsible Party	Report to	Report Format and Schedule	Inspection and Maintenance Form Required	Frequency	Notes	As-Built Drawing Reference
Subsurface Drains									
Flush all drains and underdrain lines for greens. Use clean-outs when appropriate.	Section III.11 (p 14), Table 1	Annually or when warranted	Superintendent or Designated Technician	ADLC	Written, Annual Report	Underdrain System (Inlets, Cleanouts, and Piping) Inspection Form	Annual (December)		Sheets 5-3, 5-4, 5-9 through 5-19, 5-21 through 5-29
Flush all other drainage nodes and piping, include in annual report	Section III.11 (p 14)	As Needed	Superintendent or Designated Technician	ADLC	Written, Annual Report	Underdrain System (Inlets, Cleanouts, and Piping) Inspection Form	Annual (December)	Reporting requirements are described in Section V. Repair and Reporting Procedures	Sheets 5-3, 5-4, 5-9 through 5-19, 5-21 through 5-29
Inspect all surface drain inlets and clear of debris, including leaves, grass clippings, dirt and litter.	Section III.11 (p 14)	Monthly	Superintendent/ Groundskeeper	Not Required				Monthly Inspections represent a minimum frequency for this requirement.	
Edge around all surface drain inlets to keep inlets from being grown over with sod.	Section III.11 (p 14)	As Needed	Groundskeeper	Not Required					
Repair malfunctioning drains upon discovery.	Section III.11 (p 14)	As Needed	Groundskeeper	ADLC	Oral, As Needed	Underdrain System (Inlets, Cleanouts, and Piping) Inspection Form	Annual (December)		
Install perforated drainage piping to existing drains upon discovery of areas that require additional drainage. Reconstruction of the cover soil system is required.	Section III.11 (p 14)	As Needed	Superintendent/ Groundskeeper	ADLC	Written, Annual Report	French Drain Installation Form	As Needed, Report all Annually	Perforated drainage pipe to be installed as shown on Figure 12.	
Monitor and provide maintenance for the three dry wells. Remove collected sediment from the bottom of the wells and monitor water levels in the wells to prevent overflow. Include in Annual Report.	Section III.11 (p 14), Table 1	Annually	Superintendent/ Groundskeeper	ADLC	Written, Annual Report	Dry Well Inspection Form and Bunker Liner Inspection Form	Annual (December)	Dry Well Locations: 1) South side of WSC at tee box for Hole #1; 2) Foot of the Heap Roast Pile along the #8 Fairway; 3) In the grass near the northwest corner of the Clubhouse patio.	
Report any plans for modifications or non-routine repairs to the sub-drainage system prior to initiation of work.	Table 1	Prior to Work	Superintendent	ADLC, EPA, Atlantic Richfield	Written, Prior to Work	Non-Routine Maintenance Form	Prior to Work, Report all Annually	Reporting requirements are described in Section V. Repair and Reporting Procedures	
Maintenance Facility and Out-Building Care									
Repair potholes and broken pavement or curbing as soon as possible as these features provide additional protection for underlying cover materials.	Section III.12 (p 16)	As Needed	Superintendent	Not Required					
Replace coarse slag used for pedestrian paths around the driving range from the West Stack 3/4-inch minus Slag Pile.	Section III.12 (p 16)	As Needed	Superintendent	Not Required					
Monitor all bridges to ensure that nothing is hanging off of any bridges, columns, or abutments that could impede creek flow.	Section III.12 (p 16)	As Needed	Superintendent	ADLC	Written, Annual Report	Bridge Inspection Form	Annual (December)	Report problems to ADLC Road/Shop Department Supervisor immediately.	Sheets B-1 through B-12
		As Needed	ADLC	Roads Department				ADLC Road/Shop Department Supervisor responsible for I&M on bridges	
Inspection of existing structures	Table 1	Bi-annually; As Needed	Superintendent	ADLC	Written, Annual Report	Existing Structures Inspection Form	Annual (December)		
Maintain restrooms, half-way house, shelters and other out-buildings.	Section III.12 (p 16)	As Needed	Superintendent	Not Required					Sheets E-1 through E-3, E-5, S-2, U-1, U-2, W-2 through W-4
Report any plans for new structures or modifications to existing structures prior to initiation of work.	Table 1	As Needed	Superintendent	ADLC, EPA, Atlantic Richfield	Written, Prior to Work	Non-Routine Maintenance Form	Prior to Work, Report all Annually		
Nursery Area - Provision to monitor/replenish Type H cover soil to maintain design cover thickness of 12" each time sod is cut/removed from the area.	Section III.6 (p 16)	As Needed when sod is removed from nursery	Superintendent	Not Required					
Transportation of mine waste materials to the repository for disposal requires notification prior to work, and a determination if a Development Permit is required.	Section III	Non-routine maintenance	Superintendent	ADLC	Written, Prior to Work	Non-Routine Maintenance Form	Prior to Work, Report all Annually	Notify ADLC prior to work. Determine need for DP - typically when more than 1 CY of dirt is handled.	

Task	OWGC O&M Plan Reference	Frequency	Responsible Party	Report to	Report Format and Schedule	Inspection and Maintenance Form Required	Frequency	Notes	As-Built Drawing Reference
Reporting Procedures and Miscellaneous									
Annual Report	Section V (p 18)	Annual	Superintendent, ADLC, Superfund Coordinator	ADLC CEO	Written, Annual in December			Superintendent is to prepare report with assistance from the ADLC Superfund Coordinator.	
			ADLC CEO	EPA, MDEQ, AR	Written, Annual in January			See Table 2 for distribution list.	
ADLC Inspection of OWGC relative to remedy related O&M requirements.	N/A	Semi-Annual, As Needed	ADLC Superfund Coordinator	ADLC CEO	Written, Upon Completion of Inspection			County inspections should coincide with the annual inspection of OWGC stormwater management features (spring/fall) as determined by the OWGC Superintendent, and once during regular golf course operations (summer/fall).	

CAP ALTERATION FORM

Old Works Golf Course
501 N. Monroe
Anaconda, MT 59711

Name: _____ Date: _____

Type of Work Performed:

- ❑ Irrigation
- ❑ Drainage Installation
- ❑ Tree Planting
- ❑ Other (Describe Below)

Hole #: _____ Location Description or Irrigation I.D.# _____

Type of Work Performed: _____

CAP DISTURBED	CAP REPLACED
❑ Turf	❑ Turf
❑ "H" Layer	❑ "H" Layer
❑ "A" Layer	❑ "A" Layer
❑ Limestone	❑ Limestone
❑ Tailings	❑ Tailings

TAILINGS REMOVED?	If Yes, where deposited?
❑ No	_____
❑ Yes	_____

Other Information: _____

EMPLOYEE SIGATURE: _____

OLD WORKS

Old Works Golf Course

Bridge Inspection Form

Inspector(s): _____ Weather: _____

Date: _____

Location: _____

_____

Notes:

1. Inspect all fives bridges that cross Warm Springs Creek as needed and document inspection on a Bridge Inspection Form (include inspection forms in the O&M Annual Report). Periodic bridge inspections shall be done after extreme weather or precipitation events to insure that bridges have not been damaged or structurally compromised; document periodic inspections on a Bridge Inspection Form and include in the O&M Annual Report.
2. Any damage to bridge will be repaired by qualified personnel as soon as possible after discovery (notification to EPA, ADLC, and the Atlantic Richfield Company will be made prior to repair work).
3. Any structure that needs to be repaired, replaced, or modified will be completed by qualified personnel per the requirements of the OWGC O&M Plan (reconstruction of any disturbed Engineered Cover will also require repair/replacement per the original design as outlined in the OWGC O&M Plan).
4. Any modification or maintenance work performed on any bridge will be documented on an Bridge Inspection Form and included in the O&M Annual Report.

1. **List Bridge Location:** _____

_____

_____

2. **Is the bridge damaged? If yes, to what extent?**

☐None Observed ☐Mild ☐Moderate ☐Severe

Describe problem and location: _____

_____

_____

_____

3. **Are modifications proposed/required for the bridge?** ☐ Yes ☐ No

If yes, describe below:

Location: _____

_____

_____

_____

4. **Is there evidence of Engineered Cover erosion, degradation, or disturbance around the bridge?** ☐ Yes ☐ No

If yes, describe below:

☐ Minor ☐ Mild ☐ Moderate ☐ Severe

Location: _____

_____

_____

5. **Other Comments/Observations:** _____

_____
_____
_____
_____

6. **If any damage was observed to the bridge or the surrounding engineered cover, were the bridge and/or the engineered cover returned to As-Built conditions upon completion of any repair, modification, or new component installation?** ☐ Yes ☐ No
(If "yes" List Date:_____)

If Yes, describe how the structure and/or the engineered cover was reconstructed (reconstruction must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC, and the Atlantic Richfield Company): _____

_____
_____
_____
_____

7. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action: _____

_____
_____
_____
_____
_____

8. **Photographs taken during inspection:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

Old Works Golf Course

Bunker Liner Inspection Form

Inspector(s): _____ Weather: _____

Date: _____

Location: _____

_____

Notes:

1. Any non-routine work performed on any bunker liner will be pre-approved by EPA, ADLC, and the Atlantic Richfield Company and documented on a Bunker Liner Inspection Form; all completed Bunker Liner Inspection forms will be included in the O&M Annual Report.

1. **Is the bunker damaged? If yes, to what extent (if the damaged bunker is a "formal bunker" that was constructed with a high density polyethylene [HDPE] liner personnel, the liner must be inspected for damage)?**

   ☐None Observed ☐Mild ☐Moderate ☐Severe

   Describe damage/problem and location: _____

   _____

   _____

   _____

2. **Are modifications proposed/required for the bunker?** ☐ Yes ☐ No

   If yes, describe below:

   Location: _____

   _____

   _____

   _____

3. **Is there evidence of Engineered Cover erosion resulting from the damage?** ☐ Yes ☐ No

   If yes, describe below:

   ☐ Minor ☐ Mild ☐ Moderate ☐ Severe

   Location: _____

   _____

   _____

   _____

4. **Is there evidence of Engineered Cover degradation or disturbance around the bunker?**

   ☐ Yes ☐ No

   If yes, describe below:

   ☐ Minor ☐ Mild ☐ Moderate ☐ Severe

   Location: _____

   _____

   _____

5. **Other Comments/Observations:** _____

6. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action (non-routine liner repairs in bunkers must be pre-approved by EPA, ADLC, and the Atlantic Richfield Company): _____

7. **If any damage was observed to a bunker, bunker liner, or the surrounding engineered cover, were the bunker, bunker liner, and/or the engineered cover returned to As-Built conditions upon completion of any repair, modification, or new component installation?** ☐ Yes ☐ No
(If "yes" List Date:_____)

If Yes, describe how the bunker, bunker liner, and/or the engineered cover were reconstructed (reconstruction must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC, and the Atlantic Richfield Company): _____

8. **Photographs taken during inspection:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

Old Works Golf Course

Dry Well Inspection Form

Inspector(s): _____ Weather: _____

Date: _____

Notes:

1. Inspect the dry well on the south side of Warm Springs Creek at the tee box for Hole #1 (the bottom of the dry well is filled with a 2.5-foot thickness of lime rock).
2. Inspect the dry well at the foot of the heap roast pile along the #8 Fairway that consists of a 36-inch corrugated metal pipe (CMP) (the CMP is approximately 6 feet deep and the bottom ties into existing alluvial soils [1.5-inch drain rock is placed around the base of the CMP to improve the contact between the bottom of the CMP and the existing alluvium]) with a manhole lid and a 12-inch grated inlet.
3. Inspect the dry well located in the grass near the northwest corner of the clubhouse patio, and consists of a 48-inch CMP which extends approximately 12 feet below grade into existing alluvial soils (1.5-inch drain rock is placed around the base of the CMP to improve the contract between the bottom of the CMP and the alluvium).
4. Periodic inspection shall be done after precipitation events to insure dry well inlet and piping have not been compromised, become blocked, or are otherwise malfunctioning.
5. Any of the aforementioned maintenance items that may be found to be malfunctioning will be cleaned and/or repaired as soon as possible after discovery.
6. Any inlet or drainage piping that needs to be repaired, replaced, or added will be completed per the requirements of the OWGC O&M Plan (reconstruction of the Engineered Cover will also be required per the original design as outlined in the OWGC O&M Plan).
7. Flushing of all piping will be completed on an annual basis and as needed if problems are noted or if the system malfunctions.
8. Any modification or maintenance work performed on any dry well will be documented on a Dry Well Inspection Form and included in the O&M Annual Report.

1. **Location of the dry well being inspection:** _____

Personnel involved in the inspection: _____

Description of debris or depth of water found in dry well during the inspection: _____

Date debris removed from dry well: _____

2. **Is there any damage to the dry well inlet, dry well piping, or engineered cover? If yes, to what extent?**

☐None Observed ☐Mild ☐Moderate ☐Severe

Type of damage and date that damage was repaired: _____

3. **Does the dry well appear to be malfunctioning? If yes, describe the problem and note to what extent the system is malfunctioning?**

☐None Observed ☐Mild ☐Moderate ☐Severe

_____
_____
_____
_____
_____

4. **Is there evidence of erosion around the dry well or to the adjacent engineered cover?** ☐ Yes ☐ No
If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Description and Location:_____
_____
_____
_____
_____

5. **If any damage was observed to the dry well or the surrounding engineered cover, were the dry well and/or the engineered cover returned to As-Built conditions upon completion of any repair, modification, or new component installation?** ☐ Yes ☐ No
(If "yes" List Date:_____)

If Yes, describe how the dry well and/or the engineered cover was reconstructed (reconstruction must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC, and the Atlantic Richfield Company): _____
_____
_____
_____
_____

6. **Other Comments/Observations:** _____
_____
_____
_____
_____
_____
_____
_____

7. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action:_____
_____
_____
_____
_____
_____
_____

8. **Photographs taken during dry well inspection:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

Old Works Golf Course

Existing Structures Inspection Form

Inspector(s): _____ Weather: _____

Date: _____

Location: _____

_____

Notes:

1. Inspect all existing structures prior to and immediately after each operating season and document inspection on an Existing Structures Inspection Form
2. Periodic inspection shall be done after extreme weather or precipitation events to insure existing structures have not been damaged or structurally compromised.
3. Any damage to an existing structure will be repaired as soon as possible after discovery (notification to EPA, ADLC, and the Atlantic Richfield Company will be made prior to repair work).
4. Any structure that needs to be repaired, replaced, or modified will be completed per the requirements of the OWGC O&M Plan (reconstruction of any disturbed Engineered Cover will also require repair/replacement per the original design as outlined in the OWGC O&M Plan).
5. Any modification or maintenance work performed on any existing structure will be documented on an Existing Structures Inspection Form and included in the O&M Annual Report.

1. **Is the structure damaged? If yes, to what extent?**

☐None Observed ☐Mild ☐Moderate ☐Severe

Describe problem and location: _____

_____

_____

_____

2. **Are modifications proposed/required for the structure?** ☐ Yes ☐ No

If yes, describe below:

Location: _____

_____

_____

_____

3. **Is there evidence of Engineered Cover erosion, degradation, or disturbance around the existing structure?** ☐ Yes ☐ No

If yes, describe below:

☐ Minor ☐ Mild ☐ Moderate ☐ Severe

Location: _____

_____

_____

_____

4. **Other Comments/Observations:** _____

_____
_____
_____
_____

5. **If any damage was observed to the structure or the surrounding engineered cover, were the structure and/or the engineered cover returned to As-Built conditions upon completion of any repair, modification, or new component installation?** ☐ Yes ☐ No
(If "yes" List Date:_____)

If Yes, describe how the structure and/or the engineered cover was reconstructed (reconstruction must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC, and the Atlantic Richfield Company): _____

_____
_____
_____
_____

6. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action: _____

_____
_____
_____
_____
_____

7. **Photographs taken during inspection:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

Old Works Golf Course

French Drain Installation Form

Person(s) Performing Work: _____Weather: _____

Date:_____

Note: Form will be provided in the O&M Annual Report. Refer to Figure 12 of the OWGC O&M Plan for the details of the required French drain installation procedure.

1. **Describe the installation procedure to be used during the work (the installation procedure shall be in accordance with Figure 12 of the OWGC O&M Plan):**

   _____
   _____
   _____
   _____
   _____

2. **List the type of pipe and liner, including model/manufacturer, being used in the installation:**

   _____
   _____
   _____

3. **Type of pea gravel and supplier being used around the French Drain during the installation:**

   _____
   _____
   _____

4. **Is there evidence of Engineered Cover erosion in the installation area?** ☐ Yes ☐ No
   If yes, describe below:
   ☐ Minor ☐ Mild ☐ Moderate ☐ Severe
   Location:_____
   _____
   _____
   _____

5. **Is there evidence of Engineered Cover degradation in the installation area?**
   ☐ Yes ☐ No

   If yes, describe below:
   ☐ Minor ☐ Mild ☐ Moderate ☐ Severe
   Location: _____
   _____
   _____
   _____

6. **Was the Engineered Cover restored to As-Built conditions upon completion of work involved in this French Drain installation?** ☐ Yes ☐ No (If "yes" List Date:_____)

   If Yes, describe how the Engineered Cover was reconstructed (reconstruction must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC,

and the Atlantic Richfield Company): _____

_____
_____
_____
_____
_____

7. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action:_____

_____
_____
_____
_____
_____
_____

8. **Photographs taken during French Drain installation activities:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

Old Works Golf Course

Golf Course Lake #2 Pumping and Piping System Inspection Form

Inspector(s): _____ Weather: _____

Date: _____

Notes:

1. The integrity of the perimeter riprap cover, soil cover, and liner materials of Golf Course Lake #2 should be inspected on a daily basis to ensure their integrity. The water level in Golf Course Lake #2 should also be inspected daily to ensure that it is maintained within the elevation range of the perimeter riprap cover to protect the soil cover and liner materials.
2. The entire Golf Course Lake #2 pumping system should be inspected at the start and end of each working season and on an as-needed basis to ensure proper operation; operational problems should be addressed/repaired immediately.
3. The entire Golf Course Lake #2 piping system, perimeter riprap cover, emergency spillway outlet structure, liner air vents (remove debris from the outlet end of the vents and check that the backflow prevention valve located near the top of each vent is operating properly), and the manually operated outflow valve and associated piping connecting Golf Course Lake #2 to the underdrain system should be inspected completely at least once per year as outlined in the OWGC O&M Plan.
4. Periodic inspection shall be done after precipitation events to insure piping, perimeter riprap cover, the emergency spillway, liner air vents, and outflow piping connecting Golf Course Lake #2 to the underdrain system has not been compromised, become blocked, or is otherwise malfunctioning.
5. Any of the aforementioned maintenance items that may be found to be malfunctioning will be cleaned and/or repaired as soon as possible after discovery.
6. Any inlet or drainage piping that needs to be repaired, replaced, or added will be completed per the requirements of the OWGC O&M Plan (reconstruction of the Engineered Cover will also be required per the original design as outlined in the OWGC O&M Plan).
7. Flushing/blow-off of mainline will be completed on an annual basis and as needed if problems are noted or if the system malfunctions.
8. Any modification or maintenance work performed on the Golf Course Lake #2 system will be documented on a Golf Course Lake #2 Pumping and Piping Inspection Form and included in the O&M Annual Report.

1. **Is there any damage to the perimeter riprap cover, soil cover, and liner materials of Golf Course Lake #2? If yes, to what extent?**

   ☐None Observed ☐Mild ☐Moderate ☐Severe

   Date of repair and summary of repair activities completed: _____

   _____
   _____
   _____
   _____
   _____

2. **Are any components of the pumping or piping system found to be malfunctioning? If yes, to what extent?**

   ☐None Observed ☐Mild ☐Moderate ☐Severe

   Type and Date that pumping or piping components (s) were repaired/replaced: _____

   _____

   Describe/location of components that were repaired/replaced: _____

   _____
   _____

3. **Is there evidence of erosion to Golf Course Lake #2 or the engineered cover?** ☐ Yes ☐ No
If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Location:

4. **Other Comments/Observations:**

5. **If any damage was observed to Golf Course Lake #2 or the engineered cover, were Golf Course Lake #2 and/or the engineered cover returned to As-Built conditions upon completion of any repair, modification, or new component installation?** ☐ Yes ☐ No
(If "yes" List Date:_____)

If Yes, describe how Golf Course Lake #2 and/or the engineered cover was reconstructed (reconstruction must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC, and the Atlantic Richfield Company):

6. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action:

7. **Date(s), personnel, inventory of auxiliary pump and piping system, and location of annual inspection (the auxiliary system is designed to discharge in to the C-1 underdrain system and includes a 3-inch portable gas pump and 300 feet of flexible discharge hose as outlined in the OWGC O&M Plan):**

Date of Inspection:

Personnel involved in the inspection:

Auxiliary Pump and Piping System Components:

(1) List name and model of 3-inch gas pump:

(2) Did pump fire and run during inspection? ☐ Yes ☐ No

If "No",

(a) List name and model of functional available back-up pump:

(b) List date primary pump was repaired and made available for service:

(3) List type, condition, and linear feet of flexible discharge hose available:

8. **Photographs taken during drainage piping flushing and inspection:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

Old Works Golf Course

Golf Course Lake #2 Water Quality Form

Person(s) Performing Work: _____ Weather: _____

Date: _____

Location: _____

_____

Notes:

1. Water in Golf Course Lake #2 will be monitored by the ADLC Superfund Coordinator after notification by the OWGC Superintendent when supplemental wells are being used for the golf course irrigation system. The supplemental irrigation wells (IW-01 and IW-05) will be monitored for water elevation and groundwater quality by the Montana Bureau of Mines and Geology (MBMG). Recordkeeping pertaining to the sampling activities and reporting requirements for groundwater monitoring data are available on the GWIC website (www.mbmggwic.mtech.edu).

2. All sampling activities involving water from Golf Course Lake #2 will be documented on a Golf Course Lake #2 Water Quality Form and included in the O&M Annual Report.

1. **List water sample name, location, date, and time:**

_____

_____

_____

_____

2. **List date, time, and carrier sample was shipped for analysis:**

_____

_____

_____

_____

3. **Other Comments/Observations:** _____

_____

_____

_____

_____

4. **Photographs taken during sampling:**

Photo Name	Location	Description
Picture 1		
Picture 2		

_____

1

2

Old Works Golf Course

Irrigation Main-line or Sub-Drainage System Inspection Form

Inspector(s): _____ Weather: _____

Date: _____

Location: _____

_____

Notes:

1. The entire golf course irrigation system should be thoroughly and completely inspected at least once per week as outlined in the OWGC O&M Plan.
2. Periodic inspection shall be done after precipitation events to insure that the irrigation system has not been compromised, become blocked, or is otherwise malfunctioning.
3. Any of the irrigation system maintenance items that may be found to be malfunctioning will be cleaned and/or repaired as soon as possible after discovery.
4. Any irrigation system component that needs to be repaired, replaced, or added will be completed per the requirements of the OWGC O&M Plan (reconstruction of the Engineered Cover will also be required per the original design as outlined in the OWGC O&M Plan).
5. Flushing of the irrigation system (including all underdrain lines) will be completed on an annual basis and as needed if problems are noted or if the system malfunctions.
6. Any modification performed on the irrigation system will be documented on an Irrigation Main-line or Sub-Drainage System Inspection Form and included in the O&M Annual Report.

1. **Are there any distribution anomalies or problems with pump plant operation? If yes, to what extent?**

   ☐None Observed ☐Mild ☐Moderate ☐Severe
   Describe problem and location: _____
   _____
   _____
   _____

2. **Are there any problems in irrigation coverage resulting from improper sprinkler head adjustment, clogged or leaking heads, pipes and fittings, or materials obstructing the trajectory of the spray system? If yes, to what extent?**

   ☐None Observed ☐Mild ☐Moderate ☐Severe
   Describe problem and location: _____
   _____
   _____
   _____

3. **Is flushing of the underdrain lines being performed?** ☐ Yes ☐ No
   If yes, list date and location (underdrain node network) of flushing and describe below:

   Date and Description of Flushing: _____
   _____
   _____
   _____

4. **Is the main-line or sub-drainage system obstructed or damaged? If yes, to what extent?**

☐None Observed ☐Mild ☐Moderate ☐Severe

Describe problem and location: _____

_____

_____

_____

5. **Is there evidence of Engineered Cover erosion?** ☐ Yes ☐ No

If yes, describe below:

☐ Minor ☐ Mild ☐ Moderate ☐ Severe

Location:_____

_____

_____

_____

6. **Is there evidence of Engineered Cover degradation or disturbance near the irrigation system components (irrigation heads, irrigation boxes)?** ☐ Yes ☐ No

If yes, describe below:

☐ Minor ☐ Mild ☐ Moderate ☐ Severe

Location: _____

_____

_____

_____

7. **Other Comments/Observations:** _____

_____

_____

_____

_____

_____

_____

_____

8. **Is Follow-up Action Required?** ☐ Yes ☐ No

If Yes, describe problem, location, and potential action: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

9. **Photographs taken during inspection:**

Photo Name	Location	Description
Picture 1		
Picture 2		

_____

Old Works Golf Course

Non-Routine Maintenance Form

(Repairs or Modifications to Greens, Tees, Bunkers, Fairways, and Driving Range)

Person(s) Performing Work: _____ Weather: _____

Date: _____

Location: _____

_____

Notes:

1. Any non-routine modification or maintenance work performed will be documented on a Non-Routine Maintenance Form (Maintenance Items requiring Cap Removal) and included in the O&M Annual Report.

1. **Describe the non-routine maintenance item:**

_____

_____

_____

_____

2. **Does the work require a Development Permit?**

☐ Yes ☐ No

If "Yes", list date, ADLC contact, and Development Permit Number: _____

_____

If "Yes", list volume of material disposed of in the Repository: _____

_____

3. **Will the Engineered Cover be disturbed during work for this non-routine maintenance item?**

☐ Yes ☐ No

If "Yes", describe approximate size/area of the Engineered Cover that will be removed for completion of this maintenance item: _____

_____

_____

_____

4. **Is there evidence of Engineered Cover erosion in the area requiring maintenance?** ☐ Yes ☐ No

If yes, describe below:

☐ Minor ☐ Mild ☐ Moderate ☐ Severe

Location: _____

_____

_____

_____

5. **Is there evidence of Engineered Cover degradation in the area requiring maintenance?**
☐ Yes ☐ No

If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Location: _____

6. **Other Comments/Observations:** _____

7. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action:_____

8. **Was the Engineered Cover restored to As-Built conditions upon completion of work involved in this non-routine maintenance item?** ☐ Yes ☐ No (If "yes" List Date:_____)

If Yes, describe how the Engineered Cover was reconstructed (reconstruction must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC, and the Atlantic Richfield Company): _____

9. **Photographs taken during inspection:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

Old Works Golf Course

Pond Liner Inspection Form

Inspector(s): _____ Weather: _____

Date: _____

Location: _____

_____

Notes:

1. An annual inspection of the pond liner and air vents will be conducted and documented on this form; these maintenance items should also be inspected on a daily basis to ensure proper operation of Golf Course Lake #2.
2. Periodic inspection shall be done after precipitation events to insure the aforementioned Golf Course Lake #2 components have not been compromised, become damaged or blocked, or are otherwise malfunctioning.
3. Any of the aforementioned maintenance items that may be found to be malfunctioning will be cleaned and/or repaired as soon as possible after discovery (notification will be made to and approval will be given by ADLC, EPA, and Atlantic Richfield Company prior to any repair or maintenance work).
4. Any components that needs to be repaired, replaced, or added will be completed per the requirements of the OWGC O&M Plan (reconstruction of the Engineered Cover will also be required per the original design as outlined in the OWGC O&M Plan).
5. Any modification performed on the liner or air vents of Golf Course Lake #2 must be approved prior to work and will be documented on a Pond Liner Inspection Form and included in the Annual O&M Report.

1. **Is the pond liner damaged? If yes, to what extent?**

☐None Observed ☐Mild ☐Moderate ☐Severe
Describe problem and location: _____
_____
_____
_____

2. **Are the pond liner air vents damaged or obstructed? If yes, to what extent?**

☐None Observed ☐Mild ☐Moderate ☐Severe
Describe problem and location: _____
_____
_____
_____

3. **Is there evidence of Engineered Cover erosion resulting from liner damage?** ☐ Yes ☐ No
If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Location: _____
_____

4. **Is there evidence of Engineered Cover degradation or disturbance?** ☐ Yes ☐ No
If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Location: _____

5. **Other Comments/Observations:** _____

6. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action: _____

7. **Photographs taken during inspection:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

Old Works Golf Course

Record of Yearly Gallons of Water Diverted through the Warm Springs Creek Diversion Structure

Notes:

1. The Warm Springs Creek Diversion Structure should be inspected on a daily basis when in operation (adjusting and/or cleaning of the structure will be done as necessary).
2. The volume of diverted water will be recorded a minimum of once per week, commencing on the day that the Warm Springs Creek Diversion Structure is placed in operation for the year and ending on the day that the structure is taken out of service for the winter months.
3. The golf course is allowed to divert 1.4 cubic feet (0.04 cubic meters [m^3]) per second (628 gallons per minute [gpm]) or 345 acre-feet (425,385 m^3) (112,418,743 gallons) per year under water right No. 76G-W-32342 and water right No 76G-W-32350. Any additional irrigation water required will be obtained from the supplemental irrigation wells.
4. This form will be provided to ADLC monthly during the diversion period; complete the O&M Annual Report.

Week	Date of Recording	Name of Recorder	Flow Rate (not to exceed 628 gpm)	Gallons Diverted Since Last Observation	Cummulative Total Gallons Diverted (not to exceed 112,418,743 gallons/year)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

1. **Is there evidence of Engineered Cover erosion/damage in the diversion area?** ☐ Yes ☐ No
If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Location:_____
_____
_____
_____

2. **If damage or erosion is noted in the diversion area, was the Engineered Cover restored to As-Built conditions?** ☐ Yes ☐ No (If "yes" List Date:_____)

If Yes, describe how the Engineered Cover was reconstructed (reconstruction must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC, and the Atlantic Richfield Company): _____
_____
_____
_____
_____
_____

3. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action:_____
_____
_____
_____
_____
_____
_____

4. **Photographs taken during Warm Springs Creek Diversion inspections:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

Old Works Golf Course

Sediment Pond 5 to Sediment Pond 6 Bypass Piping Flushing and Inspection Form

Inspector(s): _____ Weather: _____

Date: _____

Notes:

1. The entire Sediment Pond 5 to Sediment Pond 6 Bypass piping should be inspected completely at least once per year as outlined in the OWGC O&M Plan.
2. Periodic inspection shall be done after precipitation events to insure piping has not been compromised, become blocked, or is otherwise malfunctioning.
3. Any pipe that is found to be malfunctioning is to be cleaned or repaired as soon as possible after discovery.
4. Any area that requires additional drainage to be installed for excess water problems will be completed as soon as possible; drainage piping that needs to be repaired, replaced, or added will be completed per the requirements of the OWGC O&M Plan (reconstruction of the Engineered Cover will also be required per the original design as outlined in the OWGC O&M Plan).

5. Any modification or maintenance work performed on the discharge piping will be documented on a Sediment Pond 5 to Sediment Pond 6 Bypass Piping Flushing and Inspection Form and included in the O&M Annual Report.

1. **Is there debris in the Sediment Pond 5 discharge piping inlet? If yes, to what extent?**

☐None Observed ☐Mild ☐Moderate ☐Severe
Date that debris was removed from inlet: _____
_____
_____
_____
_____

2. **Is the drainage piping found to be malfunctioning? If yes, to what extent?**

☐None Observed ☐Mild ☐Moderate ☐Severe
Date that drainage pipe(s) was repaired/replaced: _____
Describe/location of drainage piping that was repaired/replaced: _____
_____
_____
_____
_____

3. **Is there evidence of erosion to the Sediment Pond 5 or 6 bypass piping system?** ☐ Yes ☐ No
If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Location:_____
_____
_____
_____

4. **Other Comments/Observations:** _____

5. **If any damage was observed to the Sediment Pond 5 to Sediment Pond 6 bypass piping system, was the sediment pond restored to As-Built conditions upon completion of any repair, modification, or new component installation?** ☐ Yes ☐ No
(If "yes" List Date:_____)

If Yes, describe how the bypass piping system was reconstructed (reconstruction must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC, and the Atlantic Richfield Company): _____

6. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action:_____

7. **Date(s), personnel, and location of annual flushing of bypass piping system:**_____

8. **Photographs taken during drainage piping flushing and inspection:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

Old Works Golf Course

Soil Analysis Form

Person(s) Performing Work: _____Weather: _____

Date:_____

Note: Individual composite soil samples will be taken from each of six greens, tees, fairways, and roughs on an annual basis (the driving range and practice greens and tees will be sampled every other year). Sample results will be used by the OWGC Superintendent to determine fertilizer application ratios.

1. **Type (green, tee, fairway, rough, driving range, practice green, practice tee) of composite soil sample collected:**
   ☐ Greens; #s:_____ ☐ Tees; #s:_____ ☐ Fairways; #s:_____
   ☐ Driving Range ☐ Practice Green; #s:_____ ☐ Practice Tee; #s:_____

2. **Locations where soil samples were collected:**
   Locations of samples from Greens: _____
   _____
   _____
   Locations of samples from Tees: _____
   _____
   _____
   Locations of samples from Fairways: _____
   _____
   _____
   Locations of samples from Roughs: _____
   _____
   _____
   Locations of samples from the Driving Range: _____
   _____
   _____
   Locations of samples from Practice Greens: _____
   _____
   _____
   Locations of samples from Practice Tees: _____
   _____
   _____

3. **Is there any evidence of disease or insect activity in the sampling area?**
   ☐ Yes ☐ No
   If "Yes", describe possible disease or insect responsible for the problem area and the approximate size/area of the affected area: _____
   _____
   _____

4. **Is there evidence of Engineered Cover erosion in the sampling area?** ☐ Yes ☐ No
If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Location:_____

5. **Is there evidence of Engineered Cover degradation in the sampling area?**
☐ Yes ☐ No

If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Location: _____

6. **Other Comments/Observations:** _____

7. **Is follow-up action required for any disease, insect, or erosion issues noted?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action:_____

8. **Photographs taken during soil sampling activities:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

Old Works Golf Course

Stucky Ridge Sediment Pond Discharge Piping Flushing and Inspection Form

Inspector(s): _____ Weather: _____

Date: _____

Notes:

1. The entire Stucky Ridge Sediment Pond Discharge piping should be inspected completely at least once per year as outlined in the OWGC O&M Plan.
2. Periodic inspection shall be done after precipitation events to insure piping has not been compromised, become blocked, or is otherwise malfunctioning.
3. Any pipe that is found to be malfunctioning is to be cleaned or repaired as soon as possible after discovery.
4. Any area that requires additional drainage to be installed for excess water problems will be completed as soon as possible; drainage piping that needs to be repaired, replaced, or added will be completed per the requirements of the OWGC O&M Plan (reconstruction of the Engineered Cover will also be required per the original design as outlined in the OWGC O&M Plan).
5. Flushing of all piping will be completed on an annual basis and as needed if the system malfunctions.
6. Any modification work performed on the discharge piping will be documented on a Stucky Ridge Sediment Pond Discharge Piping Flushing and Inspection Form and included in the O&M Annual Report.

1. **Is there debris in the discharge piping inlet? If yes, to what extent?**

☐None Observed ☐Mild ☐Moderate ☐Severe
Date that debris was removed from inlet: _____
_____
_____
_____
_____

2. **Is the drainage piping found to be malfunctioning? If yes, to what extent?**

☐None Observed ☐Mild ☐Moderate ☐Severe
Date that drainage pipe(s) was repaired/replaced: _____
Describe/location of drainage piping that was repaired/replaced: _____
_____
_____
_____
_____

3. **Is there evidence of erosion to the Stucky Ridge Sediment Pond structure?** ☐ Yes ☐ No
If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Location:_____
_____
_____
_____

4. **Other Comments/Observations:** _____

5. **If any damage was observed to the Stucky Ridge Sediment Pond structure, was the sediment pond restored to As-Built conditions upon completion of any repair, modification, or new component installation?** ☐ Yes ☐ No
(If "yes" List Date:_____)

If Yes, describe how the sediment pond was reconstructed (reconstruction must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC, and the Atlantic Richfield Company): _____

6. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action:_____

7. **Date(s), personnel, and location of annual flushing of drainage piping:**_____

8. **Photographs taken during drainage piping flushing and inspection:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

Old Works Golf Course

Tree Planting Form

Person(s) Performing Work: _____Weather: _____

Date:_____

Note: Form will be provided in the O&M Annual Report. Refer to Figure 11 of the OWGC O&M Plan for the details of the required tree planting procedure.

1. Briefly describe the planting procedures to be used during the tree planting work (planting procedures shall be in accordance with Figure 11 of the OWGC O&M Plan):_____
_____
_____
_____
_____
_____

2. **Locations where tree(s) are to be planted:**
_____
_____
_____

3. **Type of growth media to be used around the tree ball during planting (original mix was 80% Stewart Street Sand and 20% compost):**
_____
_____
_____

4. **Is there evidence of Engineered Cover erosion in the tree planting area?** ☐ Yes ☐ No
If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Location:_____
_____
_____
_____

5. **Is there evidence of Engineered Cover degradation in the tree planting area?**
☐ Yes ☐ No

If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Location: _____
_____
_____
_____

6. **Was the Engineered Cover restored to As-Built conditions upon completion of work involved in this tree planting work?** ☐ Yes ☐ No (If "yes" List Date:_____)

If Yes, describe how the Engineered Cover was reconstructed (reconstruction must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC, and the Atlantic Richfield Company): _____

7. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action:_____

8. **Photographs taken during tree planting work:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

Old Works Golf Course

Underdrain System (Inlets, Cleanouts, and Piping) Inspection Form

Inspector(s): _____Weather: _____

Date:_____

Notes:

1. The entire golf course underdrain node network will be thoroughly and completely inspected on an annual basis as outlined in the OWGC O&M Plan. Documentation of underdrain node network inspection activities will be documented on an Irrigation Main-line or Sub-Drainage System Inspection Form and included in the O&M Annual Report.
2. Periodic edging shall be done to keep inlets from being grown over with sod.
3. Any drain or pipe that is found to be malfunctioning is to be repaired as soon as possible after discovery.
4. Any area that requires additional drainage to be installed for excess water problems will be completed as soon as possible; drainage piping that needs to be repaired, replaced, or added will be completed per the requirements of the OWGC O&M Plan (reconstruction of the Engineered Cover will also be required per the original design as outlined in the OWGC O&M Plan).
5. Flushing of all drainage nodes and piping will be completed on a periodic basis and as needed if the system malfunctions.
6. Flushing of drains for the greens will be completed on an annual basis and as needed if problems are noted or if the system malfunctions. If clean-outs cannot be located, an acceptable method for verification that green drains are functioning is to monitor greens during precipitation events and visually inspect to insure adequate drainage is taking place. Documentation of inspection activities for green drains will be documented on an Irrigation Main-line or Sub-Drainage System Inspection Form and included in the O&M Annual Report.
7. Any modification work performed on the underdrain lines will be documented on an Underdrain Lines Inspection Form and included in the O&M Annual Report.

1. **Is there debris in any of the surface drain inlets? If yes, to what extent?**

☐None Observed ☐Mild ☐Moderate ☐Severe
Date that debris was removed from inlet: _____
Describe/location of inlet(s) containing debris: _____
_____
_____
_____
_____

2. **Are inspections of surface drain inlets and underdrain node network components being performed?**
☐ Yes ☐ No
If yes, list date and location of inspection and describe observations/required maintenance below:

Date and Description of Inspection:_____
_____
_____
_____

3. **Are there any drains or pipes found to be malfunctioning? If yes, to what extent?**

☐None Observed ☐Mild ☐Moderate ☐Severe

Date that drain(s) or pipe(s) was repaired/replaced: _____

Describe/location of drain(s) or pipe(s) that was repaired/replaced: _____

_____

_____

_____

_____

4. **Is there evidence of Engineered Cover erosion?** ☐ Yes ☐ No

If yes, describe below:

☐ Minor ☐ Mild ☐ Moderate ☐ Severe

Location:_____

_____

_____

_____

5. **Is there evidence of Engineered Cover degradation or disturbance?** ☐ Yes ☐ No

If yes, describe below:

☐ Minor ☐ Mild ☐ Moderate ☐ Severe

Location: _____

_____

_____

_____

6. **Other Comments/Observations:** _____

_____

_____

_____

_____

_____

_____

_____

7. **Was the Engineered Cover restored to As-Built conditions upon completion of any repair, modification, or new component installation?** ☐ Yes ☐ No

(If "yes" List Date:_____)

If Yes, describe how the Engineered Cover was reconstructed (reconstruction must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC, and the Atlantic Richfield Company): _____

_____

_____

_____

_____

_____

8. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action:_____

9. **Date(s) and location of inspection(s) and any necessary flushing of green drains:**_____

10. **Were any green drain cleanouts not located during inspection procedures?**
☐ Yes ☐ No
If yes, list green(s) where cleanout was not located and describe date and method of inspection used to verify green drain is functioning properly:

Date and Description of inspection methods and observations:_____

11. **Date(s) and location of inspection(s) and any flushing of drainage nodes or piping:**_____

12. **Photographs taken during inspection:**

Photo Name	Location	Description
Picture 1		
Picture 2		

Old Works Golf Course

Warm Springs Creek Stream Bank Protection Modification Form

Person(s) Performing Work: _____Weather: _____

Date:_____

Location:_____
_____

Notes:

1. This form will be provided to ADLC prior to performing any modification work on the Warm Springs Creek Stream Bank Protection.
2. All work around and in Warm Springs Creek will be performed in an environmentally sensitive manner to protect both natural and installed vegetation, fish, and wildlife.
3. Live trees and shrubs within the creek corridor will not be removed or trimmed unless approved by ADLC as described in the OWGC O&M Plan.
4. Any modification work performed on the Warm Springs Creek Stream Bank Protection will be documented on a Warm Springs Creek Stream Bank Protection Modification Form and included in the O&M Annual Report.

1. **Describe the modification, maintenance, or repair item:**
_____
_____
_____
_____

2. **Is there evidence of other erosion/damage to the Warm Springs Stream Bank Protection?**
☐ Yes ☐ No
If yes, describe below:
☐ Minor ☐ Mild ☐ Moderate ☐ Severe
Location:_____
_____
_____
_____

3. **If other damage or erosion is noted, will that damage or erosion to the Warm Springs Stream Bank Protection be restored to As-Built conditions?** ☐ Yes ☐ No
(If "yes" List Date Completed:_____)
(If "no" List Reason: :_____)

If Yes, describe how the Warm Springs Stream Bank Protection was modified, maintained, or repaired (this work must be completed as outlined in the Details provided in the OWGC Construction Drawings as approved by EPA, ADLC, and the Atlantic Richfield Company): _
_____
_____
_____
_____
_____
_____

4. **Is Follow-up Action Required?** ☐ Yes ☐ No
If Yes, describe problem, location, and potential action:_____
_____
_____
_____
_____
_____
_____

5. **Photographs taken during Warm Springs Creek Bank Protection modifications, maintenance, or repairs:**

Photo Name	Location	Description
Picture 1		
Picture 2		

1

2

ATTACHMENT B

STORM WATER RUNOFF CONTROL

ANACONDA SMELTER NPL SITE

Final

Old Works Golf Course Hydraulic Analysis

Prepared For:

Atlantic Richfield Company
317 Anaconda Road
Butte, Montana 59701

Prepared by:

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June 3, 2010

ANACONDA SMELTER NPL SITE

Final

Old Works Golf Course Hydraulic Analysis

Prepared For:

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Butte, Montana 59701

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1.0 PURPOSE OF REPORT

This report presents a summary of the hydraulic performance of the stormwater management system in and around the Old Works Golf Course. Flow routes, rates, capacities of the various components, and interactions of several components are discussed. This report is intended to be an aid in Golf Course operations, particularly in regard to the Warm Springs Creek Diversion and Golf Course Pond 2. This report also compares as-constructed conditions with the original design.

2.0 INTRODUCTION

Most information for this report came from Project Record Drawings, topography maps developed by Horizons, Inc., flown on November 1, 1996, and the *Final Engineered Controls Inspection and Maintenance (I&M) Plan,* April 28, 2006. Additional information came from conversations with Duane Logan of Pioneer Technical Services, Inc., assorted Requests for Information (RFIs), and "Report on Damage to Old Works Sediment Pond No. 5 Inlet Channel" by ESA Consultants, Inc., July, 1997 (this report, along with additional information, is also included in RFI No. 45 Rev. 3 [ARCO, 1999c]).

Sediment ponds around the golf course, and two ponds (lakes) on the golf course, store rainfall and snowmelt runoff and trap sediment from the hills above the golf course and from the golf course. A network of inlets and underground pipes collects the golf course runoff and routes the water to the two golf course ponds or to 1996 Remedial Action Channel 3A. The attached schematic, Exhibit A, shows the general flow of water on and around the golf course. Exhibit B is a plan view of the golf course and surrounding area showing the drainage basins and pond locations.

Sediment Ponds 1, 2, and 3 were designed to attenuate the 10-year, 24-hour storm runoff from their respective drainage basins. The 10-year, 24-hour storm runoff is equivalent to 0.44 inches of runoff from each drainage basin. Assuming 10 inches of snow equals 1 inch of water, the 10-year, 24-hour storm runoff is equivalent to 4.4 inches of snow melt. The two golf course ponds capture the attenuated outflow from these ponds, and runoff from the adjacent golf course areas. These sediment ponds were also designed to safely pass up to the 100-year, 24-hour storm runoff from their respective drainage basins. Sediment Pond 5 was designed to store the 25-year, 24-hour storm runoff, and safely pass flows up to the 100-year, 24-hour storm runoff, to Warm Springs Creek. Sediment Pond 6 and Golf Course Ponds 1 and 2 were designed to store the 10-year 24-hour storm runoff, and safely pass flows up to the 100-year, 24-hour storm runoff, to Warm Springs Creek. Sediment Pond 8 was designed to contain and store the rainfall runoff from the 100-year, 24-hour storm, but was removed from the system in 1999 and the runoff diverted to1996 Remedial Action Channel 3A. The Old Works Stucky Ridge Sediment Pond was designed detain the 100-year event and pass storm water runoff to Sedimentation Pond 5. The attached Table 1 lists the contributing basin areas, and respective runoff volumes routed to each pond. Table 2 shows the maximum permissible sediment storage level for each sediment pond.

3.0 SYSTEM DESCRIPTION

3.1 System Overview

Storm water conveyance channels convey storm water runoff from a portion of the south side of Stucky Ridge into the Old Works Sediment Ponds 1, 2 and 3. The sedimentation ponds discharge into the Old Works Golf Course Ponds 1 and 2 via the Old Works Golf Course underdrain system. Storm water runoff stored in Golf Course Ponds 1 and 2 is used to supplement the Old Works Golf Course irrigation system or conveyed through the Old Works Golf Course under drain system to Sediment Pond 6. If storm water is not conveyed to Sediment Pond 6, storm water runoff exceeding the 10-year storm event in Golf Course Ponds 1 and 2 will be conveyed to the Warm Springs Creek. Storm water conveyance channels convey storm water runoff from the remaining portions of the south side of Stucky Ridge into Sediment Ponds 5, 6, and 7. Storm water runoff exceeding the 25-year storm event in Sediment Pond 5 is conveyed to Warm Springs Creek. Storm water runoff exceeding the 10-year storm event in Sediment Pond 6 is conveyed to Sediment Pond 5 via piping system or to Warm Springs Creek. Storm water runoff from the 100-year storm event will be retained in Sediment Pond 7. Specific storm water runoff design information is provided in the following sections and in the *Final Old Works Remedial Action Work Plan/Final Design Report (RAWP/FDR) Volume I & II (ESA, 1994)* and construction information is provided the *Final Old Works Remedial Action Completion Report (RACR) Subareas 1 and 2* (AERL 1998).

Golf Course storm water runoff north of Warm Springs Creek is conveyed to Golf Course Ponds 1 and 2 through the Old Works Golf course under drain system. Storm water runoff stored in Golf Course Ponds 1 and 2 is used to supplement the Old Works Golf Course irrigation system or conveyed through the Old Works Golf Course under drain system to Sediment Pond 6. Storm water runoff exceeding the 10-year storm event in Golf Course Ponds 1 and 2 is conveyed to the Warm Springs Creek. Golf Course storm water runoff south of Warm Springs Creek is conveyed through the Old Works Golf Course under drain system to the 96 Remedial Action (RA) Channel 3 (OW/EADA OU Subarea 3). Specific Old Works Golf Course storm water runoff design information is provided in the following sections and in the *Final Old Works Remedial Action Work Plan/Final Design Report (RAWP/FDR) Volume I & II (ESA, 1994)* and construction information is provided the *Final Old Works Remedial Action Construction Completion Report (RACCR) Subareas 1 and 2* (AERL, 1998).

3.2 Stucky Ridge Runoff

During a rainfall or snowmelt event, runoff from Stucky Ridge collects in sediment ponds. Sediment Ponds 1, 2, and 3, as well as the Stucky Ridge Sediment Pond, attenuate the peak runoff flows by temporarily storing the runoff and releasing it to the golf course over an extended period. The orifices controlling the outflow from these ponds are sized to discharge the 10-year storm runoff over a 24-hour period. Overland flow to the golf course ponds will occur for flows greater than the inlet/underdrain capacity. This happens when flows are greater than the 10-year, 24-hour storm outflow from Sediment Ponds 1, 2, and 3.

Overland runoff from the associated drainage area, as well as discharge from Channels 1A and 1B, are collected in Sediment Pond 1. The outflow from Sediment Pond 1, released via the incorporated outlet structure, flows overland to underdrain inlets, and then through the golf course underdrains to Golf Course Pond 1. Peak outflows that are expected to be conveyed from Sediment Pond 1 to Golf Course Pond 1 are 2.8 cfs.

Overland runoff from the associated drainage area, as well as discharge from Channels 2A and 2B, are collected in Sediment Pond 2. The outflow from Sediment Pond 2, released via the incorporated outlet structure, flows overland to an underdrain inlet, and the through the golf course underdrains to Golf Course Pond 2. Peak outflows that are expected to be conveyed from Sediment Pond 2 to Golf Course Pond 2 are 9.8 cfs.

Overland runoff from the associated drainage area, as well as discharge from Channel 4A, is collected in Sediment Pond 3. The outflow from Sediment Pond 3, released via the incorporated outlet structure, flows overland to underdrain inlets, and through the golf course underdrain to Golf Course Pond 2. Peak outflows that are expected to be conveyed from Sediment Pond 3 to Golf Course Pond 2 are 1.3 cfs.

The Stucky Ridge Sediment Pond was constructed to prevent storm water from flowing down the hillside below existing Pond 4 and depositing sediment onto the gentler slope of the capped area. The Stucky Ridge Sediment Pond overflow is conveyed through the Stucky Ridge outlet structure into Sediment Pond 5. A separate storm water channel (Channel 5B) was also constructed to intercept any of storm water that was not captured in the Stucky Ridge Sediment Pond and convey the storm water through a drop inlet in the Stucky Ridge Sediment Pond piping to Sedimentation Pond 5. Peak outflow that is expected to be conveyed from the Stucky Ridge Sediment Pond to Sediment Pond 5 is 1.23 cfs.

Table 2 outlines the maximum sediment storage elevations that are allowable in each of the previously described sediment ponds (the maximum sediment storage elevations are also referenced to the staff gauges that were installed in each of the separate sediment ponds).

3.3 Golf Course Ponds 1 and 2

Golf Course Ponds 1 and 2 were designed to store the 10-year 24-hour storm runoff. Golf Course Pond 1 is a lined pond and was designed to store 5.82 acre-feet of runoff and sediment. Based on as-constructed topography of the pond, it has 5.9 acre-feet of storage available between the normal pool, elevation 5256.360 feet, and the overflow spillway crest, elevation 5259.86 feet. Golf Course Pond 2, also a lined pond, was designed to have 21.6 acre-feet of storage between the normal pool, elevation 5210.36 feet, and the overflow spillway crest, elevation 5214.86 feet. Based on as-constructed topography of the pond, the actual storage volume between these two elevations is 25.5 acre-feet. Inflows resulting in pool levels higher than the overflow spillway crest of either pond cause discharges to Warm Springs Creek.

If the water level of Golf Course Pond 1 rises above desired levels, it can be lowered to elevation 5255.86 feet by draining water to Golf Course Pond 2 through a valved gravity-drain system connected to the underdrain network. This gravity drain has a maximum flow rate of 1.5 cfs,

when the Golf Course Pond 1 water surface is at the lip of the overflow spillway crest. However, the water level in Golf Course Pond 2 should be closely monitored during use of this drain to avoid overfilling Golf Course Pond 2.

If the water level in Golf Course Pond 2 rises above desired levels, excess water can be drained to Sediment Pond 6 via a valved gravity drain using the underdrain network. This gravity drain has a maximum flow rate of 1.1 cfs, when the Golf Course Pond 2 water surface is at the lip of the overflow spillway crest. The gravity drain can lower the Golf Course Pond 2 water surface to elevation 5209.76 feet, which is 0.6 feet below the normal pool elevation. Additional excess water can be drained to Sediment Pond 6 via the irrigation system or the Golf Course Pond 2 auxiliary pumping system. The irrigation system can discharge Golf Course Pond 2 water to Sedimentation Pond 6 through irrigation drain valves connected directly to underdrain system. The Golf Course Pond 2 auxiliary pump system is designed to discharge Golf Course Pond 2 water to Sedimentation Pond 6 through into the C-1 underdrain system via a 3-inch portable gas pump and 300 feet of flexible discharge hose (per RFI No. 66 [ARCO, 1999b]). The discharge through the underdrain system, via the irrigation or the Golf Course Pond 2 auxiliary pumping systems, have a maximum flow rate of 0.67 cfs.

3.4 Water Supply to Golf Course Pond 2

During the irrigation season, the golf course irrigation system draws water from Golf Course Pond 2. Golf Course Pond 2 will be, in turn, supplied by a gravity diversion from Warm Springs Creek. The gravity diversion from Warm Springs Creek is permitted through a water right with the State of Montana for a maximum flow rate of 1.4 cfs (625 gpm), although the diversion is conservatively designed to divert approximately 2.2 cfs (1,000 gpm) in the event that the pipe were to become partially blocked due to deposited sediment or debris. This flow rate was designed to satisfy peak average daily use for the Old Works Golf Course. Flow through the diversion will be controlled by a manually operated valve. Water from Warm Springs Creek is supplied as irrigation demand exceeds runoff to Golf Course Pond 2. If additional water is required, or the diversion is inoperable, irrigation supply wells located on the golf course are available.

The point of diversion is located in the Northeast ¼ of the Southwest ¼ of the Northwest ¼ of Section 2, Township 4 North, Range 11 West (N796030, E1128430). The diversion is a cross-vane rock irrigation diversion weir that was constructed in Warm Springs Creek by installing sheet pile across the creek in a cross-vane pattern to a depth of approximately six feet with no more than a six-inch stickup above the creek channel to provide an anchor as well as scour protection for the rock weir. Rocks (boulders consisting of block limestone) with nominal diameters of 24 to 36 inches were then embedded behind the sheet pile to form the diversion. These boulders were positioned so that they extend approximately 6 inches above the bottom of the center of the creek and approximately 12 inches above the bottom of creek along either bank. The overall length of the diversion is approximately 90 feet, which includes the sheet pile that was embedded into the creek banks to provide scour protection therein. A 10-inch diameter ductile iron intake pipe with a screened intake (1/2 inch screen; removable) that is approximately 32 feet in length was installed slightly upstream of the diversion and extends to an existing manhole, which feeds the Old Works Golf Course water supply pond. Water from the diversion

is allowed to gravity flow to Node 29 of the Old Works Golf Course underdrain network during times when supplemental irrigation water is needed (the underdrain network will carry the diverted flow to Golf Course Pond 2). A backflow prevention device is fitted on the manhole end of the diversion pipe to prevent runoff from the Old Works Golf Course from entering Warms Springs Creek via reverse flow from the golf course underdrain system. Also contained within the manhole is a flow measurement device. A butterfly flow control valve is located on the inlet side of the manhole to regulate flows from the Warm Springs Creek diversion, as necessary.

3.5 Sediment Ponds 5 and 6

Overland runoff from the associated drainage area, potential storm water discharged from the Stucky Ridge Pond, potential storm water discharge from Sediment Pond 6 (e.g., overflow or controlled discharge via the pipeline discussed in the following paragraphs), and discharge from Channels 5A and 5B, are collected in Sediment Pond 5. Sediment Pond 5 is an unlined pond, in which the 10-year, 24-hour runoff volume of 6.84 acre-feet can be stored below elevation 5,191.5 feet, and the 25-year, 24-hour runoff volume of 13.33 acre-feet can be stored below elevation 5,196.6 feet. The total storage volume of Sediment Pond 5 is 56.4 acre-feet at elevation 5,196.51 feet, which is the elevation of the overflow riser rim. When water levels in Pond 5 are greater than elevation 5,196.51 feet, flows discharge to Warm Springs Creek via the incorporated outlet structure. These elevation and storage values can be found in RFI No. 5 (ARCO, 1996). The overall design of the inlet channel for Sediment Pond 5 was redesigned in September of 1998 to accommodate an arbitrarily selected flow value of 150 cfs due to July 19, 1997 storm event that caused damage to the inlet channel. This storm event and information on the damage and redesign of the inlet channel are discussed in further detail in Section IV: Performance Observations.

The design retention volume of Sediment Pond 6, also unlined, is 2.0 acre-feet below the spillway rim (elevation of the spillway rim is 5,189.65 feet). Sediment Pond 6 was sized to contain the 10-year, 24-hour runoff from its contributing drainage basin. The peak 10-year inflow rate to Sediment Pond 6 is 8 cfs. The peak 100-year inflow rate to Sediment Pond 6 is 29 cfs. The spillway/outlet structure for Sediment Pond 6 will safely pass the 100-year inflow to Warm Springs Creek without overtopping the Sediment Pond 6 berm. If necessary, excess water can be drained from Golf Course Pond 2 could reduce the available runoff storage capacity of Sediment Pond 6. To maintain design capacity in Sediment Pond 6, and to prevent Sediment Pond 6 from discharging directly to Warm Springs Creek, a manually operated gate valve and pipeline was installed to allow routing flows from Sediment Pond 6 to Sediment Pond 5 (refer to RFI No. 64;[ARCO, 1999a]).

The pipeline between Sediment Ponds 5 and 6 was designed to safely pass a flow of 9.1 cfs, which is equivalent to the combination of the storm water inflow into Sediment Pond 6 that would result from a 10-year, 24-hour storm and the peak flow of 1.1 cfs from Golf Course Pond 2. Draining of Sediment Pond 6 to Sediment Pond 5 can occur via gravity feed up to a water surface elevation of 5,189.65 feet, the elevation of the overflow riser rim in Sediment Pond 6. Twenty-two acre-feet of storage above the Sediment Pond 5 10-year, 24-hour storm runoff storage is available below elevation 5,196.51 feet in Sediment Pond 5. Water levels above this

elevation would cause discharges from Sediment Pond 6 to Warm Springs Creek. Higher water levels (i.e., greater storage) in Sediment Pond 5 could be achieved if water was pumped from Sediment Pond 6 to Sediment Pond 5. An additional 22 acre-feet of storage, above what would be stored by gravity flow from Sediment Pond 6 to Sediment pond 5, is available below the crest of the Sediment Pond 5 overflow riser (RFI No. 64;[ARCO, 1999a]).

3.6 Sediment Pond 8

Runoff from a small area south of Warm Springs Creek, around Hole 11, drains to Sediment Pond 8. Sediment Pond 8 was designed to store all runoff from this area for the 100-year, 24-hour rainfall event; however, Sediment Pond 8 was removed from the system in 1999; the associated runoff was diverted to the 1996 Remedial Action Channel 3A.

4.0 PERFORMANCE OBSERVATIONS

4.1 1997 Runnoff Event

During the spring of 1997, Golf Course Pond 2 filled nearly to the level of the overflow spillway crest. This was not caused by a 10-year, 24-hour rainfall event, but rather by rainfall on top of a heavy, wet snow (i.e., a "Chinook" event). The pond level rose three to four feet in two days. It continued to fill for about another five days, but at a much slower rate. Assuming no water left the pond during the week it filled, the first two days added approximately 19 acre-feet of water to the pond at an average inflow rate of 4.8 cfs (2,150 gpm). Water flowed in at approximately 0.7 cfs (285 gpm) for the next five days, adding an additional 6 acre-feet of water to the pond.

A pump was temporarily installed and water pumped from the Pond to a nearby underdrain inlet. The water then flowed to Sediment Pond 6 via the underdrain pipe network. A pumping rate of 300 gpm (0.67 cfs) was used. This was the maximum capacity of the inlet and underdrain at that location. It took approximately two weeks to lower the pond to the normal pool elevation of 5,206 feet (refer to Table 3 and Exhibit C for additional information associated with Pond 2).

4.2 1997 Rainfall Event

On July 19, 1997 an intense thunderstorm hit Stucky Ridge above Sediment Pond 5 with the ensuing runoff collecting in Sediment Pond 5. Comparisons of the observed high water mark and the water level six days later indicate that the pond water level dropped approximately two feet in that time period indicating a moderate infiltration rate for this unlined pond.

This storm event resulted in a substantial damage to the riprap inlet channel to Sediment Pond 5. The storm event was found to be significantly in excess of the design event (estimated peak flow of greater than 200 cfs versus the design flow of 52 cfs). The majority of the channel was reconstructed per the original design; however, due to the potential for additional flow events that may occur, improvements were made to the channel design to accommodate a flow value of 150 cfs. These improvements included replacement of the filter fabric with filter bed material, placement of larger diameter riprap in some portions of the channel, installation/construction of

scour tie-ins along the channel alignment, and the grouting of some of the channel riprap. These additions/modifications were outlined in RFI No. 45 Revisions 2 and 3 (approved by the EPA on May 6, 1999). No deficiencies relating to the performance of the Sediment Pond 5 inlet channel have been recorded since the repair work was completed.

4.3 Spring 1998

During the spring of 1998, the gravity drain was used to transfer water from Golf Course Pond 2 to Sediment Pond 6. While the flow rate into Sediment Pond 6 averaged approximately 0.5 cfs, no appreciable water accumulation was observed in Sediment Pond 6 by Atlantic Richfield and Golf Course personnel, indicating a moderate infiltration rate for this unlined pond.

5.0 REFERENCES

AERL, 1998. *Final Old Works Remedial Action Construction Completion Report (RACCR) Subareas 1 and 2.* 1998

ARCO, 1996. RFI No. 5. Approved by the EPA July 25, 1996.

ARCO, 1999a. RFI No. 66. Approved by the EPA February 25, 1999.

ARCO 1999b. RFI No. 64. Approved by the EPA June 10, 1999.

ARCO 1999c. RFI No. 45. Approved by the EPA June 19, 1999.

Atlantic Richfield Company, 2006. *Final Engineered Controls Inspection and Maintenance (I&M) Plan,* April 28, 2006.

ESA, 1994. the *Final Old Works Remedial Action Work Plan/Final Design Report (RAWP/FDR) Volume I & II,* 1994.

TABLES

Table 1. Pond Runoff Basins and Volumes

DIRECT PRECIPITATION

Pond	Basin Area (acres)	10-yr Runoff Volume (b) (ac-ft)
Sediment Pond 1	109.9	4.03
Sediment Pond 2	380.9	13.97
Sediment Pond 3	51.8	1.90
Sediment Pond 4	70.7	n/a
Sediment Pond 5	186.5	6.84
Sediment Pond 6	51.4	1.88
Sediment Pond 7	31.2	1.14
Sediment Pond 8	23.4	0.86
Golf Course Pond 1 (a)	48.8	1.79
Golf Course Pond 2 (a)	155.2	5.69

TOTAL CONTRIBUTING RUNOFF

Pond	Basin Area (acres)	10-yr Runoff Volume (b) (ac-ft)
Golf Course Pond 1 (c)	158.7	5.82
Golf Course Pond 2 (d)	587.9	21.56

a. Golf Course area that drains directly to golf course ponds.
b. 10-yr Runoff Volume = 0.44 inches of runoff. Assuming 10 inches of snow equals 1 inch of water, the 10-year, 24-hour storm runoff is equivalent to 4.4 inches of snow melt, if the ground is frozen and no infiltration occurs.
c. Golf Course Pond 1 area and Sediment Pond 1 area.
d. Golf Course Pond 2 area and Sediment Ponds 2 and 3 areas.

Table 2. Maximum Sediment Storage Elevations

Pond	Max. Sediment Storage Elevation (ft)	Staff Gauge (ft)	Description
Sediment Pond 1	5353.7	1.57	orifice invert
Sediment Pond 2	5316.8	1.55	orifice invert
Sediment Pond 3	5279.2	1.35	orifice invert
Sediment Pond 4	n/a	n/a	n/a
Sediment Pond 5	5175.7	n/a	1.5 feet above constructed pond bottom
Sediment Pond 6	5185.9	-0.45	5.5 inches below bottom of staff gauge
Sediment Pond 7	5156.8	3.55	Approximately 3.5 feet above constructed pond bottom
Sediment Pond 8	5184.5	n/a	4 inches below Network 11 pipe invert

Accumulated sediment should be removed when average sediment elevation exceeds elevation listed. Orifices of Sediment Ponds 1, 2, 3, and 6 should be kept clear.

Table 3. Time Required to Drain Golf Course Pond 2

Assumptions: 1. Starting water surface elevation = 5210.5 feet
2. No additional inflow to Golf Course Pond 2

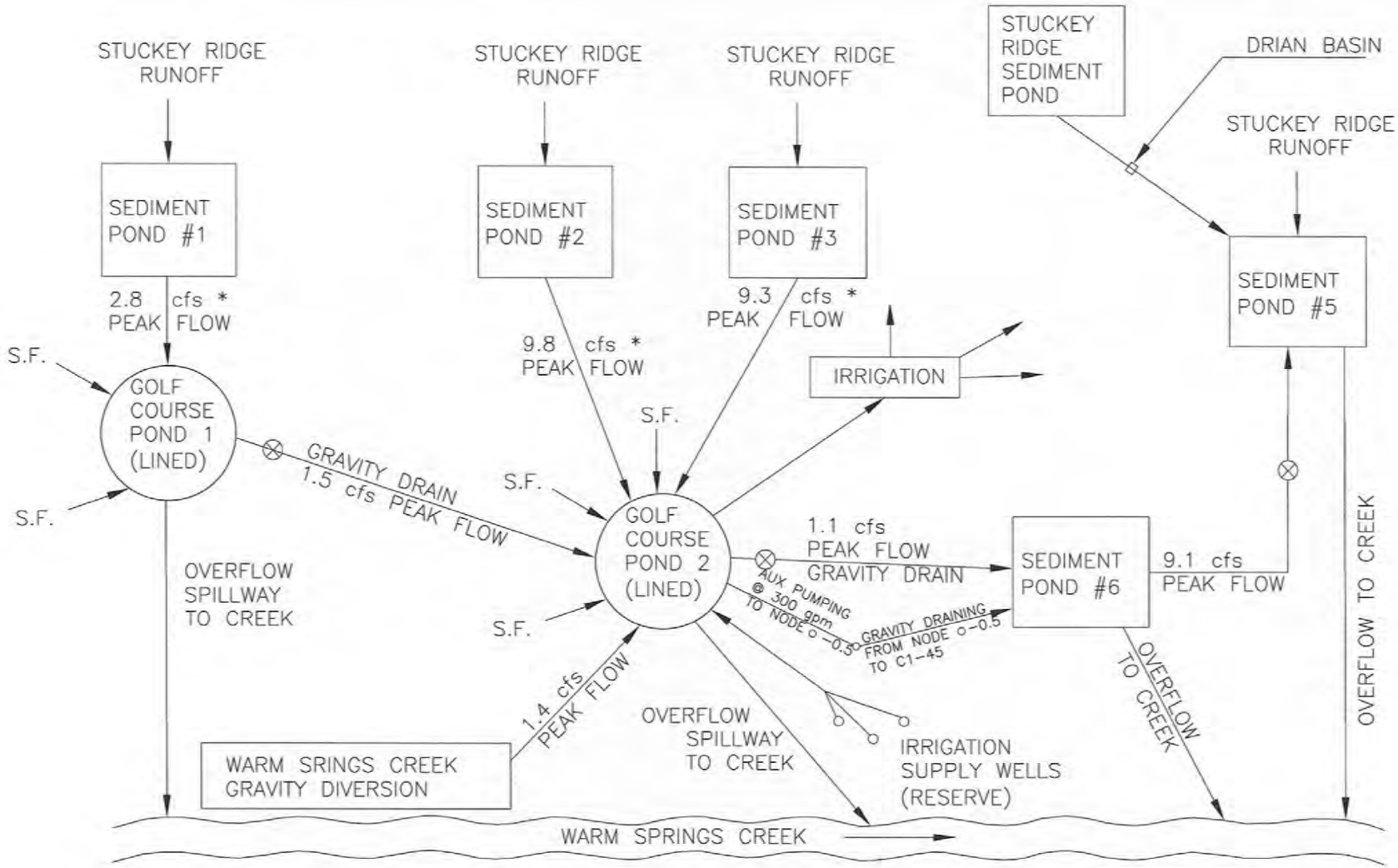
GC Pond 2 Water Surface Elevation (ft)	Description	Time to Drain to Given Water Surface Elevation	
		(a) Gravity Drain Only (days)	(b) Pumping at 300 gpm And Gravity Drain (days)
5210.5	Spillway Crest	0.0	0.0
5206.5	Top of Riprap	11.8	7.0
5206.0	Normal Pool	14.3	8.1
5204.0	Bottom of Riprap	n/a	13.8

(a) Gravity Drain Only = existing gravity diversion drain from Node O-0.5 to C1-45; no pumping.
(b) Pumping at 300 gpm and Gravity Drain = pumping from GC Pond 2 at 300 gpm (0.67cfs) and gravity draining through Node o-0.5 to C1-45.

EXHIBITS

EXHIBIT A

OLD WORKS GENERAL FLOW SCHEMATIC



S.F.= SURFACE FLOW
⊗ = VALVE
o = WELL
* PEAK FLOW SHOWN IS BASED ON WATER LEVEL IMMEDIATELY PRIOR TO SPILLING. THIS IS THE MAXIMUM DISCHARGE FOR THE 10-YR, 24-HR EVENT

PIONEER TECHNICAL SERVICES, INC.

EXHIBIT A
OLD WORKS
HYDRAULIC
ANALYSIS

SCALE: NTS
DATE: 5/28/2010

EXHIBIT B

PLAN VIEW OF THE OLD WORKS GOLF COURSE

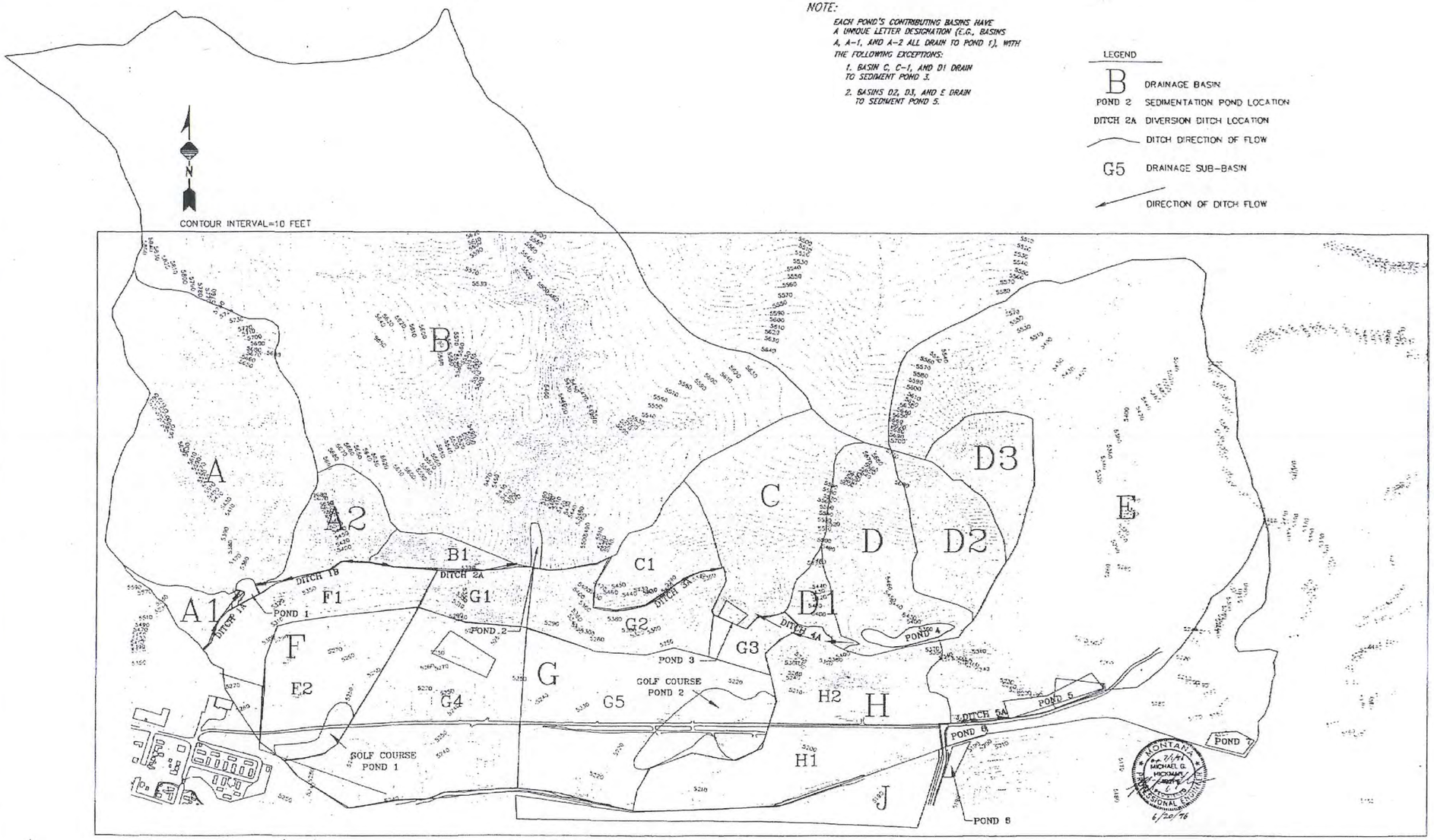
NOTE:

EACH POND'S CONTRIBUTING BASINS HAVE A UNIQUE LETTER DESIGNATION (E.G., BASINS A, A-1, AND A-2 ALL DRAIN TO POND 1), WITH THE FOLLOWING EXCEPTIONS:

1. BASIN C, C-1, AND D1 DRAIN TO SEDIMENT POND 3.
2. BASINS D2, D3, AND E DRAIN TO SEDIMENT POND 5.

LEGEND

B	DRAINAGE BASIN
POND 2	SEDIMENTATION POND LOCATION
DITCH 2A	DIVERSION DITCH LOCATION
	DITCH DIRECTION OF FLOW
G5	DRAINAGE SUB-BASIN
	DIRECTION OF DITCH FLOW



EHIIBIT B
OLD WORKS HYDRAULIC ANALYSIS

NO.	BY	DATE	REVISION DESCRIPTION
1	MGH	6/20/96	ISSUED FOR CONSTRUCTION
0	MGH	5/29/96	NEW DRAWING (NOT IN ORIGINAL SET)

DRAWING

DRAWN: ILG/BMB — DESIGNED: NCS — CHECKED: — APPROVED: — DATE: 5/24/96 — PROJECT NO. 101.9303

SCALE: HORIZ: N/A VERT: N/A — SCALE IN FEET 0 400 800

ATLANTIC RICHFIELD COMPANY
OW/EADA
1996 RA CONSTRUCTION

Prepared By:
ESA CONSULTANTS
216 West Mendenhall, Suite C-1, Bozeman, MT 59715

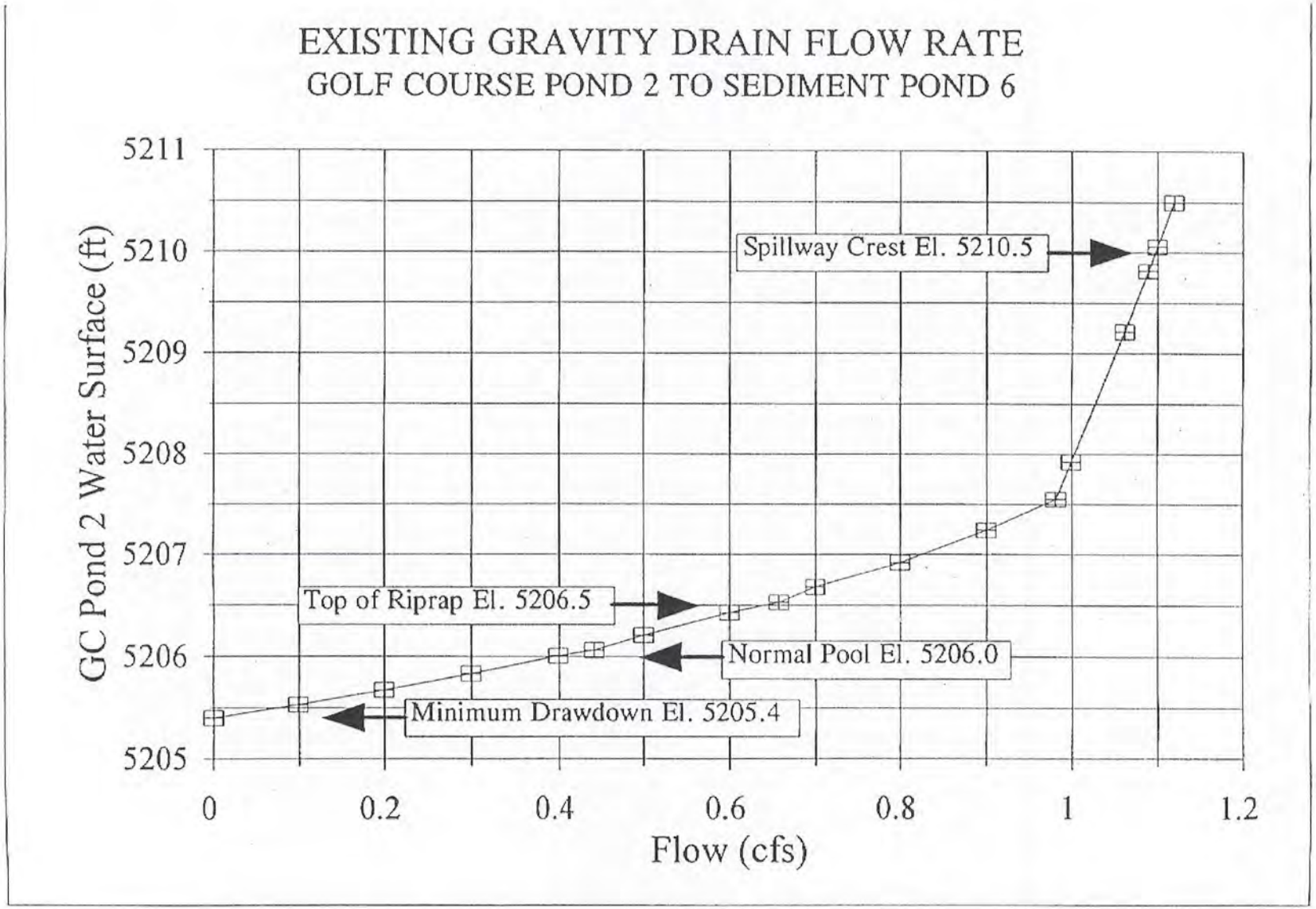
PLAN-STUCKEY RIDGE
DRAINAGE BASINS

SHEET 2-1

DATE: 5/28/2010

EXHIBIT C

EXISTING GRAVITY DRAIN FLOW RATE
GOLF COURSE POND 2 TO SEDIMENT POND 6



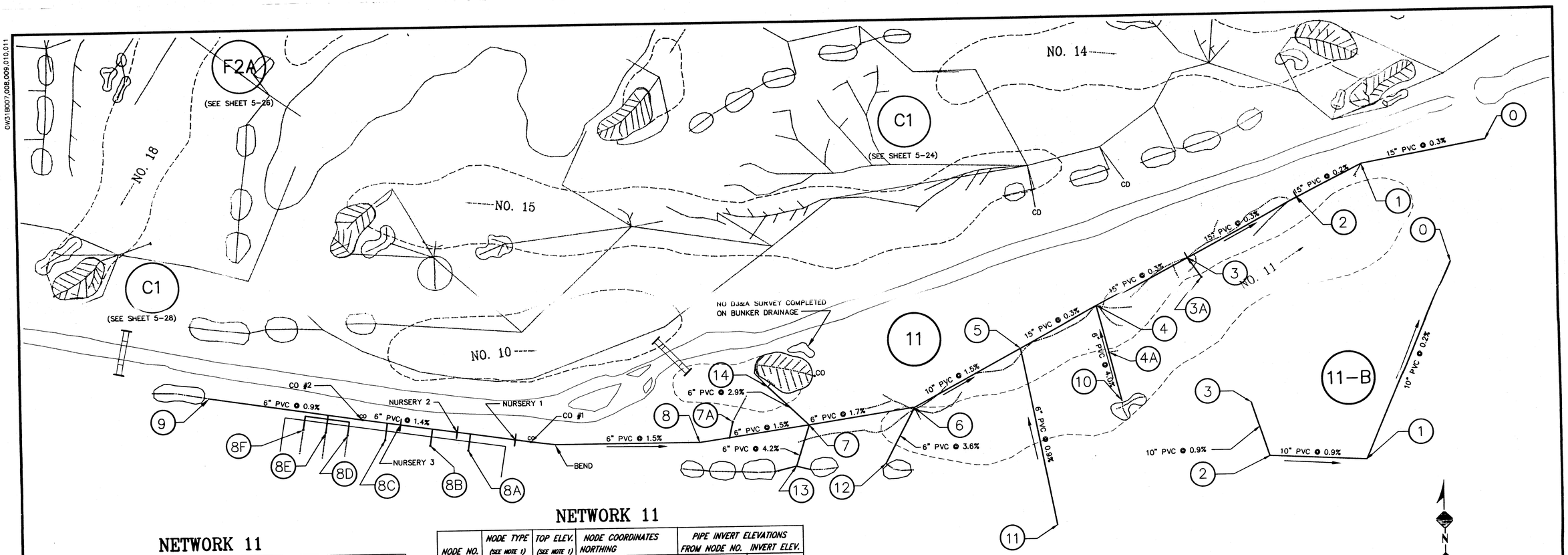
PIONEER TECHNICAL SERVICES, INC.

EXHIBIT C
OLD WORKS
HYDRAULIC
ANALYSIS

SCALE: NTS
DATE: 5/28/2010

ATTACHMENT C

OWGC UNDERDRAIN NETWORK
AS-BUILT DRAWINGS



NETWORK 11

NODE NO.	NODE TYPE (SEE NOTE 1)	TOP ELEV. (SEE NOTE 1)	NODE COORDINATES NORTHING	EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	INVERT ELEV.
0	OUTFALL	–	796377	1133012	1	5184.85
1	10" DIA.	5193.84	796330	1132755	OUT 2	5185.69 5185.77
2	–	–	796260	1132621	OUT 3	5186.04 5186.04
3		–	796139	1132391	OUT 4	5186.84 5186.84
3A	8" DIA.	–	–	–	–	–
4	–	–	796038	1132200	OUT 5 10	5187.48 5187.48 5188.95
4A	8" DIA.	–	–	–	–	–
5	–	–	795952	1132040	OUT 6 11	5188.11 5188.21 5188.33
6	–	–	795835	1131819	OUT 7 12	5192.07 5192.10 5192.11
7	8" DIA.	5200.16	795804	1131598	OUT 8 13 14	5195.91 5195.93 5195.93 5195.98
7A	10" SQ.	–	–	–	–	–
8	8" DIA.	5201.85	795770	1131370	9 9	5199.00 5199.00
8A	8" DIA.	–	–	–	–	–
8B	8" DIA.	–	–	–	–	–
8C	8" DIA.	–	–	–	–	–

NETWORK 11

NODE NO.	NODE TYPE (SEE NOTE 1)	TOP ELEV. (SEE NOTE 1)	NODE COORDINATES NORTHING	EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	INVERT ELEV.
8D	8" DIA.	–	–	–	–	–
8E	8" DIA.	–	–	–	–	–
8F	8" DIA.	–	–	–	–	–
9	–	–	795876	1130349	OUT	5212.33
10	–	–	795842	1132249	OUT	5197.08
11	8" DIA.	5195.11	795585	1132111	OUT	5191.76
12	–	–	795720	1131757	OUT	5196.79
13	–	–	795718	1131570	OUT	5199.69
14	–	–	795883	1131513	OUT	5199.35
BEND	BEND	–	795770	1131068	–	–
CO #1	CLEANOUT	–	795776	1131018	–	5204.41
CO #2	CLEANOUT	–	795828	1130669	–	5209.47
NURSERY 1	8" DIA.	5209.81	795781	1130985	–	–
NURSERY 2	8" DIA.	5210.88	795799	1130865	–	–
NURSERY 3	8" DIA.	5212.37	795816	1130747	–	–

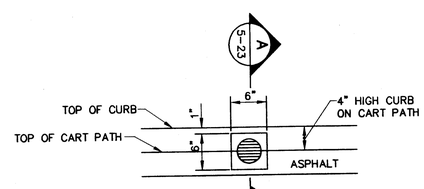
NETWORK 11B

NODE NO.	NODE TYPE (SEE NOTE 1)	TOP ELEV. (SEE NOTE 1)	NODE COORDINATES NORTHING	EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	INVERT ELEV.
0	OUTFALL	–	796121	1132936	1	5185.27
1	10" DIA.	5190.25	795710	1132754	OUT 2	5186.03 5186.02
2	10" DIA.	5191.01	795721	1132554	OUT 3	5187.87 5187.86
3	8" DIA.	5191.53	795832	1132517	OUT	5188.94

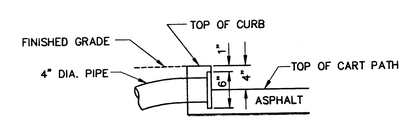
DRAFT

RECORD DRAWINGS

THESE RECORD DRAWINGS CONTAIN INFORMATION FURNISHED TO ESA BY OTHERS AND ESA IS NOT RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION.



1 – CURB DRAIN
NOT TO SCALE



A 5-23 CURB DRAIN
NOT TO SCALE

LEGEND

- C–1 — DRAINAGE NETWORK
- 11 — NODE NUMBER
- AS-BUILT TEE/GREEN/BUNKER PERIMETERS
- AS-BUILT SOLID DRAINAGE LINES
- AS-BUILT PERFORATED ADS DRAINAGE LINES
- APPROXIMATE FAIRWAY LIMITS
- CD — CURB DRAIN – SEE DETAIL 1/5-23
- CO — CLEAN OUT – BURIED – DEPTH VARIES

NOTE:

1) DATA FOR AS-BUILT INLET GRATES IS SHOWN WHERE AS-BUILT DATA EXISTS. OTHER NODES MAY BE BURIED PIPE CONNECTIONS, BURIED MANHOLES, OR ADDITIONAL INLETS.

NO.	BY	DATE	REVISION DESCRIPTION
1	RMB	4/15/97	ADDED ROE CONSTRUCTION AS-BUILT DRAWING DETAILS
1	DTL	6/06/96	AS-BUILT DRAWING

DTL/SAH/RMB DRAWN | SM DESIGNED | CHECKED
APPROVED | 6/06/96 DATE | 101.9301 PROJECT NO.

ATLANTIC RICHFIELD COMPANY
OW\EADA
1994 RA CONSTRUCTION

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

GOLF COURSE UNDERDRAIN – RECORD DRAWINGS
NETWORKS 11 & 11B (HOLES 10, 11)

SHEET 5-23

OW31B017.DWG

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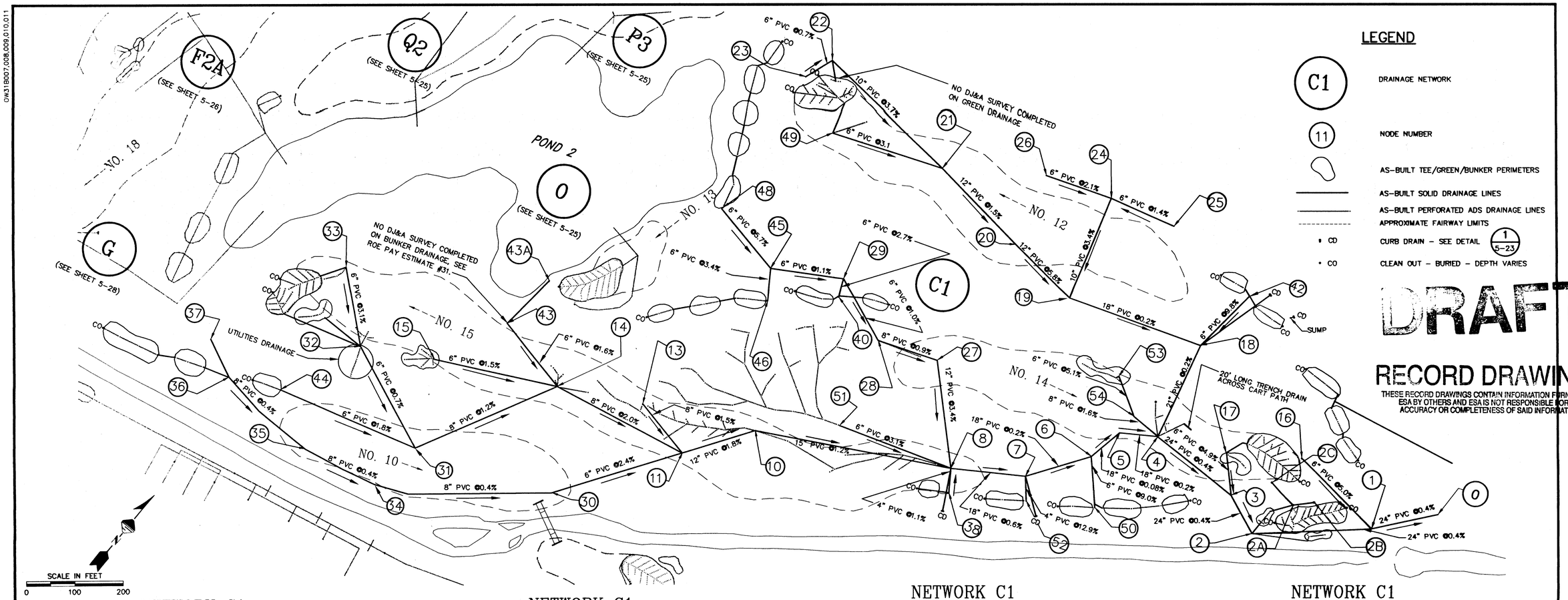

NETWORK C1

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
0	OUTFALL	–	796594	1133047	1	5182.13
1	12" SQ.	5192.82	796519	1132927	OUT 2 16	5182.75 5182.67 5185.07
2	10" DIA.	5191.07	796425	1132698	OUT 3	5183.71 5183.78
2A	8" DIA.	–	–	–	–	–
2B	8" DIA.	–	–	–	–	–
2C	8" DIA.	–	–	–	–	–
3	–	–	796485	1132629	OUT 4 17	5184.12 5184.11 5186.51
4	–	–	796550	1132445	OUT 5 18 34	5184.81 5185.30 5185.07 5185.95
5	10" DIA.	5190.89	796531	1132367	OUT 6	5185.49 5185.51
6	10" DIA.	5191.85	796463	1132329	OUT 7 50	5185.57 5185.61 5186.25
7	10" DIA.	5191.52	796377	1132214	OUT 8 37	5185.84 5185.81 5186.76

NETWORK C1

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
8	10" DIA.	5191.53	796342	1132062	OUT 10 27 38	5186.78 5187.26 5187.37 5187.66
10	12" SQ.	5196.54	796278	1131654	OUT 11	5192.18 5192.18
11	10" DIA.	5200.54	796182	1131528	OUT 13 14 30	5195.10 5195.23 5195.17 5195.60
13	12" SQ.	5202.14	796252	1131415	OUT	5197.21
14	10" DIA.	5205.55	796227	1131236	OUT 15 31 43	5201.27 5201.27 5201.32 5201.31
15	–	–	796195	1130977	OUT	5205.17
16	8" DIA.	5197.74	796609	1132741	OUT	5195.04
17	–	–	796567	1132590	OUT	5190.95
18	12" SQ.	5193.74	796762	1132463	OUT 19 42	5185.51 5186.16 5186.13
19	12" SQ.	5191.97	796764	1132173	OUT 20 24	5186.61 5187.01 5187.05

NETWORK C1

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
20	10" DIA.	5198.82	796832	1132030	OUT 21	5193.40 5193.40
21	12" SQ.	5204.17	796927	1131835	OUT 22 49	5196.62 5196.52 5197.49
22	12" SQ.	5212.09	797054	1131546	OUT 23	5208.50 5208.51
23	8" DIA.	5213.06	797004	1131505	OUT	5208.96
24	10" DIA.	5201.47	796990	1132185	OUT 25 26	5194.69 5194.84 5194.88
25	8" DIA.	5202.26	796979	1132327	OUT	5196.78
26	8" DIA.	5202.14	796987	1132042	OUT	5197.85
27	10" DIA.	5199.93	796546	1131958	OUT 28	5195.29 5195.27
28	12" SQ.	5199.74	796544	1131829	OUT 9	5196.47 5196.55
29	10" DIA.	5200.51	796642	1131719	OUT 40 45	5198.00 5198.26 5197.98
30	10" DIA.	5205.86	796011	1131301	OUT	5202.42
31	10" DIA.	5208.62	796004	1131003	OUT 32 44	5205.02 5205.02 5205.11
32	10" DIA.	5209.68	796168	1130824	OUT 33	5206.38 5206.42

NETWORK C1

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
33	10" DIA.	5215.23	796314	1130740	OUT	5211.75
34	–	–	796574	1132383	OUT 36	5186.96 5186.93
35	8" DIA.	5209.49	–	–	–	–
36	8" DIA.	5209.71	796643	1132325	OUT	5191.50
37	–	–	796329	1132233	OUT	5193.20
38	–	–	796290	1132077	OUT	5192.15
40	–	–	796602	1131722	OUT	5199.13
42	–	–	796892	1132522	OUT	5199.86
43	8" DIA.	5209.49	796317	1131094	OUT	5205.50
43A	8" DIA.	–	–	–	–	–
44	–	–	796026	1130699	OUT	5210.37
45	10" DIA.	5202.64	796610	1131570	OUT 46 48	5199.61 5199.94 5199.46
46	–	–	796544	1131586	OUT	5202.35
48	–	–	796693	1131432	OUT	5208.56
49	8" DIA.	5209.23	796918	1131596	OUT	5204.90
50	–	–	796371	1132369	OUT	5195.20
51	–	–	796347	1131815	OUT	5191.50
52	–	–	796328	1132233	–	–
53	–	–	796643	1132325	–	–
54	–	–	796573	1132383	–	–

NO.	BY	DATE	REVISION DESCRIPTION
2	RMB	4/15/97	ADDED ROE CONSTRUCTION AS-BUILT DETAILS
1	DTL	6/06/96	AS-BUILT DRAWING

DTL/SAH/RMB DRAWN | SM DESIGNED | CHECKED
APPROVED | 6/06/96 DATE | 101.9301 PROJECT NO.

ATLANTIC RICHFIELD COMPANY
OW/EADA
1994 RA CONSTRUCTION

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

GOLF COURSE UNDERDRAIN - RECORD DRAWINGS
NETWORK C1 (HOLES 10 THROUGH 15)

SHEET 5-24

OW31B012.DWG

OW31B007,008,009,010,011

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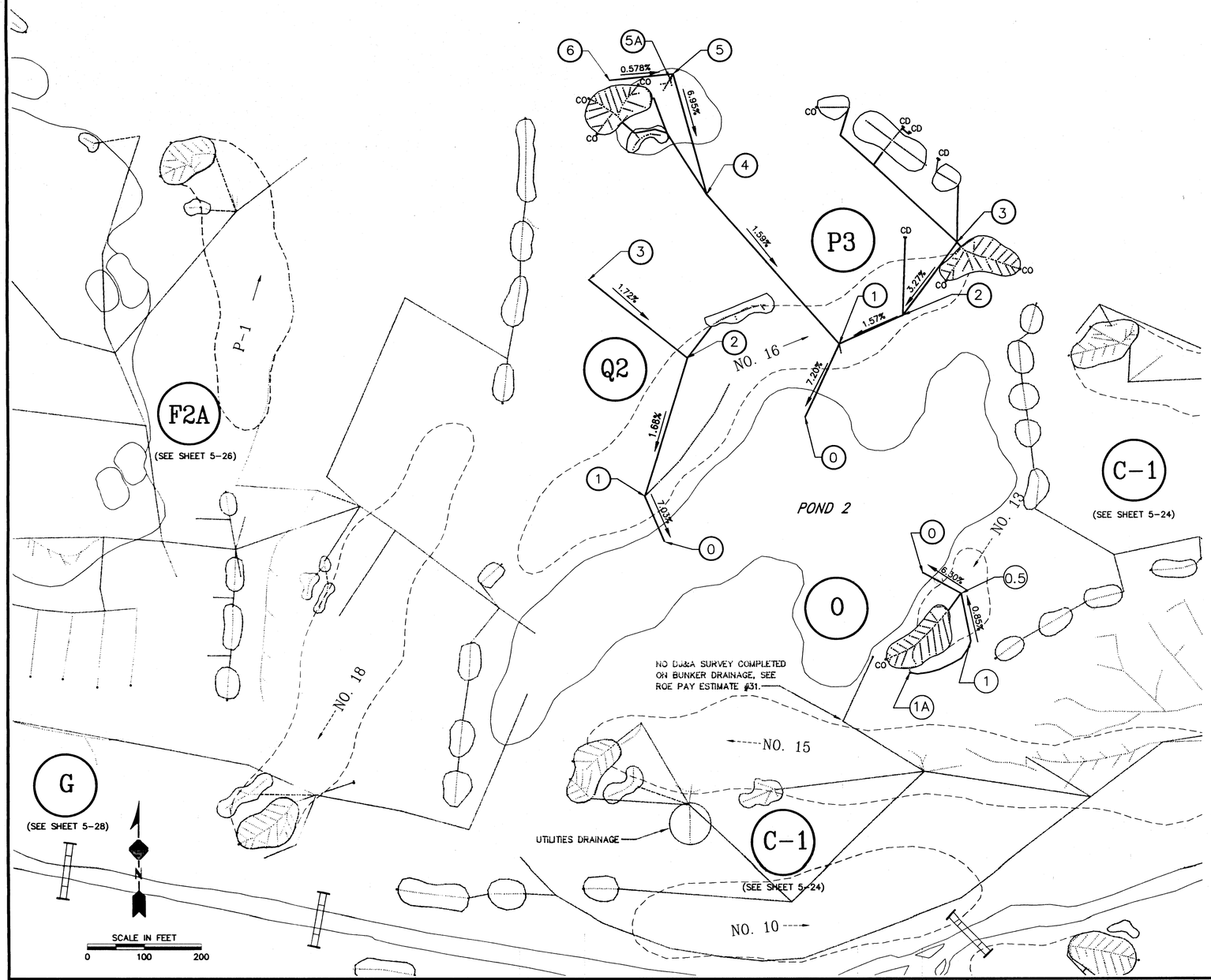

NETWORK P3

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
0	OUTFALL	–	796859	1131028	1	5200.79
1	10" DIA.	5216.34	796987	1131089	OUT 2 4	5210.98 5211.42 5211.24
2	10" DIA.	5218.19	797037	1131201	OUT 3	5212.92 5213.07
3	–	–	797163	1131296	OUT	5218.24
4	12" SQ.	5220.53	797249	1130857	OUT 5	5216.78 5216.89
5	10" DIA.	5234.70	797459	1130799	OUT 6	5232.07 5232.14
5A	10" SQ.	–	–	–	–	–
6	12" SQ.	5235.14	797447	1130687	OUT	5232.79

NETWORK Q2

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
0	OUTFALL	–	796637	1130781	1	5201.10
1	12" SQ.	5211.54	796718	1130747	OUT 2	5207.26 5207.47
2	12" SQ.	5215.56	796962	1130822	OUT 3	5211.76 5211.75
3	12" SQ.	5219.72	797100	1130649	OUT	5215.55

NETWORK O

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
0	OUTFALL	–	796580	1131234	0.5	5200.80
0.5	10" DIA.	5209.73	796542	1131301	OUT 1	5205.68 5205.92
1	8" DIA.	5208.94	796458	1131318	OUT	5206.65
1A	8" DIA.	–	–	–	–	–

DRAFT
RECORD DRAWINGS
THESE RECORD DRAWINGS CONTAIN INFORMATION FURNISHED TO ESA BY OTHERS AND ESA IS NOT RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION.

(O) (1)

- CD — CURB DRAIN – SEE DETAIL (1/5-23)
- CO — CLEAN OUT – BURIED – DEPTH VARIES

- CD — CURB DRAIN – SEE DETAIL (1/5-23)
- CO — CLEAN OUT – BURIED – DEPTH VARIES

NOTE:

1) DATA FOR AS-BUILT INLET GRATES IS SHOWN WHERE AS-BUILT DATA EXISTS. OTHER NODES MAY BE BURIED PIPE CONNECTIONS, BURIED MANHOLES, OR ADDITIONAL INLETS.

NO.	BY	DATE	REVISION DESCRIPTION
2	RMB	4/15/97	ADDED ROE CONSTRUCTION AS-BUILT DETAILS
1	DTL	6/06/96	AS-BUILT DRAWINGS

DTL/SAH/RMB DRAWN — SM DESIGNED — CHECKED
APPROVED — 6/06/96 DATE — 101.9301 PROJECT NO.

ATLANTIC RICHFIELD COMPANY
OW/EADA
1994 RA CONSTRUCTION

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

GOLF COURSE UNDERDRAIN – RECORD DRAWINGS
NETWORK O, P3, & Q2 (HOLES 13, 16 & 17)

SHEET 5-25

OW318007,008,009,010,011

OW318018.DWG

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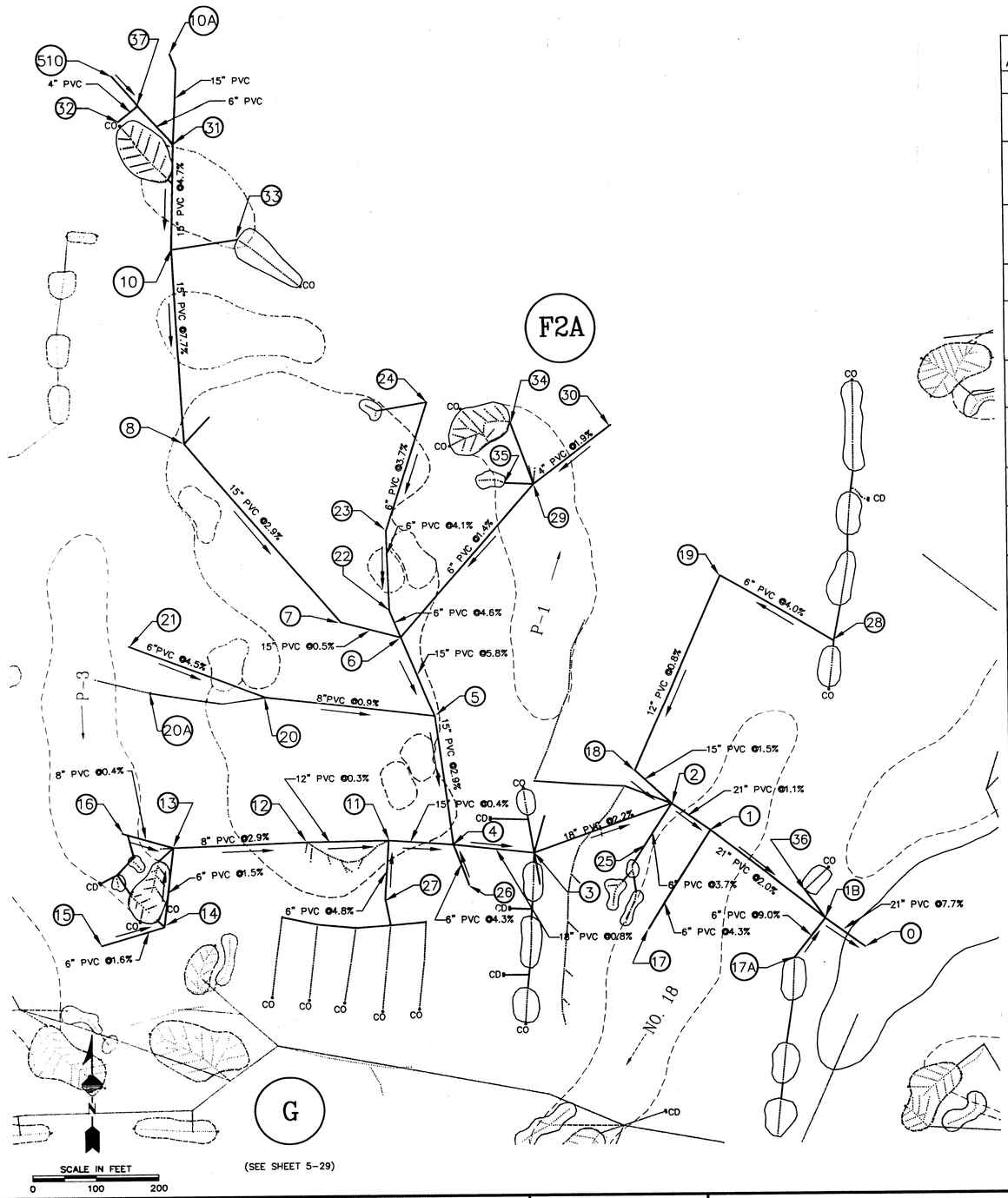

NETWORK F2A

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
0	OUTFALL	–	796473	1130553	1B	5200.46
1	–	–	796656	1130307	2 17 1	5211.13 5212.56 2511.13
1B	–	–	796518	1130491	1 17A OUT BUNKER	5206.61 5206.89 5206.61 5207.01
2	12" SQ.	5218.85	796700	1130246	OUT 3 18 25	5211.97 5212.21 5212.54 5213.14
3	10" DIA.	5223.35	796623	1130027	OUT 4	5216.24 5216.28
4	10" DIA.	5224.43	796636	1129898	OUT 5 11 26	5217.32 5217.51 5217.56 5217.85
5	10" DIA.	5228.87	796844	1129870	OUT 6 20	5223.68 5223.57 5224.30
6	–	–	796973	1129816	OUT 7 22 29	5231.62 5231.66 5231.84 5232.12
7	12" SQ.	5236.81	796998	1129720	OUT 8	5232.18 5232.26
8	10 " DIA.	5248.95	797287	1129475	OUT 10 6"	5243.42 5243.49 5243.43
10	10" DIA.	–	797598	1129457	OUT 31 TEE	5267.50 5268.09 5267.96
10A	–	–	797901	1129458	OUT	5282.91
11	12" SQ.	5222.92	796646	1129795	OUT 12 27	5217.91 5217.984 5218.22
12	12" SQ.	5223.89	796643	1129665	OUT 13	5218.43 5218.79
13	10" DIA.	5232.15	796636	1129453	OUT 14 16	5224.78 5225.01 5224.89
14	10" DIA.	5233.49	796513	1129438	OUT 15	5226.85 5226.78
15	8" DIA.	5232.77	796485	1129338	OUT	5228.42
16	12" SQ.	5230.15	796659	1129372	OUT	5225.25

NETWORK F2A

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
17	8" DIA.	5223.84	796504	1130209	OUT	5220.33
17A	–	–	796457	1130441	–	5214.07
18	–	–	796754	1130188	OUT 19	5213.73 5213.79
19	10" DIA.	5220.17	797069	1130327	OUT 28	5216.46 5216.63
20	10" DIA.	5231.07	796878	1129601	OUT 21?	5226.78 5226.60
20A	8" DIA.	–	–	–	–	–
21	–	–	796961	1129384	OUT	5236.98
22	–	–	797016	1129799	OUT 23	5233.91 5234.02
23	–	–	797145	1129795	OUT 24	5239.29 5239.21
24	8" DIA.	5249.93	797350	1129861	OUT	5246.95
25	–	–	796602	1130183	OUT	5217.61
26	8" DIA.	5224.26	796574	1129923	OUT	5220.84
27	–	–	796553	1129789	OUT	5222.56
28	–	–	796962	1130505	OUT	5225.20
29	10" DIA.	5241.69	797219	1130030	OUT 30 BUNKER GREEN	5236.82 5236.89 5236.96 5237.05
30	8" DIA.	5241.53	797312	1130154	OUT	5239.99
31	–	–	797760	1129462	–	–
32	8" DIA.	5284.18	797795	1129374	INV	5280.69
33	TEE	–	797615	1129560	INV	5279.48
34	GREEN	–	797317	1129994	INV	5244.55
35	BUNKER	–	797221	1129985	INV	5239.07
36	BUNKER	–	796564	1130455	INV	5213.80
37	TEE	–	797819	1129406	–	–
510	–	–	797866	1129365	–	5289.45

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RECORD DRAWINGS

THESE RECORD DRAWINGS CONTAIN INFORMATION FURNISHED TO ESA BY OTHERS AND ESA IS NOT RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION.

LEGEND

- F2A — DRAINAGE NETWORK
- 2 — NODE NUMBER
- AS-BUILT TEE/GREEN/BUNKER PERIMETERS
- AS-BUILT SOLID DRAINAGE LINES
- ASSUMED CONNECTING DRAINAGE LINES(NOT FIELD VERIFIED)
- AS-BUILT PERFORATED ADS DRAINAGE LINES
- APPROXIMATE FAIRWAY LIMITS
- • CD — CURB DRAIN – SEE DETAIL 1/5-23
- • CO — CLEAN OUT – BURIED – DEPTH VARIES

NOTE:

1) DATA FOR AS-BUILT INLET GRATES IS SHOWN WHERE AS-BUILT DATA EXISTS. OTHER NODES MAY BE BURIED PIPE CONNECTIONS, BURIED MANHOLES, OR ADDITIONAL INLETS.

NO.	BY	DATE	REVISION DESCRIPTION
2	RMB	4/15/97	ADDED ROE CONSTRUCTION AS-BUILT DETAILS
1	DTL	6/06/96	AS-BUILT SHEET

DTL/SAH/RMB DRAWN | SM DESIGNED | CHECKED | APPROVED | 6/06/96 DATE | 101.9301 PROJECT NO.

ATLANTIC RICHFIELD COMPANY
OW/EADA
1994 RA CONSTRUCTION

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

GOLF COURSE UNDERDRAIN – RECORD DRAWINGS
NETWORK F2A (HOLES 16,18,P1,P2,P3, & P. AREA)

SHEET 5-26

OW318007,008,009,010,011

OW318013.DWG

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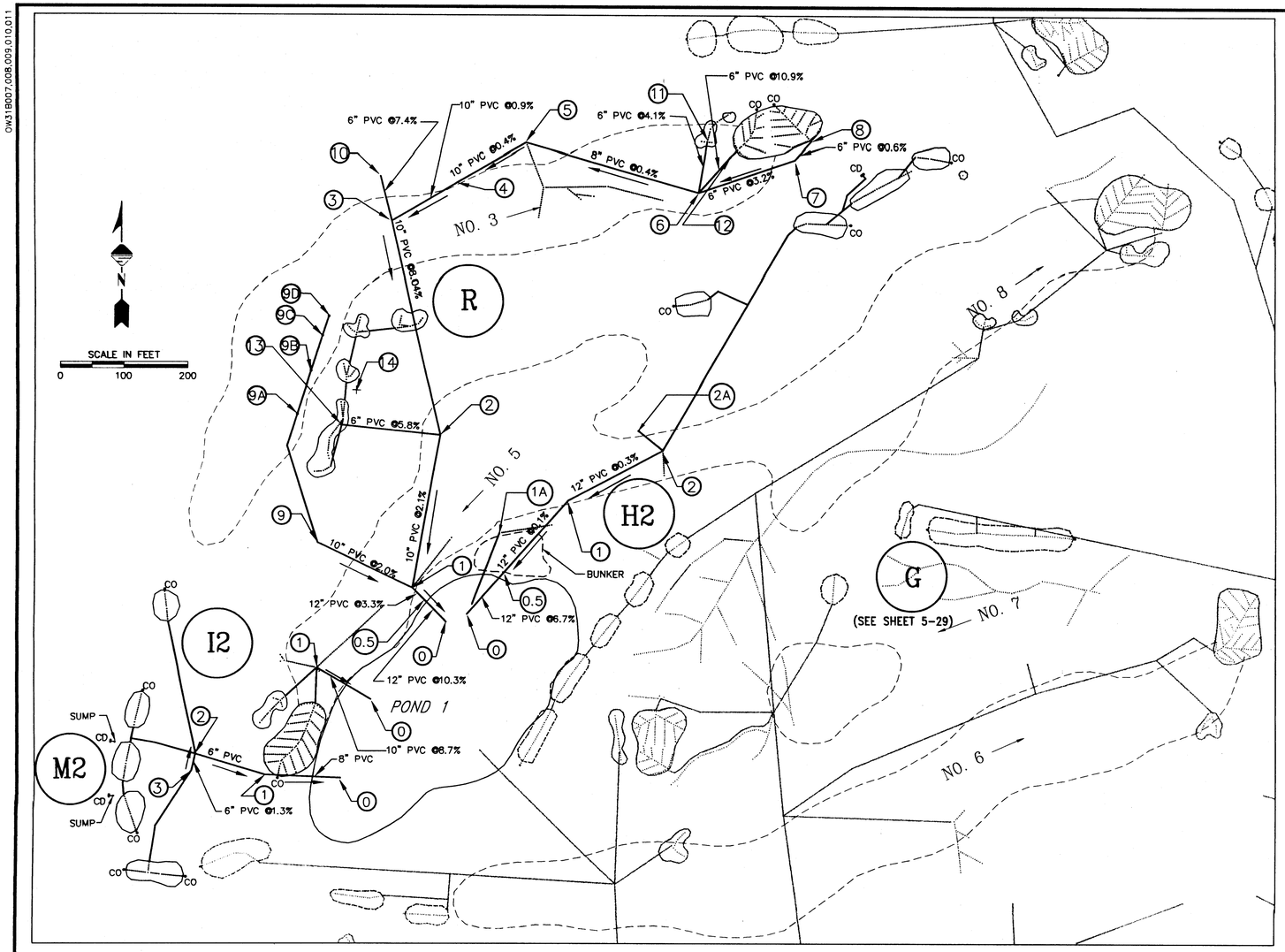

NETWORK H2

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
0	OUTFALL	–	796944	1127637	0.5	5246.07
0.5	–	–	797007	1127695	OUT 1	5251.74 5251.74
1	12" SQ.	5258.69	797123	1127796	OUT 2	5251.95 5251.96
1A	10" SQ.	–	–	–	–	–
2	12" SQ.	5256.71	797203	1127944	OUT	5252.40
2A	8" DIA.	–	–	–	–	–

NETWORK I2

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
0	OUTFALL	–	796808	1127487	1	5243.53
1	12" SQ.	5253.91	796858	1127402	OUT	5252.27

NETWORK M2

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
0	OUTFALL	–	796685	1127439	1	5243.78
1	–	–	796690	1127321	1priser	5255.34
2	12" SQ.	5255.65	796722	1127212	OUT 3	5251.89 5251.92
3	–	–	796697	1127206	OUT	5252.24

NETWORK R

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
0	OUTFALL	–	796931	1127604	1	5246.50
0.5	–	–	796966	1127570	OUT 1	5251.64 5251.64
1	10" DIA.	5256.72	796985	1127551	OUT 2 9	5252.46 5252.54 5252.64
2	12" SQ.	5263.25	797227	1127594	OUT 3 13	5257.68 5257.83 5259.03
3	–	–	797560	1127518	OUT 4 10	5285.10 5285.31 5285.08
4	–	–	797620	1127620	OUT 5	5286.36 5286.56
5	–	–	797681	1127727	OUT 6	5286.92 5287.05
6	–	–	797605	1128000	OUT 7 11 12	5288.21 5288.29 5288.31 5288.14
7	–	–	797657	1128151	OUT 8	5293.40 5293.44
8	8" DIA.	–	–	–	–	–
9	12" SQ.	5260.72	797056	1127402	OUT	5255.96
9A	10" DIA.	–	–	–	–	–
9B	10" DIA.	–	–	–	–	–
9C	10" DIA.	–	–	–	–	–
9D	10" DIA.	–	–	–	–	–
10	–	–	797630	1127500	OUT	5290.39
11	–	–	797684	1128014	OUT	5291.54
12	–	–	797663	1128052	OUT	5296.54
13	–	–	797242	1127438	BUNKER 13	5268.28
14	BUNKER	–	797297	1127463	INV	5271.78

LEGEND

- I2 — DRAINAGE NETWORK
- ② — NODE NUMBER
- AS-BUILT TEE/GREEN/BUNKER PERIMETERS
- AS-BUILT SOLID DRAINAGE LINES
- AS-BUILT PERFORATED ADS DRAINAGE LINES
- APPROXIMATE FAIRWAY LIMITS
- • CD — CURB DRAIN – SEE DETAIL 1/5-23
- • CO — CLEAN OUT – BURIED – DEPTH VARIES

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1	DTL	6/06/96	AS-BUILT DRAWING

DTL/SAH/RMB DRAWN | SM DESIGNED | CHECKED
APPROVED | 6/06/96 DATE | 101.9301 PROJECT NO.

ATLANTIC RICHFIELD COMPANY
OW/EADA
1994 RA CONSTRUCTION

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

GOLF COURSE UNDERDRAIN – RECORD DRAWINGS
NETWORKS H2, I2, M2, & R (HOLES 3 & 5)

SHEET 5-27

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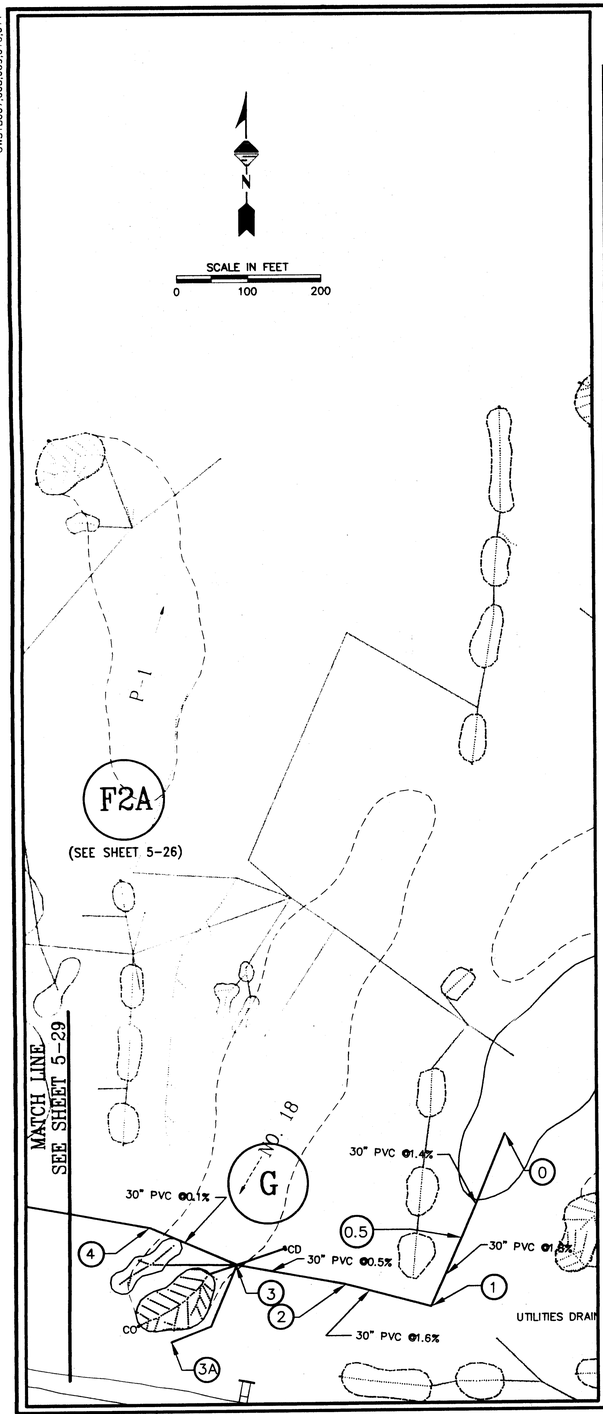

NETWORK G

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
0	OUTFALL	–	796365	1130540	0.5	5199.58
0.5	–	–	796221	1130479	1 OUT	5205.47 5201.82
1	–	–	796125	1130437	OUT 2	5207.31 5207.28
2	10" DIA.	5216.30	796157	1130318	OUT 3	5209.21 5209.20
3	10" DIA.	5218.66	796186	1130165	OUT 4	5210.10 5210.11
3A	8" DIA.	–	–	–	–	–
4	10" DIA.	5216.68	796239	1130048	OUT 5	5210.22 5210.28
5	10" DIA	5222.68	796322	1129618	OUT 6 50	5216.69 5216.77 5218.44
5A	8" DIA.	–	–	–	–	–
5B	8" DIA.	–	–	–	–	–
6	–	–	796265	1129541	5 16 47 25	5217.2 5216.8 5217.65 5217.30
7	–	–	796355	1129305	OUT 8	5219.67 5219.63
8	10" DIA.	5227.18	796386	1129209	OUT 9 19	5220.5 5220.53 5221.07
9	10" DIA.	5235.32	796605	1129086	OUT 10 21	5231.00 5231.12 5231.79
10	12" SQ.	5243.08	796861	1129147	OUT 22 55	5236.52 5236.94 5236.51
11	10" DIA.	5251.37	797096	1129022	OUT 12 24.5	5247.46 5247.57 5247.77
12	10" DIA.	5253.12	797197	1128969	OUT 13	5248.63 5248.98
13	10" DIA.	5268.93	797491	1128876	OUT 14	5264.72 5264.72
14	–	–	797599	1128840	OUT 15	5270.64 5270.71
15	–	–	797739	1128683	OUT 16	5296.95 5296.97
16	–	–	797694	1128561	OUT 17	5298.82 5298.91
17	10" DIA.	5317.14	797739	1128561	17 18	– –
17A	8" DIA.	–	–	–	–	–
18	–	–	797739	1128561	18	–
19	8" DIA.	5230.25	796380	1129119	OUT	5225.69
20	8" DIA.	5230.97	796501	1128878	OUT	5227.53

NETWORK G

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
21	8" DIA.	5243.31	796661	1128888	OUT	5239.00
22	8" DIA.	5246.40	796890	1128937	OUT 23	5239.17 5239.17
24	–	–	797272	1129212	OUT GRND	5250.21 5252
24.5	–	–	797254	1129109	OUT	5249.77
24B	–	–	797269	1129033	OUT	5257.15
25	–	–	796216	1129479	OUT 26	5220.09 5220.16
26	10" DIA.	5228.15	796211	1129216	OUT 27	5221.54 5221.65
27	10" DIA.	5227.64	796191	1129076	OUT 28	5221.83 5221.86
28	10" DIA.	5230.13	796173	1128898	OUT 29 36	5224.82 5224.92 5226.12
29	12" DIA.	5235.81	796097	1128453	OUT 30 GREEN	5227.48 5227.59 5228.83
29A	8" DIA.	–	–	–	–	–
29B	8" DIA.	–	–	–	–	–
30	12" SQ.	5235.87	796299	1128182	OUT 31 41	5228.57 5229.26 5229.44
31	12" SQ.	5238.29	796627	1128136	OUT 32 44 31A	5233.39 5233.39 5233.81 5233.99
31A	–	–	796619	1128396	OUT	5238.35
32	–	–	796790	1128121	OUT 33 48	5241.72 5241.72 5242.43
32A	8" DIA.	–	–	–	–	–
33	12" SQ.	5250.05	797136	1128089	OUT 34	5244.19 5244.43
33A	10" SQ.	–	–	–	–	–
34	12" SQ.	5251.87	797350	1128441	OUT	5246.52
36	12" DIA.	5234.15	796358	1128758	OUT 37	5229.64 5229.72
36B	8" DIA.					
37	–	–	796352	1128504	OUT 39 40	5235.54 5235.57 5235.54
38	–	–	796488	1128496	OUT	5238.87
40	8" DIA.	5240.44	796353	1128408	OUT	5236.55
41	12" SQ.	5234.88	796298	1127884	OUT 42 43	5230.22 5230.62 5230.67
42	12" SQ.	5237.18	796518	1127872	OUT 51 TEE 42A	5231.17 5231.59 5231.92 5231.92
42A	–	–	796725	1127877	OUT	5245.35

NETWORK G

NODE NO.	NODE TYPE	TOP ELEV.	NODE COORDINATES NORTHING	NODE COORDINATES EASTING	PIPE INVERT ELEVATIONS FROM NODE NO.	PIPE INVERT ELEVATIONS INVERT ELEV.
43	12" SQ.	5248.97	796301	1127501	OUT 53	5243.22 5243.18
43A	8" DIA.	–	–	–	–	–
44	12" SQ.	5238.12	796701	1128242	OUT 45	5234.02 5234.21
45	12" SQ.	5240.72	796820	1128530	OUT 46 47	5236.47 5236.60 5236.65
46	10" DIA.	5242.34	796873	1128719	OUT 46A	5238.43 5238.47
46A	–	–	796909	1128778	OUT	5239.88
47	–	–	796867	1128517	OUT	5237.58
48	–	–	796790	1128004	49 48	5245.96 5245.96
49	–	–	796811	1127941	OUT 58	5246.63 5246.73
50	–	–	796430	1129498	OUT	5221.04
51	–	–	796679 796687	1127706 1127700	OUT 52	5248.68 5247.03
52	–	–	796729	1127657	OUT	5246.80
53	10" DIA.	5250.26	796309	1127351	OUT 54	5244.76 5244.80
54	8" DIA.	5249.44	796055	1127384	OUT	5247.30
55	–	–	796979	1129084	11 55 57	– – –
57	–	–	797119	1128346	OUT	–
58	–	–	796792	1127935	OUT	5247.64
59	BUNKER	–	796103	1128370	INV	5232.21
60	GREEN	–	796085	1128304	INV	5235.08

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LEGEND

- G — DRAINAGE NETWORK
- 2 — NODE NUMBER
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- AS-BUILT SOLID DRAINAGE LINES
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- APPROXIMATE FAIRWAY LIMITS
- CD — CURB DRAIN – SEE DETAIL 1/5-23
- CO — CLEAN OUT – BURIED – DEPTH VARIES

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1994 RA CONSTRUCTION

Prepared By:
ESA CONSULTANTS INC.
215 West Mendenhall, Suite C-1, Bozeman, MT 59715

GOLF COURSE UNDERDRAIN – RECORD DRAWINGS
NETWORK G EAST (HOLE 16 & 18)

SHEET 5-28

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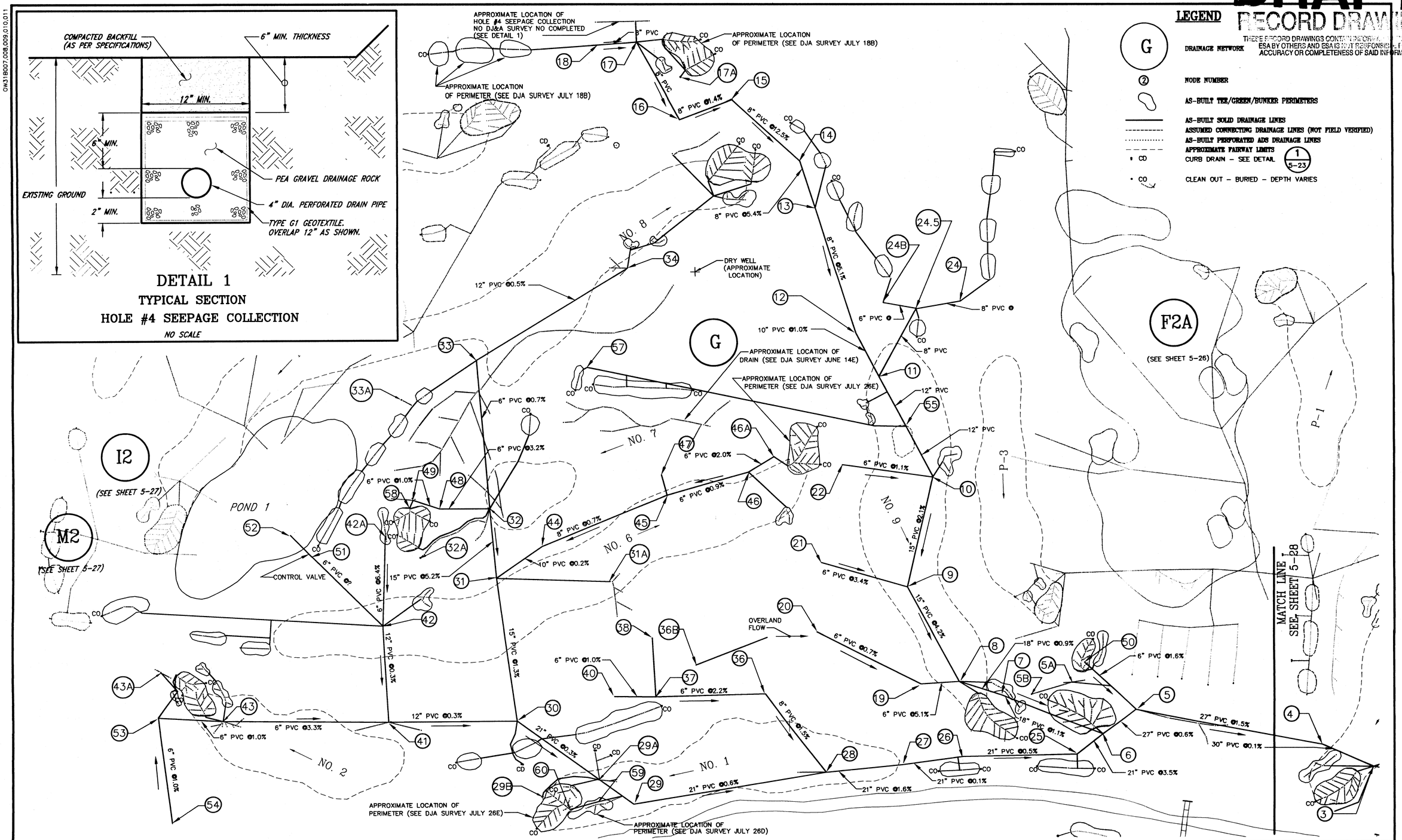

NO.	BY	DATE	REVISION DESCRIPTION
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DTL/RMB DRAWN | SM DESIGNED | CHECKED
APPROVED | 6/06/96 DATE | 101.9301 PROJECT NO.

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215 West Mendenhall, Suite C-1, Bozeman, MT 59715

GOLF COURSE UNDERDRAIN - RECORD DRAWINGS
NETWORK G WEST (HOLES 1,2,4,6,7,8,9, & P3)

SHEET 5-29

OW318007,008,009,010,011

OW318016.DWG

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Exhibit 9
(Golf Course Business Plan)

Old Works Golf Club

Strategic Business Plan

Golf Course Authority Board
Anaconda-Deer Lodge County, Montana

Touchstone Golf
11612 Bee Caves Road
Austin, Texas 78734

July 2015

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Overview and Methodology

Water & Environmental Technologies, P.C. ("WET"), on behalf of Anaconda-Deer Lodge County ("ADLC") and the Old Works Golf Course Authority (the "Authority"), engaged Touchstone Golf ("Touchstone") to prepare this Strategic Business Plan (the "Business Plan") for Old Works Golf Club ("OWGC"). Touchstone structured the Business Plan according to the framework set forth in an agreement entitled *Third Addendum to Real Property Conveyance/Transfer Agreement* (the "Third Addendum"), specifically according to the guidance provided in Paragraph 3 of the Third Addendum:

> "…. Subject to the term of this Paragraph 3, The OWGC Business Plan shall be developed and prepared by [Touchstone Golf]: (i) with input and participation from AR, ADL, and the Authority with regard to the scope of the alternatives and other matters to be addressed and evaluated, (ii) shall be consistent in all respects with the assumptions set forth in this Paragraph 3; and (iii) to the extent reasonably feasible, demonstrate to the mutual satisfaction of the Parties the conditions under which the Old Works Golf Course can be operated and maintained in a financially independent and self-supporting manner. The current manager of the Old Works Golf Course, Troon Golf, may be called upon to provide information to the Golf Course Management Consultant regarding the historic operation and maintenance of the Old Works Golf Course, including financial information related thereto, but shall not otherwise be involved in the development or preparation of the OWGC Business Plan. If the OWGC Business Plan demonstrates that the Old Works Golf Course cannot be operated in a fully financially independent and self-supporting manner, the OWGC Business Plan developed and prepared by [Touchstone Golf] shall identify the reasonably feasible conditions under which the Old Works Golf Course can be operated and maintained consistent with financial independence and self support and the assumptions set forth in this Paragraph 3 and shall include estimates of the annual deficits that will be incurred by the Authority through continued operation and maintenance of the Old Works Golf Course under such reasonably feasible conditions. … [The] Business Plan developed and prepared by [Touchstone Golf] shall consider competitive factors which negatively impact the Old Works Golf Course and shall assume the following: (i) all O&M Obligations relating to the Old Works Golf Course under Exhibit A-2 to the 1994 Conveyance Agreement shall be fully performed by ADL and/or the Authority in a manner that insures continued protectiveness of the Old Works / EADA Remedy; (ii) the Initial Loan Proceeds plus the Additional Loan Proceeds, together with all interest accrued thereon, may be amortized and repaid to AR over a period not to exceed twenty (20) years; and (iii) the terms and conditions of Article XI of the 1994 Conveyance Agreement and ADL's Ordinance No.126 may be subject to modification to the extent such modifications would facilitate the operation and management of the Old Works Golf Course in a more efficient and cost effective manner. …"

O&M Obligations

Touchstone prepared this Business Plan with the above considerations in mind; however, with regard to O&M Obligations, Touchstone notes that additional requirements could occur if certain components of OWGC suffer catastrophic failure or otherwise wear out. The rationale for this approach is that certain components of OWGC are required by Superfund – and generally not considered to be customary to standard golf course operations. These components (the "Superfund Components") include, but may not be limited to:

1) High density polyethylene liners between Lakes No. 1 and No. 2; and polyvinyl chloride liners beneath all greens, tees, and formal bunkers.
2) Soil cap beneath all areas of the Golf Course (fairway, rough, etc.) generally excluding tees and greens.
3) Under-drain piping system (over 31,000 linear feet of piping) with surface collection nodes (113 manholes and 133 drainage grate inlets).
4) Bank erosion protection located on both banks of Warm Springs Creek, consisting of riprap and vegetation.

Touchstone believes it is prudent to assume that eventually some or all of the Superfund Components may fail due to reaching the end of useful life or because of a catastrophic event. However, the timing of and costs associated with the failure of a Superfund Component are subject to such a substantial amount of uncertainty as to not allow for a financial projection with any reasonable level of certainty.

Therefore, with regard to O&M Obligations, this Business Plan assumes that ADLC and/or the Authority will continue to provide O&M at OWGC consistent with past practices, but in the event of a failure of one or more of the Superfund Components ("Superfund Component Failure" or "SCF") at OWGC not arising from the failure of ADLC and/or the Authority to perform routine O&M, repair, and/or replacement of the Superfund Component will not be covered by golf course revenues and cash flow. In the case of SCF(s), OWGC will require an external funding source to remediate the SCF(s); such external funding is not contemplated or accounted for in the financial analysis contained in this Business Plan.

Amortization of AR Loan Proceeds

For purposes of accounting for the Initial Loan Proceeds and the Additional Loan Proceeds referenced in Paragraph 3 of the Third Addendum, above, (collectively, the "Loan") in the Business Plan, Touchstone assumed the following: (i) effective December 31, 2016, the total principal balance plus accrued interest on the Loan (assuming ADLC and the Authority takes the $225,000 advance contemplated on February 10, 2016) will be $835,155.00, (ii) interest will accrue at the rate of 4.25% per annum, and (iii) with an amortization period of twenty (20) years, the monthly payment would be $5,171.57 (~$62,060 annually).

Old Works Golf Club

Old Works Golf Club ("Old Works" or "OWGC") is a highly acclaimed Jack Nicklaus-signature designed championship layout that opened for play in 1997. Old Works holds the distinction of being recognized by *Golf Digest* as one of ***America's 100 Greatest Public Courses***.

Located in southwestern Montana, in the town of Anaconda, Old Works is 175 miles northwest of Yellowstone National Park and 225 miles south of Glacier National Park, near the midpoint of a popular, well-traveled summertime route, via Interstate 90 and Interstate 15, between the two parks. The nearest Montana cities include Butte (25 mi.; ~34,000 pop.), Bozeman (110 mi.; ~40,000 pop.), Missoula (110 mi.; ~70,000 pop.), Helena, the state capital (80 mi.; ~30,000 pop.), and Billings, Montana's largest city (250 mi.; ~105,000 pop.). Further afield, within a day's drive, are the cities of Coeur d'Alene, Idaho (270 mi.; ~46,000 pop.), Spokane, Washington (300 mi.; ~210,000 pop.), and Salt Lake City, Utah (430 mi.; ~1.2M pop.).

Old Works sits on a capped, reclaimed property – an EPA-designated Superfund site – along Warm Springs Creek. Old Works is proof that one man's toxic waste site can be another's golfing paradise. As the first golf course ever built on a Superfund site, Old Works sits atop the remains of a 19th-century copper ore processing plant that left behind high quantities of arsenic in the soil. Hints of the old operation are incorporated in the course design, including furnace calciners, smelting ovens, brick foundations, a 150-foot tall concrete flue, and black slag bunker sand. (Source: *Golf Digest, America's Top 100 Public Courses*.)

The golf course is an 18-hole, par-72 championship layout with five sets of tees that play from 5,300 yards (65.0 rating, 103 slope) to just over 7,700 yards (75.8 rating, 135 slope). Old Works offers a compelling round of golf for golfers of all abilities. It can be a formidable challenge for the most accomplished golfer and, at the same time, an enjoyable, non-intimidating recreational estate for the casual, less-accomplished golfer.

Old Works Golf Club includes a thirty-station natural turf driving range; three-hole practice loop, aka Little Bear; practice green; golf course maintenance operations building and yard; and single-story, ~7,000 square foot clubhouse, comprising Jack's Grille breakfast and lunch café; a small, well-stocked golf shop; men's and women's locker rooms with small locker room facilities; and a manager's office and storage space.

Old Works is managed and operated by Troon Golf Management ("Troon"). Headquartered in Scottsdale, Arizona, Troon is an experienced leader in managing upscale, luxury golf courses around the world.

Old Works is the most affordable Jack Nicklaus design around. (Source: *Golf Digest*.)

Operations

Old Works Golf Club is a seasonal operation – generally open for business from April through October. Three full-time, year-round staff (general manager, superintendent, mechanic) and approximately fifty part-time, seasonal staff manage and operate Old Works. With oversight and senior-level management support by Troon, the general manager and his staff at Old Works do a very good job offering a very high-quality experience – golf, restaurant, golf shop, golf course, ancillary services – while working within tightly controlled expense resources. Old Works offers a great experience and great value, delivered efficiently.

The market in which Old Works operates – due largely to its combination of remote location and reputation as a high-end, Jack Nicklaus-signature design – has three (3) tiers:

- A ***Local Market***, within an approximate 25-mile radius of OWGC – including the municipalities of Anaconda, Butte, and Deer Lodge, as well as Deer Lodge, Silver Bow, Granite, and Powell Counties.
- A ***Regional Market***, within an approximate 350-mile radius (~6-hour drive) of OWGC – including Missoula, Helena, Bozeman, and Billings (MT); Coeur d'Alene, Idaho Falls, Pocatello, Twin Falls, Sun Valley, and Boise (ID); Logan, Ogden, and Salt Lake City (UT); and Spokane (WA).
- A ***World Market***, including the U.S. beyond the 350-mile radius of OWGC and international markets. Old Works enjoys opportunities in this market because of the club's Nicklaus-signature design built on a Superfund site, which has earned Old Works notoriety in the golfing press and among golfers since (and before) the club's opening in 1997.

Local Market: Competitive Market Set (Supply)

Including OWGC, there are seven (7) golf courses and clubs, comprising ninety (90) holes of golf in the Local Market, within 25 miles of Old Works. Two of the properties are private clubs and, as such, not a part of the competitive set vying for daily fee/public golfers. Another pair of properties are nine-hole layouts, not of a scale or caliber as Old Works. Another property is an aging Butte municipal course – Highland View GC – consisting of a regulation 9-hole track and a par-3, 9-hole layout. Because of the disparate pricing, golfing experience, and value propositions, as well as the distance, between Old Works and Highland View, the two courses are not bona fide competitors, except in the sense that each competes with the other for the limited number of golfers in the Local Market. The final piece in the competitive puzzle is the golf course at the Fairmont Hot Springs Resort. By virtue of its price point, amenities, and, to a lesser extent, its golfing experience, the Fairmont course represents genuine competition for Old Works, particularly with destination golfers, who can take advantage of the lodging and meals on site at Fairmont. The table below summarizes the competition.

Facility	City	Type	WE GF	Holes	Dist
The Old Works Golf Course	**Anaconda**	**Public Premium**	**$ 75**	**18**	**0 mi**
Fairmont Hot Springs Resort	Anaconda	Public Premium	$ 57	18	9 mi
Anaconda Country Club	Anaconda	Public Value	$ 55	9	3 mi
Deer Park Golf Club	Deer Lodge	Public Value	$ 50	9	16 mi
Highland View Golf Course	Butte	Public Price	$ 21	18	22 mi
Public Average			**$ 46**		**12 mi**
Rock Creek Cattle Company	Deer Lodge	Private	$ 100	18	10 mi
Butte Country Club	Butte	Private	$ 65	18	24 mi
Private Average			**$ 83**		**17 mi**
Market (All Facilities) Average			**$ 58**		**14 mi**

Local Market: Demographic Summary (Demand)

Demographic Measure	OWGC 25-mile Market	Standard: Strong Golf Mkt.
Population/Hole ("PPH")	450	2,500
Caucasian or Asian	94%	75%+
Percent Male	53%	50%+
Median Age	42.7	40
Bachelor's Degree/Higher	24%	40%+
Median Household Income	$38,400	$60,000+
Owner-occupied Housing	68%	65%+
Median Home Value	$117,000	$200,000+
Families in Poverty	~20%	<10%

As highlighted in the table above, starting with the meager population per hole, the market characteristics for supporting a golf course business, especially an upscale facility like Old Works, are not evident in the Local Market. Experience bears this out, as, historically, less than ten percent (10%) of Old Works' business has originated in the Local Market. **This is why it is imperative that Old Works, as it seeks to grow and stabilize its business at a profitable level, look beyond the Local Market and proactively market, solicit, and sell new and repeat business to individuals and groups beyond the Local Market.**

Regional Market: Overview (Demand)

Accepting that the Regional Market for Old Works comprises golfers living within 350 miles of Anaconda – a day or less drive from Old Works – the total population of that market is approximately 4.6M people. Add summertime seasonal residents into the mix and the population nears 4.85M (*Source: US Census data, as compiled by Pellucid Corporation*). Statistically, this suggests that there are about 420,000 golfers in this Regional Market (8% - 9% of the U.S. population are golfers). Again statistically, we know that, based on national and regional rates of play, these golfers generate upwards of 6.0M rounds of golf annually (*Source: Pellucid Corporation*). **Continued penetration of this Regional Market by Old Works – and growth in the yield of rounds played at Old Works by golfers in this Regional Market – are both the primary challenge and the principal key to long-term profitability/viability for Old Works.**

World Market: Overview (Demand)

By its renown, Old Works enjoys the opportunity to participate in the broad market for golf, with enough allure as a "Nicklaus-Signature-Design-on-a-Superfund-Site-in-the-Big-Sky-State" to attract golfers from throughout the U.S. and around the world. The key is employing the optimal, most cost-effective marketing tactics to rise to a level of awareness among these far flung golfers. **Old Works has a few of these low-cost/high-leverage tactics/marketing channels already at hand, including: i) recognition as a "Top 100" by *Golf Digest*; ii) access to the national database of Troon golfers; and iii) targeted web-based marketing**.

Strengths

- Jack Nicklaus Signature Design.
- Abundance of positive media attention over its lifetime (since 1997).
- Recognized by ***Golf Digest*** as one of ***America's 100 Greatest Public Courses***…#94 in 2015.
- Troon Golf Management…upscale, high-end brand and golfing experience.
- Playable and enjoyable for golfers of varied abilities.
- Sense of history associated with the golf course – reminders of that history integrated into the golf course design and property.
- Excellent golf course turf conditions.
- Attentive guest service – Montana Hospitality!
- Strong demand in July and August.
- Generates 90%+ of revenue from non-local guests (golfers residing 50+ miles away).
- Attractive, albeit modest, well-run F&B operation – Jack's Grille.
- Excellent driving range (underutilized) and practice facilities.
- Golf course maintenance staff constantly monitors, manages, and maintains the integrity of the onsite Superfund remediation infrastructure and best practices.

Weaknesses

- Local Market demographics:
  - Population per golf hole ("PPH") is a scant 450; contrast this to the 2,500 to 3,000 PPH typical of a strong market for golf courses.
  - Median household income in the surrounding counties – Deer Lodge, Silver Bow, Granite, and Powell – is 30% below the national median income and 40%+ below the median income typical of strong market for golf. This suggests that there may not be a lot of discretionary household income available for expenditure on golf.
- Sufficient number of lower-priced alternatives to Old Works in the market, coupled with a price-sensitive, non-discriminating consumer base…obviates advantages and pricing power Old Works should typically enjoy as a high-end, Nicklaus-signature layout.
- Cash flow is inadequate to fund operational options and investments essential to maintaining market position as a "Top 100" and the quality of the experience and the condition of the golf course to support that positioning, including
  - Diminished guest service…attentiveness/time with customer; services offered (e.g., bag drop, cart attendants, group sales/service, merchandising/sales).
  - Reduced detailing of the golf course…risk of course conditions, aesthetic, and experience becoming mismatched with expectations for a Nicklaus Signature layout.
  - Deferred maintenance and capital investment…not a major issue currently, but may become so as the facility ages.
- As recently as 2010, Old Works hosted 19,000+ rounds of golf; that number has slid over the past five years, coming in at ~16,000 rounds in 2014 (-15%). (During the same period, national rounds have slid by about 3.5%.)

Weaknesses (cont.)

- Parking lot and clubhouse entry area is somewhat stark…out of sync with expectations for (and what is typically experienced at) an upscale, destination golf course.
- Limited player development programs…i.e., programs to introduce, teach, nurture, and retain new, more active golfers from among the local community.

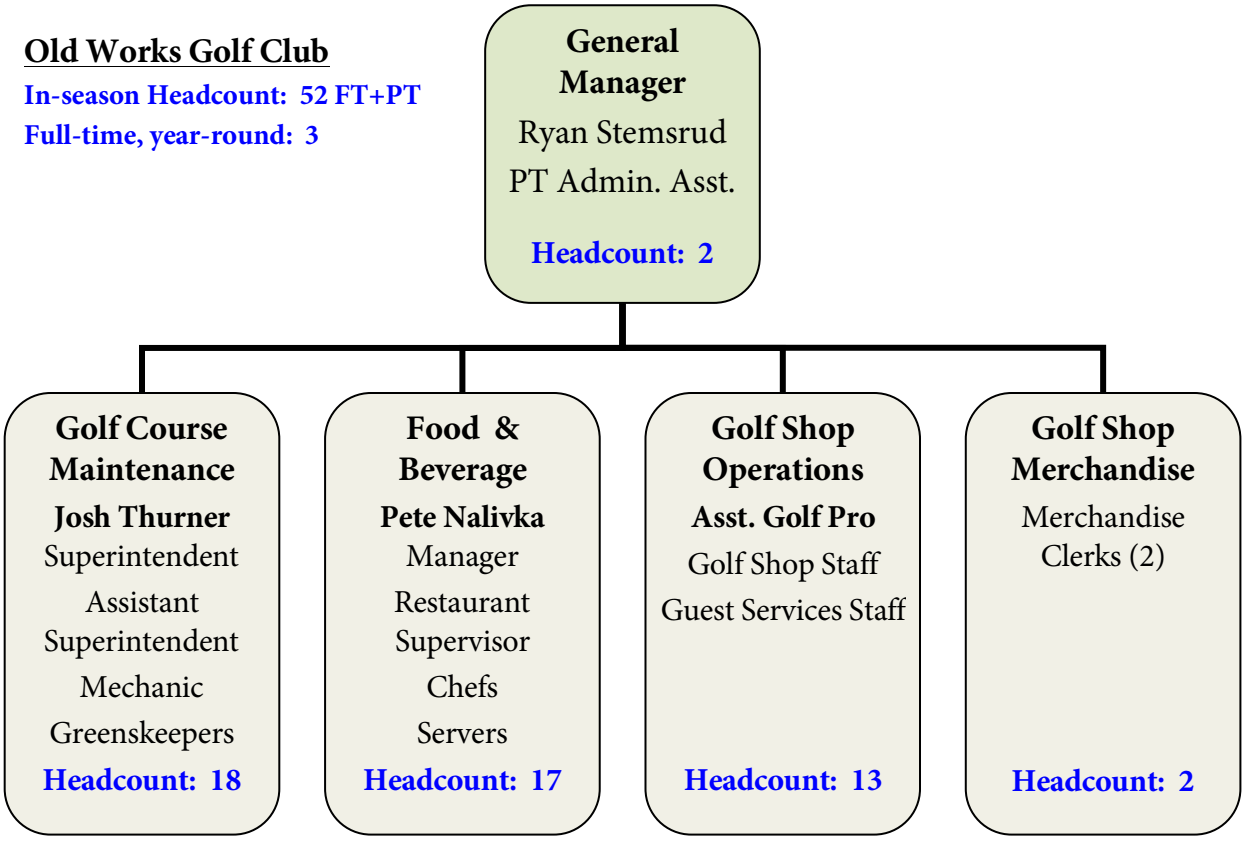
Opportunities

- Become more proactive in soliciting individuals and groups of golfers from among the golfers patronizing the portfolio of Troon Golf Courses/Clubs, particularly those in the western U.S.
- Implement revenue management disciplines to grow and optimize revenue.
- Increase the number of golf events, especially those scheduled for non-prime tee times. Both tournaments and golf leagues.
- Increase high-season (July/August) rates – demand during this period is above average.
- Use promotions to fill off-peak and low demand times.
- Improve hotel marketing program to increase visitor play.
- Create and grow men's and women's clubs memberships.
- Upgrade the grill to increase revenue and improve ambiance and experience.
- Expand lesson programs, including an affordable "Intro to Golf" series.
- In concert with other upscale daily fee courses in western Montana, establish and market a "Big Sky Golf Trail" as an engine for generating incremental rounds and revenue for its member-courses, including Old Works. (Look to Montana Department of Tourism for assistance. Explore the possibility of corporate sponsorship – ARCO/BP – of the Trail.)

Threats

- Deterioration of the guest experience due to continuing deferral of capital (re)investment.
- Loss of credibility as an upscale, signature golf course, triggered by a mismatch of (high) pricing relative to a (lower/diminishing) level and quality of amenities, conditions, and services…i.e., corruption of the Old Works' value proposition.
- Disruption of business due to a failure of the infrastructure in place to remediate the impacts of the underlying Superfund site.
- Decisions based on near-term cash flow needs (versus longer-term vision and strategy).

The following summarizes the current organization at Old Works.



Human Resources Best Practices

Troon Golf has a very good human resources management system. At Old Works, the predominantly seasonal workforce is structured to be flexible, assuring optimal expenditures on staffing by adjusting to the ebbs and flows of the business while providing the requisite, high-quality golf course conditions, experience, and service in alignment with the top-of-market positioning of Old Works.

Current Management and Operations

The present staff, led by Ryan Stemsrud, Josh Thurner, and John Nalivka, with oversight provided by Troon Golf Management, operates Old Works very well, providing an excellent guest experience – golf course conditions and playability; guest service; golf shop quality, service, and ambiance; dining quality, service, and ambiance – befitting that of a *Golf Digest Top 100 Golf Course*. The Old Works team delivers this experience efficiently, consistently, and within budgetary constraints typical of a golf course of much lower caliber and pedigree, much lower expectations regarding the quality of the asset and the experience from the market, and much more limited physical plant than Old Works.

Observation, review, and analysis of current operations and historical performance suggests that Troon is doing an excellent job of managing and operating Old Works across all key measures – labor, cost of sales, golf course maintenance quality and expense, provision of service and amenities from arrival on site through departure, and financial controls and efficiencies.

With an understanding and appreciation of the foregoing as a foundation, the business plan that follows presents supplements and enhancements to the current plan, supported by pro forma outcomes resulting from execution of the plan.

Summary of the Business Plan

The next several pages of this document detail the proposed business plan for Old Works. The highlights of the plan include:

- The key focus is on driving rounds and revenue through a variety of initiatives, products, and pricing targeting distinct, identifiable market segments. The projected yield in rounds and revenue in year one for many of the initiatives is meager; however, the sum total of the yields for all initiatives represents a material improvement in rounds and revenue for Old Works. It is the nature of revenue management and a necessity for a remote property like Old Works to capitalize on a broad swath of revenue opportunities.
- The current expense structure at Old Works is well within reason. The business plan adopts that expense structure and makes only minor adjustments to it.
- As an important strategic move, the business plan calls for the addition of a part-time Director of Sales to sell tournaments, outings, catered events, and annual passes. Again, with the focus on driving rounds and revenue as the route to financial sustainability, it is critical to have a person responsible and accountable for this potentially large and profitable piece of business.
- Many of the components of the business plan (drivers, objectives, strategies) are adoption and continuation of existing operational procedures with some enhancements and recommendations for measurement to monitor their productivity, efficiency, and overall effectiveness.

Unique Selling Proposition and Market Position

Objective: Re-establish, re-vitalize, and promote the unique selling proposition ("USP") that distinguishes Old Works from other golf courses.

Strategies:

Old Works, by virtue of its Nicklaus signature design, ambiance, golfer's experience, amenities, and name, embodies a unique set of attributes that differentiates it from every other golf course in the market – and in the world. The unique selling proposition – aka positioning – captures and conveys those attributes in a simple way that tells the market what the meaningful difference is between Old Works Golf Club and its competitors and compels golfers to give Old Works a try and return to Old Works over and over.

Positioning claims for Old Works include:

- Nicklaus Signature...
- Historic site...
- Top 100 you can play...
- Montana Hospitality...
- Big Sky Freedom, Stimulation, Relaxation, Experience…
- Great value…highest caliber golf course, amenities, service at reasonable, affordable price point

Measurement:

Management will leverage these unique selling propositions in all marketing programs and promotions.

Market Reach: Targeted Markets

Objective: Add a "shoulder season" annual pass, priced to yield great value, to the product mix. Target the local market (within ~25 miles) of golfers, including those who are members or passholders at other golf courses/clubs. Sell 20 shoulder-season passes in 2016 and increase that number thereafter.

Strategies:

1) Offer a shoulder season annual pass – good for unlimited play from opening day through June 15 and from September 15 through closing day. Optional: If golf course utilization and available capacity during the June 15 through September 15 period ("High Season") warrants, include limited access to the golf course, e.g., tee times after 4:00pm, during this period.
2) Set the price for the shoulder season pass at slightly higher than the existing Diamond Pass (16 rounds for $499 in 2015) – e.g., $549 for the Shoulder Pass – and market it as an option for the local player, giving him/her a choice between the Diamond Pass and the Shoulder Pass. Note: If limited High Season play is included in the Shoulder Pass, pricing may need to go up…or the pass can be marketed as a fantastic value and alternative to the Diamond Pass.
3) Promote and market the Shoulder Pass in the local (25-mile) market, including concerted efforts to market it to members and passholders at other local courses and clubs (e.g., Anaconda CC, Butte CC, Fairmont Hot Springs GC, Rock Creek Cattle Company GC, Deer Park GC), suggesting that the Shoulder Pass can be an add-on to their membership/pass at their respective clubs and a great value opportunity to play world-class golf at Old Works.

Objective: Add a "Four-Play Pass," priced to yield great value, to the product mix. Target the regional market (within ~100 miles, including Butte, Missoula, Helena, Bozeman) of golfers. Sell 50 Four-Play Passes in 2016 and increase that number thereafter.

Strategies:

1) Add this pass to the product mix to replace the existing Diamond Pass (5 rounds for $250 in 2015). The goal would be to get the price point under $200 – e.g., $199 for the Four-Play Pass – thereby making it attractive to a broader swath of the market, while maintaining the integrity of the average green fee per round associated with the pass.
2) Promote and market the Four-Play Pass to golfers in the regional (~100-mile) market, including "upselling" it to golfers from that market whenever they show up to play at Old Works.

Objective: Via a proactive, targeted marketing and sales effort and promotional pricing, sell daily fee play to the Troon market (members, passholders, patrons, employees of Troon's 140+ managed courses and clubs in the US). Sell 100 "Troon rounds" in 2016 and increase that number thereafter.

Strategies:

1) Establish a special Troon green fee rate, e.g., 25% lower than the posted rate(s), and promote that rate exclusively to members, passholders, daily fee players, and staff at Troon's 140+ courses and clubs.

2) Enlist Troon's central marketing support team ("TCMST") to assist in promoting this opportunity, including periodic email blasts to select portions of the Troon database of golfers.

3) Augment the TCMST effort with a marketing and sales effort carried out by the Old Works general manager and staff. This effort should include:

   a) Periodic telephone and email contact by the Old Works general manager with counterparts at other Troon properties, enlisting their help in soliciting, from among their golfers, travelers to Old Works.

   b) An Old Works point-of-sale display/poster, including a call to action, to be posted conspicuously within the clubhouses at the Troon properties…the call to action could be as simple as, "Ask your general manager or golf shop staff about how you can take advantage of this fantastic Troon benefit!"

4) Run a season-long Troon intramural event for Troon golfers from around the region/country who visit Old Works, with end-of-season prizes to the top finishers. For example, the event could be:

   a) A season-long "tournament," wherein each Troon player posts his/her Old Works score(s) whenever he/she visits/plays Old Works and the final results are tallied at the end of the season from among all posted scores (separate gross and net contests, for men and women…i.e., 4 events). Prizes could range from Troon Golf Gift Certificates to reimbursement for expenses incurred to travel to Old Works.

   b) Instead of a competitive event, enter each Troon player at Old Works into a year-end drawing for prizes. Grant one raffle ticket per round played at Old Works…i.e., the more you play, the better your chances of winning.

5) Consider incentivizing other Troon properties for sending golfers to Old Works. This incentive could take the form of a "commission" paid to each Troon property that sends golfers to Old Works or a cash prize ($500-$1,000?) paid to the Troon property that sends the most golfers to Old Works, with the cash prize earmarked for a "staff party" at the winning Troon course (rewarding those people who "made it happen").

Objective: Stimulate awareness, top-of-mind status, and green fee sales for Old Works among a broad regional, national, and international market through the creation of a Big Sky Golf Trail (e.g., patterned after the Robert Trent Jones Golf Trail in Alabama) that includes Old Works Golf Course and six-to-ten other courses in the region (Spokane-Coeur d'Alene-Missoula-Flathead Lake-Helena-Bozeman-Billings). Sell 160 Big Sky Golf Trail rounds in 2016 and increase that number thereafter.

Strategies: For a detailed description of the Big Sky Golf Trail, please see the New Revenue Initiative: Big Sky Golf Trail section of this plan on page 18.

Objective: Stimulate awareness, top-of-mind status, and green fee sales for Old Works among a high-value regional and national demographic – RV owners. Sell 60 RV-owner rounds in 2016 and increase that number thereafter.

Strategies:

1) Market, advertise, offer promotional pricing, and issue press releases targeting members of the Good Sam Club.
2) Market, advertise, offer promotional pricing, and issue press releases/blog posts targeting frequenters of online RV and motorhome forums.

Objective: Capture rounds from "Canadian Snowbirds" as they drive between their Canadian summer homes and Desert Southwest US homes/lodging. Sell 40 Canadian Snowbird rounds in 2016 and increase that number thereafter.

Strategies:

1) Place Old Works marketing/advertising collateral targeting "Canadian Snowbirds" conspicuously in the clubhouses of Troon's Arizona, Nevada, and Southern California properties.
2) Create awareness and calls to action via the *Canadian Snowbirds Association…The Voice of Traveling Canadians* (www.snowbirds.org) and other organizations and websites for traveling Canadians.
3) Consider an I-90 billboard to create awareness among traveling snowbirds (and all others!).

Measurement:

1) For each initiative, measure the number of rounds, revenue, and profitability.
2) Year-over-year growth in rounds from each initiative.

Tournament & Group Rounds/Revenue & Sales Discipline

Objective: Achieve Tournament Rounds equal to 15% of total rounds by the end of the second year (approximately 2,560 rounds in 2017) and thereafter grow annual tournament rounds and revenue by 2% and 3%, respectively.

Objective: Create four special events and/or golf tournaments each year.

Objective: Create one new golf league each year.

Objective: Deliver first-class golf tournaments and catered events.

Objective: Put a focused, professional sales discipline in place, including a Director of Sales, dedicated to marketing and selling golf tournaments, outings, and other catered events.

Strategies:

1) Execute a Direct Sales Effort:
   a) Director of Sales assigned to make 20 outbound calls a week.
   b) Create Events: Create four (new) special events and/or golf tournaments a year. For example: Veterans Day Fundraiser; Civil Service Day; Senior Appreciation Day; Independence Day Event; Montana Folk Festival Event; Evel Knievel Days Event; Irish Beer Festival Event.
   c) Solicit tournament leads from passholders, residents, local and regional businesses, and guests.
2) Tweak tournament offerings to optimize revenue:
   a) Revise seasonal and off-peak pricing to compete with golf courses in the region.
      i) Implement policy and pricing to minimize tournaments starting before 11am.
      ii) Establish off-peak tournament pricing and packages to encourage tournament play when it is most needed.
      iii) Create special discounted tournament pricing for first-time charity groups and select other groups (e.g., traveling men's/women's golf clubs).
      iv) Develop and always present and (pre-)sell a tournament food and beverage package(s), a pre-tournament warm-up (driving range) package, and a golf shop merchandise prize fund.
3) Increase tournament leads:
   a) Cold call local, regional, and state businesses and charities to solicit golf outings and fund-raisers. Offer charities the benefit of having golf course volunteers assist with their events and help raise money for their groups.
   b) Host at least one VIP Chairpersons Event each year to thank current customers and persuade prospects to use Old Works as their tournament venue.
   c) Send email to the Old Works customer database at least twice a year to solicit tournaments and events.

d) Develop a database of tournament prospects sourced from the Montana State Golf Association (MSGA) list of course-based and associate (no course as base) clubs and from other sources, including newspapers, magazines, requests for donations, and the web (e.g., www.greatnonprofits.org/organizations/state/Montana).

e) Send an annual email to the database of tournament prospects and follow up with telephone calls to the respective president/tournament chairperson of each group.

f) Target local and regional hotels for generating tournament activity. Develop relationships with the group sales staff at each hotel by hosting two events at Old Works for them each year (e.g., Free Golf Lesson and Happy Hour; Free 9 Holes of Golf and Happy Hour).

g) Organize tournament information – pricing, tournament requirements, and catering information – to distribute to hotel sales and service teams.

h) *****Additional: Provide to all local and regional hotels Old Works collateral – best option may be a rack card – conveying information about individual and small group play at Old Works.

4) Golf Leagues:

a) Create or capture a group of golfers to play a series of days – typically 9 holes in the evening for 6 to 8 weeks. Potential targets may include: hotel/bar/restaurant staff league with 2-person teams from each establishment playing a better-ball event; business league (local businesses); first responders league; church league.

b) Provide a happy hour with food and drink to coincide with league play.

c) Use flyers in the pro shop and grill room, one-on-one conversations, and email to promote each league. (Note: To "seed" leagues and get them started, participation by golf course staff and volunteers – by their own choice and on their own time – often provides the necessary kick-start.)

Measurement:

1) Complete a ***Weekly Milestone Report*** ("WMR"), year-round, that tracks tournament sales calls, activity, and bookings against the target for tournament sales.

2) Review sales calls, closings, prospects, and best practices in a bi-weekly conference call between the Old Works General Manager, Director of Sales, and Troon Golf's Regional Vice President.

3) Maintain and periodically review a ***Tournament Pace Report*** ("TPR"). The TPR tracks actual and booked tournament revenue against (monthly) budgets.

4) Review end-of-month financial statements to analyze tournament sales and trends and set and adjust near-term-future initiatives, tactics, and action plans.

Annual Passes (Memberships)

Objective: Increase annual pass revenue by raising annual pass prices. Target is $100,000 annual pass revenue in 2016. (2015 target is $94,500; 2014 actual was $88,000.)

Objective: Generate incremental annual pass revenue via the sale of a "Copper Value" pass that allows the passholder to play before June 15 and after September 15.

Objective: Sustain the existing base of passholders by maintaining and increasing passholder satisfaction. Limit attrition to not more than 10 passholders in 2016.

Strategies:

1) Introduce a new annual pass option, the Copper Value Pass, and re-price annual passes to establish a reasonable and marketable price-value relationship merited by Old Works. Annual passes and pricing:

Pass	2015 Price	2016 Price
Copper Elite - Individual	$ 825	$ 975
Copper Elite – Couple	$ 1,080	$ 1,295
Copper Twilight	$ 450	$ 575
Copper Twilight – Couple	$ 580	$ 735
Copper Elite – College	$ 475	$ 595
Copper Twilight – College	$ 400	$ 445
Copper Elite – Junior	$ 250	$ 295
*Copper Value ***	*NA*	*$ 475*

*** Copper Value will be a new pass commencing in 2016. It will allow unlimited access during the "Value Season," defined as Opening Day through June 10 and September 10 through Closing Day.*

2) Market the Copper Value Pass with a special focus on passholders and members at other local courses and clubs (known golfers), who should value the Copper Value Pass as an opportunity to play a world-class golf course in topnotch condition (i.e., in much better condition than their home course(s) early in the season and, to some extent, late in the season).

3) Increase the number of leads for annual pass sales:

   a) Use email to market to businesses in Deer Lodge and Silver Bow Counties.

   b) Use the EZLinks and Troon databases of players to market annual passes.

   c) Institute an existing-passholder referral incentive – e.g., F&B or golf shop credit for each referral.

   d) Host "Old Works Member for a Day" events wherein prospective passholders pay a reduced rate for golf, are paired with an existing passholder for a round of golf (possibly a tournament), and are treated to a specially priced post-round meal.

4) Implement direct sales best practices:
   a) Use email marketing with an embedded link to the "buy your pass online" page on the Old Works' website.
   b) Use golf as a promotional resource with prospective passholders, e.g., invite prospects to play a free round of golf paired with one (or more) existing passholder(s).
   c) Install and execute a customer relationship management (CRM) system to log, track, and prompt communications with prospects. (This CRM system should also be used to manage tournament and F&B outings as well.)
5) Be proactive in engendering passholder satisfaction:
   a) Maintain highest standards for course conditioning and playability at all times.
   b) Provide professional, engaged, efficient, and friendly service in the golf shop, in the grill room, and on the telephone at all times.
   c) Solicit regular feedback from passholders and, whenever possible and appropriate, implement their suggestions/recommendations.
   d) Treat passholders as "members" and foster a sense of belonging to something special. (This will make retention of passholders, year-in-and-year-out, more likely and easier to accomplish.)
   e) Conduct "member events / theme nights" at least once per month, e.g., Twilight Nine & Wine, Skins Games, etc.

Measurement:

1) Weekly Scorecard to track pass sales and outcomes from marketing and sales efforts.
2) Bi-weekly Sales Call that comprises OWGC's General Manager, Director of Sales, and Troon's regional/national sales management/support person(s). The agenda for this call includes a review of sales activity, new prospect generation, marketing, best practices, and near-term plans and tactics for prospecting and closing sales.
3) Monthly Financial Statement Review, completed by the general manager and aimed at gaining understanding of sales trends and achievements as well as serving as a foundation for launching future sales initiatives and spending.

Daily Fee Revenue & Revenue Management

Objective: Achieve total rounds of 17,400 in 2016 and increase rounds thereafter by approximately 1% per year, with an ultimate target of 20,000 rounds per year achieved within 10 years.

Objective: Grow green and cart fees by 15% in 2016 over 2014 level – incremental fees of ~$115,000 – and continue to grow this revenue by 2%+ per year thereafter.

Objective: Optimize "summer golf season" revenue by reducing number of seasonal pricing tiers from five to three – spring pricing (opening day thru Friday before Memorial Day); summer pricing (Saturday before Memorial Day thru Labor Day; fall pricing (Monday after Labor Day thru end of season).

Objective: Consistently manage and deliver good pace-of-play ("Troon Values Your Time") with a "Time Par" of 4-hours-30-minutes for 18-holes at Old Works.

Objective: Capture email addresses from 90%+ of the golfers who book on the web or by phone through EZLinks.

Objective: Send monthly email newsletter to promote rounds of golf, annual pass purchases, and tournament play.

Objective: Implement revenue management disciplines to optimize revenue.

Objective: Generate 200 incremental individual rounds in 2016 via offering and marketing a promotional green fee for members of the Montana State Golf Association (MSGA). Grow these promotional rounds by 5% per year thereafter.

Objective: Increase driving range revenue to $17,500 in 2016 (+30%+ over 2014 level).

Strategies:

1) Internet Marketing:
   a) Capture email addresses during the reservation process and at check-in.
   b) Implement a search engine marketing (SEM) campaign, including pay-per-click listings and search engine optimization (of www.oldworks.org).
   c) Execute a program of targeted, frequent email blasts to the Old Works email database to spread general news and information about OWGC, promote annual pass sales, and stimulate sales of special-priced (discounted/promotional) tee times during periods when the golf course in under-utilized. The latter is part of an overall revenue management program for Old Works. At a minimum, the email blast program should disseminate an Old Works newsletter plus one other promotional or marketing email each month during the golf season.
2) Revenue Management and General Marketing
   a) Staff Capabilities and Preparation: The General Manager and golf shop staff will be trained annually at the beginning of the golf season on the fundamentals of revenue management and upselling so that they understand the "how and why" of and have the tools for harvesting incremental, add-on sales.

b) Promotional-rate Rounds: The General Manager will be empowered and required to execute an email blast program (as described above) to promote play during periods of under-utilization.

c) Maximum Tee Time Availability / Open on Time: The General Manager will assure that the first tee time available each day will be at least 20 minutes before official sunrise (tool: www.sunrisesunset.com).

d) Periods of Peak Demand / High Utilization (PPD/HU):

   i) For tee time reservations for play during PPD/HU, up until 24 hours prior to the PPD/HU, restrict tee time reservations only to those for full- or premium-priced rounds. Once inside the 24-hour advanced booking window, lift the restriction and accept all reservations, regardless of the price of the round.

   ii) Use promotional pricing to move rounds out of PPD/HU to periods of weak demand / sub-capacity utilization (PWD/SU).

e) Advanced Tee Time Reservations: Institute an advanced reservation fee (e.g., $5.00+ per round) – build it into the green fee – for rounds booked outside the standard 7-day-in-advance booking window. (Automate this process via the EZLinks reservations system.) Booking tee times well in advance of the date of play is typically an option used and appreciated by golfers outside the region who are planning a trip to the area.

f) Pricing: To re-establish the proper price/value relationship for the Jack Nicklaus Signature, Top 100 in America Old Works Golf Course, raise the peak season green fee rate (the "rack rate") to $125 in 2016. Adjust other green fee rates for 2016 relative to the higher 2016 rack rate. Beyond 2016, increase green fee rates periodically (at least once every three years), using the rate of inflation as a benchmark for the percentage increase of the green fee rates.

g) Share of Golfer: Develop, market, and sell to visitors (upsell in the golf shop) a 3-day Golf Pass to capture a greater share of the rounds played by golfers visiting the area. The discount should be in the order of magnitude of ~25% - 30%.

New Revenue Initiative: Big Sky Golf Trail

As a model for the Big Sky Golf Trail ("BSGT"), consider:

> The Robert Trent Jones Golf Trail is an incredible golfing experience for everyone. The courses will challenge the best golfers in the world, yet at the same time allow an enjoyable outing for the casual to beginning golfer. [The] philosophy from the very beginning was to build the finest collection of public golf courses in the world, and run them as a successful business investment. The Robert Trent Jones Golf Trail is a dream come true for the people of Alabama and for golfers all over the world. There is no venue in the world where such a golfing experience is possible. (*The Official Guide, Alabama's Robert Trent Jones Golf Trail, 2015 Edition*.)

Objective: Generate incremental rounds and revenue for Old Works via the Big Sky Golf Trail, a new marketing and positioning collaboration among select golf courses in western and northern Montana and northern Idaho.

Objective: Book 160 BSGT incremental rounds in year one (2016) and increase the number of BSGT rounds to 270+ annually by year five (2020).

Objective: Establish Old Works as the leading BSGT property – the keystone among the members.

Strategies:

1) Create and invest in a marketing, branding, and positioning initiative – with a revenue-generating engine – that will yield near-term awareness and financial benefits and longer term sustainability of those benefits.
2) Recruit and enlist at least six (6) high-quality properties in western/northern Montana and northern Idaho into the BSGT collaboration. Add properties to the coalition over time…cap membership at 12 to 15 properties (quality control, market allure ("distinctive properties"), ROI for member properties).
3) Seek corporate funding – sponsorship – for the BSGT, e.g., *The Big Sky Golf Trail sponsored by XYZ Corporation*. Sponsorship funding will be used to:
   a) Establish the BSGT (legal entity);
   b) Hire and pay a person to oversee/operate the BSGT;
   c) Recruit members (golf course properties) into the BSGT;
   d) Build/purchase and operate infrastructure (website, online tee time booking engine, etc.);
   e) Produce and disseminate marketing materials; and
   f) Support other elements of the BSGT business plan as a going concern.
   g) Note: Funding for the BSGT is not included in the pro forma financial projections that accompany this business plan.
4) Collect dues from member properties to augment sponsorship funding.

5) Conduct an ongoing awareness campaign for BSGT:

   a) **Public relations**: Regular and frequent correspondence with local, regional, and national golf writers, inviting them to tour and play golf at BSGT member properties. Accessible national media contacts include GolfWeek Magazine, GolfWorld Magazine, Golf Digest, Golf Magazine, Links Magazine, Golf Inc. Magazine, USA Today and The Golf Channel. Regional contacts include Fairways and Greens Magazine, Golf Today, Executive Golfer Magazine, Pacific Golf Magazine and newspapers in Montana, Idaho, and throughout he Pacific Northwest and Intermountain West.

   b) **Grand Opening Media/VIP Event**. Hold concurrent Grand Opening Events at all BSGT member properties in early 2016. Invite and host local/regional media, business people, government officials, and other centers-of-influence.

   c) **Ratings, Rankings, and Awards**. To increase the stature and solidify the reputation of the BSGT, make a concerted effort to garner significant ratings, rankings, and awards for BSGT courses from golf publications. (Old Works currently holds a *Golf Digest Top 100* accolade.) Garnering Top 100 ratings is generally a two-to-three-year process and, given the remote locations of BSGT candidate golf courses, it may take longer for raters to visit any particular course and assign a rating.

   d) **Media Plan (Advertising)**. BSGT will use advertising placement in regional and national publications to ensure editorial support. It will also take advantage of advertorial opportunities in key publications. Budget allowing, also consider advertising placements in select national media to attract golfers nationwide to the Big Sky Golf Trail.

   e) **Awareness Campaign Summary**. The goal of all "awareness efforts" will be to start and maintain dialogue with members of the golf media about the Big Sky Golf Trail and its member properties. Through these relationships, the BSGT and its members will seek media placements and increased exposure. The BSGT manager will manage these relationships and be the point person for media communication.

Measurement:

1) Rounds and revenue booked by OWGC and other member properties through the BSGT portal.
2) ROI from the investment in the BSGT.
3) Number of properties that join the BSGT; retention of properties in the BSGT.

Revenue Initiative: Troon Golfers

Objective: Generate incremental rounds and revenue for Old Works via a concerted, intentional marketing, promotional, and sales effort directed at patrons (members, guests, daily fee players) at Troon's 140+ managed properties ("TGMP") throughout the US, Mexico, the Caribbean, Australia, Asia, and Europe.

Objective: Book 100 TGMP incremental rounds in year one (2016) and increase the number of TGMP rounds to 200 annually by year seven (2022).

Objective: Establish Old Works as a top-of-mind Troon destination property among patrons, management, and staff at the 140+ Troon properties in North America and the Caribbean.

Strategies:

1) Create and invest in a marketing, promotional, and sales initiative directed at staff and patrons of Troon's managed properties.
2) Minimize (optimize) the investment in marketing and promotions by:
   a) Requiring the Old Works staff (general manager) to carry out the marketing and promotional activities, including word-of-mouth and direct calling of general managers at Troon's properties.
   b) Leveraging Troon's database of golfers for each of its managed properties, sending regular, periodic, targeted email blasts promoting Old Works and the Big Sky Golf Trail.
3) Target Troon's western US properties - ~50 courses and clubs – for the most intensive marketing and promotional activity.
4) Incent the management and staff at Troon's properties to promote and sell rounds at Old Works via a commission/referral fee payable to the referring property for each round booked and played at Old Works by an identified regular patron of the referring property.
5) Involve Troon's centralized marketing support function, which is provided as part of the management agreement, in proactively marketing to and conducting an awareness campaign aimed at the Troon database of golfers touting Old Works as a leading, high-end destination golf experience for all Troon golfers.
6) Invite the general manager at each Troon property to bring/accompany a group of his/her patrons to play at Old Works. (Optional: Conduct a season-long team competition for the Troon groups at Old Works, with the winning group from one of the Troon properties being awarded a prize – the prize could be something as lucrative as reimbursement of the winning group's travel and lodging expenses for the trip to Old Works.)

Measurement:

1) Rounds and revenue booked at OWGC by golfers from the Troon portfolio of courses and clubs.
2) ROI from the investment in the TGMP effort.
3) Level of satisfaction reported by Troon golfers participating in the Old-Works-as-destination program. (Survey golfers.)

Golf Shop Merchandise Sales & Margins

Objective: Reverse the downtrend of the past few years in merchandise sales per round..

Objective: Build on the ~$14.00 average merchandise sales per round (Note: While part of a downtrend, this average is nonetheless very good.) of the past few years. Move that average to $15.00+ per round within four years and to $16.00+ per round within eight years.

Objective: Maximize inventory turns and thereby limit the aging of inventory and the resulting discounting (markdowns, sales) that typically accompanies an aging inventory.

Objective: Take full advantage of the benefits, especially preferred pricing, offered by Troon's national accounts relationships with purveyors of golf shop merchandise. National accounts benefits contribute to minimizing the cost of goods sold and, thereby, maximizing gross margins and profits from merchandise sales. Target: merchandise gross margin percentage of 40%.

Objective: Manage inventory turns, purchasing (Troon preferred buyer/national accounts), pricing, and markdowns to achieve an overall golf shop gross margin percentage on merchandise equal to 40% or more (60% cost of goods sold).

Strategies:

1) Increase the number of tournament rounds, which tend to yield greater merchandise sales per round (along with greater overall revenue).
2) Train golf shop staff in selling, suggestive selling, and upselling techniques. Inspire a "sales culture" in the golf shop.
3) Monitor and coach staff in selling; reinforce that merchandise sales is a priority.
4) Conduct sales contests (with rewards) for golf shop staff, e.g., monthly contest, gross sales per round while on duty (or per hour worked), post a scorecard of results, updated weekly, conspicuously, but out-of-site of guests, pay out monthly reward (cash, shop credit, F&B credit, other) to highest achiever.
5) Write an annual merchandise plan each year during the budgeting process.
6) Perform monthly physical counts and reconciliations of inventory.
7) Establish and execute a discipline for pricing golf shop merchandise, including a consistent mark-up approach and markdown regimen that dictates when and by how much to discount prices as inventory ages.

Measurement:

1) Results of monthly sales contests.
2) Monthly financial statements: merchandise revenue, cost of sales, gross margin.
3) Monthly inventory levels; aging of inventory.
4) Discounting/markdowns/sales…seek to minimize these.

Food & Beverage Sales, Service, & Margins

Objective: Generate total F&B revenue of $280,000 in 2016 (+$20,000 (+8%) over 2014 level).

Objective: Generate catering revenue of $58,000 in 2016 (+$18,000 (+63%) over 2014 level).

Objective: Generate 21% margin on F&B revenue in 2016, yielding ~$59,000 F&B NOI (+$15,000 (+33%) over 2014 level).

Objective: Manage costs/expenses to levels consistent with industry standards for percentages of sales: i) cost of goods sold, 33% (36% from 2013-2015); ii) payroll, 38% (43% now); other operating, 8% (6% now).

Strategies:

1) Manage staffing continuously to assure that the grill room is always "right-staffed." Manage labor re: the budget (and labor scheduling/tracking tool).
2) Bolster sales and profits:
   a) Offer and promote "daily specials," including promoting them, via point-of-sale displays and coworkers' "suggestive selling," in the golf shop.
   b) Align beverage cart hours and coverage with the ebb and flow of demand as indicated by number of golf rounds booked/anticipated.
   c) Sell food/beverages prior to large events via an outdoor barbeque set up in the tournament/cart staging area.
   d) Train staff re: quality service and suggestive selling to "build the ticket."
   e) Additional consideration: Sell food/beverages via an outdoor barbeque on all anticipated high-volume golf rounds days (e.g., weekends, holidays).
3) Improve margins:
   a) Monitor and maintain labor percentages to industry standard (<=38% of sales). Schedule and deploy labor according to demand (customer/sales volume).
   b) Tighten, monitor, and review results from systems and controls in place to minimize the cost of food and beverage sales.
   c) Take advantage of programs offered by vendors to lower food and beverage costs.
4) Increase catering (group event) sales:
   a) Institute an outbound selling program, including a staff person responsible, a plan, sales targets, sales process and measurements, and accountability.
   b) Funnel all inbound requests for events to the staff person identified in 4a, above.
   c) Tap Old Works email database to promote and solicit events (golf and non-golf events).
   d) Network with local businesses, charities, government agencies, churches, and other organizations with a critical mass of people to solicit and sell catered events.

Measurement:

1) Monthly financial statements: F&B revenue, cost of sales, gross margin.
2) Monthly inventory levels; aging of inventory.
3) Discounting/markdowns/sales…seek to minimize these.
4) Month-end group sales and catering report.
5) Group/catering sales activity report – calls, contacts, contracts written, revenue booked.

Player Development

Objective: Introduce new players to the game at Old Works – positive impact on revenue.

Objective: Improve players' skills; enhance players' enjoyment of the game/experience – positive correlation with retaining players as golfers.

Objective: Introduce and reinforce golf as a lifetime recreational pursuit – positive impacts on the community.

Objective: Increase participation by youth by hosting clinics, tournaments, and play-all-day green fees for youth on the 3-hole Little Bear course.

Objective: Reduce apprehensions about the game by beginners/less skilled adult players and allow them to feel more comfortable on the golf course by hosting clinics, tournaments, and play-all-day green fees on the 3-hole Little Bear course.

Strategies:

1) Provide golf instruction programs for players of every skill level.
2) Promote a holistic player development program that is designed for all players, regardless of ability. Introduce players to the game and encourage them to continue with regular practice and play to improve skills and enjoyment.
3) Sponsor weekly golf clinics throughout the golf season, with each clinic tailored for a specific segment of the golfing market, including beginners; women (e.g., during the industry's annual *Golf 20-20 Women in Golf Month* promoted by *PGA of America's Play Golf America*); youth (e.g., as part of a series of summer clinics for junior golfers); and seniors.
4) Schedule, promote, and run a calendar of events (targeted for the local community) for youth, adults, men, women, and seniors on the Little Bear course throughout the season. (Over time, transition some/all of these events and participants to 9 holes on the main course.)
5) Adopt/adapt the principles of the PGA Tour's First Tee Program as a foundation for building the Old Works youth program.
6) Offer a Little Bear Annual Pass, very reasonably priced, for unlimited play on the 3-hole Little Bear course

Measurement:

1) Number of participants in the programs.
2) Revenue from programs, lessons, and clinics.
3) Rounds and annual pass sales (contribution to these by new players brought into the game via the Old Works' player development efforts).

Community Outreach, Engagement, & Public Relations

Objective: Establish men's, women's, seniors', and juniors' golf associations at Old Works.

Objective: Engender a feeling of "membership" among people in the associations, which leads to "members" spreading goodwill in the community and, in turn, leads to bringing additional golfers – and their positive economic impacts – to Old Works.

Objective: Raise top-of-mind awareness of Old Works and its amenities – golf and non-golf – among residents of Anaconda and Deer Lodge and Silver Bow Counties.

Objective: Engage local residents by using the course as catalyst for growing the game of golf and supporting local community groups and charity.

Strategies:

1) Assist local golfers – men, women, seniors, juniors – in setting up association (aka clubs) based at Old Works. Transition the management of each association to its members.
2) Assure that each association holds regular events, including some events exclusive of golf, e.g., an event featuring a speaker and/or social hour.
3) Engage members to solicit their feedback re: the management and operation of Old Works and to hear their suggestions for ways that Old Works' can support their efforts to grow their organizations and improve their experience.
4) Develop, promote, and host a variety of "resident/locals events" – at least one event per month. These occasions can center around golf, dining, and/or social functions and may include, for example: "Pasta Night" featuring live music; "Nine, Wine & Dine" comprising 9 holes of golf in the evening followed by wine/beer tasting and dinner afterward; "Monday Night Football" with a simple bar menu; holiday events, including a Memorial Day Tournament (or a tournament coinciding with Jack Nicklaus's *Memorial Tournament* on the PGA Tour, a US Open Kick-off Event, July 4th BBQ, December Holiday Party…
5) Issue monthly press releases (to media outlets within 250 miles) promoting an aspect of Old Works.
6) Continue to participate in the Anaconda Chamber of Commerce, Anaconda Rotary Club, and the Montana State Golf Association.

Measurement:

1) Revenue from associations and community outreach events.
2) Enrollment, participation, response to associations and events.
3) Press coverage…quantity and tone.
4) Feedback from guests and the community.

Staff Recruitment, Development, & Service Delivery

Objective: Recruit and employ the highest caliber coworker in every position.

Objective: Assure the highest levels of coworker satisfaction.

Objective: Maintain a work environment in which coworkers are challenged and supported.

Objective: Reward coworkers for providing excellent service.

Objective: Establish and communicate opportunities for growth.

Strategies:

1) Use proven recruiting resources – coworker referrals; referrals from passholders and guests; PGA of America; Internet ads, including the Old Works' website – to source, recruit, and hire high-quality candidates.
2) Train and cross-train coworkers to assure excellent service delivered efficiently in all departments.
3) Provide coaching and feedback to insure coworkers understand their roles and are equipped to effectively perform their duties.
4) Perform tailored departmental customer service training.
5) Convene front line staff monthly to review guest feedback, assess overall group performance, fine-tune initiatives, and review coworkers' concerns and ideas for improvement.
6) Provide continuing education for managers that focuses on developing their skills re: hiring, training, motivating, correcting, recognizing, and rewarding coworkers and teams.

Measurement:

1) Training Log – tracking who has completed service training.
2) Periodic informal assessments of coworker morale and competencies by the management team.
3) Spontaneous rewards to coworker(s) exemplifying Old Works' highest standards for customer service, e.g., when a coworker is "caught in the act," hand him/her a voucher for a small credit (~$5.00) in the golf shop or grill room.

Guest Feedback & Response

Objective: Establish a guest feedback system (continue the current system deployed by Troon) and benchmarks for "player experience" based on the data collected from members and guests.

Strategies:

1) Make comment cards available in the golf shop and the grill room.
2) Conduct an annual survey of golfers via the internet (continue Troon's survey).
3) Send a customer survey to each tournament chairperson after his/her event.
4) Query guests about their experience and forward the feedback to the manager. Manager will encourage front line staff to continually do so.
5) Relay customer feedback to department heads during weekly meetings and to the front line staff during their respective departmental meetings.
6) Maintain an "open-door policy" in the manager's office to encourage feedback.

Measurement:

1) Survey results.
2) Feedback from staff, guest comment cards, and tournament surveys.
3) Actions emanating from review of feedback (i.e., how the feedback is put to use).

Outlays for capital improvements and projects at Old Works, as with all golf course properties as they age, are anticipated to be a large use of cash over time. Furthermore, historical cash flows at the Old Works have been insufficient to fund an ongoing capital improvements plan to the extent necessary to sustain OWGC for the long term. We developed this CIP – comprising investments in golf course infrastructure, including the irrigation system and pumps, golf course maintenance equipment, and renovations on the golf course from tee to green, as well as investment in capital improvements supporting golf course operations, including on-course signage and amenities, on-course restrooms, and clubhouse/restaurant renovations and updates – to highlight the need and be assured that a provision for adequate funds to address the ongoing capital investment needs of an aging OWGC facility is in place.

For a detailed capital improvements plan ("CIP") for Old Works, please see Exhibit B. The 50-year summary shown in Exhibit B results from a collaborative effort among the county's superfund coordinator, WET Consulting, Touchstone Golf, and Old Works' management. The following tables summarize the CIP for the next ten years and the following 40 years.

Capital Expenditure	2015-2016	2017	2018	2019	2020
Golf Course Infrastructure	$ 482,700	$ 253,800	$ 279,800	$ 227,200	$ 160,000
Golf Course Operations	$ 84,000	$ 142,400	$ 69,900	$ 44,000	$ 20,000
Total CapEx	$ 566,700	$ 396,200	$ 349,700	$ 271,200	$ 180,000
Cumulative CapEx	$ 566,700	$ 962,900	$ 1,312,600	$ 1,583,800	$ 1,763,800

Capital Expenditure	2021	2022	2023	2024	2025
Golf Course Infrastructure	$ 157,000	$ 165,000	$ 165,000	$ 146,500	$ 160,000
Golf Course Operations	$ 57,000	$ 57,000	$ 17,000	$ 73,000	$ 20,000
Total CapEx	$ 214,000	$ 222,000	$ 182,000	$ 219,500	$ 180,000
Cumulative CapEx	$ 1,977,800	$ 2,199,800	$ 2,381,800	$ 2,601,300	$ 2,781,300

Capital Expenditure	2026-2035	2036-2045	2046-2055	2056-2065	Total CIP 2015-2065
Golf Course Infrastructure	$ 1,587,000	$ 1,587,000	$ 1,587,000	$ 1,553,000	**$ 8,511,000**
Golf Course Operations	$ 438,000	$ 438,000	$ 438,000	$ 440,000	**$ 2,338,300**
Total CapEx	$ 2,025,000	$ 2,025,000	$ 2,025,000	$ 1,993,000	**$ 10,849,300**
Cumulative CapEx	$ 4,806,300	$ 6,831,300	$ 8,856,300	$ 10,849,300	

Pro Forma Financial Projections

Old Works Golf Club	2016 (P)	2017 (P)	2018 (P)	2019 (P)	2020 (P)
Rounds	17,570	18,060	18,530	18,990	19,340
Total Revenue	$ 1,464,000	$ 1,519,700	$ 1,577,900	$ 1,636,900	$ 1,695,000
Total Cost of Sales	371,400	393,500	415,300	437,100	456,800
Gross Profit	$ 1,092,600	$ 1,126,200	$ 1,162,600	$ 1,199,800	$ 1,238,200
Total Payroll	670,000	677,300	691,300	698,700	706,200
Total OpEx	414,100	421,000	428,000	435,100	442,300
Management Fee	60,000	60,000	60,000	60,000	60,000
(NOI)	**$ (51,500)**	**$ (32,100)**	**$ (16,700)**	**$ 6,000**	**$ 29,700**
Depreciation	109,000	109,000	109,000	109,000	109,000
Net Income	**$ (160,500)**	**$ (141,100)**	**$ (125,700)**	**$ (103,000)**	**$ (79,300)**
Addback Depreciation	109,000	109,000	109,000	109,000	109,000
Net Operating Cash	**$ (51,500)**	**$ (32,100)**	**$ (16,700)**	**$ 6,000**	**$ 29,700**
Cap Ex - Golf Course Ops	84,000	142,400	69,900	44,000	20,000
Cash after GC Cap Ex	**$ (135,500)**	**$ (174,500)**	**$ (86,600)**	**$ (38,000)**	**$ 9,700**
Cap Ex - Infrastructure	482,700	253,800	279,800	227,200	160,000
Cash after Infrastructure	**$ (618,200)**	**$ (428,300)**	**$ (366,400)**	**$ (265,200)**	**$ (150,300)**
Debt Service (ARCo)	46,500	62,100	62,100	62,100	62,100
Net Cash Flow	**$ (664,700)**	**$ (490,400)**	**$ (428,500)**	**$ (327,300)**	**$ (212,400)**

Old Works Golf Club	2021 (P)	2022 (P)	2023 (P)	2024 (P)	2025 (P)
Rounds	19,630	19,880	20,040	20,200	20,360
Total Revenue	$ 1,739,000	$ 1,778,500	$ 1,805,700	$ 1,833,100	$ 1,860,800
Total Cost of Sales	471,800	484,100	493,100	502,300	511,500
Gross Profit	$ 1,267,200	$ 1,294,400	$ 1,312,600	$ 1,330,800	$ 1,349,300
Total Payroll	720,500	727,800	735,200	742,600	750,100
Total OpEx	449,800	457,400	465,100	472,900	480,800
Management Fee	75,000	75,000	75,000	75,000	75,000
(NOI)	**$ 21,900**	**$ 34,200**	**$ 37,300**	**$ 40,300**	**$ 43,400**
Depreciation	109,000	109,000	109,000	109,000	109,000
Net Income	**$ (87,100)**	**$ (74,800)**	**$ (71,700)**	**$ (68,700)**	**$ (65,600)**
Addback Depreciation	109,000	109,000	109,000	109,000	109,000
Net Operating Cash	**$ 21,900**	**$ 34,200**	**$ 37,300**	**$ 40,300**	**$ 43,400**
Cap Ex - Golf Course Ops	57,000	57,000	17,000	73,000	20,000
Cash after GC Cap Ex	**$ (35,100)**	**$ (22,800)**	**$ 20,300**	**$ (32,700)**	**$ 23,400**
Cap Ex - Infrastructure	157,000	165,000	165,000	146,500	160,000
Cash after Infrastructure	**$ (192,100)**	**$ (187,800)**	**$ (144,700)**	**$ (179,200)**	**$ (136,600)**
Debt Service (ARCo)	62,100	62,100	62,100	62,100	62,100
Net Cash Flow	**$ (254,200)**	**$ (249,900)**	**$ (206,800)**	**$ (241,300)**	**$ (198,700)**

Conclusions

The Business Plan set forth herein is a realistic and achievable blueprint for action at Old Works Golf Club. Nonetheless, and in deference to the considerations set forth in the Third Addendum, the Business Plan concludes:

1) After accounting for the ongoing and required CIP and repayment (amortization) of the AR Loan, Old Works Golf Club cannot be expected to generate cash flow that allows it to operate in a financially independent and self-sustaining manner.
2) At the Net Operating Income ("NOI") and Net Cash from Operations ("NFO") levels – basically, accounting for running the day-to-day operations of the golf course – OWGC is expected to be profitable/cash flow positive on an annual basis by year 2020.
3) However, in continuing down the projected P&L, we encounter barriers to self-sustainability:
    a) After funding the CIP supporting golf course operations, cash flow, while slightly positive in some years due to the timing of capital investment, averages -$46,000 per annum from 2016 through 2025 (10 years).
    b) After funding the CIP supporting golf course operations and that supporting golf course infrastructure, annual cash flow never returns a positive number and averages -$244,000 per annum from 2016 through 2025.
    c) After funding the CIPs, above, and the amortization of the AR Loan, annual cash flow never returns a positive number and averages -$305,000 per annum from 2016 through 2025.
4) Rudimentary pro forma projections (less certainty as results are projected further out) suggest that OWGC will continue to operate at a cash flow deficit, after CIPs and Loan amortization, into perpetuity, with this expected deficit averaging -$230,000 per annum.

General Risks

There are risks inherent in the business plan for Old Works, including:

- **Market Risk**. There is no guarantee that the national and local economies will improve enough any time soon to have a positive impact on the golf industry. As a discretionary purchase, golf will likely lag the overall economy in bouncing back from recession. This may impact OWGC's results.
- **Competition**. On the regional and national fronts, Old Works' competition is formidable and extensive. While Old Works is a legitimate world-class golf course and experience, its competitive advantage is, nonetheless, diminished by its remote location, exacerbated by golfers reticence to travel great distances for golf in lieu of their ability to enjoy alternative world-class properties nearer to home.
- **Reliance on Management**. Like all golf courses, Old Works' success depends largely on the effectiveness of management. Management has exclusive control of all aspects of the business and, in this role, makes all operating decisions. The local management at Old Works, supported by Troon Golf, currently provides excellent oversight and direction of the property. Nonetheless, while the best managers in the industry bring significant experience and knowledge and provide sound management and financial strategies, there can be no guarantee of results.
- **Financial Projections**. The financial projections in this business plan are based on information and assumptions that we believe are reasonable. These projections reflect only our current expectations of likely results. Because events and circumstances often do not occur as expected, there may be differences – some material – between projected results and actual results.

Supporting Infrastructure

In addition to the risks laid out above, there is the risk of being unable to execute the business plan and achieve its projected results due to the lack of infrastructure – simply put, the facilities and amenities – needed to support and entice visitors to Anaconda-Deer Lodge and Old Works. Old Works was conceived as a golfing destination that would, at least to some extent, fuel the local economy. With the small size of the local population, the importance of attracting out-of-market visitors to the property to sustain its economic viability and "fuel the local economy" was, and remains, evident.

Important infrastructure typically found surrounding destination golf properties – and deficient to varying degrees in and around Anaconda-Deer Lodge – includes:

- A variety of quality lodging properties – hotels, motels, condominiums, casitas.
- A variety of quality dining and nightlife establishments.
- A diversity of quality recreational options for non-golfers accompanying the golfers to the destination. This diversity of options also makes a destination more appealing to golfers because they know there are alternatives to golf should they want to "take a day off from golf." Existence of options also tends to make a destination more "sticky," resulting in longer stays – and more spending – in the area by visitors/golfers.

For the most part, the demographic of golfers who are willing and able to travel to destination golf properties look for and require the "complete package," including the non-golf infrastructure and amenities highlighted above.

Alternative Structure: Business Improvement District

As sanctioned by Montana Code, Title 7, Chapter 12, Part 11 ("MC07-12-11"), Business Improvement Districts, the administration of Anaconda-Deer Lodge County may establish a Business Improvement District ("District"), comprising the real property of Old Works Golf Course and all or part of Deer Lodge County. The purpose(s) and power(s) of the district, in compliance with MC 07-12-11, would be to:

1) serve a public use;
2) promote the health, safety, prosperity, security, and general welfare of the inhabitants of the district and of the people of the State of Montana;
3) be of special benefit to the property within the boundaries of the district; and
4) aid in tourism, promotion, and marketing within the district.

While the establishment of the District should not materially change the business plan or the way that Old Works is operated, it would:

1) Affirm the support of the Deer Lodge residents/voters for maintaining Old Works Golf Course as a going concern.
2) Provide funding, via property tax dollars, to supplement operational cash flow and augment funding for ongoing capital investment at Old Works.

Thorough vetting of this concept is beyond the purview of this business plan; however, a full understanding, including the legal structure, mechanics of implementing and executing it, and the political feasibility for putting it in place, would provide valuable context for this business plan.

Appendix A: Detailed 10-year Financial Projections

Old Works Golf Club	2016 (P)	2017 (P)	2018 (P)	2019 (P)	2020 (P)
Rounds	**17,570**	**18,060**	**18,530**	**18,990**	**19,340**
Total Revenue / Round	**$ 83.32**	**$ 84.15**	**$ 85.15**	**$ 86.20**	**$ 87.64**
Revenue					
Annual Membership Fees	$ 95,100	$ 98,700	$ 103,300	$ 108,000	$ 111,100
Green Fees & Cart Fees	797,200	827,600	857,600	887,700	922,100
Driving Range	17,900	18,500	19,100	19,600	20,100
Lessons	3,100	3,200	3,300	3,300	3,400
Golf Schools	6,300	6,500	6,700	6,900	7,100
Merchandise	253,500	263,200	274,100	285,100	294,700
F&B	284,900	295,800	307,300	319,600	329,600
Other	6,000	6,200	6,500	6,700	6,900
Total Revenue	**$ 1,464,000**	**$ 1,519,700**	**$ 1,577,900**	**$ 1,636,900**	**$ 1,695,000**
Cost of Sales					
Merchandise	$ 154,600	$ 160,600	$ 167,200	$ 173,900	$ 179,800
F&B	99,700	103,500	107,600	111,900	115,400
Golf Instruction	1,900	1,900	2,000	2,000	2,000
Group Services	115,200	127,500	138,500	149,300	159,600
Total Cost of Sales	**$ 371,400**	**$ 393,500**	**$ 415,300**	**$ 437,100**	**$ 456,800**
Gross Profit	**$ 1,092,600**	**$ 1,126,200**	**$ 1,162,600**	**$ 1,199,800**	**$ 1,238,200**
Payroll					
Salaries & Wages	$ 534,100	$ 539,400	$ 550,200	$ 555,700	$ 561,300
Commissions/Tournament Sales	6,100	6,800	7,400	8,000	8,500
Payroll Taxes & Benefits	129,800	131,100	133,700	135,000	136,400
Total Payroll	**$ 670,000**	**$ 677,300**	**$ 691,300**	**$ 698,700**	**$ 706,200**
Operating Expenses					
Golf Shop	12,200	12,400	12,600	12,900	13,200
Golf Cart Operations	55,000	55,300	55,600	55,900	56,200
Clubhouse	3,900	4,000	4,100	4,200	4,300
F&B Operations	21,500	22,000	22,500	23,000	23,500
Maintenance	160,500	163,400	166,400	169,400	172,400
Marketing & Sales	31,400	31,700	32,000	32,300	32,600
G&A	129,600	132,200	134,800	137,400	140,100
Total OpEx	**$ 414,100**	**$ 421,000**	**$ 428,000**	**$ 435,100**	**$ 442,300**
Management Fee	60,000	60,000	60,000	60,000	60,000
Net Operating Income (NOI)	**$ (51,500)**	**$ (32,100)**	**$ (16,700)**	**$ 6,000**	**$ 29,700**
Cap Leases - Interest	-	-	-	-	-
Depreciation & Amortization	109,000	109,000	109,000	109,000	109,000
Net Income	**$ (160,500)**	**$ (141,100)**	**$ (125,700)**	**$ (103,000)**	**$ (79,300)**
Addback Depreciation	$ 109,000	$ 109,000	$ 109,000	$ 109,000	$ 109,000
Net Operating Cash Flow	$ (51,500)	$ (32,100)	$ (16,700)	$ 6,000	$ 29,700
Cap Ex - Golf Course Ops	**$ 84,000**	**$ 142,400**	**$ 69,900**	**$ 44,000**	**$ 20,000**
Cash Flow after GC Cap Ex	**$ (135,500)**	**$ (174,500)**	**$ (86,600)**	**$ (38,000)**	**$ 9,700**
Cap Ex - Infrastructure	$ 482,700	$ 253,800	$ 279,800	$ 227,200	$ 160,000
Cash Flow after GC Cap Ex	**$ (618,200)**	**$ (428,300)**	**$ (366,400)**	**$ (265,200)**	**$ (150,300)**
Debt Service (ARCo)	$ 46,500	$ 62,100	$ 62,100	$ 62,100	$ 62,100
Net Cash Flow	**$ (664,700)**	**$ (490,400)**	**$ (428,500)**	**$ (327,300)**	**$ (212,400)**
Cumulative Cash Flow	**$ (664,700)**	**$ (1,155,100)**	**$ (1,583,600)**	**$ (1,910,900)**	**$ (2,123,300)**

Appendix A: Detailed 10-year Financial Projections (cont.)

Old Works Golf Club	2021 (P)	2022 (P)	2023 (P)	2024 (P)	2025 (P)
Rounds	**19,630**	**19,880**	**20,040**	**20,200**	**20,360**
Total Revenue / Round	**$ 88.59**	**$ 89.46**	**$ 90.10**	**$ 90.75**	**$ 91.40**
Revenue					
Annual Membership Fees	$ 113,900	$ 116,500	$ 118,600	$ 120,800	$ 122,900
Green Fees & Cart Fees	945,300	966,900	979,600	992,300	1,005,200
Driving Range	20,500	20,800	21,000	21,300	21,500
Lessons	3,500	3,600	3,600	3,600	3,700
Golf Schools	7,200	7,300	7,400	7,500	7,500
Merchandise	303,600	310,600	316,200	321,900	327,700
F&B	337,900	345,600	351,900	358,200	364,700
Other	7,100	7,200	7,400	7,500	7,600
Total Revenue	**$ 1,739,000**	**$ 1,778,500**	**$ 1,805,700**	**$ 1,833,100**	**$ 1,860,800**
Cost of Sales					
Merchandise	$ 185,200	$ 189,500	$ 192,900	$ 196,400	$ 199,900
F&B	118,300	121,000	123,200	125,400	127,600
Golf Instruction	2,100	2,200	2,200	2,200	2,200
Group Services	166,200	171,400	174,800	178,300	181,800
Total Cost of Sales	**$ 471,800**	**$ 484,100**	**$ 493,100**	**$ 502,300**	**$ 511,500**
Gross Profit	**$ 1,267,200**	**$ 1,294,400**	**$ 1,312,600**	**$ 1,330,800**	**$ 1,349,300**
Payroll					
Salaries & Wages	$ 572,500	$ 578,200	$ 584,000	$ 589,800	$ 595,700
Commissions/Tournament Sales	8,900	9,100	9,300	9,500	9,700
Payroll Taxes & Benefits	139,100	140,500	141,900	143,300	144,700
Total Payroll	**$ 720,500**	**$ 727,800**	**$ 735,200**	**$ 742,600**	**$ 750,100**
Operating Expenses					
Golf Shop	13,500	13,800	14,100	14,400	14,700
Golf Cart Operations	56,500	56,800	57,100	57,400	57,700
Clubhouse	4,400	4,500	4,600	4,700	4,800
F&B Operations	24,000	24,500	25,000	25,500	26,000
Maintenance	175,700	179,000	182,400	185,800	189,200
Marketing & Sales	32,900	33,200	33,500	33,800	34,100
G&A	142,800	145,600	148,400	151,300	154,300
Total OpEx	**$ 449,800**	**$ 457,400**	**$ 465,100**	**$ 472,900**	**$ 480,800**
Management Fee	75,000	75,000	75,000	75,000	75,000
Net Operating Income (NOI)	**$ 21,900**	**$ 34,200**	**$ 37,300**	**$ 40,300**	**$ 43,400**
Cap Leases - Interest	-	-	-	-	-
Depreciation & Amortization	109,000	109,000	109,000	109,000	109,000
Net Income	**$ (87,100)**	**$ (74,800)**	**$ (71,700)**	**$ (68,700)**	**$ (65,600)**
Addback Depreciation	$ 109,000	$ 109,000	$ 109,000	$ 109,000	$ 109,000
Net Operating Cash Flow	$ 21,900	$ 34,200	$ 37,300	$ 40,300	$ 43,400
Cap Ex - Golf Course Ops	**$ 57,000**	**$ 57,000**	**$ 17,000**	**$ 73,000**	**$ 20,000**
Cash Flow after GC Cap Ex	**$ (35,100)**	**$ (22,800)**	**$ 20,300**	**$ (32,700)**	**$ 23,400**
Cap Ex - Infrastructure	$ 157,000	$ 165,000	$ 165,000	$ 146,500	$ 160,000
Cash Flow after GC Cap Ex	**$ (192,100)**	**$ (187,800)**	**$ (144,700)**	**$ (179,200)**	**$ (136,600)**
Debt Service (ARCo)	$ 62,100	$ 62,100	$ 62,100	$ 62,100	$ 62,100
Net Cash Flow	**$ (254,200)**	**$ (249,900)**	**$ (206,800)**	**$ (241,300)**	**$ (198,700)**
Cumulative Cash Flow	**$ (2,377,500)**	**$ (2,627,400)**	**$ (2,834,200)**	**$ (3,075,500)**	**$ (3,274,200)**

Appendix B: 50-year Capital Improvements Plan

Golf Course Infrastructure	2015	2016	2017	2018	2019	2015-2019
Golf Course						
Bridges	$ -	$ -	$ 45,000	$ -	$ -	$ 45,000
Bunker Renovations	-	25,000	25,000	25,000	-	75,000
Electronics	-	-	-	-	2,500	2,500
Fairway Sanding/Renovations	-	5,000	5,000	5,000	-	15,000
Fencing/Gates	-	1,000	-	-	1,000	2,000
Golf Course Drainage System	-	-	1,000	-	1,000	2,000
Irrigation System & Pumps	25,000	50,000	50,000	50,000	50,000	225,000
Maintenance Equipment	86,371	-	9,274	-	-	95,645
Misc. Golf Course Equipment	-	68,937	7,245	25,374	7,687	109,243
Mowers	-	12,020	-	96,718	-	108,738
Paving (Parking lot & Cart Paths)	-	50,000	50,000	25,000	25,000	150,000
Runabouts	21,855	7,316	-	-	-	29,170
Tee Leveling/Renovations	7,500	-	10,000	-	10,000	27,500
Turf Rehab/Native Areas	1,500	10,000	-	10,000	-	21,500
Utility Vehicles	83,047	28,138	16,230	22,687	-	150,102
Maintenance Building						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	-	5,000	-	-	5,000
Fire Systems	-	-	-	-	500	500
Lighting	-	-	-	5,000	-	5,000
Office Furniture	-	-	-	-	500	500
Paving (Parking lot)	-	-	30,083	-	122,987	153,071
Roofing	-	-	-	-	5,000	5,000
Refurbishment	-	-	-	15,000	-	15,000
GC Infrastructure s.t.	**$ 225,273**	**$ 257,411**	**$ 253,833**	**$ 279,779**	**$ 227,174**	**$ 1,243,469**
Golf Course Operations	**2015**	**2016**	**2017**	**2018**	**2019**	**2015-2019**
GC Amenities (ball washers, etc)	$ -	$ 15,000	$ -	$ -	$ -	$ 15,000
On-course Restrooms	-	-	25,000	-	-	25,000
Signage	-	5,000	-	5,000	-	10,000
Tree Planting/Veg Maintenance	-	1,000	1,000	1,000	1,000	4,000
Clubhouse Improvements						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	1,000	1,000	1,000	1,000	4,000
Fire Systems	-	-	-	-	500	500
Flooring	-	-	20,000	-	20,000	40,000
HVAC	-	10,000	-	-	10,000	20,000
Kitchen Equipment	7,000	-	-	17,911	-	24,911
Interior Finishes	-	-	-	-	1,000	1,000
Lighting	-	-	-	25,000	-	25,000
Office Equipment	-	-	-	-	5,000	5,000
Office Furniture	-	-	-	-	1,000	1,000
Paint	-	-	-	-	1,000	1,000
Plumbing	-	5,000	-	-	-	5,000
Refurbishment	-	40,000	20,000	20,000	-	80,000
Roofing	-	-	75,353	-	-	75,353
Windows/Window Treatments	-	-	-	-	2,500	2,500
GC Operations s.t.	**$ 7,000**	**$ 77,000**	**$ 142,353**	**$ 69,911**	**$ 44,000**	**$ 340,264**
Total CIP	**$ 232,273**	**$ 334,411**	**$ 396,185**	**$ 349,690**	**$ 271,174**	**$ 1,583,733**

Appendix B: 50-year Capital Improvements Plan (cont.)

Golf Course Infrastructure	2020	2021	2022	2023	2024	2020-2024
Golf Course						
Bridges	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Bunker Renovations	25,000	-	25,000	-	25,000	75,000
Electronics	-	-	-	-	2,500	2,500
Fairway Sanding/Renovations	5,000	-	5,000	-	5,000	15,000
Fencing/Gates	-	1,000	-	-	1,000	2,000
Golf Course Drainage System	-	1,000	-	-	1,000	2,000
Irrigation System & Pumps	25,000	25,000	25,000	25,000	-	100,000
Maintenance Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Misc. Golf Course Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Mowers	20,000	20,000	20,000	20,000	20,000	100,000
Paving (Parking lot & Cart Paths)	10,000	10,000	10,000	10,000	10,000	50,000
Runabouts	-	10,000	-	-	-	10,000
Tee Leveling/Renovations	10,000	-	10,000	-	10,000	30,000
Turf Rehab/Native Areas		10,000	-	10,000	-	20,000
Utility Vehicles	10,000	10,000	10,000	10,000	10,000	50,000
Maintenance Building						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	-	5,000	-	-	5,000
Fire Systems	-	-	-	-	500	500
Lighting	-	-	-	5,000	-	5,000
Office Furniture	-	-	-	-	500	500
Paving (Parking lot)	-	15,000	-	15,000	-	30,000
Roofing	-	-	-	-	5,000	5,000
Refurbishment	-	-	-	15,000	-	15,000
GC Infrastructure s.t.	**$ 160,000**	**$ 157,000**	**$ 165,000**	**$ 165,000**	**$ 146,500**	**$ 793,500**
Golf Course Operations	**2020**	**2021**	**2022**	**2023**	**2024**	**2020-2024**
GC Amenities (ball washers, etc)	$ -	$ 15,000	$ -	$ -	$ -	$ 15,000
On-course Restrooms	-	-	15,000	-	-	15,000
Signage	-	5,000	-	5,000	-	10,000
Tree Planting/Veg Maintenance	-	1,000	1,000	1,000	1,000	4,000
Clubhouse Improvements						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	1,000	1,000	1,000	1,000	4,000
Fire Systems	-	-	-	-	500	500
Flooring	-	-	20,000	-	20,000	40,000
HVAC	-	10,000	-	-	10,000	20,000
Kitchen Equipment	10,000	-	10,000	-	10,000	30,000
Interior Finishes	-	-	-	-	2,500	2,500
Lighting	-	-	-	5,000	-	5,000
Office Equipment	-	-	-	-	5,000	5,000
Office Furniture	-	-	-	-	1,000	1,000
Paint	-	-	-	-	1,000	1,000
Plumbing	-	5,000	-	-	5,000	10,000
Refurbishment	-	20,000	-	5,000	-	25,000
Roofing	10,000	-	10,000	-	10,000	30,000
Windows/Window Treatments	-	-	-	-	5,000	5,000
GC Operations s.t.	**$ 20,000**	**$ 57,000**	**$ 57,000**	**$ 17,000**	**$ 73,000**	**$ 224,000**
Total CIP	**$ 180,000**	**$ 214,000**	**$ 222,000**	**$ 182,000**	**$ 219,500**	**$ 1,017,500**

Golf Course Infrastructure	2025	2026	2027	2028	2029	2025-2029
Golf Course						
Bridges	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Bunker Renovations	25,000	-	25,000	-	25,000	75,000
Electronics	-	-	-	-	2,500	2,500
Fairway Sanding/Renovations	5,000	-	5,000	-	5,000	15,000
Fencing/Gates	-	1,000	-	-	1,000	2,000
Golf Course Drainage System	-	1,000	-	-	1,000	2,000
Irrigation System & Pumps	25,000	25,000	25,000	25,000	-	100,000
Maintenance Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Misc. Golf Course Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Mowers	20,000	20,000	20,000	20,000	20,000	100,000
Paving (Parking lot & Cart Paths)	10,000	10,000	10,000	10,000	10,000	50,000
Runabouts	-	10,000	-	-	-	10,000
Tee Leveling/Renovations	10,000	-	10,000	-	10,000	30,000
Turf Rehab/Native Areas		10,000	-	10,000	-	20,000
Utility Vehicles	10,000	10,000	10,000	10,000	10,000	50,000
Maintenance Building						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	-	5,000	-	-	5,000
Fire Systems	-	-	-	-	500	500
Lighting	-	-	-	5,000	-	5,000
Office Furniture	-	-	-	-	500	500
Paving (Parking lot)	-	15,000	-	15,000	-	30,000
Roofing	-	-	-	-	5,000	5,000
Refurbishment	-	-	-	15,000	-	15,000
GC Infrastructure s.t.	**$ 160,000**	**$ 157,000**	**$ 165,000**	**$ 165,000**	**$ 146,500**	**$ 793,500**
Golf Course Operations	**2025**	**2026**	**2027**	**2028**	**2029**	**2025-2029**
On-course Amenities (ball	$ -	$ 15,000	$ -	$ -	$ -	$ 15,000
On-course Restrooms	-	-	15,000	-	-	15,000
Signage	-	5,000	-	5,000	-	10,000
Tree Planting/Veg Maintenance	-	1,000	1,000	1,000	1,000	4,000
Clubhouse Improvements						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	1,000	1,000	1,000	1,000	4,000
Fire Systems	-	-	-	-	500	500
Flooring	-	-	20,000	-	20,000	40,000
HVAC	-	10,000	-	-	10,000	20,000
Kitchen Equipment	10,000	-	10,000	-	10,000	30,000
Interior Finishes	-	-	-	-	2,500	2,500
Lighting	-	-	-	5,000	-	5,000
Office Equipment	-	-	-	-	5,000	5,000
Office Furniture	-	-	-	-	1,000	1,000
Paint	-	-	-	-	1,000	1,000
Plumbing	-	5,000	-	-	-	5,000
Refurbishment	-	20,000	-	5,000	-	25,000
Roofing	10,000	10,000	-	10,000	-	30,000
Windows/Window Treatments	-	-	-	-	5,000	5,000
GC Operations s.t.	**$ 20,000**	**$ 67,000**	**$ 47,000**	**$ 27,000**	**$ 58,000**	**$ 219,000**
Total CIP	**$ 180,000**	**$ 224,000**	**$ 212,000**	**$ 192,000**	**$ 204,500**	**$ 1,012,500**

Golf Course Infrastructure	2030	2031	2032	2033	2034	2030-2034
Golf Course						
Bridges	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Bunker Renovations	25,000	-	25,000	-	25,000	75,000
Electronics	-	-	-	-	2,500	2,500
Fairway Sanding/Renovations	5,000	-	5,000	-	5,000	15,000
Fencing/Gates	-	1,000	-	-	1,000	2,000
Golf Course Drainage System	-	-	1,000	-	1,000	2,000
Irrigation System & Pumps	25,000	25,000	25,000	25,000	-	100,000
Maintenance Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Misc. Golf Course Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Mowers	20,000	20,000	20,000	20,000	20,000	100,000
Paving (Parking lot & Cart Paths)	10,000	10,000	10,000	10,000	10,000	50,000
Runabouts	-	10,000	-	-	-	10,000
Tee Leveling/Renovations	10,000	-	10,000	-	10,000	30,000
Turf Rehab/Native Areas		10,000	-	10,000	-	20,000
Utility Vehicles	10,000	10,000	10,000	10,000	10,000	50,000
Maintenance Building						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	-	5,000	-	-	5,000
Fire Systems	-	-	-	-	500	500
Lighting	-	-	-	5,000	-	5,000
Office Furniture	-	-	-	-	500	500
Paving (Parking lot)	-	15,000	-	15,000	-	30,000
Roofing	-	-	-	-	5,000	5,000
Refurbishment	-	-	-	15,000	-	15,000
GC Infrastructure s.t.	**$ 160,000**	**$ 156,000**	**$ 166,000**	**$ 165,000**	**$ 146,500**	**$ 793,500**
Golf Course Operations	**2030**	**2031**	**2032**	**2033**	**2034**	**2030-2034**
On-course Amenities (ball	$ -	$ 15,000	$ -	$ -	$ -	$ 15,000
On-course Restrooms	-	-	15,000	-	-	15,000
Signage	-	5,000	-	5,000	-	10,000
Tree Planting/Veg Maintenance	-	1,000	1,000	1,000	1,000	4,000
Clubhouse Improvements						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	1,000	1,000	1,000	1,000	4,000
Fire Systems	-	-	-	-	500	500
Flooring	-	-	20,000	-	20,000	40,000
HVAC	-	10,000	-	-	10,000	20,000
Kitchen Equipment	10,000	-	10,000	-	10,000	30,000
Interior Finishes	-	-	-	-	2,500	2,500
Lighting	-	-	-	5,000	-	5,000
Office Equipment	-	-	-	-	5,000	5,000
Office Furniture	-	-	-	-	1,000	1,000
Paint	-	-	-	-	1,000	1,000
Plumbing	-	5,000	-	-	-	5,000
Refurbishment	-	20,000	-	5,000	-	25,000
Roofing	10,000	10,000	-	10,000	-	30,000
Windows/Window Treatments	-	-	-	-	5,000	5,000
GC Operations s.t.	**$ 20,000**	**$ 67,000**	**$ 47,000**	**$ 27,000**	**$ 58,000**	**$ 219,000**
Total CIP	**$ 180,000**	**$ 223,000**	**$ 213,000**	**$ 192,000**	**$ 204,500**	**$ 1,012,500**

Golf Course Infrastructure	2035	2036	2037	2038	2039	2035-2039
Golf Course						
Bridges	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Bunker Renovations	25,000	-	25,000	-	25,000	75,000
Electronics	-	-	-	-	2,500	2,500
Fairway Sanding/Renovations	5,000	-	5,000	-	5,000	15,000
Fencing/Gates	-	1,000	-	-	1,000	2,000
Golf Course Drainage System	-	1,000	-	-	1,000	2,000
Irrigation System & Pumps	25,000	25,000	25,000	25,000	-	100,000
Maintenance Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Misc. Golf Course Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Mowers	20,000	20,000	20,000	20,000	20,000	100,000
Paving (Parking lot & Cart Paths)	10,000	10,000	10,000	10,000	10,000	50,000
Runabouts	-	10,000	-	-	-	10,000
Tee Leveling/Renovations	10,000	-	10,000	-	10,000	30,000
Turf Rehab/Native Areas		10,000	-	10,000	-	20,000
Utility Vehicles	10,000	10,000	10,000	10,000	10,000	50,000
Maintenance Building						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	-	5,000	-	-	5,000
Fire Systems	-	-	-	-	500	500
Lighting	-	-	-	5,000	-	5,000
Office Furniture	-	-	-	-	500	500
Paving (Parking lot)	-	15,000	-	15,000	-	30,000
Roofing	-	-	-	-	5,000	5,000
Refurbishment	-	-	-	15,000	-	15,000
GC Infrastructure s.t.	**$ 160,000**	**$ 157,000**	**$ 165,000**	**$ 165,000**	**$ 146,500**	**$ 793,500**

Golf Course Operations	2035	2036	2037	2038	2039	2035-2039
On-course Amenities (ball	$ -	$ 15,000	$ -	$ -	$ -	$ 15,000
On-course Restrooms	-	-	15,000	-	-	15,000
Signage	-	5,000	-	5,000	-	10,000
Tree Planting/Veg Maintenance	-	1,000	1,000	1,000	1,000	4,000
Clubhouse Improvements						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	1,000	1,000	1,000	1,000	4,000
Fire Systems	-	-	-	-	500	500
Flooring	-	-	20,000	-	20,000	40,000
HVAC	-	10,000	-	-	10,000	20,000
Kitchen Equipment	10,000	-	10,000	-	10,000	30,000
Interior Finishes	-	-	-	-	2,500	2,500
Lighting	-	-	-	5,000	-	5,000
Office Equipment	-	-	-	-	5,000	5,000
Office Furniture	-	-	-	-	1,000	1,000
Paint	-	-	-	-	1,000	1,000
Plumbing	-	5,000	-	-	-	5,000
Refurbishment	-	20,000	-	5,000	-	25,000
Roofing	10,000	10,000	-	10,000	-	30,000
Windows/Window Treatments	-	-	-	-	5,000	5,000
GC Operations s.t.	**$ 20,000**	**$ 67,000**	**$ 47,000**	**$ 27,000**	**$ 58,000**	**$ 219,000**
Total CIP	**$ 180,000**	**$ 224,000**	**$ 212,000**	**$ 192,000**	**$ 204,500**	**$ 1,012,500**

Golf Course Infrastructure	2040	2041	2042	2043	2044	2040-2044
Golf Course						
Bridges	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Bunker Renovations	25,000	-	25,000	-	25,000	75,000
Electronics	-	-	-	-	2,500	2,500
Fairway Sanding/Renovations	5,000	-	5,000	-	5,000	15,000
Fencing/Gates	-	1,000	-	-	1,000	2,000
Golf Course Drainage System	-	-	1,000	-	1,000	2,000
Irrigation System & Pumps	25,000	25,000	25,000	25,000	-	100,000
Maintenance Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Misc. Golf Course Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Mowers	20,000	20,000	20,000	20,000	20,000	100,000
Paving (Parking lot & Cart Paths)	10,000	10,000	10,000	10,000	10,000	50,000
Runabouts	-	10,000	-	-	-	10,000
Tee Leveling/Renovations	10,000	-	10,000	-	10,000	30,000
Turf Rehab/Native Areas		10,000	-	10,000	-	20,000
Utility Vehicles	10,000	10,000	10,000	10,000	10,000	50,000
Maintenance Building						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	-	5,000	-	-	5,000
Fire Systems	-	-	-	-	500	500
Lighting	-	-	-	5,000	-	5,000
Office Furniture	-	-	-	-	500	500
Paving (Parking lot)	-	15,000	-	15,000	-	30,000
Roofing	-	-	-	-	5,000	5,000
Refurbishment	-	-	-	15,000	-	15,000
GC Infrastructure s.t.	**$ 160,000**	**$ 156,000**	**$ 166,000**	**$ 165,000**	**$ 146,500**	**$ 793,500**
Golf Course Operations	**2040**	**2041**	**2042**	**2043**	**2044**	**2040-2044**
On-course Amenities (ball	$ -	$ 15,000	$ -	$ -	$ -	$ 15,000
On-course Restrooms	-	-	15,000	-	-	15,000
Signage	-	5,000	-	5,000	-	10,000
Tree Planting/Veg Maintenance	-	1,000	1,000	1,000	1,000	4,000
Clubhouse Improvements						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	1,000	1,000	1,000	1,000	4,000
Fire Systems	-	-	-	-	500	500
Flooring	-	-	20,000	-	20,000	40,000
HVAC	-	10,000	-	-	10,000	20,000
Kitchen Equipment	10,000	-	10,000	-	10,000	30,000
Interior Finishes	-	-	-	-	2,500	2,500
Lighting	-	-	-	5,000	-	5,000
Office Equipment	-	-	-	-	5,000	5,000
Office Furniture	-	-	-	-	1,000	1,000
Paint	-	-	-	-	1,000	1,000
Plumbing	-	5,000	-	-	-	5,000
Refurbishment	-	20,000	-	5,000	-	25,000
Roofing	10,000	10,000	-	10,000	-	30,000
Windows/Window Treatments	-	-	-	-	5,000	5,000
GC Operations s.t.	**$ 20,000**	**$ 67,000**	**$ 47,000**	**$ 27,000**	**$ 58,000**	**$ 219,000**
Total CIP	**$ 180,000**	**$ 223,000**	**$ 213,000**	**$ 192,000**	**$ 204,500**	**$ 1,012,500**

Golf Course Infrastructure	2045	2046	2047	2048	2049	2045-2049
Golf Course						
Bridges	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Bunker Renovations	25,000	-	25,000	-	25,000	75,000
Electronics	-	-	-	-	2,500	2,500
Fairway Sanding/Renovations	5,000	-	5,000	-	5,000	15,000
Fencing/Gates	-	1,000	-	-	1,000	2,000
Golf Course Drainage System	-	-	1,000	-	1,000	2,000
Irrigation System & Pumps	25,000	25,000	25,000	25,000	-	100,000
Maintenance Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Misc. Golf Course Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Mowers	20,000	20,000	20,000	20,000	20,000	100,000
Paving (Parking lot & Cart Paths)	10,000	10,000	10,000	10,000	10,000	50,000
Runabouts	-	10,000	-	-	-	10,000
Tee Leveling/Renovations	10,000	-	10,000	-	10,000	30,000
Turf Rehab/Native Areas		10,000	-	10,000	-	20,000
Utility Vehicles	10,000	10,000	10,000	10,000	10,000	50,000
Maintenance Building						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	-	5,000	-	-	5,000
Fire Systems	-	-	-	-	500	500
Lighting	-	-	-	5,000	-	5,000
Office Furniture	-	-	-	-	500	500
Paving (Parking lot)	-	15,000	-	15,000	-	30,000
Roofing	-	-	-	-	5,000	5,000
Refurbishment	-	-	-	15,000	-	15,000
GC Infrastructure s.t.	**$ 160,000**	**$ 156,000**	**$ 166,000**	**$ 165,000**	**$ 146,500**	**$ 793,500**
Golf Course Operations	**2045**	**2046**	**2047**	**2048**	**2049**	**2045-2049**
On-course Amenities (ball	$ -	$ 15,000	$ -	$ -	$ -	$ 15,000
On-course Restrooms	-	-	15,000	-	-	15,000
Signage	-	5,000	-	5,000	-	10,000
Tree Planting/Veg Maintenance	-	1,000	1,000	1,000	1,000	4,000
Clubhouse Improvements						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	1,000	1,000	1,000	1,000	4,000
Fire Systems	-	-	-	-	500	500
Flooring	-	-	20,000	-	20,000	40,000
HVAC	-	10,000	-	-	10,000	20,000
Kitchen Equipment	10,000	-	10,000	-	10,000	30,000
Interior Finishes	-	-	-	-	2,500	2,500
Lighting	-	-	-	5,000	-	5,000
Office Equipment	-	-	-	-	5,000	5,000
Office Furniture	-	-	-	-	1,000	1,000
Paint	-	-	-	-	1,000	1,000
Plumbing	-	5,000	-	-	-	5,000
Refurbishment	-	20,000	-	5,000	-	25,000
Roofing	10,000	10,000	-	10,000	-	30,000
Windows/Window Treatments	-	-	-	-	5,000	5,000
GC Operations s.t.	**$ 20,000**	**$ 67,000**	**$ 47,000**	**$ 27,000**	**$ 58,000**	**$ 219,000**
Total CIP	**$ 180,000**	**$ 223,000**	**$ 213,000**	**$ 192,000**	**$ 204,500**	**$ 1,012,500**

Golf Course Infrastructure	2050	2051	2052	2053	2054	2050-2054
Golf Course						
Bridges	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Bunker Renovations	25,000	-	25,000	-	25,000	75,000
Electronics	-	-	-	-	2,500	2,500
Fairway Sanding/Renovations	5,000	-	5,000	-	5,000	15,000
Fencing/Gates	-	1,000	-	-	1,000	2,000
Golf Course Drainage System	-	1,000	-	-	1,000	2,000
Irrigation System & Pumps	25,000	25,000	25,000	25,000	-	100,000
Maintenance Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Misc. Golf Course Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Mowers	20,000	20,000	20,000	20,000	20,000	100,000
Paving (Parking lot & Cart Paths)	10,000	10,000	10,000	10,000	10,000	50,000
Runabouts	-	10,000	-	-	-	10,000
Tee Leveling/Renovations	10,000	-	10,000	-	10,000	30,000
Turf Rehab/Native Areas		10,000	-	10,000	-	20,000
Utility Vehicles	10,000	10,000	10,000	10,000	10,000	50,000
Maintenance Building						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	-	5,000	-	-	5,000
Fire Systems	-	-	-	-	500	500
Lighting	-	-	-	5,000	-	5,000
Office Furniture	-	-	-	-	500	500
Paving (Parking lot)	-	15,000	-	15,000	-	30,000
Roofing	-	-	-	-	5,000	5,000
Refurbishment	-	-	-	15,000	-	15,000
GC Infrastructure s.t.	**$ 160,000**	**$ 157,000**	**$ 165,000**	**$ 165,000**	**$ 146,500**	**$ 793,500**
Golf Course Operations	**2050**	**2051**	**2052**	**2053**	**2054**	**2050-2054**
On-course Amenities (ball	$ -	$ 15,000	$ -	$ -	$ -	$ 15,000
On-course Restrooms	-	-	15,000	-	-	15,000
Signage	-	5,000	-	5,000	-	10,000
Tree Planting/Veg Maintenance	-	1,000	1,000	1,000	1,000	4,000
Clubhouse Improvements						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	1,000	1,000	1,000	1,000	4,000
Fire Systems	-	-	-	-	500	500
Flooring	-	-	20,000	-	20,000	40,000
HVAC	-	10,000	-	-	10,000	20,000
Kitchen Equipment	10,000	-	10,000	-	10,000	30,000
Interior Finishes	-	-	-	-	2,500	2,500
Lighting	-	-	-	5,000	-	5,000
Office Equipment	-	-	-	-	5,000	5,000
Office Furniture	-	-	-	-	1,000	1,000
Paint	-	-	-	-	1,000	1,000
Plumbing	-	5,000	-	-	-	5,000
Refurbishment	-	20,000	-	5,000	-	25,000
Roofing	10,000	10,000	-	10,000	-	30,000
Windows/Window Treatments	-	-	-	-	5,000	5,000
GC Operations s.t.	**$ 20,000**	**$ 67,000**	**$ 47,000**	**$ 27,000**	**$ 58,000**	**$ 219,000**
Total CIP	**$ 180,000**	**$ 224,000**	**$ 212,000**	**$ 192,000**	**$ 204,500**	**$ 1,012,500**

Golf Course Infrastructure	2055	2056	2057	2058	2059	2055-2059
Golf Course						
Bridges	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Bunker Renovations	25,000	-	25,000	-	25,000	75,000
Electronics	-	-	-	-	2,500	2,500
Fairway Sanding/Renovations	5,000	-	5,000	-	5,000	15,000
Fencing/Gates	-	1,000	-	-	1,000	2,000
Golf Course Drainage System	-	1,000	-	-	1,000	2,000
Irrigation System & Pumps	25,000	25,000	25,000	25,000	-	100,000
Maintenance Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Misc. Golf Course Equipment	25,000	25,000	25,000	25,000	25,000	125,000
Mowers	20,000	20,000	20,000	20,000	20,000	100,000
Paving (Parking lot & Cart Paths)	10,000	10,000	10,000	10,000	10,000	50,000
Runabouts	-	10,000	-	-	-	10,000
Tee Leveling/Renovations	10,000	-	10,000	-	10,000	30,000
Turf Rehab/Native Areas		10,000	-	10,000	-	20,000
Utility Vehicles	10,000	10,000	10,000	10,000	10,000	50,000
Maintenance Building						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	-	5,000	-	-	5,000
Fire Systems	-	-	-	-	500	500
Lighting	-	-	-	5,000	-	5,000
Office Furniture	-	-	-	-	500	500
Paving (Parking lot)	-	15,000	-	15,000	-	30,000
Roofing	-	-	-	-	5,000	5,000
Refurbishment	-	-	-	15,000	-	15,000
GC Infrastructure s.t.	**$ 160,000**	**$ 157,000**	**$ 165,000**	**$ 165,000**	**$ 146,500**	**$ 793,500**
Golf Course Operations	**2055**	**2056**	**2057**	**2058**	**2059**	**2055-2059**
On-course Amenities (ball	$ -	$ 15,000	$ -	$ -	$ -	$ 15,000
On-course Restrooms	-	-	15,000	-	-	15,000
Signage	-	5,000	-	5,000	-	10,000
Tree Planting/Veg Maintenance	-	1,000	1,000	1,000	1,000	4,000
Clubhouse Improvements						
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ 1,000
Computers	-	1,000	1,000	1,000	1,000	4,000
Fire Systems	-	-	-	-	500	500
Flooring	-	-	20,000	-	20,000	40,000
HVAC	-	10,000	-	-	10,000	20,000
Kitchen Equipment	10,000	-	10,000	-	10,000	30,000
Interior Finishes	-	-	-	-	2,500	2,500
Lighting	-	-	-	5,000	-	5,000
Office Equipment	-	-	-	-	5,000	5,000
Office Furniture	-	-	-	-	1,000	1,000
Paint	-	-	-	-	1,000	1,000
Plumbing	-	5,000	-	-	-	5,000
Refurbishment	-	20,000	-	5,000	-	25,000
Roofing	10,000	10,000	-	10,000	-	30,000
Windows/Window Treatments	-	-	-	-	5,000	5,000
GC Operations s.t.	**$ 20,000**	**$ 67,000**	**$ 47,000**	**$ 27,000**	**$ 58,000**	**$ 219,000**
Total CIP	**$ 180,000**	**$ 224,000**	**$ 212,000**	**$ 192,000**	**$ 204,500**	**$ 1,012,500**

Appendix B: 50-year Capital Improvements Plan (cont.)

Golf Course Infrastructure	2060	2061	2062	2063	2064	2065	2060-2065
Golf Course							
Bridges	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 30,000
Bunker Renovations	25,000	-	25,000	-	25,000	-	75,000
Electronics	-	-	-	-	1,000	2,500	3,500
Fairway Sanding/Renovations	5,000	-	5,000	-	5,000	-	15,000
Fencing/Gates	-	1,000	-	-	1,000	-	2,000
Golf Course Drainage System	-	1,000	-	-	1,000	-	2,000
Irrigation System & Pumps	25,000	25,000	25,000	-	25,000	-	100,000
Maintenance Equipment	25,000	25,000	25,000	25,000	25,000	25,000	150,000
Misc. Golf Course Equipment	25,000	25,000	25,000	25,000	25,000	25,000	150,000
Mowers	20,000	20,000	20,000	20,000	20,000	20,000	120,000
Paving (Parking lot & Cart Paths)	10,000	10,000	10,000	10,000	10,000	10,000	60,000
Runabouts	-	10,000	-	-	-	-	10,000
Tee Leveling/Renovations	10,000	-	10,000	-	10,000	-	30,000
Turf Rehab/Native Areas		10,000	-	10,000	-	10,000	30,000
Utility Vehicles	10,000	10,000	10,000	10,000	10,000	10,000	60,000
Maintenance Building							
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ -	$ 1,000
Computers	-	-	5,000	-	-	-	5,000
Fire Systems	-	-	-	-	500	-	500
Lighting	-	-	-	5,000	-	5,000	10,000
Office Furniture	-	-	-	-	500	-	500
Paving (Parking lot)	-	15,000	-	15,000	-	15,000	45,000
Roofing	-	-	-	-	5,000	-	5,000
Refurbishment	-	-	-	15,000	-	-	15,000
GC Infrastructure s.t.	**$ 160,000**	**$ 157,000**	**$ 165,000**	**$ 140,000**	**$ 170,000**	**$ 127,500**	**$ 919,500**
Golf Course Operations	**2060**	**2061**	**2062**	**2063**	**2064**	**2065**	**2060-2065**
On-course Amenities (ball	$ -	$ 15,000	$ -	$ -	$ -	$ -	$ 15,000
On-course Restrooms	-	-	15,000	-	-	-	15,000
Signage	-	5,000	-	5,000	-	5,000	15,000
Tree Planting/Veg Maintenance	-	1,000	1,000	1,000	1,000	1,000	5,000
Clubhouse Improvements							
Communications	$ -	$ -	$ -	$ -	$ 1,000	$ -	$ 1,000
Computers	-	1,000	1,000	1,000	1,000	1,000	5,000
Fire Systems	-	-	-	-	500	-	500
Flooring	-	-	20,000	-	20,000	-	40,000
HVAC	-	10,000	-	-	10,000	-	20,000
Kitchen Equipment	10,000	-	10,000	-	10,000	-	30,000
Interior Finishes	-	-	-	-	2,500	-	2,500
Lighting	-	-	-	5,000	-	5,000	10,000
Office Equipment	-	-	-	-	5,000	-	5,000
Office Furniture	-	-	-	-	1,000	-	1,000
Paint	-	-	-	-	1,000	-	1,000
Plumbing	-	5,000	-	-	-	-	5,000
Refurbishment	-	20,000	-	5,000	-	-	25,000
Roofing	10,000	10,000	-	10,000	10,000	-	40,000
Windows/Window Treatments	-	-	-	-	5,000	-	5,000
GC Operations s.t.	**$ 20,000**	**$ 67,000**	**$ 47,000**	**$ 27,000**	**$ 68,000**	**$ 12,000**	**$ 241,000**
Total CIP	**$ 180,000**	**$ 224,000**	**$ 212,000**	**$ 167,000**	**$ 238,000**	**$ 139,500**	**$ 1,160,500**

Exhibit 10
(Golf Course Superfund O&M Annual Performance Evaluation Report Form)

Anaconda Smelter NPL Site
Old Works Golf Course Superfund O&M
Annual Performance Evaluation Report
(Reporting Period 20__ to 20__)

1.0 Did ADLC fully implement all activities required of ADLC pursuant to the Old Works Golf Course Superfund O&M Plan?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies
Corrective Actions
Corrective Actions Completed by ADLC
Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

2.0 Did ADLC comply with all reporting requirements under the Old Works Golf Course Superfund O&M Plan?

☐ No Deficiencies
☐ Deficient

Deficiencies
Description of the Deficiencies that need to be addressed
Recommendations to remedy the deficiencies

Anaconda Smelter NPL Site
Old Works Golf Course Superfund O&M
Annual Performance Evaluation Report
(Reporting Period 20__ to 20__)

Corrective Actions
Corrective Actions Completed by ADLC
Reviewer
☐ **Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____

☐ **All Deficiencies have been satisfactorily remedied**
Reviewer: Signature: _____ Date:_____
Annual Review Completed By:
Reviewer: Signature: _____ Date:_____

Exhibit 11
(Development Repository O&M Plan)

ANACONDA SMELTER NPL SITE
ANACONDA REGIONAL WATER, WASTE & SOILS OPERABLE UNIT

Final

Anaconda Smelter Development Repository Operation and Management (O&M) Plan

Revision 1

Atlantic Richfield Company

January 9, 2009

ANACONDA SMELTER NPL SITE
ANACONDA REGIONAL WATER, WASTE & SOILS OPERABLE UNIT

Final

Anaconda Smelter Development Repository Operation and Management (O&M) Plan

Revision 1

Prepared for:

Atlantic Richfield Company
317 Anaconda Road
Butte, Montana 59701

Prepared by:

Pioneer Technical Services, Inc.
P.O. Box 3445
Butte, Montana 59702

January 9, 2009

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1.0 INTRODUCTION

The purpose of this Anaconda Smelter Development Repository Operation and Management (O&M) Plan is to present the procedures for operating and managing the Anaconda Smelter Development Repository. The Anaconda Smelter Development Repository has been established to dispose of mining- and smelting-related wastes and metals-impacted soils obtained from removal, remedial or general construction conducted within the Anaconda Smelter National Priorities List (NPL) Site. Material from other NPL sites may not be placed in the Anaconda Smelter Development Repository without prior approval by the U.S. Environmental Protection Agency (EPA) and Atlantic Richfield Company (Atlantic Richfield). Atlantic Richfield or its designee will operate the Anaconda Smelter Development Repository to dispose of waste material generated from remedial activities conducted within the Anaconda Smelter NPL Site and materials subject to the Superfund Planning Area Overlay District (SPAOD) portion of the Anaconda-Deer Lodge County (ADLC) Development Permit System (DPS) regulations.

2.0 ANACONDA SMELTER DEVELOPMENT REPOSITORY LOCATION

The Anaconda Smelter Development Repository is located approximately 4 miles east of Anaconda, Montana, near the intersection of Montana Highway 48 and Montana Highway 1, within the Northeast ¼ of Section 5, Township 4 North Range 10 West, as shown on Figure 1. The Anaconda Smelter Development Repository encompasses approximately 21 acres and lays within the northern portion of the Opportunity Ponds A-Cell complex, as shown on Figure 2. The Anaconda Smelter Development Repository may be accessed from Anaconda by heading east along Montana Highway 1 approximately 2.25 miles and turning left on the Opportunity Ponds access road (dirt road) through a secured gate and traveling approximately 1.5 miles.

3.0 ANACONDA SMELTER DEVELOPMENT REPOSITORY DESIGN

The boundary and dimensions of the Anaconda Smelter Development Repository within the A.9 Sub-cell of the Opportunity Ponds are shown on Figure 2. The final grade of the Anaconda Smelter Development Repository, or final elevation to which materials will be placed and graded, is anticipated to be four feet below the final grade of the A.9 Cell south perimeter dike. Using this grading regime (remaining 4 feet below the grade of the South A.9 Cell perimeter dike), the final grade of the Anaconda Smelter Development Repository will slope from west to east at roughly a 0.1% slope from an elevation of approximately 5,056 feet on the western boundary to an elevation of approximately 5,052 feet on the eastern boundary, as shown on Figure 3. Using this final repository grade along with the current site topography within the repository footprint, the capacity within the repository is approximately 277,581 cubic yards (cy). The remaining capacity is reserved primarily for waste materials generated from development within the Anaconda Smelter NPL Site through the DPS.

Wastes will be disposed within the Anaconda Smelter Development Repository to the final contour elevations shown on Figure 3 according to the disposal procedures and grading requirements shown on Figure 4 and also described in Section 4.3.3. The Anaconda Smelter Development Repository has been divided into three 7-acre sub-cells to help guide disposal operations and allow for routine closure of filled portions of the repository, which is also shown

on Figure 3. When a sub-cell of the Anaconda Smelter Development Repository is filled to final grade, a final vegetative cover will be installed over the wastes to "close" areas and contain the waste materials, as described in Section 5.0. Closure of filled portions of the repository will include the formation of a Plant Water Retention Basin berm around the perimeter of the 7-acre sub-cell for storm water control. This feature is consistent with the interior storm water control design for the remainder of the Opportunity Ponds project, which is addressed in detail in the *Final Opportunity Ponds Remedial Design Unit (RDU) 8 Remedial Action Work Plan/Final Design Report (RAWP/FDR)* (Atlantic Richfield Company, 2006). Details regarding how and when to implement final closure, the installation of final cover, and the configuration and installation requirements of Plant Water Retention Basins, are included in Section 5.0. The final vegetative cover will be maintained, as necessary, under the approved Anaconda Regional Water, Waste and Soils (ARWW&S) Operable Unit (OU) Vegetation Management Plan, as outlined in Section 6.0.

Between 2001 and 2006, an estimated 5,800 cy of off-site waste materials (not including Community Soils) were generated for disposal in the Anaconda Smelter Development Repository (or depressions in surrounding areas), which includes approximately 5,300 cy of material generated from reclamation of the Ueland property within the Old Works/East Anaconda Development Area. Based on past disposal at the repository, the actual average annual disposal rate of off-site waste materials (not including Community Soils) has been approximately 1,060 cy. Using this average annual disposal rate, the Anaconda Smelter Development Repository has a enough capacity to handle disposal operations for approximately 260 years. Although disposal rates may occasionally be higher in the future, significant increases in the annual average disposal rates are not expected. If additional repository capacity is needed in the future, wastes may be consolidated above the design grade to an elevation level with the south A.9 Cell dike elevation. If waste materials were consolidated to a peak elevation equal to the south A.9 Cell dike, the disposal capacity within the repository would increase by approximately 124,000 cy. This maximum capacity configuration was not selected for the base design approach because the final cover used for closure would rise above the surrounding topography, increasing the potential for windblown dust before final vegetation is established.

Clark Fork River OU materials will not be placed in the Anaconda Smelter Development Repository, but are expected to be placed in other areas of the Opportunity Ponds Waste Management Area (WMA), such as the B2.12 or D1 Cells.

4.0 REPOSITORY OPERATION AND MANAGEMENT

4.1 Types of Material Accepted for Disposal

As indicated previously, the Anaconda Smelter Development Repository has been specifically established to dispose of mining- and smelting-related wastes and metals-impacted soils obtained from removal, remedial or general construction activities conducted within the Anaconda Smelter NPL Site. Examples of the types of materials that will be accepted for disposal include, but are not necessarily limited to, the following:

- Metals-impacted soils excavated as a result of removal or remedial actions (RAs) conducted in compliance with the provisions of Federal Superfund requirements throughout the Anaconda Smelter NPL Site.

- Metals-impacted soils exceeding action levels excavated as a result of general construction activities occurring within residential, commercial or industrial areas subject to the SPAOD portion of the ADLC DPS regulations.

- Mining- and smelting-related wastes or metals-impacted soils excavated as a result of remedial or maintenance activities associated with the Anaconda Smelter NPL Site.

All third party municipal construction and demolition debris, municipal solid waste, non-metal contaminated wastes (i.e., hydrocarbon-contaminated wastes), asphalt, etc., will be separated from the mining- and smelting-related waste stream, to the extent practicable, prior to being loaded for transport to the Anaconda Smelter Development Repository. No free liquids (as defined by the Paint Filter Test, EPA Method 9095) will be accepted for disposal at the Anaconda Smelter Development Repository. All waste loads designated for disposal at the Anaconda Smelter Development Repository are subject to inspection and/or analytical testing prior to disposal (see Section 4.2.2).

4.1.1 Activities Generating Material Eligible for Disposal

Activities within the Anaconda Smelter NPL Site that are anticipated to generate materials eligible for disposal at the Anaconda Smelter Development Repository include the following:

- Remedial activities within the Anaconda Smelter NPL Site.

- Clean up of future residential soils at the time of development that exceed the residential action level of 250 parts per million (ppm) soil arsenic concentrations through the ADLC DPS.

- Clean up of future commercial or industrial areas at the time of development that exceed the commercial/industrial action level of 500 ppm soil arsenic concentration, through the ADLC DPS.

- Maintenance of engineered controls under the Monitoring and Maintenance Plan.

The activities listed above are anticipated to generate materials potentially in need of disposal; consequently, the Anaconda Smelter Development Repository has been established within an existing WMA at the Anaconda Smelter NPL Site (Opportunity Ponds WMA). A WMA is consistent with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) concept of "wastes left-in-place" where removal of the waste material within the WMA and restoration of groundwater beneath the WMA is technically impracticable and cost prohibitive. Therefore, waste materials within a WMA will be managed in-place and potentially contaminated groundwater located beneath the waste material will not be remediated. This is also compatible with ADLC's designation of the Opportunity Ponds as a WMA under ADLC's

Land Use Master Plan and the SPAOD portion of the DPS.

As determined by the Community Soils OU, Anaconda Smelter NPL Site, Anaconda, Montana, *Record of Decision* (ROD) (EPA, 1996), ARWW&S OU, Anaconda Smelter NPL Site, *Record of Decision* (ROD) (EPA, 1998), and the Old Works/East Anaconda Development Area (OW/EADA) OU, Anaconda Smelter NPL Site, *Record of Decision* (ROD) (EPA, 1994), action levels for specific land uses within the Anaconda Smelter NPL Site are as follows:

Land Use	***Arsenic Action Level***
Residential	*250 ppm*
Commercial/Industrial	*500 ppm*
Recreational / Open Space	*1,000 ppm*

4.2 Obtaining Approval for Disposal

Atlantic Richfield is not required to receive approval to place waste materials and debris resulting from RA throughout the Anaconda Smelter NPL Site within the Anaconda Smelter Development Repository. All entities other than Atlantic Richfield must receive formal approval from Atlantic Richfield or its designee prior to disposing material in the Anaconda Smelter Development Repository. There will be no charge to landowners or developers for placement of approved waste materials in the repository. The landowner or developer is responsible for any cost associated with excavation, transport and disposal of waste materials. Materials outside of the Anaconda Smelter NPL Site will only be accepted upon approval by EPA and Atlantic Richfield. Figure 5 illustrates the logic associated with determining a waste material's eligibility for disposal at the Anaconda Smelter Development Repository by entities other than Atlantic Richfield. Waste materials being disposed of must satisfy all of the following criteria:

- Material must be generated within the Anaconda Smelter NPL Site;
- Material must consist of mining- or smelting-related wastes and/or impacted soils containing elevated metals concentrations (in excess of the residential action level);
- Material must be reasonably free of refuse such as slash, scrap metal, concrete, construction and demolition debris, municipal solid waste, etc.;
- Material must be free of hydrocarbon contamination (i.e., fuels, solvents, waste oils, paint, pesticides, etc.);
- Material will contain no more than 100 ppm total hydrocarbons (i.e., sum of Total Extractable Hydrocarbons [TEH] plus Total Purgeable Hydrocarbons [TPH] will be less than 100 ppm); and

- Material must contain no free liquids (in accordance with the Paint Filter Test, EPA Method 9095).

Provided that the DPS permitting process is required and the waste material satisfies the criteria listed above, the generator of the material (petitioner) will contact the ADLC Planning Department to arrange disposal. The ADLC Planning Department may be reached at (406) 563-4010. The ADLC Planning Department will provide the petitioner with an Anaconda Smelter Development Repository Waste Profile Form/Questionnaire (see Appendix A) requesting that the generator provide information regarding the quantity of material to be disposed of as well as the physical properties of the material. Upon reviewing, approving, and signing the completed waste profile form, the ADLC Planning Department will contact the Operator for approval of the material for disposal at the Anaconda Smelter Development Repository. If a DPS permit is not required (i.e., railroad maintenance and engineered control maintenance), the material is subject to final approval by the Operator upon physical inspection at the facility entrance gate (see Section 4.2.2).

4.2.1 Material Sampling Requirements

As indicated on Figure 5, sampling of the material may or may not be required to screen for contamination or to verify exceedance of the residential action level for arsenic. If existing historical data adequately characterizes the material being evaluated for disposal, then additional sampling of the material is not required. If existing data does not adequately characterize the material being evaluated for disposal, sampling is required and will be addressed through the SPAOD portion of the ADLC DPS. If a sample of the material is required to be analyzed for arsenic, the sample can be submitted to a certified soil laboratory. If the sample result does not exceed the arsenic action level for the current or permitted land use, the material does not require disposal at the Anaconda Smelter Development Repository. If the sample result exceeds the residential action level for arsenic, the material is eligible for disposal at the Anaconda Smelter Development Repository provided that it is relatively free of trash and debris, and does not contain hydrocarbon contamination.

If the material is known or suspected of containing hydrocarbon contamination (i.e., fuels, solvents, waste oils, paint, and pesticides, etc.), a sample of the material collected by the petitioner with oversight by Atlantic Richfield or its designee will be submitted to a laboratory, at the expense of the petitioner, for hydrocarbon screening (see Figure 5). The sample will be analyzed for the following two constituents:

- Total Extractable Hydrocarbons; and

- Total Purgeable Hydrocarbons.

Energy Laboratories, Inc., located in Billings, Montana, or other certified materials laboratory, may analyze the sample for TEH and TPH. If the sum of the TEH and TPH sample results is $\geq$ 100 milligrams per kilogram (mg/kg), then the material is not eligible for disposal at the Anaconda Smelter Development Repository and must be disposed of by the petitioner in a Class

II Solid Waste Municipal Landfill (i.e., Butte Landfill). Material should be less than 100 mg/kg TEH and TPH and exceed the residential action level for arsenic.

4.2.2 Material Inspection Procedures

Any load of material approved for disposal is subject to physical inspection by Atlantic Richfield or its designee. Inspection will include physically viewing the contents of the waste load prior to actual disposal, as well as inspection upon emptying the load within the Anaconda Smelter Development Repository. If abundant slash, scrap metal, concrete, construction and demolition debris, municipal solid waste, hydrocarbon contamination or free liquids are discovered during an inspection, the waste will be rejected, and the petitioner will be required to remove the material from the premises.

4.3 Material Disposal

4.3.1 Days and Hours of Operation

Operating days and hours at the Anaconda Smelter Development Repository will generally coincide with a normal work week excluding government holidays; however, all disposals will be scheduled by appointment only with the Operator.

4.3.2 Access

The Anaconda Smelter Development Repository will be accessed via the dirt road that branches from Montana Highway 1 in a northerly direction approximately 1/8 miles east of the intersection of Montana Highway 1 and Montana Highway 274 (see Figure 1). A locked gate spans the dirt road near its junction with Montana Highway 1. Access to the Anaconda Smelter Development Repository must be pre-arranged with the Operator (to unlock the gate) prior to disposal on the premises.

4.3.3 Disposal and Grading

Material shall be disposed of within the Anaconda Smelter Development Repository to the final grade four feet below the south dike of the A.9 Cell and to the approximate contour elevations shown on Figure 3. In order to guide disposal operations, the repository has been divided into 3 individual sub-cells, each roughly 300 feet wide, 580 feet long, and 7 acres in size, which are also shown on Figure 3. Waste disposal will begin in the westernmost Sub-cell #1 and proceed to the east in numerical order as each sub-cell is filled to final grade (i.e., Sub-cell #1 shall be entirely filled to final grade before disposing of wastes in Sub-cell #2). It is important that each sub-cell be filled completely to the southern boundary of the repository before disposing in the next sub-cell so that completed sub-cells can be "closed" with final cover on a regular basis, as outlined in Section 5.0.

For each disposal project, material will be dumped in piles beginning at the southwestern leading edge of the existing fill (or last dump pile) and advance in successive rows within each sub-cell from south to north, as shown on Figure 4. Each load of material will be dumped as closely as

possible to the previous dump pile to avoid gaps or open areas in the disposal operation. The Operator may provide more specific direction regarding waste placement procedures upon approval for disposing of waste material. Dust will be minimized during the disposal operation as outlined in Section 4.3.4.

Waste piles will be leveled by the Operator on an as-needed basis, or at a minimum of once per year, to create a smooth driving surface level with the final grading elevation within + or - 1 foot of the final fill contours shown on Figure 3. A laser level or other means of grade control will be used during each leveling operation to assure that the advancing fill is within tolerances of final grade. Leveling will be completed as often as necessary to maintain a smooth dumping area within the active sub-cell that is large enough for on-going disposal operations. Compaction of waste materials will be performed using available equipment (dozer) to provide a continuous, firm, non-rutted surface. As portions of the sub-cell are filled to final grade, excess waste material will be used to construct permanent Plant Water Retention Basin berms along the perimeter of the sub-cell, as shown on Figure 4. The Plant Water Retention Basin berms will be constructed a minimum of 2 feet high with a 10-foot minimum top width and 4H to 1V side slopes (to allow for future cover placement and revegetation), as shown on Figure 4. It is important that Plant Water Retention Basin berms are continually constructed along with the advancing fill in order to minimize the concentration of storm water in lower unfilled areas during repository operation.

Excess material that is not needed to reach final grade or to construct Plant Water Retention Basin berms shall be pushed off of the northern edge of the fill to advance placement toward the northern boundary of the repository. Following leveling operations, a temporary 2 foot high berm will be constructed along the leading edge of advancing fill as shown on Figure 4 to keep storm water from concentrating in lower unfilled areas. The temporary berm will also serve as a construction safety berm and will mark the starting point for the waste piles to be dumped. Additional temporary berms and/or grading may be required by the Operator to minimize the concentration and ponding of storm water. Sub-cells that are completely filled to final grade will be closed, which will involve the installation of a final vegetative cover, as outlined in Section 5.0. These areas will be identified by the Operator using field stakes or other means of identification. Waste material will not be dumped in sub-cells of the repository that have been completely filled to final grade or areas that have been closed with final cover and vegetation.

4.3.4 Fugitive Emissions Control

Access roads, waste disposal areas, and other heavy traffic areas will be watered, as necessary, during waste disposal activities to minimize generation of fugitive dust emissions. While wastes are actively being disposed of on-site, dust control will be the responsibility of the Operator. If dust generation from waste areas becomes a problem during periods of inactivity (such as during dry, windy conditions), dust control measures will be implemented by the Operator. Minor and infrequent dust emissions may be controlled by watering of uncovered waste areas causing dust. If dust emissions are frequent and potentially causing contamination of surrounding areas, an interim cover consisting of 6 inches of Type B or other material shall be placed over the problem waste areas. Type B Material will be available in surrounding borrow areas within the Opportunity Ponds Remedial Design Unit (RDU) 8 for this purpose. Type B Material

identification and acquisition will be coordinated with the Opportunity Ponds RDU 8 project. Haul roads used for interim cover installation will be graded and maintained during hauling operations and will be left in good overall condition for future hauling needs.

5.0 REPOSITORY FINAL CLOSURE

Each sub-cell of the Anaconda Smelter Development Repository that has been filled to capacity will be "closed," which will involve the installation of final cover, surface pitting, and final revegetation. The routine closure of the 7-acre sub-cells from west to east will help minimize the area of exposed waste and will also help control upgradient dust and storm water during operation of the repository. When a given sub-cell has been completely filled to the southern boundary of the repository, a final sub-cell survey and assessment will be conducted by the Operator to determine if the sub-cell is ready for closure. In order for the sub-cell to be closed, the final grade of the waste materials must be within + or - 1 foot of the final fill contours shown on Figure 3 (as determined on a 100-foot grid) and the Plant Water Retention Basin berms must be constructed to the proper dimensions along all perimeter boundaries of the sub-cell. If these conditions are not met, additional grading work and/or filling will be completed to meet the criteria. Intermediate grade control that will be completed during filling operations, as outlined in Section 4.3.3, will help assure that the fill within the sub-cell is at or closely within final grade once the material reaches the southern boundary.

Once the sub-cell closure criteria are met, a final vegetative cover will be installed within the sub-cell by the Anaconda Smelter Development Repository Operator. The final cover will consist of one of the approved Engineered Covers outlined in the *Final Opportunity Ponds Remedial Design Unit (RDU) 8 Remedial Action Work Plan/Final Design Report (RAWP/FDR)* (Atlantic Richfield Company, 2006), as approved by the EPA. The final cover will be installed in accordance with the Construction Drawings, Technical Specifications, and Construction Quality Assurance Plan included in the *Final Opportunity Ponds Remedial Design Unit (RDU) 8 Remedial Action Work Plan/Final Design Report (RAWP/FDR)* (Atlantic Richfield Company, 2006). In order to meet requirements for storm water control, the final cover must be installed over the Plant Water Retention Basin berms in order to maintain the 2-foot final height requirement of the berm. The final Engineered Cover will be revegetated during the soonest available spring or fall seeding window in order to minimize weed infestation and windblown dust. The final vegetative cover will be maintained by the Operator, as necessary, under the approved ARWW&S OU Vegetation Management Plan, as outlined in Section 6.0.

6.0 MONITORING AND MAINTENANCE

6.1 Vegetation Monitoring

The Anaconda Smelter Development Repository will be monitored and maintained to ensure that that the vegetative cover over consolidated waste material is performing as intended. Monitoring and maintenance activities for the Anaconda Smelter Development Repository will be performed in accordance with the ARWW&S OU Vegetation Management Plan attached to the approved ARWW&S Monitoring and Maintenance Plan. The Vegetation Management Plan identifies revegetation objectives along with the procedures and requirements for monitoring, maintenance

of revegetated areas. The monitoring program outlined in the Vegetation Management Plan describes when one of more of the following maintenance activities may be required: fertilizer, weed spraying, re-seeding, the need for additional Best Management Practices (BMPs) or maintenance to existing ones, and diagnostic evaluations for vegetation success.

6.2 Road Maintenance

Haul roads used for waste disposal at the Anaconda Smelter Development Repository will be graded and kept in good condition to facilitate continued waste material hauling and placement operations. Haul road maintenance will be completed on the main access road between Montana Highway 1 and the repository and on the A.9 Cell dike road that runs along the entire north edge of the repository boundary. Maintenance work will be completed on an "as needed" basis and will depend on road use.

7.0 REFERENCES

Atlantic Richfield Company, 2006. Anaconda Smelter NPL Site, Anaconda Regional Water, Waste and Soils Operable Unit Final Opportunity Ponds Remedial Design Unit (RDU) 8 Remedial Action Work Plan/Final Design Report (RAWP/FDR). January 20, 2006.

EPA, 1994. Old Works/East Anaconda Development Area Operable Unit, Anaconda Smelter NPL Site, Record of Decision (ROD).

EPA, 1996. Community Soils Operable Unit, Anaconda Smelter NPL Site, Record of Decision (ROD).

EPA, 1998. Anaconda Regional Water, Waste and Soils Operable Unit, Anaconda Smelter NPL Site, Record of Decision (ROD).

FIGURES

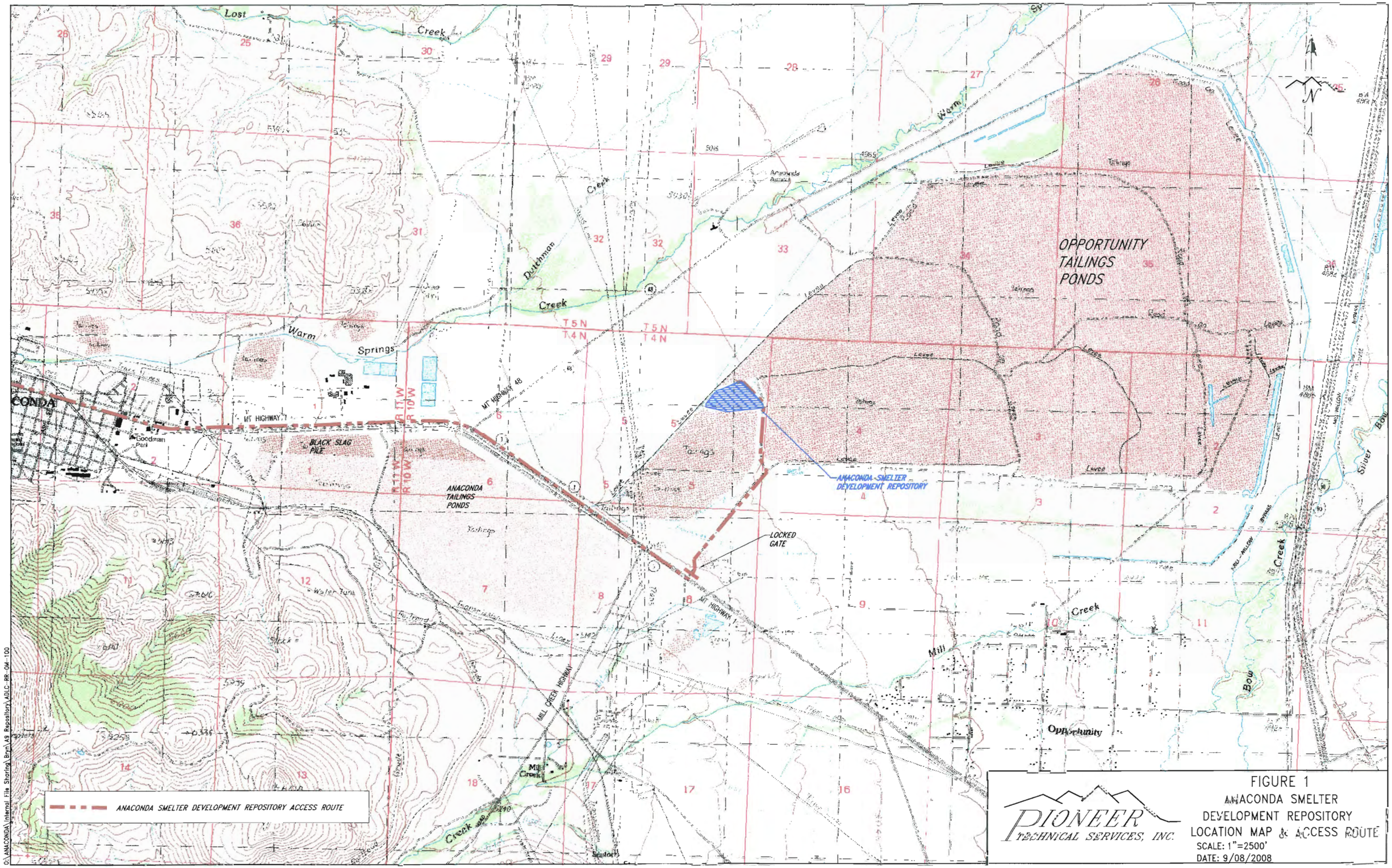
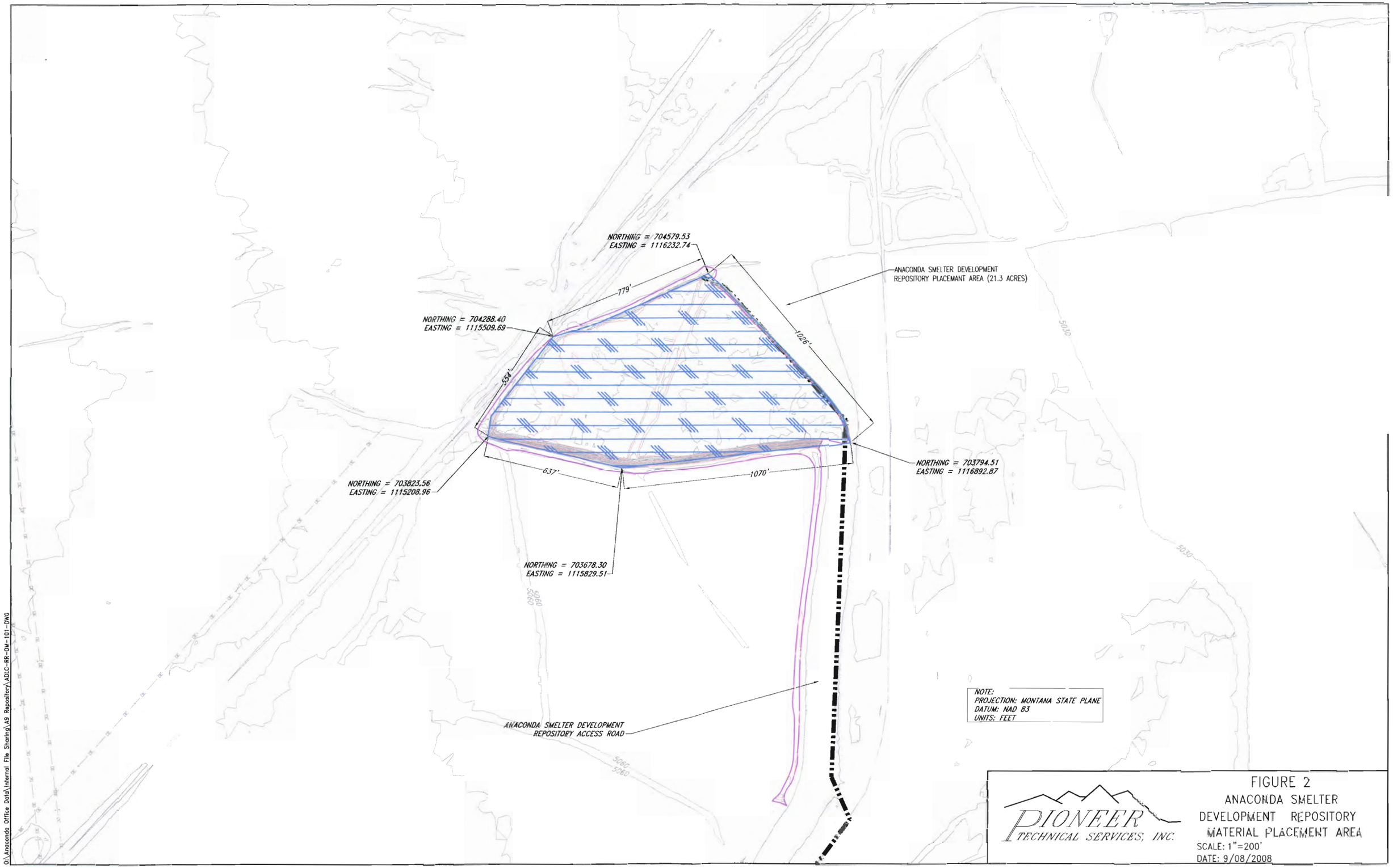
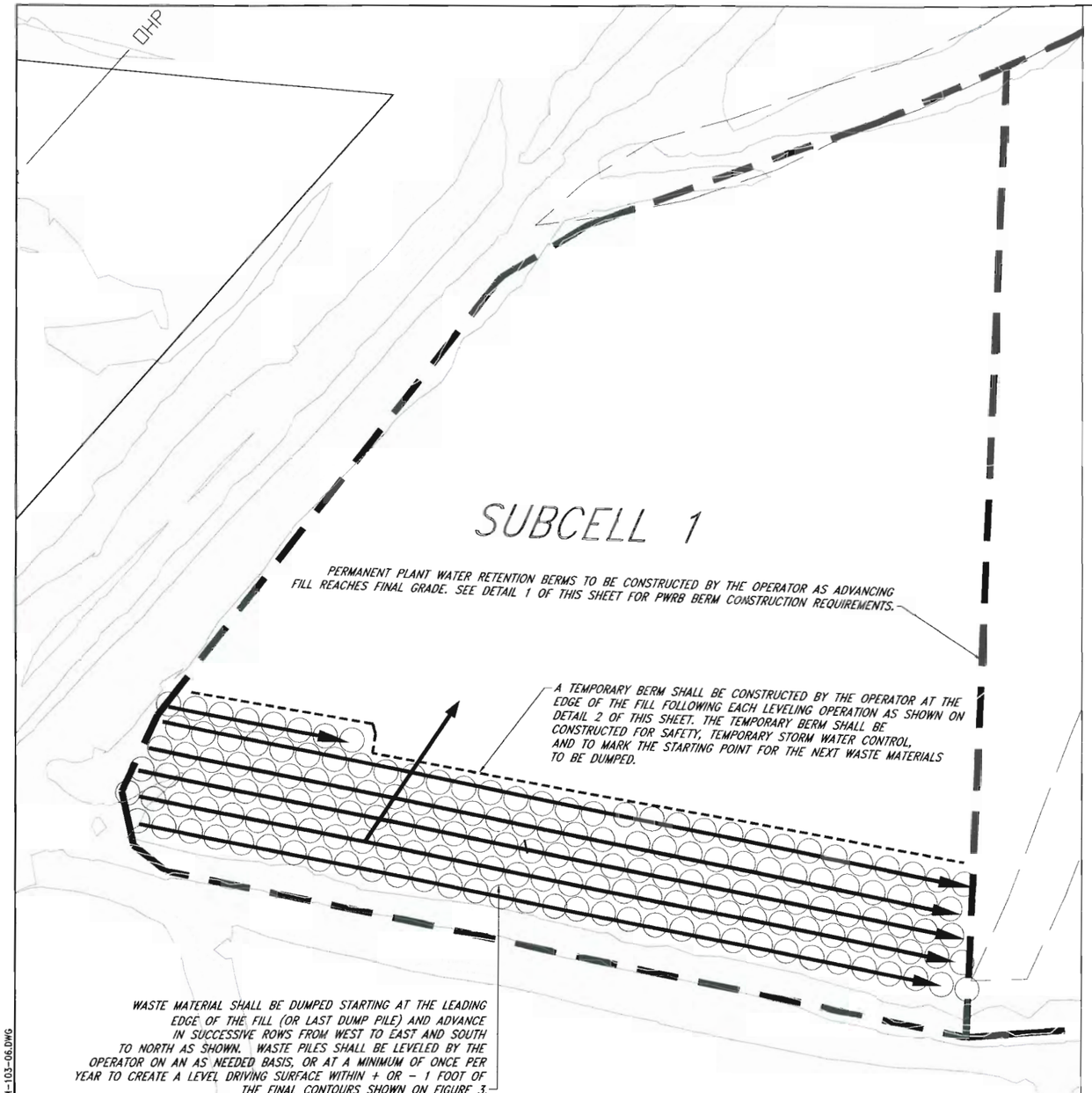


FIGURE 1
ANACONDA SMELTER
DEVELOPMENT REPOSITORY
LOCATION MAP & ACCESS ROUTE
SCALE: 1"=2500'
DATE: 9/08/2008

O:\ANACONDA\Internal File Sharing\Bryn\49 Repository\ADLC-RR-04-100


NORTHING = 704579.53
EASTING = 1116232.74
ANACONDA SMELTER DEVELOPMENT
REPOSITORY PLACEMANT AREA (21.3 ACRES)
779'
NORTHING = 704288.40
EASTING = 1115509.69
1026'
554'
NORTHING = 703794.51
EASTING = 1116892.87
637'
1070'
NORTHING = 703823.56
EASTING = 1115208.96
NORTHING = 703678.30
EASTING = 1115829.51
5060
5060
5030
5030
NOTE:
PROJECTION: MONTANA STATE PLANE
DATUM: NAD 83
UNITS: FEET
ANACONDA SMELTER DEVELOPMENT
REPOSITORY ACCESS ROAD
5060
5060
PIONEER
TECHNICAL SERVICES, INC.
FIGURE 2
ANACONDA SMELTER
DEVELOPMENT REPOSITORY
MATERIAL PLACEMENT AREA
SCALE: 1"=200'
DATE: 9/08/2008
O:\Anaconda Office Data\Internal File Sharing\A9 Repository\ADLC-RR-DM-101-DWG

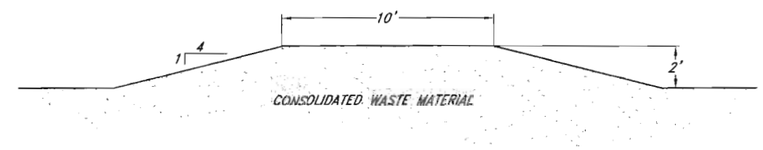
SUBCELL #1
SUBCELL #2
SUBCELL #3
5060
5059
5058
5057
5056
ANACONDA SMELTER DEVELOPMENT
REPOSITORY ACCESS ROAD
PIONEER
TECHNICAL SERVICES, INC.
FIGURE 3
ANACONDA SMELTER
DEVELOPMENT REPOSITORY GRADING
PLAN AND SUBCELL CONFIGURATION
SCALE: 1"=100'
DATE: 9/08/2008
O:\Anaconda Office Data\Internal File Sharing\A9 Repository\ADLC-RR-OM-101-DWG



NOTES:

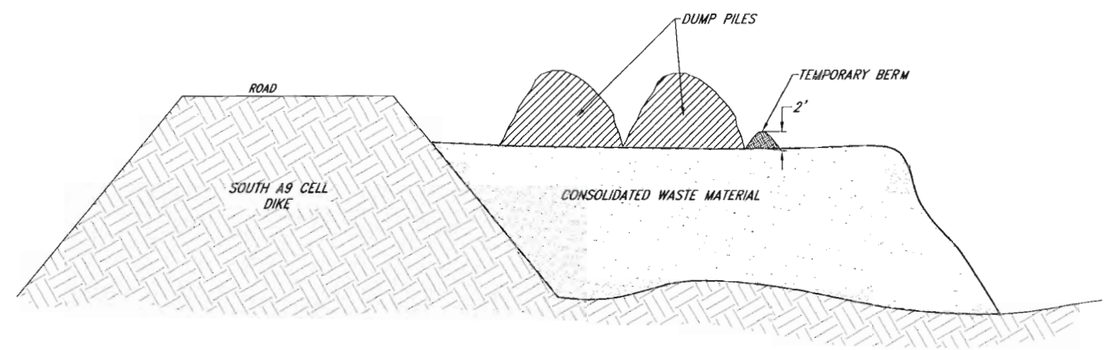
1. IT MAY BE POSSIBLE TO ACCESS LOWER UNFILLED PORTIONS OF THE REPOSITORY FOR MATERIAL DISPOSAL. IN THIS EVENT, TRUCKS SHALL DUMP WASTE MATERIAL IN PILES SIMILAR TO THE PATTERN SHOWN AND AS DIRECTED BY THE OPERATOR. MATERIAL SHALL BE LEVELED BY THE OPERATOR ON AN AS NEEDED BASIS TO FORM AN INTERMEDIATE "LIFT" APPROXIMATELY 3 TO 5 FEET IN THICKNESS. WASTE MATERIAL PLACED IN THIS FASHION SHALL NOT EXCEED THE DESIGN FILL ELEVATIONS SHOWN ON FIGURE 3.

SCALE 1"=100'



PLANT WATER RETENTION BASIN BERM DETAIL (1)

NOT TO SCALE



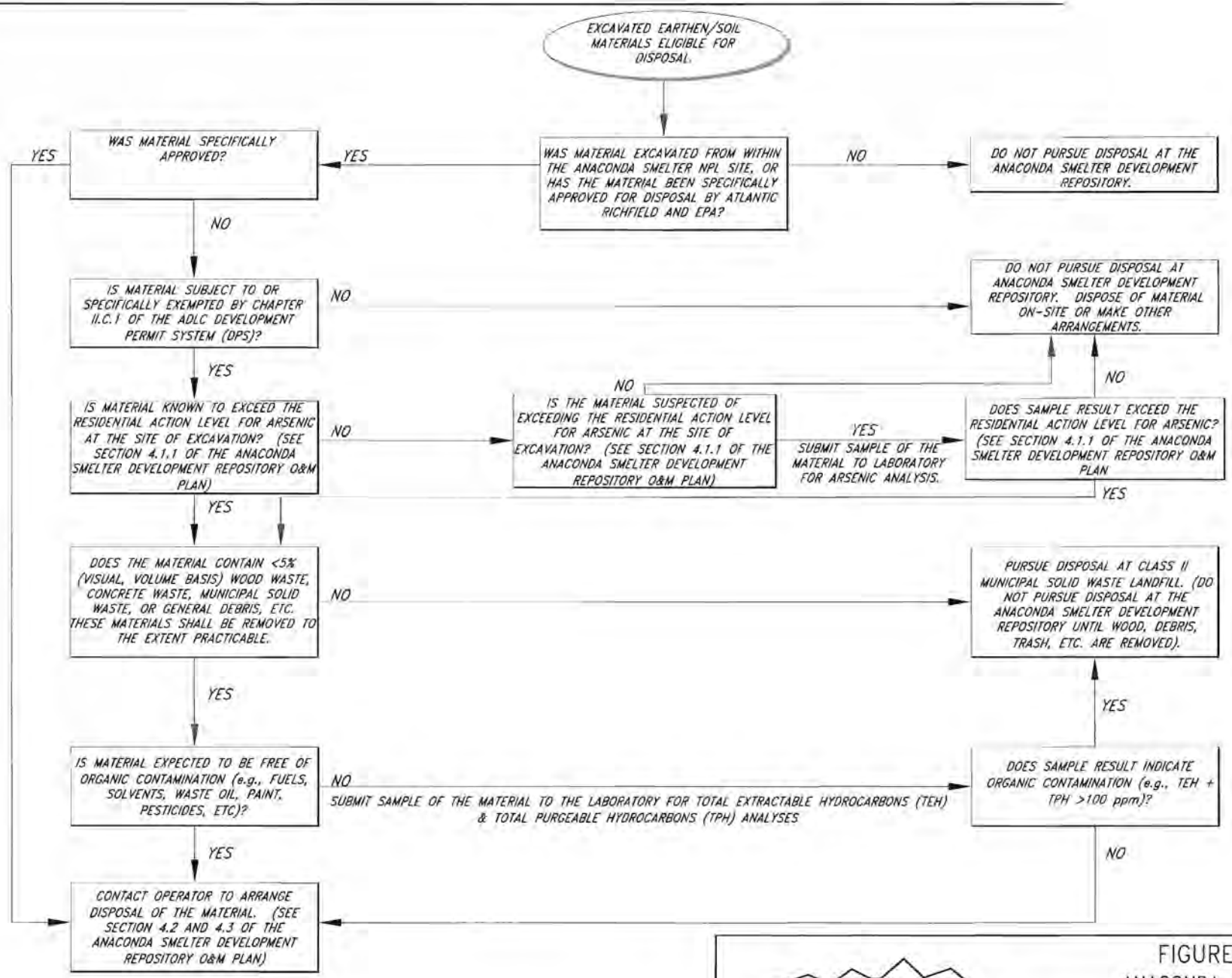
WASTE CONSOLIDATION PROFILE (2)

NOT TO SCALE

PIONEER TECHNICAL SERVICES, INC.

FIGURE 4
ANACONDA SMELTER
DEVELOPMENT REPOSITORY
WASTE MATERIAL DISPOSAL PLAN
SCALE:
DATE: 9/08/08

STA1\G:\ANACONDA\2006\ADLC-RR-O&M/ADLC-RR-OM-103-06.DWG



PIONEER TECHNICAL SERVICES, INC.

FIGURE 5
ANACONDA SMELTER DEVELOPMENT REPOSITORY WASTE DISPOSAL ELIGIBILITY FLOW CHART
SCALE: N.T.S.
DATE: 6/6/07

anaconda/2004/adlc-rr-o&m plan/Fig2-ADLC-FLOWCHART-rev.DWG

C:\Documents and Settings\chrisa\Desktop\Fig2-ADLC-FLOWCHART-rev.dwg, 1/6/2009 1:09:53 PM

APPENDIX A

ANACONDA SMELTER DEVELOPMENT REPOSITORY
WASTE PROFILE FORM/QUESTIONNAIRE

ANACONDA SMELTER DEVELOPMENT REPOSITORY

WASTE PROFILE FORM/QUESTIONNAIRE

SECTION A – DEVELOPER INFORMATION

Landowner: _____

Phone: _____

Location: _____

_____

_____

Previous Reclamation: _____

_____

Current Land Use: _____

_____

Proposed Land Use: _____

_____

SECTION B - WASTE CHARACTERIZATION

		Yes	No
1.	Was the waste material obtained within the Anaconda Smelter National Priorities List (NPL) Site?	_____	_____
2a.	Is the waste material subject to the SPAOD portion of the Anaconda-Deer Lodge County (ADLC) Development Permit System (DPS)?	_____	_____

If the answer to Question 2a is "No", please answer Question 2b. If the answer to Question 2a is "Yes", proceed to Question 3.

	Yes	No
2b. Is the waste material specifically exempted by Chapter II.C.1 of the ADLC DPS?	_____	_____

If "Yes", explain _____

_____

_____

3. Is the waste material known to exceed, or suspected of exceeding, the residential action level for arsenic at the site of removal. Attach sample results if available.	_____	_____

4. Describe the physical state of the waste material (examples include: dry soil with rocks up to 6 inches in diameter, wet soil with abundant wood debris and garbage, broken concrete foundation with some soil, etc.).

_____

_____

_____

5. Is the waste material known or suspected of containing hydrocarbon contamination (e.g., gasoline or diesel fuels, solvents waste oil, paint, pesticides, etc.)? Attach sample results if available.	_____	_____

SECTION C - MATERIAL QUANTITY

1. Estimated material quantity: _____ cubic yard(s); OR _____ ton(s).

SECTION D - CERTIFICATION

1. Certification Statement:

   I hereby certify that, as the generator or authorized representative of the generator named above, all information submitted in this and all the attached document are true and accurate. To the best of my knowledge, all known and suspected hazardous components have been included in this documentation.

SIGNATURE _____ DATE _____

PRINTED NAME _____

ADLC USE ONLY

Comments _____

Reviewed By _____

Date Approved _____

Date Denied _____

Exhibit 12
(Certificate of Survey)

CERTIFICATE OF SURVEY

LOCATED IN THE WEST 1/2 OF SECTION 6, TOWNSHIP 4 NORTH, RANGE 10 WEST,
ALL OF SECTION 1, THE NORTH 1/2 OF SECTION 2 AND THE NE 1/4 OF SECTION 3 OF TOWNSHIP 4 NORTH, RANGE, 11 WEST,
THE SOUTH 1/2 OF SECTION 35 AND THE SOUTH 1/2 OF SECTION 36 OF TOWNSHIP 5 NORTH, RANGE 11 WEST
PRINCIPAL MERIDIAN, MONTANA
DEER LODGE COUNTY, STATE OF MONTANA

Parcel Line Table

Line #	Length	Direction
L1	204.83	S16° 09' 50"W
L2	485.66	N73° 49' 19"W
L3	158.97	S3° 59' 59"W
L4	29.91	N16° 15' 39"E
L5	74.96	S73° 55' 02"E
L6	29.99	S16° 04' 58"W
L7	85.91	S81° 52' 26"E
L8	72.99	N15° 59' 38"E
L9	282.07	S73° 51' 28"E
L10	49.98	N16° 11' 14"E
L11	38.13	N88° 25' 56"W
L12	163.00	N74° 16' 20"W
L13	200.00	N74° 16' 20"W
L14	365.90	N15° 43' 40"E
L15	199.97	N74° 17' 34"W
L16	90.45	N61° 54' 19"W
L17	376.36	N24° 28' 41"E
L18	216.50	N33° 11' 11"E
L19	123.18	N33° 11' 11"E
L20	216.60	N3° 41' 34"W

Parcel Line Table

Line #	Length	Direction
L21	278.60	N82° 59' 01"E
L22	298.22	N71° 26' 05"E
L23	201.78	N89° 00' 49"E
L24	505.10	S86° 40' 38"E
L25	177.59	S70° 29' 58"E
L26	173.68	N62° 19' 18"E
L27	147.62	S81° 49' 00"E
L28	261.07	N88° 39' 41"E
L29	96.96	S15° 29' 41"E
L31	164.24	S42° 40' 59"W
L32	153.97	S49° 50' 58"E
L33	267.85	N40° 27' 55"E
L35	431.57	S37° 57' 43"E
L36	121.41	S37° 57' 43"E
L37	350.83	S78° 57' 34"E
L39	548.78	S78° 57' 34"E
L40	280.54	N60° 19' 08"E
L42	205.18	S72° 29' 07"E
L43	257.25	S78° 12' 13"E
L44	166.61	S78° 12' 13"E

Parcel Line Table

Line #	Length	Direction
L45	417.12	S41° 01' 33"E
L46	446.26	S77° 47' 12"E
L47	445.98	S88° 07' 07"E
L48	332.98	S70° 22' 22"E
L50	344.07	S43° 34' 21"E
L51	203.87	S28° 42' 19"E
L62	192.33	N16° 11' 23"E
L63	192.04	S78° 29' 12"W
L64	457.66	S85° 30' 20"W
L65	226.24	S80° 08' 38"W
L66	84.80	N78° 01' 05"W
L67	261.60	N50° 35' 50"W
L69	270.38	S71° 49' 33"W
L70	146.83	S75° 58' 26"W
L71	511.07	S83° 32' 59"W
L72	308.10	S78° 20' 19"W
L73	158.30	N84° 58' 46"W
L74	298.57	N69° 58' 08"W
L75	177.10	N80° 11' 44"W
L76	296.93	N73° 48' 58"W

Parcel Line Table

Line #	Length	Direction
L77	157.01	N67° 39' 40"W
L78	93.25	N76° 58' 47"W
L79	28.50	N76° 58' 57"W
L80	117.80	N85° 04' 32"W
L81	103.74	N70° 24' 23"W
L82	141.27	N54° 10' 40"W
L83	148.43	N40° 20' 03"W
L84	52.50	N50° 10' 43"W
L85	21.02	N67° 51' 49"W
L86	22.78	N83° 18' 36"W
L87	24.72	S63° 27' 32"W
L88	63.54	S68° 08' 16"W
L89	36.11	S85° 45' 34"W
L90	16.39	N84° 20' 13"W
L91	87.35	N63° 49' 27"W
L92	96.40	N75° 03' 52"W
L93	69.27	N82° 35' 00"W
L94	132.29	S87° 04' 51"W
L95	57.60	N85° 50' 08"W
L97	342.13	N79° 13' 21"W

Parcel Line Table

Line #	Length	Direction
L98	79.33	S87° 44' 16"W
L99	151.61	S68° 16' 27"W
L100	187.85	S80° 12' 25"W
L101	94.79	S61° 39' 41"W
L102	149.83	S56° 03' 02"W
L103	186.20	S78° 21' 37"W
L104	69.64	N88° 31' 38"W
L105	129.66	N78° 42' 09"W
L106	120.64	S58° 38' 17"W
L107	161.69	S30° 44' 59"W
L108	148.23	S55° 45' 40"W
L109	122.64	S74° 08' 00"W
L110	61.84	S49° 58' 02"W
L111	339.88	S37° 24' 31"W
L112	272.50	S48° 36' 50"W
L113	126.60	S64° 22' 09"W
L116	112.23	N3° 13' 12"E
L117	418.46	S87° 29' 41"E
L118	72.41	S69° 01' 59"E
L119	282.40	S82° 48' 24"E

Parcel Line Table

Line #	Length	Direction
L120	158.99	S3° 14' 45"W
L121	348.19	N80° 50' 06"W
L122	27.28	N9° 15' 07"E
L123	100.51	N78° 46' 41"W
L125	269.01	N86° 23' 14"W

LEGAL DESCRIPTION TRACT A

Tract A of this Certificate of Survey, located in the SE1/4 and SW 1/4 of Section 35, the SW1/4 of Section 36, Township 5 North, Range 11 West, the NW1/4 of Section 1, the NE1/4 and NW1/4 of Section 2, the NE1/4 of Section 3, Township 4 North, Range 11 West, Principal Meridian, Montana, Deer Lodge County, State of Montana, being more particularly described as follows:

Beginning at a point from which the Standard Corner between Section 35 and Section 36 bears N03°32'58"E 145.90 feet; thence from said Point of Beginning S78°57'34"E 548.78 feet; thence N60°19'08"E 280.54 feet; thence N72°29'07"E 205.18 feet; thence S78°12'13"E 257.25 feet; thence S78°12'13"E 423.86 feet; thence S41°01'33"E 417.12 feet; thence S77°47'12"E 446.26 feet; thence S88°07'07"E 445.98 feet; thence S70°22'22"E 332.98 feet; thence S43°34'21"E 344.07 feet; thence S28°42'19"E 203.87 feet; thence S26°15'47"W 587.10 feet to a curve to the right; thence 1020.97 feet along said curve, having Radius = 800.00 feet and Long Chord Bearing S62°49'26"W 953.08 feet; thence N80°36'54"W 648.88 feet; thence S01°50'21"E 18.69 feet; thence S77°51'38"W 867.99 feet to a curve to the right; thence 148.55 feet along said curve, having Radius = 300.00 feet and a Long Chord Bearing N87°57'16"W 147.03 feet; thence N73°46'10"W 238.31 feet; thence S16°12'19"W 60.00 feet to the Northerly line of C.O.S. 144-B; thence the following seven (7) courses along said C.O.S. 144-B, N70°14'06"W 372.17 feet; thence N70°24'19"W 163.09 feet to a Non-Tangent curve to the left; thence 167.27 feet along said curve having Radius = 385.64 feet and Long Chord Bearing N82°51'58"W 165.97 feet; thence N70°26'16"W 150.05 feet; thence S61°04'39"W 305.63 feet; thence N43°45'48"W 442.79 feet; thence S83°29'04"W 439.77 feet; thence leaving said Northerly line of C.O.S. 144-B. N16°11'23"E 192.33 feet to the centerline of Warm Springs Creek; thence the following four (4) courses along said centerline, S78°29'12"W 192.04 feet; thence S85°30'20"W 457.66 feet; thence S80°08'38"W 226.24 feet; thence N78°01'05"W 84.80 feet to the Section line between Section 2 and Section 3; thence along said Section line, N03°57'57"E 305.16 feet to the parcel described in Book 63 Page 360; thence N50°35'50"W 261.60 feet; thence N73°37'15"W 182.92 feet; thence N12°00'37"E 247.81 feet to the Southeasterly corner of C.O.S. 6-D; thence the following two (2) courses along said C.O.S. 6-D, N15°43'40"E 365.90 feet; thence N74°17'34"W 199.97 feet; thence leaving said C.O.S. 6-D, N61°54'19"W 90.45 feet; thence N24°28'41"E 376.36 feet; thence N33°11'11"E 339.68 feet; thence N03°41'34"W 216.60 feet; thence N82°59'01"E 278.60 feet; thence N71°26'05"E 298.22 feet; thence N89°00'49"E 201.78 feet; thence S86°40'38"E 505.10 feet; thence S70°29'58"E 177.59 feet; thence N62°19'18"E 173.68 feet; thence S81°49'00"E 147.62 feet; thence N88°39'41"E 261.07 feet; thence S15°29'41"E 96.96 feet to a curve to the right; thence 91.00 feet along said curve, having a Radius = 89.62 feet and Long Chord Bearing S13°35'39"W 87.14 feet; thence S42°40'59"W 164.24 feet; thence S49°50'58"E 153.97 feet; thence N40°27'55"E 267.85 feet; thence S37°57'43"E 552.98 feet; thence S78°57'34"E 350.83 feet to the Point of Beginning, containing 253.91 acres, more or less, and subject to easements of record or apparent on the ground.

Excepting therefrom 2.38 acres as shown on C.O.S. 324-A.

After exceptions, this parcel contains 251.53 acres, more or less, and subject to easements of record or apparent on the ground.

LEGAL DESCRIPTION TRACT B

Tract B of this Certificate of Survey, located in the NW1/4 of Section 6, Township 4 North, Range 10 West, the NE1/4, the SE1/4, the SW1/4 and the SE1/4 of Section 1, Township 4 North, Range 11 West, Principal Meridian, Montana, Deer Lodge County, State of Montana, being more particularly described as follows:

Beginning at a point from which the Standard corner between Section 31 and Section 32 of Township 5 North, Range 10 West bears S86°49'17"E 58.92 feet; thence from said Point of Beginning along a Non-Tangent curve to the right a distance of 612.30 feet, said curve having a Radius = 5140.00 and a Long Chord Bearing S07°09'07"W 611.94 feet; thence S10°33'13"W 35.32 feet; thence N63°57'54"W 818.30 feet; thence N86°19'22"W 991.16 feet; thence S51°06'59"W 1221.80 feet; thence S02°23'27"E 1740.31 feet to the Northerly right-of-way line of U.S. Highway 10A; thence along said northerly right-of-way the following seven (7) courses, S87°35'35"W 1912.39 feet: thence N02°33'46"W 93.48 feet; thence S87°11'58"W 150.09 feet; thence S02°50'06"E 92.45 feet; thence S87°35'35"W 674.80 feet; thence S73°53'34"W 40.46 feet; thence S87°36'08"W 1979.44 feet to the easterly line of C.O.S. 175-A; thence N06°05'48"E 579.76 feet; thence S72°29'55"E 254.00 feet; thence N17°16'16"E 60.00 feet; thence N04°37'00"E 614.94 feet; thence N80°36'54"W 1645.07 feet to a Non-Tangent curve to the left; thence 1020.97 feet along said curve, having Radius = 800.00 feet and Long Chord Bearing N62°49'26"E 953.08 feet; thence N26°15'47"E 587.10 feet to the centerline of Warm Springs Creek; thence the following 44 courses along said centerline, N71°49'33"E 270.38 feet; thence N75°58'26"E 146.83 feet; thence N83°32'59"E 511.07 feet; thence N78°20'19"E 308.10 feet; thence S84°58'46"E 158.30 feet; thence S69°58'08"E 298.57 feet; thence S80°11'44"E 177.10 feet; thence S67°39'40"E 157.01 feet; thence S76°58'47"E 93.25 feet; thence S76°58'47"E 93.25 feet; thence S80°11'44"E 177.10 feet; thence S73°48'58"E 296.93 feet; thence S67°39'40"E 157.01 feet; thence S76°58'47"E 93.25 feet; thence S76°58'57"E 28.50 feet; thence S85°04'32"E 117.80 feet; thence S70°24'23"E 103.74 feet; thence S54°10'40"E 141.27 feet; thence S40°20'03"E 148.43 feet; thence S50°10'43"E 52.50 feet; thence S67°51'49"E 21.02 feet; thence S83°18'36"E 22.78 feet; thence S63°27'32"E 24.72 feet; thence N68°08'16"E 63.54 feet; thence N85°45'34"E 36.11 feet; thence S84°25'13"E 16.39 feet; thence S63°49'27"E 87.35 feet; thence S75°03'52"E 96.40 feet; thence S82°35'00"E 69.27 feet; thence N87°04'51"E 132.29 feet; thence S85°50'08"E 57.60 feet; thence S79°13'21"E 342.13 feet; thence S87°44'16"E 79.33 feet; thence N68°16'27"E 151.61 feet; thence N80°12'25"E 187.85 feet; thence N61°39'41"E 94.79 feet; thence N56°03'02"E 149.83 feet; thenceN78°21'37"E 186.20 feet; thence S88°31'38"E 69.64 feet; thence S78°42'09"E 129.66 feet; thence N58°38'17"E 120.64 feet; thence N30°44'59"E 161.69 feet; thence N55°45'40"E 148.23 feet; thence N74°08'00"E 122.64 feet; thence N49°58'02"E 61.84 feet; thence N37°24'31"E 339.88 feet; thence N 48°36'50"E 272.50 feet; thence N64°22'09"E 126.60 feet to the northerly line of Township 4 North, Range 10 West; thence along said Township line S86°49'17"E 1814.87 feet to the Point of Beginning, containing 266.08 acres, more or less, and subject to easements of record or apparent on the ground.

Excepting therefrom 20.00 acres as shown on C.O.S. 362-B.
Excepting therefrom 42.12 acres as shown on C.O.S. 183-A.

After exceptions, this parcel contains 203.96 acres, more or less, and subject to easements of record or apparent on the ground.

LEGAL DESCRIPTION TRACT C

Tract C of this Certificate of Survey, located in the NW1/4 of Section 1, Township 4 North, Range 11 West, the NE1/4 of Section 2, Township 4 North, Range 11 West, the SE1/4 and the SW1/4 of Section 36, Township 5 North, Range 11 West, Principal Meridian, Montana, Deer Lodge County, State of Montana, being more particularly described as follows:

Beginning at a point from which the Standard Corner between Section 35 and Section 36 bears N03°32'58"E 145.90 feet; thence from said Point of Beginning S78°57'34"E 548.78 feet; thence N60°19'08"E 280.54 feet; thence N72°29'07"E 205.18 feet; thence S78°12'13"E 257.25 feet; thence S78°12'13"E 423.86 feet; thence S41°01'33"E 417.12 feet; thence S77°47'12"E 446.26 feet; thence S88°07'07"E 445.98 feet; thence S70°22'22"E 332.98 feet; thence S43°34'21"E 344.07 feet; thence S28°42'19"E 203.87 feet; thence S26°15'47"W 587.10 feet to the centerline of Warm Springs Creek; thence the following 10 courses along said centerline, N71°49'33"E 270.38 feet; thence N75°58'26"E 146.83 feet; thence N83°32'59"E 511.07 feet; thence N78°20'19"E 308.10 feet; thence S84°58'46"E 158.30 feet; thence S69°58'08"E 298.57 feet; thence S80°11'44"E 177.10 feet; thence S73°48'58"E 296.93 feet; thence S67°39'40"E 157.01 feet; thence S76°58'47"E 93.25 feet;thence N02°26'06"E 892.79 feet to the Standard corner common to Section 36 of Township 5 North, Range 11 West and Section 31 of Township 5 North, Range 10 Wes on the First Standard Parallel North; thence along said Parallel N87°41'02"W 1307.35 feet to the East 1/16 corner to Section 36 only; thence N02°16'53"E 1328.36 feet to a point on the fourth course of the Hoo Doo Placer, M.S. 1601; thence along said fourth course N87°04'28"W 3891.63 feet to Corner 4 of said M.S. 1601; thence S03°32'58"W 1370.07 feet to Corner 3 of said M.S. 1601, which is coincident with the Southwest corner of Section 36 on the First Standard Parallel North; thence S03°32'58"W 145.90 feet to the Point of Beginning, containing 180.58 acres, more or less, and subject to easements of record or apparent on the ground.

LEGAL DESCRIPTION TRACT D

Tract D of this Certificate of Survey, located in the SE1/4 and the SW1/4 of Section 35, Township 5 North, Range 11 West, the NE 1/4 of Section 3, Township 4 North, Range 11 West, Principal Meridian, Montana, Deer Lodge County, State of Montana, being more particularly described as follows:

Beginning at a point from which the Standard Corner between Section 35 and Section 36 bears N03°32'58"E 145.90 feet; thence from said Point of Beginning, N03°32'58"E 145.90 feet to the Standard Corner between Section 35 and Section 36 which is coincident with Corner 3 of the Hoo Doo Placer, M.S. 1601 on the Fist Standard Parallel North; thence along the third course of said M.S. 1601, N03°32'58"E 1370.07 feet to Corner 4 of said M.S. 1601; thence N02°10'37"E 1226.23 feet to the one-quarter corner common to Section 35 and Section 36; thence along the East-West Mid-Section line N87°12'59"W 5245.71 feet to the one-quarter corner common to Section 34 and Section 35; thence S02°31'48"W 2639.04 feet to the Standard Corner between Section 34 and Section 35 of Township 5 North, Range 11 West on the First Standard Parallel North; thence along said Parallel, S87°41'11"E 1052.16 feet; thence leaving said Parallel, S02°28'18"W 738.07 feet to the North line of C.O.S. 002-B; thence S73°49'11"E 616.21 feet to the NE corner of said C.O.S. 002-B; thence S16°09'50"W 204.83 feet to the Southeast corner of said C.O.S. 002-B; thence N73°49'19"W 485.66 feet along said C.O.S. 002-B to a point; thence leaving said C.O.S. 002-B, S03°59'59"W 158.97 feet; thence N16°15'39"E 29.91 feet; thence S73°55'02"E 74.96 feet; thence S16°04'58"W 29.99 feet; thence S81°52'26"E 85.91 feet; thence N15°59'38"E 72.99 feet; thence S73°51'28"E 282.07 feet; thence N16°11'14"E 49.98 feet to the North line of C.O.S. 18-D; thence along said line S73°37'15"E 477.09 feet; thence leaving said C.O.S. 18-D N12°00'37"E 247.81 feet to the southeast corner of C.O.S. 6-D; thence N88°25'56"W 38.13 feet; thence N74°16'20"W 163.00 feet to the southeasterly corner of a parcel described in Book 93, Page 535; thence N74°16'20"W 200.00 feet; thence N15°43'40"E 200.00 feet; thence S74°16'20"E 200.00 feet to the westerly line of C.O.S. 6-D; thence N15°43'40"E 175.16 feet to the northwesterly corner of said C.O.S. 6-D; thence leaving said C.O.S. 6-D, N61°54'19"W 90.45 feet; thence N24°28'41"E 376.36 feet; thence N33°11'11"E 339.68 feet; thence N03°41'34"W 216.60 feet; thence N82°59'01"E 278.60 feet; thence N71°26'05"E 298.22 feet; thence N89°00'49"E 201.78 feet; thence S86°40'38"E 505.10 feet; thence S70°29'58"E 177.59 feet; thence N62°19'18"E 173.68 feet; thence S81°49'00"E 147.62 feet; thence N88°39'41"E 261.07 feet; thence S15°29'41"E 96.96 feet to a curve to the right; thence 91.00 feet along said curve, having a Radius = 89.62 feet and Long Chord Bearing S13°35'39"W 87.14 feet; thence S42°40'59"W 164.24 feet; thence S49°50'58"E 153.97 feet; thence N40°27'55"E 267.85 feet; thence S37°57'43"E 552.98 feet; thence S78°57'34"E 350.83 feet to the Point of Beginning, containing 313.64 acres, more or less, and subject to easements of record or apparent on the ground.

LEGAL DESCRIPTION REMAINDER BLOCK 5, ANACONDA INDUSTRIAL PARK ADDITION

Remainder Block 5, Anaconda Industrial Park Addition of this Certificate of Survey, located in the NE1/4, the SE1/4, the SW1/4 and the NW1/4 of Section 2, Township 4 North, Range 11 West, Principal Meridian, Montana, Deer Lodge County, State of Montana, being more particularly described as follows:

Beginning at the southwest corner of Block 5; thence N16°14'01"W 990.95 feet; thence N16°12'19"E 60.00 feet; thence S73°46'10"E 238.31 feet to a curve to the left; thence 148.55 feet along said curve, having Radius = 300.00 feet and Long Chord Bearing S87°57'16"E 147.03 feet; thence N77°51'38"E 162.58 feet; thence S15°12'01"W 1164.40 feet to the southeast corner of Block 5; thence N73°46'18"W 544.88 feet to the Point of Beginning, containing 13.20 acres, more or less, and subject to easements of record or apparent on the ground.

CERTIFICATE OF EXEMPTION

We hereby certify that the purpose of this survey is for divisions made outside of platted subdivisions for the purpose of relocating common boundary lines between adjoining properties and the aggregation of parcels or lots when a certificate of survey or subdivision plat shows that the boundaries of the original parcels have been eliminated and the boundaries of a larger aggregate parcel are established. Therefore, this division of land is not subject to review as a subdivision pursuant to Section 76-3-207(1)(a)(e)&(f), M.C.A.

_____
For: Deer Lodge County

STATE OF _____)
)SS
County of _____)

On this _____ day of _____, 2014, before me, the undersigned, a Notary Public for the State of _____, personally appeared the above named persons whose names are subscribed to the foregoing instrument and acknowledged to me that he/she executed the same

_____
Printed Name _____
Notary Public for the State of _____
Residing at _____
My commission expires _____

_____
For: ARCO Environmental Remediation, LLC

STATE OF _____)
)SS
County of _____)

On this _____ day of _____, 2014, before me, the undersigned, a Notary Public for the State of _____, personally appeared the above named persons whose names are subscribed to the foregoing instrument and acknowledged to me that he/she executed the same

_____
Printed Name _____
Notary Public for the State of _____
Residing at _____
My commission expires _____

CERTIFICATE OF SANITARIAN

I _____ , certify that the survey shown here has been examined to determine compliance with the Montana Sanitation in Subdivisions Act, and applicable A.R.M.

_____
Sanitarian: Deer Lodge County Date

CERTIFICATE OF COUNTY TREASURER

I, _____, Treasurer of Deer Lodge County, Montana, do hereby certify that the accompanying Survey has been duly examined and that the real property taxes and special assessments assessed and levied on the land to be divided have been paid. (Parcels #315200, 316910, 525020, 525030 and 580450)

Signed this _____ day of _____ , 2014.

By:_____
Treasurer

BASIS OF BEARINGS

Bearings are grid, derived from GPS observations with survey-grade receivers and referenced to the Montana Coordinate System, Single Zone, NAD83.

CERTIFICATE OF EXAMINING LAND SURVEYOR

I _____ acting as an examining land surveyor for Deer Lodge County, Montana, do hereby certify that I have examined this Certificate of Survey and find that the survey data shown hereon meet the conditions set forth by or pursuant to 76-3-611(2)(a), MCA.

_____
Examining Land Surveyor Date
Montana License No. _____

CERTIFICATE OF SURVEYOR

I, Jared A. Lay, a Montana licensed Professional Land Surveyor, do hereby certify that this survey was performed under my supervision during the months of May, 2014 through August, 2014 in accordance with the provisions of the Montana Subdivisions and Platting Act (76-3-101 through 76-3-625, MCA) and the regulations adopted under that Act.

_____
Jared A. Lay, P.L.S. Date
Montana License No. 17305LS
Helena, MT

CERTIFICATE OF CLERK AND RECORDER

PIONEER TECHNICAL SERVICES, INC.
201 E. BROADWAY, SUITE C
HELENA, MONTANA 59601
(406) 457-8252

1/4 SEC.	SECTION	TOWNSHIP	RANGE
	6	4N	10W
	1,2,3	4N	11W
	35,36	5N	11W

P.M.,M., DEER LODGE COUNTY, MONTANA
FIELD WORK: MTN/MRS DRAWN BY: JAL CHECKED BY: JAL
SCALE: 1"=300' PROJ. # OWGC
CLIENT: ARCO
PLOTTED DATE: 12/12/2014 SHEET 1 OF 3

DRAWING NAME: M:\SURVEY-CLIENTS\ARCO\OLD WORKS\2014\DRAWINGS\SURVEY\OWGC-SU-COS-001-14.DWG

CERTIFICATE OF SURVEY

LOCATED IN THE WEST 1/2 OF SECTION 6, TOWNSHIP 4 NORTH, RANGE 10 WEST,
ALL OF SECTION 1, THE NORTH 1/2 OF SECTION 2 AND THE NE 1/4 OF SECTION 3 OF TOWNSHIP 4 NORTH, RANGE, 11 WEST,
THE SOUTH 1/2 OF SECTION 35 AND THE SOUTH 1/2 OF SECTION 36 OF TOWNSHIP 5 NORTH, RANGE 11 WEST
PRINCIPAL MERIDIAN, MONTANA
DEER LODGE COUNTY, STATE OF MONTANA

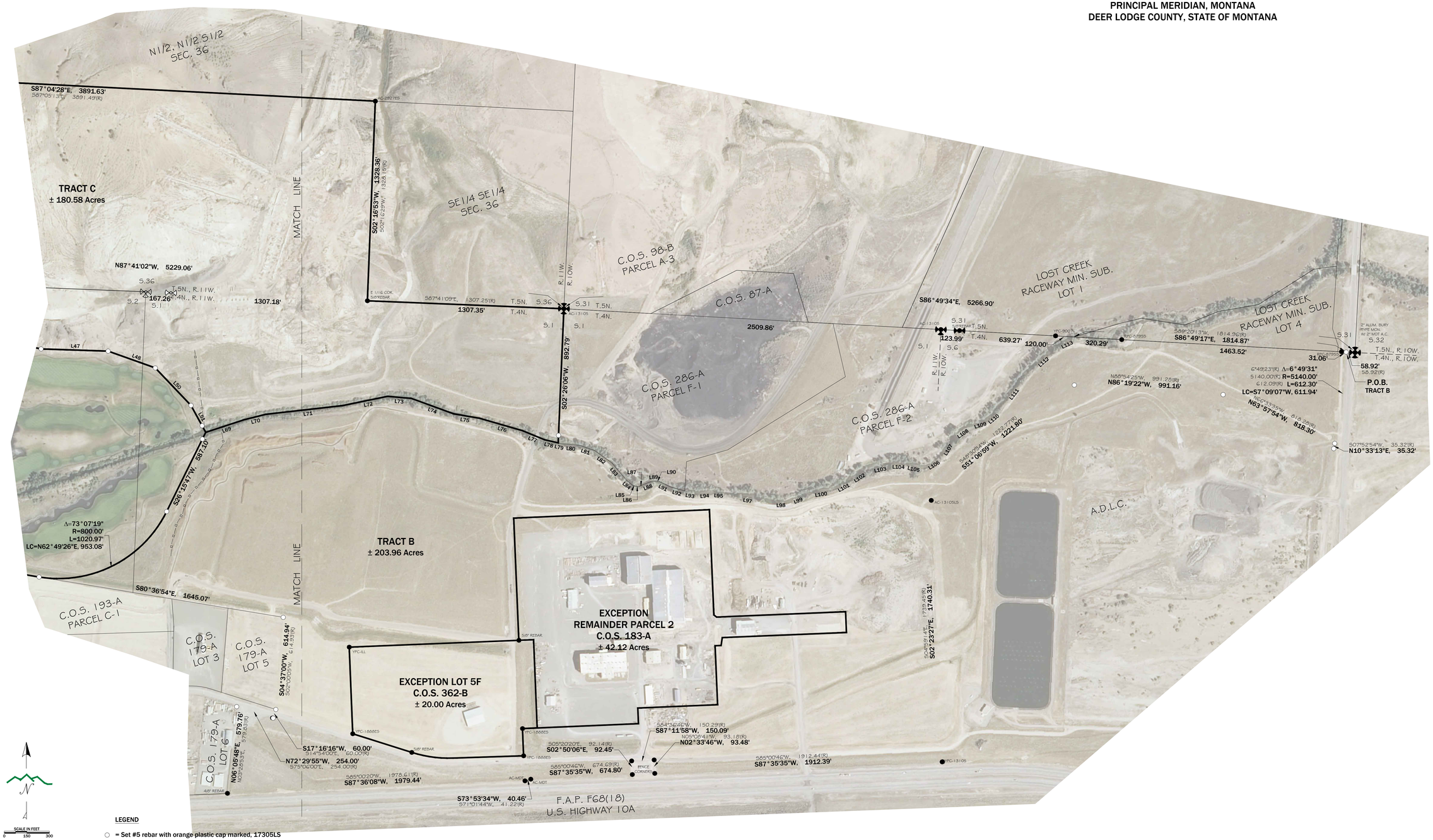
PIONEER TECHNICAL SERVICES, INC.
201 E. BROADWAY, SUITE C
HELENA, MONTANA 59601
(406) 457-8252

1/4 SEC.	SECTION	TOWNSHIP	RANGE
	6	4N	10W
	1,2,3	4N	11W
	35,36	5N	11W

P.M.,M., DEER LODGE COUNTY, MONTANA
FIELD WORK: MTN/MRS DRAWN BY: JAL CHECKED BY: JAL
SCALE: 1"=300' PROJ. # OWGC .
CLIENT: ARCO .
PLOTTED DATE: 12/12/2014 SHEET 2 OF 3 .
DRAWING NAME: M:\SURVEY-CLIENTS\ARCO\OLD WORKS\2014\DRAWINGS\SURVEY\OWGC-SU-COS-001-14.DWG

CERTIFICATE OF SURVEY

LOCATED IN THE WEST 1/2 OF SECTION 6, TOWNSHIP 4 NORTH, RANGE 10 WEST,
ALL OF SECTION 1, THE NORTH 1/2 OF SECTION 2 AND THE NE 1/4 OF SECTION 3 OF TOWNSHIP 4 NORTH, RANGE, 11 WEST,
THE SOUTH 1/2 OF SECTION 35 AND THE SOUTH 1/2 OF SECTION 36 OF TOWNSHIP 5 NORTH, RANGE 11 WEST
PRINCIPAL MERIDIAN, MONTANA
DEER LODGE COUNTY, STATE OF MONTANA



SCALE IN FEET
0 150 300

LEGEND

- ○ = Set #5 rebar with orange plastic cap marked, 17305LS
- ● = Found monument as noted on plat
- S89°55'20"E, 1000.00' = Measured bearing and distance this survey
- 589°55'20"E, 1000.00' (R1) = Record bearing and distance
- — — — — = Eliminated Boundary
- ——— = Boundary this Survey
- P.O.B. = Point of Beginning

PIONEER TECHNICAL SERVICES, INC.
201 E. BROADWAY, SUITE C
HELENA, MONTANA 59601
(406) 457-8252

1/4 SEC.	SECTION	TOWNSHIP	RANGE
	6	4N	10W
	1,2,3	4N	11W
	35,36	5N	11W

P.M.,M., DEER LODGE COUNTY, MONTANA
FIELD WORK: MTN/MRS DRAWN BY: JAL CHECKED BY: JAL
SCALE: 1"=300' PROJ. # OWGC
CLIENT: ARCO
PLOTTED DATE: 12/12/2014 SHEET 3 OF 3
DRAWING NAME: M:\SURVEY-CLIENTS\ARCO\OLD WORKS\2014\DRAWINGS\SURVEY\OWGC-SU-COS-001-14.DWG

Exhibit 13
(Conveyance Agreement Parcels Re-conveyance Quitclaim Deeds)

After Recording, Return to:
Atlantic Richfield Company
Attention: Rob Jordan
317 Anaconda Road
Butte, Montana 59701

QUITCLAIM DEED
(1986 Deed Parcel-Triangle Parcel North of Cedar Park Homes)

THIS QUITCLAIM DEED ("Quitclaim Deed") is made effective as of _____ , 2016 (the "Effective Date"), by ANACONDA-DEER LODGE COUNTY ("ADLC" or "Grantor"), a consolidated governmental entity organized under the Constitution and laws of the State of Montana, whose address is 800 South Main, Anaconda, MT 59711, and ATLANTIC RICHFIELD COMPANY ("AR" or "Grantee"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701.

RECITALS

A. AR conveyed to ADLC the real property described in Attachment 1 attached hereto and incorporated herein by this reference located in Anaconda-Deer lodge County, Montana (the "Property") by that certain Deed of Gift by Quitclaim Deed dated December 2nd, 1986 and recorded on the 12th day of December, 1986 in Book 63 at Page 360 of the Anaconda-Deer Lodge County real property records.(the "Original Deed").

B. AR and ADLC now plan to resurvey and reconfigure the plat for the Property and certain adjacent properties (collectively, the "Golf Course Resurvey Properties").

C. In order to facilitate the plan, ADLC is reconveying the Property to AR as provided in this Quitclaim Deed.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ADLC conveys the Property to AR on the terms and conditions set forth below:

WITNESSETH:

1. Quitclaim of Property. GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer Lodge County,

State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference ("Property").

2. Effect of Conveyance. As noted in Recital C above, it is AR's and ADLC's intent that the reconveyance of the Property is for the purpose of facilitating the reconfiguration of the Property as a part of the Golf Course Resurvey Properties. Accordingly, any rights, duties, obligations, claims or liabilities of any nature with respect to the Property, or in connection with ADLC's ownership, operation, maintenance or disposition thereof, arising prior to the Effective Date shall be governed by and construed in accordance with the provisions of the Original Deed.

The parties have executed this Quitclaim Deed effective for all purposes as of the date first written above.

GRANTOR:

ANACONDA-DEER LODGE COUNTY,
a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: _____
Name: _____
Title: _____

GRANTEE:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: _____
Name: _____
Title: _____

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.

_____
Notary Public for the State of Montana
(SEAL) Residing at:_____
My commission expires:_____

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.

_____
Notary Public for the State of Montana
(SEAL) Residing at:_____
My commission expires:_____

ATTACHMENT 1
(To Quitclaim Deed)

Legal Description of Property

Parcel 1 of Certificate of Survey No. 458-A, recorded on April 8, 2016 at Reception No. 197367 of the real property records of Deer Lodge County, Montana.

After Recording, Return to:
Atlantic Richfield Company
Attention: Rob Jordan
317 Anaconda Road
Butte, Montana 59701

QUITCLAIM DEED
(Red Sands -Arbiter Parcel)

This QUITCLAIM DEED ("Quitclaim Deed") is made effective as of _____ , 2016 (the "Effective Date"), by ANACONDA-DEER LODGE COUNTY ("ADLC" or "Grantor"), a consolidated governmental entity organized under the Constitution and laws of the State of Montana, whose address is 800 South Main, Anaconda, MT 59711, and ATLANTIC RICHFIELD COMPANY ("AR" or "Grantee"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701.

RECITALS

A. AR conveyed to ADLC the real property described in Attachment 1 attached hereto and incorporated herein by this reference located in Anaconda-Deer lodge County, Montana (the "Property") pursuant to and in accordance with the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among AR, ADLC and Old Works Golf Course, Inc. (the "Conveyance Agreement") and, in particular, that certain Quitclaim Deed (Red Sands - Arbiter Parcel) dated as of May 5, 1994 and recorded on May 5, 1994 in the Anaconda-Deer lodge County real property records in Book 96 at Page 230 (the "Original Deed").

B. AR and ADLC now plan to (i) resurvey and reconfigure the plat for the Property, the adjacent Golf Course Parcel and certain other adjacent properties (collectively, the "Golf Course Resurvey Properties"), (ii) terminate the existing "ADDITIONAL PROVISIONS" applicable to the Golf Course Resurvey Properties, and (iii) provide for revised and updated ADDITIONAL PROVISIONS applicable to the Golf Course Resurvey Properties.

C. In order to facilitate the plan, ADLC is reconveying the Property to AR as provided in this Quitclaim Deed.

D. The parties acknowledge that the ADDITIONAL PROVISIONS contained in the Original Deed, among other things, included (i) a DISCLAIMER OF WARRANTIES, (ii) PROPERTY DISCLOSURES, (iii) a RELEASE AND COVENANT NOT TO SUE, (iv) RESTRICTIVE COVENANTS (including provisions for enforcement and modification of the

RESTRICTIVE COVENANTS), and (vi) obligations on TRANSFERS OF PROPERTY (collectively, the "ADDITIONAL PROVISIONS").

D. It is AR's and ADLC's intent that the reconveyance of the Property pursuant to this Quitclaim Deed shall effectuate a merger of title in AR such that the ADDITIONAL PROVISIONS applicable to the Property shall be terminated as of the Effective Date of this Quitclaim Deed for all matters arising from and after the Effective Date of this Quitclaim Deed.

E. AR and ADLC hereby acknowledge that subsequent to the conveyance in the Original Deed, ADLC conveyed a portion of the real property included in the Original Deed to one or more third-parties.

F. This Quitclaim Deed does not affect any property included in the Original Deed but conveyed by ADLC prior to this Quitclaim Deed and the legal description attached hereto as Attachment 1 specifically excepts such property.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ADLC conveys the Property to AR on the terms and conditions set forth below:

WITNESSETH:

1. Quitclaim of Property. Grantor has remised, released and QUITCLAIMED and hereby remises, release and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the Property (as described on Attachment 1 attached hereto and incorporated herein by this reference) together with any and all right, title and interest of Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and mining wastes located on the Property, together the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, ditch and ditch rights, situated on or appurtenant to the Property, or owned or used in connection therewith, and the right to use the same, and together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature.

2. Effect of Conveyance. As noted in Recital C above, it is AR's and ADLC's intent that the reconveyance of the Property pursuant to this Quitclaim Deed shall effectuate a merger of title in AR such that the ADDITIONAL PROVISIONS shall be terminated as of the effective date of this Quitclaim Deed for all matters arising from and after the Effective Date of this Quitclaim Deed. Notwithstanding the foregoing, any rights, duties, obligations, claims or liabilities of any nature with respect to the Property, or in connection with ADLC's ownership, operation, maintenance or disposition thereof, arising prior to the Effective Date shall be governed by and construed in accordance with the provisions of the Original Deed.

3. Termination of Covenants. If and to the extent that the reconveyance of the Property by ADLC to AR pursuant to this Quitclaim Deed is determined not to terminate the RESTRICTIVE COVENANTS for any reason, AR (as beneficiary) and ADLC (as obligor and

current owner of the Property) hereby acknowledge and confirm that they (i) have complied with all the requirements set forth in Section H of the Original Deed for termination of the RESTRICTIVE COVENANTS, and (ii) intend to terminate the RESTRICTIVE COVENANTS in their entirety as of the Effective Date. As required in Section H of the Original Deed, this Quitclaim Deed shall be construed as the instrument created by AR and ADLC to terminate the RESTRICTIVE COVENANTS.

The parties have executed this Quitclaim Deed effective for all purposes as of the date first written above.

GRANTOR:

ANACONDA-DEER LODGE COUNTY,
a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: _____
Name: _____
Title: _____

GRANTEE:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: _____
Name: _____
Title: _____

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

ATTACHMENT 1
(To Quitclaim Deed - Red Sands - Arbiter Parcel)

Legal Description of Red Sands - Arbiter Parcel

That certain real property described in Certificate of Survey No. 98-D recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

Less and Except: Lot 1, Certificate of Survey No. 269-B, Arbiter South Subdivision, recorded on February 24, 2000 at Reception No. 159345 in the real property records of Deer Lodge County, Montana.

and

Less and Except: Exception Lot 5F of Certificate of Survey No. 362-B, Final Amended Lot 5A of Amended Arbiter Minor Subdivision, recorded on October 14, 2004 at Reception No. 171763 in the real property records of Deer Lodge County, Montana.

After Recording, Return to:
Atlantic Richfield Company
Attention: Rob Jordan
317 Anaconda Road
Butte, Montana 59701

QUITCLAIM DEED
*(*Old Works Historic Trail Parcel*)*

This QUITCLAIM DEED ("Quitclaim Deed") is made effective as of _____ , 2016 (the "Effective Date"), by ANACONDA-DEER LODGE COUNTY ("ADLC" or "Grantor"), a consolidated governmental entity organized under the Constitution and laws of the State of Montana, whose address is 800 South Main, Anaconda, MT 59711, and ATLANTIC RICHFIELD COMPANY ("AR" or "Grantee"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701.

RECITALS

A. AR conveyed to ADLC the real property described in Attachment 1 attached hereto and incorporated herein by this reference located in Anaconda-Deer lodge County, Montana (the "Property") pursuant to and in accordance with the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among AR, ADLC and Old Works Golf Course, Inc. (the "Conveyance Agreement") and, in particular, that certain Quitclaim Deed (Old Works Historic Trail Parcel) dated as of May 5, 1994 and recorded on May 5, 1994 in the Anaconda-Deer lodge County real property records in Book 96 at Page 182 (the "Original Deed").

B. AR and ADLC now plan to (i) resurvey and reconfigure the plat for the Property, the adjacent Golf Course Parcel and certain other adjacent properties (collectively, the "Golf Course Resurvey Properties"), (ii) terminate the existing "ADDITIONAL PROVISIONS" applicable to the Golf Course Resurvey Properties, and (iii) provide for revised and updated ADDITIONAL PROVISIONS applicable to the Golf Course Resurvey Properties.

C. In order to facilitate the plan, ADLC is reconveying the Property to AR as provided in this Quitclaim Deed.

D. The parties acknowledge that the ADDITIONAL PROVISIONS contained in the Original Deed, among other things, included (i) a DISCLAIMER OF WARRANTIES, (ii) PROPERTY DISCLOSURES, (iii)) a RELEASE AND COVENANT NOT TO SUE, (iv)

RESTRICTIVE COVENANTS (including provisions for enforcement and modification of the RESTRICTIVE COVENANTS), and (vi) obligations on TRANSFERS OF PROPERTY (collectively, the "ADDITIONAL PROVISIONS").

D. It is AR's and ADLC's intent that the reconveyance of the Property pursuant to this Quitclaim Deed shall effectuate a merger of title in AR such that the ADDITIONAL PROVISIONS applicable to the Property shall be terminated as of the Effective Date of this Quitclaim Deed for all matters arising from and after the Effective Date of this Quitclaim Deed.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ADLC conveys the Property to AR on the terms and conditions set forth below:

WITNESSETH:

1. Quitclaim of Property. Grantor has remised, released and QUITCLAIMED and hereby remises, release and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the Property (as described on Attachment 1 attached hereto and incorporated herein by this reference) together with any and all right, title and interest of Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and mining wastes located on the Property, together the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, ditch and ditch rights, situated on or appurtenant to the Property, or owned or used in connection therewith, and the right to use the same, and together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature.

2. Effect of Conveyance. As noted in Recital C above, it is AR's and ADLC's intent that the reconveyance of the Property pursuant to this Quitclaim Deed shall effectuate a merger of title in AR such that the ADDITIONAL PROVISIONS shall be terminated as of the effective date of this Quitclaim Deed for all matters arising from and after the Effective Date of this Quitclaim Deed. Notwithstanding the foregoing, any rights, duties, obligations, claims or liabilities of any nature with respect to the Property, or in connection with ADLC's ownership, operation, maintenance or disposition thereof, arising prior to the Effective Date shall be governed by and construed in accordance with the provisions of the Original Deed.

3. Termination of Covenants. If and to the extent that the reconveyance of the Property by ADLC to AR pursuant to this Quitclaim Deed is determined not to terminate the RESTRICTIVE COVENANTS for any reason, AR (as beneficiary) and ADLC (as obligor and current owner of the Property) hereby acknowledge and confirm that they (i) have complied with all the requirements set forth in Section H of the Original Deed for termination of the RESTRICTIVE COVENANTS, and (ii) intend to terminate the RESTRICTIVE COVENANTS in their entirety as of the Effective Date. As required in Section H of the Original Deed, this Quitclaim Deed shall be construed as the instrument created by AR and ADLC to terminate the RESTRICTIVE COVENANTS.

The parties have executed this Quitclaim Deed effective for all purposes as of the date first written above.

GRANTOR:

ANACONDA-DEER LODGE COUNTY,
a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By:_____
Name:_____
Title: _____

GRANTEE:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By:_____
Name:_____
Title: _____

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

ATTACHMENT 1

(To Quitclaim Deed- Old Works Trail Parcel)

Legal Description of Old Works Historic Trail Property

That certain real property described in Certificate of Survey No. 98-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

After Recording, Return to:
Atlantic Richfield Company
Attention: Rob Jordan
317 Anaconda Road
Butte, Montana 59701

QUITCLAIM DEED
*(*Lot 4A of Block 3*)*

THIS QUITCLAIM DEED ("Quitclaim Deed") is made effective as of _____ , 2016 (the "Effective Date"), by ANACONDA-DEER LODGE COUNTY ("ADLC" or "Grantor"), a consolidated governmental entity organized under the Constitution and laws of the State of Montana, whose address is 800 South Main, Anaconda, MT 59711, and ATLANTIC RICHFIELD COMPANY ("AR" or "Grantee"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701.

RECITALS

A. AR conveyed to ADLC the real property described in Attachment 1 attached hereto and incorporated herein by this reference located in Anaconda-Deer lodge County, Montana (the "Property") by that certain Deed of Gift dated December 15, 1982 and recorded on the 31st day of December, 1982 in Book 45 at Page 174 of the Anaconda-Deer Lodge County real property records (the "Original Deed").

B. The Original Deed contains covenants governing the use, operation development and disposition of the Property (the "Existing Covenants").

C. In a series of transactions, ADLC conveyed the property subject to the Original Deed (the "Original Deed Property") to a third party, the Original Deed Property was subdivided and the portion of the Original Deed Property described on Attachment 1 was reconveyed to ADLC.

D. The Existing Covenants applicable to the Property were modified by that certain Modification of Covenants (Lots 1 through 5 of Block 3 of Plat 178-B) dated April 13, 2010 and recorded on April 22, 2010 in the Anaconda-Deer Lodge real property records in Book 223 at Page 794 (collectively, the "Modified Covenants").

E. AR and ADLC now plan to (i) resurvey and reconfigure the plat that includes the Property, (ii) resurvey and reconfigure the adjacent parcel commonly known as the Golf Course Parcel and certain other adjacent properties (collectively, the "Golf Course Resurvey Properties"), (iii) terminate the Modified Covenants applicable to the Property, and (iv) include the Property in the newly reconfigured Golf Course Parcel created by the resurvey.

F. In order to facilitate the plan, ADLC is reconveying the Property to AR as provided in this Quitclaim Deed.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ADLC conveys the Property to AR on the terms and conditions set forth below:

WITNESSETH:

1. Quitclaim of Property. GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference ("Property").

2. Effect of Conveyance. As noted in Recital C above, it is AR's and ADLC's intent that the reconveyance of the Property pursuant to the Quitclaim Deed shall effectuate a merger of title in AR such that the Modified Covenants shall be terminated as of the effective date of this Quitclaim Deed for all matters arising from and after the Effective Date of this Quitclaim Deed. Notwithstanding the foregoing, any rights, duties, obligations, claims or liabilities of any nature with respect to the Property, or in connection with ADLC's ownership, operation, maintenance or disposition thereof, arising prior to the Effective Date shall be governed by and construed in accordance with the provisions of the Original Deed.

3. Termination of Covenants. If and to the extent that the reconveyance of the Property by ADLC to AR pursuant to this Quitclaim Deed is determined not to terminate the Modified Covenant for any reason, AR (as beneficiary) and ADLC (as obligor and current owner of the Property) hereby acknowledge and confirm that they (i) have complied with all the requirements set forth in Section 6 of the Modification of Covenants for termination of the Modified Covenants, and (ii) intend to terminate the Modified Covenants in their entirety as of the Effective Date. As required in Section 6 of the Modification of Covenants, this Quitclaim Deed shall be construed as the instrument created by AR and ADLC to terminate the Modified Covenants.

The parties have executed this Quitclaim Deed effective for all purposes as of the date first written above.

GRANTOR:

ANACONDA-DEER LODGE COUNTY,
a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By:_____
Name: _____
Title: _____

GRANTEE:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By:_____
Name: _____
Title: _____

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF _____)

) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

ATTACHMENT 1
(To Quitclaim Deed - Lot 4A, Block 3)

Legal Description of Property

Lot 4A, Block 3, Certificate of Survey No. 292-A, Anaconda Industrial Park Addition, recorded on February 25, 1998 at Reception No. 153939 in the real property records of Deer Lodge County.

After Recording, Return to:
Atlantic Richfield Company
Attention: Rob Jordan
317 Anaconda Road
Butte, Montana 59701

QUITCLAIM DEED
(Hotel Site Parcel)

THIS QUITCLAIM DEED ("Quitclaim Deed") is made effective as of _____ , 2016 (the "Effective Date"), by ANACONDA-DEER LODGE COUNTY ("ADLC" or "Grantor"), a consolidated governmental entity organized under the Constitution and laws of the State of Montana, whose address is 800 South Main, Anaconda, MT 59711, and ATLANTIC RICHFIELD COMPANY ("AR" or "Grantee"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701.

RECITALS

A. AR conveyed to ADLC the real property described in Attachment 1 attached hereto and incorporated herein by this reference located in Anaconda-Deer lodge County, Montana commonly known as the "Hotel Site Parcel" pursuant to and in accordance with the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among AR, ADLC and Old Works Golf Course, Inc. (the "Conveyance Agreement") and, in particular, that certain Quitclaim Deed (Golf Course Parcel) dated as of May 5, 1994 and recorded on May 5, 1994 in the Anaconda-Deer lodge County real property records in Book 96 at Page 198 (the "Original Deed"). The Hotel Site Parcel was only a small portion of the property conveyed by the Original Deed and was not separately described at that time.

B. ADLC subsequently created the Hotel Site Parcel by recordation of Certificate of Survey No. 324-A on October 9, 2001 at Reception No. 163470 in the real property records of Deer Lodge County, Montana.

C. In conjunction with creation of the Hotel Site Parcel, AR and ADLC modified the covenants and related provisions of the Original Deed applicable to the Hotel Site Parcel by execution and recordation of a "Modification of Restrictive Covenants and Related Deed Provisions" dated April 25, 2002 and recorded on May 2, 2002 in Book 149 at Page 1 of the Anaconda-Deer Lodge County real property records (the "Covenant Modification Agreement").

D. In a series of transactions, ADLC conveyed the Hotel Site Parcel to a third party and reacquired the Hotel Site Parcel. ADLC is the current owner of the Hotel Site Parcel and the

property is subject to the provisions of the Original Deed as modified by the Covenant Modification Agreement.

E. AR and ADLC now plan to (i) terminate the existing "ADDITIONAL PROVISIONS" applicable to the Hotel Site Parcel, and (ii) provide for revised and updated ADDITIONAL PROVISIONS applicable to the Hotel Site Parcel.

F. In order to facilitate the plan, ADLC is reconveying the Hotel Site Parcel to AR as provided in this Quitclaim Deed.

G. The parties acknowledge that the ADDITIONAL PROVISIONS contained in the Original Deed as modified by the Covenant Modification Agreement, among other things, included (i) a DISCLAIMER OF WARRANTIES, (ii) PROPERTY DISCLOSURES, (iii) a RELEASE AND COVENANT NOT TO SUE, (iv) RESTRICTIVE COVENANTS (including provisions for enforcement and modification of the RESTRICTIVE COVENANTS), and (vi) obligations on TRANSFERS OF PROPERTY (collectively, the "ADDITIONAL PROVISIONS").

H. It is AR's and ADLC's intent that the reconveyance of the Hotel Site Parcel pursuant to this Quitclaim Deed shall effectuate a merger of title in AR such that the ADDITIONAL PROVISIONS shall be terminated as of the Effective Date of this Quitclaim Deed for all matters arising from and after the Effective Date of this Quitclaim Deed.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ADLC conveys the Hotel Site Parcel to AR on the terms and conditions set forth below:

WITNESSETH:

1. Quitclaim of Property. GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, ditch and ditch rights, situated on or appurtenant to the Property, or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature (the "Property").

2. Effect of Conveyance. As noted in Recital C above, it is AR's and ADLC's intent that the reconveyance of the Property pursuant to this Quitclaim Deed shall effectuate a merger of title in AR such that the ADDITIONAL PROVISIONS shall be terminated as of the effective date of this Quitclaim Deed for all matters arising from and after the Effective Date of this Quitclaim Deed. Notwithstanding the foregoing, any rights, duties, obligations, claims or

liabilities of any nature with respect to the Property, or in connection with ADLC's ownership, operation, maintenance or disposition thereof, arising prior to the Effective Date shall be governed by and construed in accordance with the provisions of the Original Deed.

3. Termination of Covenants. If and to the extent that the reconveyance of the Property by ADLC to AR pursuant to this Quitclaim Deed is determined not to terminate the RESTRICTIVE COVENANTS for any reason, AR (as beneficiary) and ADLC (as obligor and current owner of the Property) hereby acknowledge and confirm that they (i) have complied with all the requirements set forth in Section H of the Original Deed for termination of the RESTRICTIVE COVENANTS, and (ii) intend to terminate the RESTRICTIVE COVENANTS in their entirety as of the Effective Date. As required in Section H of the Original Deed, this Quitclaim Deed shall be construed as the instrument created by AR and ADLC to terminate the RESTRICTIVE COVENANTS.

“”The parties have executed this Quitclaim Deed effective for all purposes as of the date first written above.

GRANTOR:

ANACONDA-DEER LODGE COUNTY,
a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: _____
Name: _____
Title: _____

GRANTEE:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: _____
Name: _____
Title: _____

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

CONSENT TO PROVISIONS OF QUITCLAIM DEED

Old Works Golf Course, Inc. hereby consents to the conveyance of the Property by Grantor to Grantee pursuant to this Quitclaim Deed.

OLD WORKS GOLF COURSE, INC.,
a Montana nonprofit corporation

By: _____
Name: _____
Title: _____

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 201 by _____ as _____ of Old Works Golf Course, Inc. on behalf of Old Works Golf Course, Inc.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

ATTACHMENT 1
(To Quitclaim Deed - Hotel Parcel Site)

Legal Description of Property Commonly Known as Hotel Site Parcel

Tract 1, Certificate of Survey No. 324-A, recorded on October 9, 2001 at Reception No. 163470 in the real property records of Deer Lodge County, Montana.

After Recording, Return to:
Atlantic Richfield Company
Attention: Rob Jordan
317 Anaconda Road
Butte, Montana 59701

QUITCLAIM DEED
*(*Golf Course Parcel*)*

THIS QUITCLAIM DEED ("Quitclaim Deed") is made effective as of _____ , 2016 (the "Effective Date"), by ANACONDA-DEER LODGE COUNTY ("ADLC" or "Grantor"), a consolidated governmental entity organized under the Constitution and laws of the State of Montana, whose address is 800 South Main, Anaconda, MT 59711, and ATLANTIC RICHFIELD COMPANY ("AR" or "Grantee"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701.

RECITALS

A. AR conveyed to ADLC the real property described in Attachment 1 attached hereto and incorporated herein by this reference located in Anaconda-Deer lodge County, Montana (the "Property") pursuant to and in accordance with the terms and conditions of that certain Real Property Transfer/Conveyance Agreement dated May 5, 1994 among AR, ADLC and Old Works Golf Course, Inc. (the "Conveyance Agreement") and, in particular, that certain Quitclaim Deed (Golf Course Parcel) dated as of May 5, 1994 and recorded on May 5, 1994 in the Anaconda-Deer lodge County real property records in Book 96 at Page 198 (the "Original Deed").

B. AR and ADLC now plan to (i) resurvey and reconfigure the plat for the Property and certain adjacent properties (collectively, the "Golf Course Resurvey Properties"), (ii) terminate the existing "ADDITIONAL PROVISIONS" applicable to the Golf Course Resurvey Properties, and (iii) provide for revised and updated ADDITIONAL PROVISIONS applicable to the Golf Course Resurvey Properties.

C. In order to facilitate the plan, ADLC is reconveying the Property to AR as provided in this Quitclaim Deed.

D. The parties acknowledge that the ADDITIONAL PROVISIONS contained in the Original Deed, among other things, included (i) a DISCLAIMER OF WARRANTIES, (ii) PROPERTY DISCLOSURES, (iii)) a RELEASE AND COVENANT NOT TO SUE, (iv)

RESTRICTIVE COVENANTS (including provisions for enforcement and modification of the RESTRICTIVE COVENANTS), and (vi) obligations on TRANSFERS OF PROPERTY (collectively, the "ADDITIONAL PROVISIONS").

D. It is AR's and ADLC's intent that the reconveyance of the Property pursuant to this Quitclaim Deed shall effectuate a merger of title in AR such that the ADDITIONAL PROVISIONS shall be terminated as of the Effective Date of this Quitclaim Deed for all matters arising from and after the Effective Date of this Quitclaim Deed.

E. AR and ADLC hereby acknowledge that subsequent to the conveyance in the Original Deed, ADLC conveyed a portion of the real property included in the Original Deed to one or more third-parties.

F. This Quitclaim Deed does not affect any property included in the Original Deed but conveyed by ADLC prior to this Quitclaim Deed and the legal description attached hereto as Attachment 1 specifically excepts such property.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ADLC conveys the Property to AR on the terms and conditions set forth below:

WITNESSETH:

1. Quitclaim of Property. GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, ditch and ditch rights, situated on or appurtenant to the Property, or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

2. Effect of Conveyance. As noted in Recital C above, it is AR's and ADLC's intent that the reconveyance of the Property pursuant to this Quitclaim Deed shall effectuate a merger of title in AR such that the ADDITIONAL PROVISIONS shall be terminated as of the effective date of this Quitclaim Deed for all matters arising from and after the Effective Date of this Quitclaim Deed. Notwithstanding the foregoing, any rights, duties, obligations, claims or liabilities of any nature with respect to the Property, or in connection with ADLC's ownership, operation, maintenance or disposition thereof, arising prior to the Effective Date shall be governed by and construed in accordance with the provisions of the Original Deed.

3. Termination of Covenants. If and to the extent that the reconveyance of the Property by ADLC to AR pursuant to this Quitclaim Deed is determined not to terminate the

RESTRICTIVE COVENANTS for any reason, AR (as beneficiary) and ADLC (as obligor and current owner of the Property) hereby acknowledge and confirm that they (i) have complied with all the requirements set forth in Section H of the Original Deed for termination of the RESTRICTIVE COVENANTS, and (ii) intend to terminate the RESTRICTIVE COVENANTS in their entirety as of the Effective Date. As required in Section H of the Original Deed, this Quitclaim Deed shall be construed as the instrument created by AR and ADLC to terminate the RESTRICTIVE COVENANTS.

The parties have executed this Quitclaim Deed effective for all purposes as of the date first written above.

GRANTOR:

ANACONDA-DEER LODGE COUNTY,
a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: _____
Name:_____
Title: _____

GRANTEE:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By:_____
Name: _____
Title: _____

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

CONSENT TO PROVISIONS OF QUITCLAIM DEED

Old Works Golf Course, Inc. hereby consents to the conveyance of the Property by Grantor to Grantee pursuant to this Quitclaim Deed.

OLD WORKS GOLF COURSE, INC.,
a Montana nonprofit corporation

By: _____
Name: _____
Title: _____

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Old Works Golf Course, Inc. on behalf of Old Works Golf Course, Inc.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

ATTACHMENT 1

(To Quitclaim Deed - Golf Course Parcel)

Legal Description of Golf Course Parcel

That certain real property described in Certificate of Survey No. 98-C recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

Less and Except: Tract 1, Certificate of Survey No. 324-A, recorded on October 9, 2001 at Reception No. 163470 in the real property records of Deer Lodge County, Montana.

After Recording, Return to:
Atlantic Richfield Company
Attention: Rob Jordan
317 Anaconda Road
Butte, Montana 59701

QUITCLAIM DEED
*(*Portion of 1982 Deed Parcel*)*

THIS QUITCLAIM DEED ("Quitclaim Deed") is made effective as of _____ , 2016 (the "Effective Date"), by ANACONDA-DEER LODGE COUNTY ("ADLC" or "Grantor"), a consolidated governmental entity organized under the Constitution and laws of the State of Montana, whose address is 800 South Main, Anaconda, MT 59711, and ATLANTIC RICHFIELD COMPANY ("AR" or "Grantee"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701.

RECITALS

A. AR conveyed to Anaconda Local Development Corporation certain real property located in Anaconda-Deer lodge County, Montana by that certain Quitclaim Deed dated December 15, 1982 and recorded on the 28th day of December, 1982 in Book 45 at Page 174 of the Anaconda-Deer lodge County real property records.(the "Original Deed").

B. The Original Deed included the real property described in Attachment 1 attached hereto and incorporated herein by this reference (the "Subject Property").

C. Anaconda Local Development Corporation conveyed to ADLC the Subject Property by that certain Bargain and Sale Deed dated December 11, 1987 and recorded on December ____, 1987 in Book 68 at Page 220 of the Anaconda-Deer lodge County real property records.

D. AR and ADLC now plan to resurvey and reconfigure the plat for the Subject Property and certain adjacent properties (collectively, the "Golf Course Resurvey Properties").

E. In order to facilitate the plan, ADLC is conveying the Subject Property to AR as provided in this Quitclaim Deed.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ADLC conveys the Subject Property to AR on the terms and conditions set forth below:

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference.

The parties have executed this Quitclaim Deed effective for all purposes as of the date first written above.

GRANTOR:

ANACONDA-DEER LODGE COUNTY,
a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: _____
Name: _____
Title: _____

GRANTEE:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: _____
Name: _____
Title: _____

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

ATTACHMENT 1
(To Quitclaim Deed)

Legal Description of Property

Block 5 of Plat 178-B, Anaconda Industrial Park Addition, recorded on December 28, 1982 at Reception No. 120629 in the real property records of Deer Lodge County, Montana.

Exhibit 14
(Conveyance Agreement Parcels Access Agreement)

ACCESS AGREEMENT

This Access Agreement ("Agreement") is made and entered into this 5th day of May, 1994 among Anaconda-Deer Lodge County, a consolidated governmental entity organized under the constitution and laws of the State of Montana ("ADL"), Old Works Golf Course, Inc. a Montana nonprofit corporation ("Authority"), and Atlantic Richfield Company, a Delaware corporation ("ARCO").

RECITALS

A. ADL owns certain properties located in Anaconda-Deer Lodge County, in the State of Montana, which properties are more particularly described in Exhibits A-1 through A-9 attached hereto and incorporated herein by this reference as though fully set forth. The Properties subject to this Agreement are generally referred to as follows:

1. Old Works Trail System Parcel;
2. Golf Course Parcel;
3. Ballfields/Industrial Park Parcel;
4. Red Sands/Arbiter Parcel;
5. East Anaconda Yards Parcel;
6. Drag Strip Parcel;
7. Mill Creek Parcel;
8. Stucky Ridge Parcel; and
9. Lumber Yard Parcel.

B. ADL, the Authority and ARCO have entered into a Conveyance Agreement (as hereinafter defined) wherein ARCO is conveying the Properties to ADL. As a part of the consideration for the Conveyance Agreement, ADL and the Authority have agreed to grant to ARCO access to the Properties for various remedial purposes which are more particularly described herein.

C. ADL is the current owner of the Properties and desires to provide ARCO with the access rights more particularly described herein. The Authority has or will have certain rights to the Golf Course Parcel and desires to provide ARCO with the access rights more particularly described herein.

D. Access to the Properties is needed by ARCO to conduct the Remedial Action on the Properties, as a whole, and on individual Parcels with respect to certain required Remedial Actions.

E. ADL and the Authority have agreed to permit ARCO to conduct the Remedial Action on the Properties since the Remedial Action is in the mutual interest of ADL, the Authority and ARCO in furthering the protection of public health and the environment, including benefits to the Properties owned by ADL.

NOW, THEREFORE, for and in consideration of the recitals, the mutual covenants and obligations of ARCO and ADL contained herein and in the Conveyance Agreement and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, ARCO and ADL hereby agree as follows:

DEFINED TERMS

For the purposes of this Agreement, including the Recitals above, the following terms shall have the meanings set forth below. Any capitalized terms found in this Agreement, but not more particularly defined below, shall have the meanings ascribed to such terms in the Conveyance Agreement.

"ADL" shall mean Anaconda-Deer Lodge County, its officials, representatives, successors and assigns.

"ARCO" shall mean the Atlantic Richfield Company, its successors and assigns.

"Agreement" shall mean this Access Agreement.

"Authority" shall mean The Old Works Golf Course Authority.

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. 99-499, 100 Stat. 9613 ("SARA"), and as hereafter amended.

"Completion of the Golf Course" shall mean the date upon which ARCO delivers to ADL a written notice stating that the construction of the Golf Course is complete.

"Completion of the Old Works Historic Trail System" shall mean the date upon which ARCO delivers to ADL a written notice stating that the construction of the Old Works Historic Trail System is complete.

"Conveyance Agreement" shall mean that certain Real Property Conveyance/Transfer Agreement between ARCO, ADL and The Old Works Golf Course Authority, a Montana nonprofit corporation dated May 5, 1994 and executed contemporaneously herewith, a memorandum of which was recorded on May 5, 1994 in Book 425 at Page 945 of the Deer Lodge real property records.

"EPA" shall mean the United States Environmental Protection Agency.

"Environmental Conditions" shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials or Mining Wastes; or 2) any mining, milling, smelting, processing, refining or other operations by ARCO or its predecessors.

"Environmental Laws" shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions or protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. §§ 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended (CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. § 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. § 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; any Applicable or Relevant and Appropriate Requirements (ARARs) for the OW/EADA Remedy; all as amended and as may change from time to time; and any provisions or theories of common law providing for any cause of action, remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

"Golf Course" shall mean the Jack Nicklaus Signature Golf Course that ARCO intends to construct on the Golf Course Parcel in accordance with the Conveyance Agreement.

"Hazardous Materials" shall mean any substance (i) the presence of which requires investigation of remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," "hazardous or deleterious substance," or pollutant or contaminant under any federal, state or

local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated biphenyls (PCBs), asbestos or urea formaldehyde foam insulation.

"Jack Nicklaus Golf Services™ Golf Course Agreement" shall mean that certain agreement entitled "Jack Nicklaus Golf Services™ Golf Course Agreement", a copy which is attached to the Conveyance Agreement.

"Mining Wastes" shall mean any solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, heap roast, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

OW/EADA Administrative Order shall mean the Administrative Order issued by EPA to ARCO on April 7, 1994, EPA Docket No. CERCLA VIII-94-08, and all attachments thereto and deliverables submitted thereunder, with respect to implementation of the OW/EADA Remedy.

"OW/EADA OU" shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL Site in or near Anaconda, Montana.

OW/EADA ROD or ROD shall mean the Record of Decision issued by EPA on March 8, 1994 with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

"OW/EADA Remedy" shall mean the remedy selected by EPA in the ROD issued March 8, 1994, as more specifically described in the OW/EADA Administrative Order and attachments thereto, including any operation and maintenance requirements of such remedy.

"Old Works Historic Trail System" shall mean the trail system to be constructed by ARCO on the Parcels or any portion thereof.

"Operation and Maintenance or O&M" shall mean those measures required to maintain the effectiveness of the OW/EADA Remedy or any other Remedial Action at or related to the OW/EADA OU.

"Properties" shall mean the properties described in Exhibits A-1 through A-9 to this Agreement.

"Release" shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever.

"Remedial Action" shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

"State" shall mean the State of Montana.

"Transferee" shall mean any person or entity receiving a transfer of all or any portion of the Properties from ADL or the Authority.

ARTICLE I

DESCRIPTION OF RIGHTS OF USE AND ACCESS GRANTED TO ALL PROPERTIES

1.1 Grant of Access. ADL and the Authority hereby grant to A. ', its employees, agents, contractors, subcontractors, representatives and designees, and to all authorized representatives of EPA and the State a right of access to and use of any or all of the Properties for purposes of implementing or causing to be implemented any or all of the following:

a. The OW/EADA Remedy, including any O&M obligations pertaining to such OW/EADA Remedy;

b. Any Remedial Action directed, ordered or otherwise required under any Environmental Laws or by any federal, state or local governmental entity or by any court; or

c. Any other actions which ARCO deems necessary or advisable to address any Environmental Conditions on or relating to the Properties.

Notwithstanding the foregoing, ARCO shall use its best efforts to provide twenty-four (24) hour's notice prior to entering the properties for the purposes described in paragraph c. of this Section 1.1.

The rights of access and use described herein shall include, but shall not be limited to, the right to oversee all actions designed

to accomplish the purposes of the OW/EADA Remedy or any other Remedial Action on the Properties, the right to enter onto the Properties to excavate and remove soils, monitor and sample (or to receive split samples of) environmental media and to conduct other information gathering activities such as field investigations, data collection, installation of monitoring wells and soil borings, surface water and ground water sampling, surveys, testing and periodic monitoring.

1.2 Access for Maintenance, Repair and Other Obligations. In the event that ADL (or with respect to the Golf Course Parcel, ADL or the Authority) fails to perform any maintenance or repair requirements or other obligations required by the Conveyance Agreement, the ROD, or the OW/EADA Remedy with respect to any of the Properties in a timely manner, ARCO shall have and is hereby specifically granted the right, but not the obligation, to enter onto the affected Parcel(s) to perform any such required maintenance, repairs or other obligations and to charge to ADL (or in the case of the Golf Course Parcel, ADL or the Authority) the costs incurred by ARCO in taking any such actions.

1.3 Rights of Access and Use to be Deemed Irrevocable License. The rights of access and use granted herein shall be deemed to be and are coupled with an interest and shall be irrevocable by ADL and the Authority to the fullest extent permitted by Montana law until the expiration of this Agreement as more particularly set forth herein.

1.4 Term. The term of the rights of access and use set forth in this Article I of this Agreement shall commence upon the date of execution hereof by ARCO, ADL and the Authority and shall continue until terminated as more particularly described herein. Notwithstanding any other provision contained in this Agreement, this Agreement shall terminate upon the execution of a mutual written termination agreement by ADL, ARCO and the Authority.

1.5 Costs. All of the rights granted to ARCO under the terms and conditions of this Article I shall be at no additional cost to ARCO.

ARTICLE II
DESCRIPTION OF ADDITIONAL RIGHTS OF USE AND ACCESS - THE GOLF COURSE PARCEL AND OLD WORKS HISTORIC TRAIL PARCEL

2.1 Construction Access. Pursuant to the terms and conditions of the Conveyance Agreement, ARCO has agreed to construct the Golf Course on the Golf Course Parcel and the Old Works Historic Trail System on the Old Works Historic Trail Parcels. ADL and the Authority hereby grant to ARCO, its employees, agents, contractors, subcontractors, representatives and designees a right of access to and use of the Golf Course Parcel and the Old Works Historic Trail Parcel for purposes of

construction of the Golf Course and its appurtenant facilities, and the Old Works Historic Trail System, and any activities related to such construction, including without limitation mapping and surveying activities, and for the purposes of implementation of the OW/EADA Remedy or any other Remedial Action.

2.2 Construction on Golf Course Parcel. For the purposes of this Article II, the Golf Course shall include without limitation the Golf Course being designed and to be constructed pursuant to the OW/EADA Remedy and the Jack Nicklaus Golf Services™ Golf Course Agreement. The Golf Course appurtenant facilities shall include without limitation the parking lot, halfway house, shelter houses, sanitary facilities, potable water stations, maintenance facilities, storm drainage systems, irrigation systems, dams, bridges, cart paths and all other facilities incidental to the operation of the Golf Course required to be constructed by ARCO pursuant to the terms and conditions of the Conveyance Agreement. The right of access and use granted herein shall include without limitation the right to drill, construct, install, and maintain any wells (including monitoring wells), ditches, flumes and pipelines which ARCO deems appropriate for development of a water supply to the Golf Course.

2.3 Construction on Old Works Historic Trail Parcel. For purposes of this Article II, the Old Works Historic Trail System shall include without limitation the trail system and all appurtenant facilities as set forth in the OW/EADA Remedy and as ARCO may determine to be necessary or desirable in connection with the design and construction of the trail system.

2.4 Access to Other Properties. ADL and the Authority further grant to ARCO, its employees, agents, contractors, subcontractors, representatives and designees a right of access to and use of all necessary Properties for purposes of construction of the Golf Course and the Old Works Historic Trail System and their appurtenant facilities, and any activities related to such construction and for the purposes of implementation of the OW/EADA Remedy or any other Remedial Action.

2.5 Access for Inspection, Maintenance and Repair. ADL and the Authority hereby grant to ARCO, its employees, agents, contractors, subcontractors, representatives and designees a right of access to and use of the Golf Course Parcel and the Old Works Historic Trail Parcel for purposes of the inspection, maintenance and repair of all facilities constructed on the Golf Course Parcel and the Old Works Historic Trail Parcel.

2.6 Acknowledgment of Possible Exclusion From Parcels. ADL and the Authority hereby acknowledge that the rights of access and use granted in this Article II may completely exclude ADL and the Authority from use or enjoyment of all or portions of the Golf Course Parcel and the Old Works Historic Trail Parcel during

construction activities. ADL shall not be entitled to compensation or damages of any nature by reason of such exclusion.

2.7 Rights of Access and Use to be Deemed Irrevocable License. The rights of access and use granted herein shall be deemed to be and are coupled with an interest and shall be irrevocable by ADL and the Authority to the fullest extent permitted by Montana law until the expiration of this Agreement as more particularly set forth herein.

2.8 Term. The term of the rights of access and use set forth in this Article II of this Agreement shall commence upon the date of execution hereof by ARCO, ADL and the Authority and shall continue until terminated as more particularly described herein. Notwithstanding any other provision contained in this Agreement, (a) the rights of access and use set forth in this Article II for construction of the Golf Course shall terminate upon the Completion of the Golf Course or upon the mutual written agreement of ADL, the Authority and ARCO, whichever occurs first, and (b) the right of access and use set forth in the Article II for the Old Works Historic Trail Parcel shall terminate upon Completion of the Old Works Historic Trail System or upon the mutual written agreement of ADL and ARCO, whichever occurs first. Termination of the rights granted in this Article II pursuant to this Section 2.8 shall not in any way terminate, limit or otherwise impair the rights granted under Article I of this Agreement.

2.9 Costs. All of the rights granted to ARCO under the terms and conditions of this Article II shall be at no additional cost to ARCO.

ARTICLE III
REPRESENTATIONS, WARRANTIES AND COVENANTS OF ADL AND THE AUTHORITY

3.1 Acknowledgment of Use. ADL and Authority expressly acknowledge that they are fully aware and informed of the use to which ARCO will put the Parcels, specifically including the Golf Course Parcel, and the nature and extent of the activities to be conducted by ARCO thereon.

3.2 Authority to Execute Agreement and Title to Properties. ADL and the Authority represent and warrant to ARCO that they have the power and authority to execute and deliver this Agreement and to carry out and perform all of the covenants to be performed hereunder. ADL further represents and warrants to ARCO:

a. that it is currently in possession of the Properties;

b. that ADL shall not lease, sell or grant any other rights for the use of any part of the Properties (including any

rights to the Authority) unless such lease, sale, conveyance or grant is subject and subordinate to the rights of ARCO hereunder; and

c. at all times ARCO shall have unobstructed and adequate means of ingress and egress to the Properties from all abutting streets, roads and highways.

3.3 Noninterference. ADL and its successors and assigns, including without limitation any subsequent owner(s) of the Properties shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the construction of the Golf Course, the Old Works Historic Trail System and appurtenant facilities or the implementation of any of the OW/EADA Remedy or any other Remedial Action by ARCO on any of the Parcels, specifically including but not limited to the Golf Course Parcel.

3.4 Grant or Transfer of Title to the Properties. No grant, transfer or conveyance of title, easement or other interest in the Properties shall be made or effected by ADL or the Authority without including therein a provision allowing the access and use and containing the covenants not to sue and indemnities set forth in this Agreement. All such conveyances of title, grants of easements or other grants, transfers or conveyances of any interest in any or all of the Properties shall contain covenants providing for the use and access and the covenants and releases described herein. At least 45 days prior to any grant, transfer or conveyance of any interest in any or all of the Properties, the owner of such Property in which an interest is to be granted, transferred or conveyed shall notify ARCO by registered mail of the intent of the owner to grant, transfer or convey an interest in such Property and of provisions to be made to ensure that the Transferee of the Property will provide the use and access described in this Agreement to ARCO.

3.5 Reservations of Future Easements by ADL. Contemporaneously with the conveyance or other transfer of all or any portion of the Property to a Transferee by ADL, ADL shall obtain from such Transferee written easements sufficient to allow ARCO the access and uses granted to ARCO herein. Such easements shall be recorded in the appropriate real property records and shall, by their own terms, run with the land and be binding upon the Transferee and all successive owners of the Property (or any part thereof) being conveyed or transferred to such Transferee. The terms and conditions set forth in this Section 3.5 shall terminate twenty-one years after the death of the survivor of the persons named in Section 18.2(b) of the Conveyance Agreement (as set forth in paragraph 6.b. of the Memorandum of Conveyance Agreement).

3.6 Release and Covenant Not to Sue. ADL and the Authority hereby agree to release and covenant not to sue ARCO its affiliates, subsidiaries, officers, directors, agents, representatives, contractors and employees for any claims, causes of action, demands, damages liabilities losses, penalties, fines, costs and expenses (including attorneys' fees and other litigation expenses) damages arising out of or relating to the performance of any activities on the Properties within the scope of the rights of access and use described herein.

ARTICLE IV
MISCELLANEOUS

4.1 Governing Law. This Agreement and the performance hereof shall be governed, interpreted, construed and regulated by the laws of the State of Montana.

4.2 Partial Invalidity. If any term, covenant, condition or provision of this Agreement or the application thereof to any person or circumstance shall at any time or to any extent be invalid or unenforceable, the remainder of this Agreement or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby and each term, covenant, condition and provision of this Agreement shall be valid and be enforced to the fullest extent permitted by law.

4.3 Interpretation. Whenever herein the singular number is used the same shall include the plural and the masculine gender shall include the faminine and neuter genders and vice versa as the context shall require. The section and article headings used herein are for reference and convenience only and shall not enter into the interpretations hereof. The Recitals, however, are intended to be fully enforceable as a part of this Agreement.

4.4 Successors and Assigns. The covenants, conditions or agreements contained in this Agreement shall bind and inure to the benefit of ADL and ARCO and any Transferee.

4.5 Entire Agreement. No oral statement or prior written material shall have any force or effect. ARCO and ADL agree that they are not relying on any representations or agreements, other than those contained in this Agreement, the exhibits attached hereto and the Conveyance Agreement. This Agreement shall be construed as supplemental to the Conveyance Agreement. However, to the extent that the terms and conditions of the Conveyance Agreement are inconsistent with this Agreement with respect to the subject matter hereof, this Agreement shall control. This Agreement shall not be modified except in a writing subscribed by all of the parties hereto.

4.6 Construction. Each and every provision of this Agreement has been independently, separately and freely negotiated by the parties and their respective counsel. The parties, therefore, waive any statutory or common law presumptions which would serve to ·ive this Agreement construed in favor of or against either party.

4.7 Sufficient Consideration. Each party agrees that the promises and covenants contained herein and in the Conveyance Agreement are good and sufficient consideration for the respective obligations required under this Agreement.

4.8 Waivers. Failure of ARCO, the Authority or ADL to complain of any act or omission on the part of any other party, no matter how long the same may continue, shall not be deemed to be a waiver by said party of any of its rights hereunder. No waiver by ARCO, the Authority or ADL at any time, express or implied, or any breach of any provision of this Agreement shall be deemed a waiver or breach of any other provision of this Agreement or a consent to any subsequent breach of the same or any other provision.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals on the day and year first above written.

ANACONDA-DEER LODGE COUNTY
a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: Jane Anderson
Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ____ day of May, 1994 by Jane Anderson as Chairwoman of Anaconda-Deer Lodge County Commission on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.

My commission expires: 3-18-98

James A. Glover
Notary Public

JAMES A. GLOVER NOTARIAL SEAL STATE OF MONTANA

ATLANTIC RICHFIELD COMPANY
a Delaware corporation

By: Sandra M. Stash
Sandra M. Stash
Attorney-in-Fact

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ____ day of May, 1994 by Sandra M. Stash as Attorney-in-Fact of Atlantic Richfield Company.

Witness my hand and official seal.

My commission expires: 3-18-98

James A. Glover
Notary Public

JAMES A. GLOVER NOTARIAL SEAL STATE OF MONTANA

OLD WORKS GOLF COURSE, INC.,
a Montana nonprofit corporation

By: William P. Finnegan
William P. Finnegan
President

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ____ day of May, 1994 by William P. Finnegan as the President of Old Works Golf Course, Inc.

Witness my hand and official seal.

My commission expires: 3-18-98

James A. Glover
Notary Public

JAMES A. GLOVER NOTARIAL SEAL STATE OF MONTANA

(P:\clients\1408.40\grantees.RED) 5/03/94

EXHIBIT A-1

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel A - Old Works Trail System Parcel

That certain real property described in Certificate of Survey No. 98-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-2

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel B - Golf Course Parcel

That certain real property described in Certificate of Survey No. 98-C recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

Excepting and reserving for the Grantor all water rights and ditch easements arising out of or associated with Permit Number 83498-G76G.

EXHIBIT A-3

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel C - Ballfields/Industrial Parcel

That certain real property described in Plat No. 193-A recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-4

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel D - Red Sands Arbiter Parcel

That certain real property described in Certificate of Survey No. 98-D recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-5

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel E - East Anaconda Yards Parcel

That certain real property described in Certificate of Survey No. 99-A recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-6

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel F - Drag Strip Parcel

That certain real property described in Plat No. 194-A recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-7

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel G - Mill Creek Parcel

That certain real property described in Plat No. 193-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-8

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel H - Stuckey Ridge Parcel

That certain real property described in Certificate of Survey No. 99-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

EXHIBIT A-9

(to Access Agreement)

PROPERTY DESCRIPTION
Parcel I - Lumber Yard Parcel

That certain real property described in Plat No. 194-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

145001

STATE OF MONTANA) ss
County of Deer Lodge)

I, hereby certify that the within instrument was filed in my office on the 5th day of May, 1994 at 50 minutes past 2 o'clock P.M., and is recorded on Page ____ of Book ____ of Records of Deer Lodge County, State of Montana.

County Recorder Peggy Davis Deputy Fee$ 126.00

Exhibit 15
(Drag Strip Amended Parcel Quitclaim Deed)

After Recording, Return to:
Anaconda-Deer Lodge County
Attn: Carl Nyman
800 South Main
Anaconda, MT 59711

AMENDED AND CORRECTED QUITCLAIM DEED

(Drag Strip Parcel)

THIS AMENDED AND CORRECTED QUITCLAIM DEED ("Amended and Corrected Quitclaim Deed") is made effective as of _____, 2016, between ATLANTIC RICHFIELD COMPANY ("AR" or "Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("ADLC" or "Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

RECITALS

A. AR previously conveyed to ADLC the real property described in Attachment 1 to that certain Quitclaim Deed (Drag Strip Parcel) dated as of May 5, 1994 and recorded on May 5, 1994 in the Anaconda-Deer Lodge County real property records in Book 96 at Page 167 (the "Original Deed").

B. The Original Deed contained various provisions governing the ownership, use and disposition of the Property. Certain of the provisions are outdated, cumbersome and/or inconsistent with the provisions governing other properties conveyed by AR to ADLC.

C. AR and ADLC have decided to amend and correct the applicable provisions of the Original Deed as provided in this Amended and Corrected Quitclaim Deed for those portions of the Original Deed property currently owned by ADLC. The portions of the Original Deed property currently owned by ADLC are described on Attachment 1 and are referred to herein as the "Property".

D. This Amended and Corrected Quitclaim Deed supersedes and replaces in its entirety the Original Deed as it applies to the Property.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, ditch and ditch rights, situated on or appurtenant to the Property , or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described and in the Additional Provisions set forth below.

Pursuant to that certain Access Agreement dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 146 of the Anaconda-Deer Lodge County real property records (the "Access Agreement"), ADLC previously granted to AR an ongoing right of access to the Property and certain additional properties. ADLC and AR hereby acknowledge and agree that the Access Agreement shall continue in full force and effect with respect to the Property and all other properties to which it applies in accordance with its terms and conditions.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this Amended and Corrected Quitclaim Deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Amended and Corrected Quitclaim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees

or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Development Permit System shall mean the Anaconda-Deer Lodge County Development Permit System adopted by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended or supplemented from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. Section 6901 et seq.); or (iii)

which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Hazardous Mining Waste shall mean Mining Waste which is unacceptable for disposal at the Anaconda Development Repository or the Anaconda-Deer Lodge County Landfill because of the specific characteristics and/or constituents of the Mining Waste.

Institutional Controls Agreement shall mean that certain Institutional Controls Agreement by and between Grantor, Grantee and Old Works Golf Course, Inc. dated effective _____, 2016 and filed on _____, 2016 in the permanent files of the Anaconda-Deer Lodge County Clerk & Recorder at Miscellaneous Files _____ and any amendments thereto.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan for the Property.

O&M Plan shall mean the Anaconda-Deer Lodge County (ADLC) Superfund Inspection and Maintenance (I&M) Plan attached as Exhibit ___ to the Institutional Controls Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the OW/EADA ROD and attachments thereto, including any operation and maintenance requirements of such remedy.

Operation and Maintenance or O&M shall mean those measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan on the Property.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the

meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to the Property, or any portion thereof, subsequent to the execution of this Amended and Corrected Quitclaim Deed.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS AMENED AND CORRECTED QUITCLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without

limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials or Mining Wastes at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Amended and Corrected Quitclaim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by AR relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more

particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter Site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter Site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Except as provided in Paragraph E.1 below with respect to Hazardous Mining Waste, Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; and (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures." The foregoing release and covenant not to sue shall burden the Property and is intended to be, and shall be construed as, a covenant of Grantee and its Successors in Interest and Assigns which runs with the land.

E. RESTRICTIVE COVENANTS.

1. Covenants Running with the Land . Subject to the terms of the Institutional Controls Agreement, the following restrictive covenants shall burden the Property and are intended to be, and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the measures required of Grantee pursuant to the O&M Plan for the Property;

c. All use, construction and/or drilling of water wells for potable water purposes shall be prohibited;

d. Residential development shall be prohibited on the Property;

e. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

f. Except as otherwise provided in this Paragraph E.1 below with respect to Hazardous Mining Waste, the Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

g. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited; and

h. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the restrictive covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator.

Notwithstanding the terms of Paragraph E.1.f above, in the event and to the extent the Property

owner discovers any Hazardous Mining Waste during any Future Development of the Property and such Hazardous Mining Waste must be removed from the Property and disposed of off-site pursuant to the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and/or other Applicable laws, the Property owner shall notify Grantor and Grantor shall be responsible for the removal and disposal of such Hazardous Mining Waste.

2. Benefitted Properties. The restrictive covenants shall be for the benefit of the real properties that are adjacent to or contiguous with the Property.

3. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the benefitted properties by reason of the restrictive covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment on, or in the vicinity of, the benefitted properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and environment.

F. TRANSFERS OF PROPERTY.

1. General. The release and covenant not to sue and restrictive covenants set forth in this Amended and Corrected Quitclaim Deed are intended to be covenants which run with the land and shall be binding upon Grantee and its Successors in Interest and Assigns.

2. Provisions of Subsequent Conveyance Instruments. Grantee hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation any grant of an easement burdening the Property or any grant of a lease of all or any part of the Property), the Grantee shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Amended and Corrected Quitclaim Deed and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the restrictive covenants set forth in that certain Amended and Corrected Quitclaim Deed dated _____, and recorded on _____, at Book _____, Page _____ in the real property records of Anaconda-Deer Lodge County, Montana (the "Covenant Deed"), (ii) abide by the restrictive covenants as owner of the Property in accordance with the terms and conditions of the Covenant Deed, and (iii) be bound by the release and covenant not to sue provisions set forth in the Covenant Deed.
>
> Grantee hereby also agrees that in any subsequent deed or other

conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute a deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

3. Binding Effect. Notwithstanding the foregoing, any person or entity who acquires any right, title or interest in all or any part of the Property shall be conclusively deemed to have consented and agreed to the provisions of Paragraph F.2, whether or not any reference to this Amended and Corrected Quitclaim Deed or these provisions is contained in the deed or other conveyance instruments by which such person or entity acquires an interest in the Property.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each restrictive covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the restrictive covenants set forth in this Amended and Corrected Quitclaim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor or its designee shall be entitled to enforce the provisions of the restrictive covenants against Grantee and its Successors in Interest and Assigns pursuant to the terms and conditions of this Amended and Corrected Quitclaim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the restrictive covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The restrictive covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by

AR, ADLC and the owner of the Parcel burdened by the restrictive covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. Such written approval by AR, ADLC and the parcel owner may be evidenced by execution of the instrument created to amend the restrictive covenants.

b. Recordation of Modification. In order to be effective, any modification of the restrictive covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original restrictive covenants. For purposes of these provisions, a modification of the restrictive covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing restrictive covenants.

The parties have executed this Amended and Corrected Quitclaim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, Delaware corporation

By: _____
Name: _____
Title: _____

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: _____
Name: _____
Title: _____

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE `)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

ATTACHMENT 1
(to Amended and Corrected Quitclaim Deed for Drag Strip Parcel)

PROPERTY DESCRIPTION
Drag Strip Parcel

That certain real property described in Plat No. 194-A recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

Less and Except:

Parcel F-2, Drag Strip Minor Subdivision, Plat 286-A, recorded on June 25, 1997 at Reception No. 152289A in the real property records of Deer Lodge County, Montana.

Also Known As:

Parcel F-1, Drag Strip Minor Subdivision, Plat 286-A, recorded on June 25, 1997 at Reception No. 152289A in the real property records of Deer Lodge County, Montana.

Exhibit 16
(East Anaconda Yard Amended Parcel Quitclaim Deed)

After Recording, Return to:
Anaconda-Deer Lodge County
Attn: Carl Nyman
800 South Main
Anaconda, MT 59711

AMENDED AND CORRECTED QUITCLAIM DEED

(East Anaconda Yards Parcel)

THIS AMENDED AND CORRECTED QUITCLAIM DEED ("Amended and Corrected Quitclaim Deed") is made effective as of _____, 2016, between ATLANTIC RICHFIELD COMPANY ("AR" or "Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("ADLC" or "Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

RECITALS

A. AR previously conveyed to ADLC the real property described in Attachment 1 to that certain Quitclaim Deed (East Anaconda Yards Parcel) dated as of May 5, 1994 and recorded on May 5, 1994 in the Anaconda-Deer Lodge County real property records in Book 96 at Page 246 (the "Original Deed").

B. The Original Deed contained various provisions governing the ownership, use and disposition of the Property. Certain of the provisions are outdated, cumbersome and/or inconsistent with the provisions governing other properties conveyed by AR to ADLC.

C. AR and ADLC have decided to amend and correct the applicable provisions of the Original Deed as provided in this Amended and Corrected Quitclaim Deed for those portions of the Original Deed property currently owned by ADLC. The portions of the Original Deed property currently owned by ADLC are described on Attachment 1 (the "Property").

D. This Amended and Corrected Quitclaim Deed supersedes and replaces in its entirety the Original Deed as it applies to the Property.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, ditch and ditch rights, situated on or appurtenant to the Property , or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Additional Provisions set forth below.

Pursuant to that certain Access Agreement dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 146 of the Anaconda-Deer Lodge County real property records (the "Access Agreement"), ADLC previously granted to AR an ongoing right of access to the Property and certain additional properties. ADLC and AR hereby acknowledge and agree that the Access Agreement shall continue in full force and effect with respect to the Property and all other properties to which it applies in accordance with its terms and conditions.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this Amended and Corrected Quitclaim Deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Amended and Corrected Quitclaim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may Change from time to time.

Development Permit System shall mean the Anaconda-Deer Lodge County Development Permit System adopted by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended or supplemented from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of

action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. Section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Hazardous Mining Waste shall mean Mining Waste which is unacceptable for disposal at the Anaconda Development Repository or the Anaconda-Deer Lodge County Landfill because of the specific characteristics and/or constituents of the Mining Waste.

Institutional Controls Agreement shall mean that certain Institutional Controls Agreement by and between Grantor, Grantee and Old Works Golf Course, Inc. dated effective _____, 2016 and filed on _____, 2016 in the permanent files of the Anaconda-Deer Lodge County Clerk & Recorder at Miscellaneous Files _____ and any amendments thereto.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan for the Property.

O&M Plan shall mean the Anaconda-Deer Lodge County (ADLC) Superfund Inspection and Maintenance (I&M) Plan attached as Exhibit ___ to the Institutional Controls Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable

Unit, which is one of several Operable units at the Anaconda Smelter NPL Site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the OW/EADA ROD and attachments thereto, including any operation and maintenance requirements of such remedy.

Operation and Maintenance or O&M shall mean those measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan to maintain the effectiveness of the OW/EADA Remedy on the Property.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation Whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in" section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to the Property, or any portion thereof, subsequent to the execution of this Amended and Corrected Quitclaim Deed.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER

WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS AMENDED AND CORRECTED QUITCLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials or Mining Wastes at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Amended and Corrected Quitclaim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by AR relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below,

subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Except as provided in Paragraph E.1 below with respect to Hazardous Mining Waste, Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property i and (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures." The foregoing release and covenant not to sue shall burden the Property and is intended to be, and shall be construed as, a covenant of Grantee and its Successors in Interest and Assigns which runs with the land.

E. RESTRICTIVE COVENANTS.

1. Covenants Running with the Land. Subject to the terms of the Institutional Controls Agreement, the following restrictive covenants shall burden the Property and are intended to be, and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including measures required of Grantee pursuant to the O&M Plan for the Property;

c. The Property may only be used for development for Commercial, or Light Industrial purposes, as such terms are defined in the Development Permit System, and for those open space uses associated with Benny Goodman Park;

d. Any fencing erected by Grantor in accordance with the requirements of the OW/EADA Remedy shall be maintained by the Property owner in good condition and repair as described more specifically in the O&M Plan for the Property;

e. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including without limitation EPA and the State» shall be prohibited;

f. The Property owner shall maintain all caps and drainage control structures installed by Grantor or its agents on the Property in good condition and repair and shall not interfere with their operation as described more specifically in the O&M Plan for the Property;

g. Residential development shall be prohibited on the Property;

h. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

i. Except as otherwise provided in this Paragraph E.1 below with respect to Hazardous Mining Waste, the Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

j. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited;

k. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the restrictive covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator. Notwithstanding the foregoing, this section "k" shall <u>not</u> be applicable to those areas of the Property identified on Attachment 2 attached hereto and incorporated herein; and

1. Irrigation shall be permitted only on those portions of the Property shown on the map attached hereto as Attachment 2 indicating permissible irrigation areas.

Irrigation of such areas shall be permitted so long as such irrigation (i) is permitted by the OW/EADA Remedy, (ii) is in compliance with the O&M Plan, and (iii) does not exacerbate the existing Environmental Conditions on the Property.

Notwithstanding the terms of Paragraph E.1.i above, in the event and to the extent the Property owner discovers any Hazardous Mining Waste during any Future Development of the Property and such Hazardous Mining Waste must be removed from the Property and disposed of off-site pursuant to the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and/or other Applicable laws, the Property owner shall notify Grantor and Grantor shall be responsible for the removal and disposal of such Hazardous Mining Waste.

2. Benefitted Properties. The restrictive covenants shall be for the benefit of the real properties that are adjacent to or contiguous with the Property.

3. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the benefitted properties by reason of the restrictive covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment on, or in the vicinity of, the benefitted properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural 'and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

1. General. The release and covenant not to sue and restrictive covenants set forth in this Amended and Corrected Quitclaim Deed are intended to be covenants which run with the land and shall be binding upon Grantee and its Successors in Interest and Assigns.

2. Provisions of Subsequent Conveyance Instruments. Grantee hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation any grant of an easement burdening the Property or any grant of a lease of all or any part of the Property), the Grantee shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Amended and Corrected Quitclaim Deed and modified only so as to fit appropriately in the context of the conveyance instrument):

Grantee hereby agrees to: (i) accept the Property subject to the restrictive covenants set forth in that certain Amended and Corrected Quitclaim Deed dated _____, and recorded on _____, at Book _____, Page _____ in the real property

records of Anaconda-Deer Lodge County, Montana (the "Covenant Deed"), (ii) abide by the restrictive covenants as owner of the Property in accordance with the terms and conditions of the Covenant Deed, and (iii) be bound by the release and covenant not to sue provisions set forth in the Covenant Deed.

Grantee hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute a deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

3. Binding Effect. Notwithstanding the foregoing, any person or entity who acquires any right, title or interest in all or any part of the Property shall be conclusively deemed to have consented and agreed to the provisions of Paragraph F.2, whether or not any reference to this Amended and Corrected Quitclaim Deed or these provisions is contained in the deed or other conveyance instruments by which such person or entity acquires an interest in the Property.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each restrictive covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the restrictive covenants set forth in this Amended and Corrected Quitclaim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor or its designee shall be entitled to enforce the provisions of the restrictive covenants against Grantee and its Successors in Interest and Assigns pursuant to the terms and conditions of this Amended and Corrected Quitclaim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the restrictive covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The restrictive covenant may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by AR, ADLC and the owner of the Parcel burdened by the restrictive covenant to be modified. EPA and the state shall be provided prior written notice of such proposed modifications. Such written approval by AR, ADLC and the parcel owner may be evidenced by execution of the instrument created to amend the restrictive covenants.

b. Recordation of Modification. In order to be effective, any modification of the restrictive covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original restrictive covenants. For purposes of these provisions, a modification of the restrictive covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing restrictive covenants.

The parties have executed this Amended and Corrected Quitclaim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, Delaware corporation

By: _____
Name: _____
Title: _____

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: _____
Name: _____
Title: _____

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE `)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as Chairwoman of Anaconda-Deer Lodge county Commission on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

ATTACHMENT 1
(to Amended and Corrected Quitclaim Deed for East Anaconda Yards Parcel)

PROPERTY DESCRIPTION
East Anaconda Yards Parcel

Tract 1 of Certificate of Survey No. 339-B, recorded on September 13, 2002 at Reception No. 165930, in the real property records of Deer Lodge County, Montana ("C.O.S. 339-B").

Remainder Tract 2 of C.O.S. 339-B

Tract 3 of C.O.S. 339-B (a.k.a. Smelter Road)

Mitchell Road as described on East Yards Subdivision Phase I, Plat 298-A, recorded on May 21, 1999 at Reception No. 157382, in the real property records of Deer Lodge County, Montana

4th Street (Extended), as shown on East 4th Street Minor Subdivision, Plat 200-A, recorded on June 12, 1995 at Reception No. 147633, in the real property records of Deer Lodge County, Montana

4th Street by-pass, as shown on East 4th Street Minor Subdivision, Plat 200-A, recorded on June 12, 1995 at Reception No. 147633, in the real property records of Deer Lodge County, Montana

Parcel 2C of Certificate of Survey No. 377-C, recorded on February 24, 2006 at Reception No. 175244, in the real property records of Deer Lodge County, Montana

For Informational Purposes Only:

The foregoing property is a portion of the property formerly described in Certificate of Survey No. 99-A recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

ATTACHMENT 2
EAST ANACONDA YARDS (MAP)

Exhibit 17
(Golf Course Amended Parcel Quitclaim Deed)

After Recording, Return to:
Anaconda-Deer Lodge County
Attn: Carl Nyman
800 South Main
Anaconda, MT 59711

QUITCLAIM DEED

(Reconfigured Golf Course Parcel)

THIS QUITCLAIM DEED ("Quitclaim Deed") is made effective as of _____, 2016, between ATLANTIC RICHFIELD COMPANY ("AR" or "Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("ADLC" or "Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

RECITALS

A. By Quitclaim Deed dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 198 of the ADLC real property records, AR previously conveyed to ADLC certain real property situated in Deer Lodge County, Montana commonly known as the "Golf Course Parcel".

B. By Quitclaim Deed dated _____, 2016 and recorded on _____, 2016 in Book ____, at Page ____of the ADLC real property records, the Golf Course Parcel was reconveyed by ADLC to AR as part of a plan to resurvey and reconfigure the plat for the Golf Course Parcel and certain adjacent properties and the existing "ADDITIONAL PROVISIONS" applicable to the Golf Course Parcel were terminated.

C. AR and ADLC have completed the resurvey and reconfiguration of the Golf Course Parcel and certain adjacent properties.

D. AR now desires to convey to ADLC the reconfigured Golf Course Parcel and to provide for revised and updated "ADDITIONAL PROVISIONS" applicable to the reconfigured Golf Course Parcel on the terms and conditions set forth in this Quitclaim Deed.

E. AR also now desires to convey to ADLC certain water and water rights appurtenant to the reconfigured Golf Course Parcel on the terms and conditions set forth in

this Quitclaim Deed.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its Successors in Interest and Assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to the Water Rights and all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, ditch and ditch rights, situated on or appurtenant to the Property, or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature (the "Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Additional Provisions set forth below.

Pursuant to that certain Access Agreement dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 146 of the Anaconda-Deer Lodge County real property records (the "Access Agreement"), ADLC previously granted to AR an ongoing right of access to the Property and certain additional properties. ADLC and AR hereby acknowledge and agree that the Access Agreement shall continue in full force and effect with respect to the Property and all other properties to which it applies in accordance with its terms and conditions.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this Quitclaim Deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quitclaim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Development Permit System shall mean the Anaconda-Deer Lodge County Development Permit System adopted by the Anaconda-Deer Lodge County Commission, as the same may be amended or supplemented from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10- 701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW / EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property.

Golf Course shall mean the Old Works Golf Course constructed by AR on the Property.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. §§ 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Hazardous Mining Waste shall mean Mining Waste which is unacceptable for disposal at the Anaconda Development Repository or the Anaconda-Deer Lodge County Landfill because of the specific characteristics and/or constituents of the Mining Waste.

Institutional Controls Agreement shall mean that certain Institutional Controls Agreement by and between Grantor, Grantee and Old Works Golf Course, Inc. dated effective _____, 2016 and filed on _____, in the permanent files of the Anaconda-Deer Lodge County Clerk & Recorder at Miscellaneous Files _____ and any amendments thereto.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan for the Property.

O&M Plan shall mean the Old Works Golf Course Operation and Maintenance (O&M) Plan attached as Exhibit ___ to the Institutional Controls Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW / EADA OU, and any attachments

thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the OW/EADA ROD, including any operation and maintenance requirements of such remedy.

Operation and Maintenance or O&M shall mean those measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan to maintain the effectiveness of the OW/EADA Remedy on the Property.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever.

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to the Property, or any portion thereof, subsequent to the execution of this Quitclaim Deed.

Water Rights shall mean the water and water supply available from and under that certain Montana Department of Natural Resources and Conservation Change Authorization No. 76G-3234201 and Water Right Number 76G P092739-00 together with all measurement, diversion, and control facilities used in connection therewith.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUITCLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING

WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in Paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials or Mining Wastes at, to, or from the Property into the environment; and

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quitclaim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by AR relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property;

b. The information described in the Property Disclosures in Paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site and the OW/EADA OU

contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter Site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter Site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter Site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Except as provided in Paragraph E.1 below with respect to Hazardous Mining Waste, Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the

Property, and (3) ownership, use or operations of the Golf Course. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to Paragraph C above entitled "Property Disclosures." The foregoing release and covenant not to sue shall burden the Property and is intended to be, and shall be construed as, a covenant of Grantee and its Successors in Interest and Assigns which runs with the land.

E. RESTRICTIVE COVENANTS.

1. Covenants Running with the Land. Subject to the terms of the Institutional Controls Agreement, the following restrictive covenants shall burden the Property and are intended to be, and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the measures required of Grantee pursuant to the O&M Plan for the Property;

c. The Property may only be used for golf, park or other open space purposes;

d. Any fencing erected by Grantor in accordance with the requirements of the OW/EADA Remedy shall be maintained by the Property owner in good condition and repair as described more specifically on the O&M Plan for the Property;

e. The Property owner shall maintain the Golf Course and all facilities and improvements related thereto in accordance with the measures required of Grantee pursuant to the O&M Plan for the Property;

f. All use, construction and/or drilling of water wells for potable water purposes shall be prohibited;

g. The Golf Course shall be maintained by the Property owner in good

condition and repair in accordance with the OW/EADA Remedy;

h. Except for required inspection and maintenance of golf improvements and systems, the Property owner shall not disturb the cap in any manner, whether by excavation or otherwise, without the prior written consent of Grantor. If the Property owner disturbs the cap for inspection and maintenance, the Property owner shall promptly restore the cap to substantially the same or better condition;

i. The Property owner shall maintain all caps, drainage control structures and pond systems or water courses installed by Grantor or its agents on the Property in good condition and repair and shall not interfere with their operation as described more specifically in the Institutional Controls Agreement and the O&M Plan for the Property;

j. The Property owner shall not encumber all or any portion of the Property without the prior written consent of Grantor which consent will not be unreasonably withheld;

k. The Property owner shall not convey the Property to anyone without the prior written consent of Grantor which consent will not be unreasonably withheld;

l. Residential development shall be prohibited;

m. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

n. Except as otherwise provided in this Paragraph E.1 below with respect to Hazardous Mining Waste, the Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

o. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited;

p. Any and all irrigation of those portions of the Property other than the Golf Course shall be prohibited. Irrigation of the Golf Course only shall be permitted so long as such irrigation (i) is permitted by the OW/EADA Remedy, (ii) is in compliance with the O&M Plan, and (iii) does not exacerbate the existing Environmental Conditions on the Property; and

q. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the restrictive covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator.

Notwithstanding the terms of Paragraph E.1.n above, in the event and to the extent the Property owner discovers any Hazardous Mining Waste during any Future Development of the Property and such Hazardous Mining Waste must be removed from the Property and disposed of off-site pursuant to the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and/or other Applicable laws, the Property owner shall notify Grantor and Grantor shall be responsible for the removal and disposal of such Hazardous Mining Waste.

2. Benefitted Properties. The restrictive covenants shall be for the benefit of the real properties that are adjacent to or contiguous with the Property.

3. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the benefitted properties by reason of the restrictive covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment on, or in the vicinity of, the benefitted properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

1. General. The release and covenant not to sue and the restrictive covenants set forth in this Quitclaim Deed are intended to be covenants which run with the land and shall be binding upon Grantee and its Successors in Interest and Assigns.

2. Provisions of Subsequent Conveyance Instruments. Grantee hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation any grant of an easement burdening the Property or any grant of a lease of all or any part of the Property), the Grantee shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Quitclaim Deed and modified only so as to fit appropriately in the context of

the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the restrictive covenants set forth in that certain Quitclaim Deed dated _____, and recorded on _____, at Book _____, Page _____ in the real property records of Anaconda-Deer Lodge County, Montana (the "Covenant Deed"), (ii) abide by the restrictive covenants as owner of the Property in accordance with the terms and conditions of the Covenant Deed, and (iii) be bound by the release and covenant not to sue provisions set forth in the Covenant Deed.
>
> Grantee hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute a deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

3. Binding Effect. Notwithstanding the foregoing, any person or entity who acquires any right, title or interest in all or any part of the Property shall be conclusively deemed to have consented and agreed to the provisions of Paragraph F.2, whether or not any reference to this Quitclaim Deed or these provisions is contained in the deed or other conveyance instruments by which such person or entity acquires an interest in the Property.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each restrictive covenant is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the restrictive covenants set forth in this Quitclaim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor or its designee shall be entitled to enforce the provisions of the restrictive covenants against Grantee and its Successors in Interest and Assigns pursuant to the terms and conditions of this Quitclaim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the restrictive covenants to the fullest extent permitted by Montana

law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The restrictive covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by AR, ADLC and the owner of the Parcel burdened by the restrictive covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. Such written approval by AR, ADLC and the parcel owner may be evidenced by execution of the instrument created to amend the restrictive covenants.

b. Recordation of Modification. In order to be effective, any modification of the restrictive covenants must be (i) in writing, (ii) executed by each of the persons described in subparagraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original restrictive covenants. For purposes of these provisions, a modification of the restrictive covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing restrictive covenants.

The parties have executed this Quitclaim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: _____
Name: _____
Title: _____

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the

Constitution and laws of the State of Montana

By: _____
Name: _____
Title: _____

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of ____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ____day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

CONSENT TO PROVISIONS OF QUITCLAIM DEED

Old Works Golf Course, Inc. hereby consents to the conveyance of the Property by Grantor to Grantee pursuant to this Quitclaim Deed.

OLD WORKS GOLF COURSE, INC.,
a Montana nonprofit corporation

By: _____
Name: _____
Title: _____

STATE OF MONTANA)
) ss
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Old Works Golf Course, Inc. on behalf of Old Works Golf Course, Inc.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

ATTACHMENT 1
(to Quitclaim Deed for Reconfigured Golf Course Parcel)

PROPERTY DESCRIPTION
(Golf Course Parcel)

Tract A, Certificate of Survey No. _____ recorded on _____, 2016 at Reception No. _____ in the real property records of Deer Lodge County, Montana.

Exhibit 18
(Hotel Amended Parcel Quitclaim Deed)

After Recording, Return to:
Anaconda-Deer Lodge County
Attn: _Carl Nyman
800 South Main
Anaconda, MT 59711

QUITCLAIM DEED
(Hotel Site Parcel)

THIS QUITCLAIM DEED ("Quitclaim Deed") is made effective as of _____, 2016, between ATLANTIC RICHFIELD COMPANY ("AR" or "Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("ADLC" or "Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

RECITALS

A. By Quitclaim Deed dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 198 of the ADLC real property records, AR previously conveyed to ADLC certain real property situated in Deer Lodge County, Montana that included real property that is now commonly known as the "Hotel Site Parcel".

B. By Quitclaim Deed dated _____, 2016 and recorded on _____, 2015 in Book ____, at Page ____of the ADLC real property records, the Hotel Site Parcel was reconveyed by ADLC to AR as part of a plan to terminate the existing "ADDITIONAL PROVISIONS" applicable to the Hotel Site Parcel.

C. AR now desires to convey to ADLC the Hotel Site Parcel and to provide for revised and updated "ADDITIONAL PROVISIONS" applicable to the Hotel Site Parcel on the terms and conditions set forth in this Quitclaim Deed.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its Successors in Interest and Assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer Lodge

County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, water and water rights, ditch and ditch rights, situated on or appurtenant to the Property, or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature (the "Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Additional Provisions set forth below.

Pursuant to that certain Access Agreement dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 146 of the Anaconda-Deer Lodge County real property records (the "Access Agreement"), ADLC previously granted to AR an ongoing right of access to the Property and certain additional properties. ADLC and AR hereby acknowledge and agree that the Access Agreement shall continue in full force and effect with respect to the Property and all other properties to which it applies in accordance with its terms and conditions.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this Quitclaim Deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quitclaim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances,

decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Development Permit System shall mean the Anaconda-Deer Lodge County Development Permit System adopted by the Anaconda-Deer Lodge County Commission, as the same may be amended or supplemented from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10- 701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW / EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property.

Golf Course shall mean the Old Works Golf Course constructed by AR.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation,

the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. §§ 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Hazardous Mining Waste shall mean Mining Waste which is unacceptable for disposal at the Anaconda Development Repository or the Anaconda-Deer Lodge County Landfill because of the specific characteristics and/or constituents of the Mining Waste.

Institutional Controls Agreement shall mean that certain Institutional Controls Agreement by and between Grantor, Grantee and Old Works Golf Course, Inc. dated effective _____, 2016 and filed on _____, in the permanent files of the Anaconda-Deer Lodge County Clerk & Recorder at Miscellaneous Files _____ and any amendments thereto.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan for the Property.

O&M Plan shall mean the Old Works Golf Course Operation and Maintenance (O&M) Plan attached as Exhibit ___ to the Institutional Controls Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW / EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the OW/EADA ROD, including any operation and maintenance requirements of such remedy.

Operation and Maintenance or O&M shall mean those measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan to maintain the effectiveness of the OW/EADA Remedy on the Property.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever.

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to the Property, or any portion thereof, subsequent to the execution of this Quitclaim Deed.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUITCLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the

information provided to Grantee as described in the Property Disclosures in Paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials or Mining Wastes at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quitclaim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by AR relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in Paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter Site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter Site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter Site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Except as provided in Paragraph E.1 below with respect to Hazardous Mining Waste, Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property, and (3) ownership, use or operations of the Golf Course. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to Paragraph C above entitled "Property Disclosures." The foregoing release and covenant not to sue shall burden the Property and is intended to be, and shall be construed as, a covenant of Grantee and its Successors in Interest and Assigns which runs with the land.

E. RESTRICTIVE COVENANTS.

1. Covenants Running with the Land. Subject to the terms of the Institutional Controls Agreement, the following restrictive covenants shall burden the Property and are intended to be, and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the measures required of Grantee pursuant to the O&M Plan for the Property;

c. The Property may only be used for a resort hotel, condominiums and related facilities, golf, park or other open space purposes;

d. Any fencing erected by Grantor in accordance with the requirements of the OW/EADA Remedy shall be maintained by the Property owner in good condition and repair as described more specifically on the O&M Plan for the Property;

e. The Property owner shall maintain the Golf Course and all facilities and improvements related thereto in accordance with the O&M Plan for the Property.

f. All use, construction and/or drilling of water wells for potable water purposes shall be prohibited;

g. The Golf Course shall be maintained by the Property owner in good condition and repair in accordance with the OW/EADA Remedy;

h. Except for required inspection and maintenance of golf improvements and systems, the Property owner shall not disturb the cap in any manner, whether by excavation or otherwise, without the prior written consent of Grantor. If the Property owner disturbs the cap for inspection and maintenance, the Property owner shall promptly restore the cap to substantially the same or better condition;

i. The Property owner shall maintain all caps, drainage control

structures and pond systems or water courses installed by Grantor or its agents on the Property in good condition and repair and shall not interfere with their operation as described more specifically in the Institutional Controls Agreement and the O&M Plan for the Property;

j. The Property owner shall not encumber all or any portion of the Property without the prior written consent of Grantor which consent will not be unreasonably withheld;

k. Except as otherwise provided in Paragraph E.1.c above, Residential development shall be prohibited;

l. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

m. Except as otherwise provided in this Paragraph E.1 below with respect to Hazardous Mining Waste, the Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

n. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited;

o. Any and all irrigation of those portions of the Property other than the Golf Course and the Property shall be prohibited. Irrigation of the Golf Course only shall be permitted so long as such irrigation (i) is permitted by the OW/EADA Remedy, (ii) is in compliance with the O&M Plan, and (iii) does not exacerbate the existing Environmental Conditions on the Property. Irrigation of the Property only shall be permitted so long as such irrigation (y) is for the purpose of maintaining landscaping for the hotel and related facilities, and (z) does not exacerbate the Environmental conditions

on the Property or the reminder of the Golf Course; and

p. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the restrictive covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator.

Notwithstanding the terms of Paragraph E.1.m above, in the event and to the extent the Property owner discovers any Hazardous Mining Waste during any Future Development of the Property and such Hazardous Mining Waste must be removed from the Property and disposed of off-site pursuant to the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and/or other Applicable laws, the Property owner shall notify Grantor and Grantor shall be responsible for the removal and disposal of such Hazardous Mining Waste.

2. Benefitted Properties. The restrictive covenants shall be for the benefit of the real properties that are adjacent to or contiguous with the Property.

3. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the benefitted properties by reason of the restrictive covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment on, or in the vicinity of, the benefitted properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

1. General. The release and covenant not to sue and the restrictive covenants set forth in this Quitclaim Deed are intended to be covenants which run with the land and shall be binding upon the Grantee and its Successors in Interest and Assigns.

2. Provisions of Subsequent Conveyance Instruments. Grantee hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation any grant of an easement burdening the Property or any grant of a lease of all or any part of the Property), the Grantee shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Quitclaim Deed and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the restrictive covenants set forth in that certain Quitclaim Deed dated _____, and recorded on _____, at Book _____, Page _____ in the real property records of Anaconda-Deer Lodge County, Montana (the "Covenant Deed"), (ii) abide by the restrictive covenants as owner of the Property in accordance with the terms and conditions of the Covenant Deed, and (iii) be bound by the release and covenant not to sue provisions set forth in the Covenant Deed.
>
> Grantee hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute a deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

3. Binding Effect. Notwithstanding the foregoing, any person or entity who acquires any right, title or interest in all or any part of the Property shall be conclusively deemed to have consented and agreed to the provisions of Paragraph F.2, whether or not any reference to this Quitclaim Deed or these provisions is contained in the deed or other conveyance instruments by which such person or entity acquires an interest in the Property.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each restrictive covenant is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the restrictive covenants set forth in this Quitclaim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor or its designee shall be entitled to enforce the provisions of the restrictive covenants against Grantee and its Successors in Interest and Assigns pursuant to the terms and conditions of this Quitclaim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the restrictive covenants to the fullest extent

permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The restrictive covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by AR, ADLC and the owner of the Parcel burdened by the restrictive covenant to be modified. Such written approval by AR, ADLC and the parcel owner may be evidenced by execution of the instrument created to amend the restrictive covenants.

b. Recordation of Modification. In order to be effective, any modification of the restrictive covenants must be (i) in writing, (ii) executed by each of the persons described in subparagraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original restrictive covenants. For purposes of these provisions, a modification of the restrictive covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing restrictive covenants.

The parties have executed this Quitclaim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: _____
Name: _____
Title: _____

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: _____
Name: _____
Title: _____

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this _____ day of ____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ____day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

CONSENT TO PROVISIONS OF QUITCLAIM DEED

Old Works Golf Course, Inc. “”“”hereby consents to the conveyance of the Property by Grantor to Grantee pursuant to this Quitclaim Deed.

OLD WORKS GOLF COURSE, INC.,

a Montana nonprofit corporation

By: _____
Name: _____
Title: _____

STATE OF MONTANA)

) ss.

COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 201 by _____ as _____ of Old Works Golf Course, Inc. on behalf of Old Works Golf Course, Inc.

Witness my hand and official seal.

My commission expires: _____

_____

Notary Public

ATTACHMENT 1

(to Quitclaim Deed for Hotel Site Parcel)

PROPERTY DESCRIPTION
Hotel Site Parcel

Tract 1, Certificate of Survey No. 324-A, recorded on October 9, 2001 at Reception No. 163470 in the real property records of Deer Lodge County, Montana.

Exhibit 19
(Mill Creek Amended Parcel Quitclaim Deed)

After Recording, Return to:
Anaconda-Deer Lodge County
Attn: Carl Nyman
800 South Main
Anaconda, MT 59711

AMENDED AND CORRECTED QUITCLAIM DEED

(Mill Creek Parcel)

THIS AMENDED AND CORRECTED QUITCLAIM DEED is made is effect as of _____, 2016, between ATLANTIC RICHFIELD COMPANY ("AR" or "Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("ADLC" or "Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

RECITALS

A. AR previously conveyed to ADLC the real property described in Attachment 1 to that certain Quitclaim Deed (Mill Creek Parcel) dated as of May 5, 1994 and recorded on August 24, 1994 in the Anaconda-Deer Lodge County real property records in Book 98 at Page 232 (the "Original Deed").

B. The Original Deed contained various provisions governing the ownership, use and disposition of the Property. Certain of the provisions are outdated, cumbersome and/or inconsistent with the provisions governing other properties conveyed by AR to ADLC.

C. AR and ADLC have decided to amend and correct the applicable provisions of the Original Deed as provided in this Amended and Corrected Quitclaim Deed for those portions of the Original Deed property currently owned by ADLC. The portions of the Original Deed property currently owned by ADLC are described on Attachment 1 and are referred to herein as the "Property".

D. This Amended and Corrected Quitclaim Deed supersedes and replaces in its entirety the Original Deed as it applies to the Property.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and

QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, ditch and ditch rights, situated on or appurtenant to the Property or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Additional Provisions set forth below.

Pursuant to that certain Access Agreement dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 146 of the Anaconda-Deer Lodge County real property records (the "Access Agreement"), ADLC previously granted to AR an ongoing right of access to the Property and certain additional properties. ADLC and AR hereby acknowledge and agree that the Access Agreement shall continue in full force and effect with respect to the Property and all other properties to which it applies in accordance with its terms and conditions.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this Amended and Corrected Quitclaim Deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Amended and Corrected Quitclaim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, Operable Unit #1, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Development Permit System shall mean the Anaconda-Deer Lodge County Development Permit System adopted by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended or supplemented from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §S 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Hazardous Mining Waste shall mean Mining Waste which is unacceptable for disposal at the Anaconda Development Repository or the Anaconda-Deer Lodge County Landfill because of the specific characteristics and/or constituents of the Mining Waste.

Institutional Controls Agreement shall mean that certain Institutional Controls Agreement by and between Grantor, Grantee and Old Works Golf Course, Inc. dated effective _____, 2016 and filed on _____, 2016 in the permanent files of the Anaconda-Deer Lodge County Clerk & Recorder at Miscellaneous Files _____ and any amendments thereto.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan for the Property.

O&M Plan shall mean the Anaconda-Deer Lodge County (ADLC) Superfund Inspection and Maintenance (I&M) Plan attached as Exhibit ___ to the Institutional Controls Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL site in or near Anaconda, Montana. For the purposes of this Amended and Corrected Quitclaim Deed the term OW/EADA OU shall also refer to and be deemed to include Operable Unit #1 of the Anaconda Smelter Site, which is within the area encompassed by the OW/EADA OU.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto. For the purposes of this Amended and Corrected Quitclaim Deed, the term OW/EADA ROD shall also refer to and be deemed to include that certain Record of Decision issued by EPA on October 2, 1987 which selected a remedial action for Operable Unit #1 of the Anaconda Smelter site pertaining to the community of Mill Creek, Montana; which such remedial action was conducted within the area encompassed by the OW/EADA OU.

OW/EADA Remedy shall mean the remedy selected by EPA in the OW/EADA ROD and attachments thereto, including any operation and maintenance requirements of such remedy. For the purposes of this Amended and Corrected Quitclaim Deed, the term of OW/EADA Remedy shall also refer to and be deemed to include the remedial action/response action evidenced by the Partial Consent Decree entered into on September 14, 1988 between Grantor and the State of Montana concerning Operable Unit #1 of the Anaconda Smelter Site.

Operation and Maintenance or O&M shall mean those measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan to maintain the effectiveness of the OW/EADA Remedy on the Property.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to the Property, or any portion thereof, subsequent to the execution of this Amended and Corrected Quitclaim Deed.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS AMENDED AND CORRECTED QUITCLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials or Mining Wastes at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Amended and Corrected Quitclaim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by AR relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more

particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Except as provided in Paragraph E.1 below with respect to Hazardous Mining Waste, Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; and (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability , damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures." The foregoing release and covenant not to sue shall burden the Property and is intended to be, and shall be construed as, a covenant of Grantee and its Successors in Interest and Assigns which runs with the land.

E. RESTRICTIVE COVENANTS.

1. Covenants Running with the Land. Subject to the terms of the Institutional Controls Agreement, the following restrictive covenants shall burden the Property and are intended to be and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or

frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the measures required of Grantee pursuant to the O&M Plan for the Property;

c. Except for that portion of the Property described on Attachment 2 attached hereto and incorporated herein (the "Industrial Areas") the Property may only be used for open space and Commercial or Light Industrial development, as such terms are defined herein or in the Development Permit System, including but not limited to a junk vehicle storage and processing yard in accordance with Environmental Laws, the Development Permit System and other Applicable Laws. In the "Industrial Areas", all Industrial uses shall be permitted so long as they comply with the OW/EADA Remedy, the Environmental Laws, the Development Permit System and all other Applicable Laws;

d. All use, construction and/or drilling of water wells for potable water purposes shall be prohibited except that new water wells, or use of existing water wells, shall be permitted if such well is approved and a Certificate of Compliance is issued by Anaconda-Deer Lodge County pursuant to the Development Permit System;

e. Residential development shall be prohibited on the Property;

f. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

g. Except as otherwise provided in this Paragraph E.1 below with respect to Hazardous Mining Waste, the Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

h. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other

naturally occurring substances or mineral rights shall be prohibited; and

i. Except for the areas described in Attachment 2 attached hereto and incorporated herein (the Industrial Areas), any Commercial or Industrial activities (as such terms are defined in the Development Permit system) if otherwise permitted by the restrictive covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator.

Notwithstanding the terms of Paragraph E.1.g above, in the event and to the extent the Property owner discovers any Hazardous Mining Waste during any Future Development of the Property and such Hazardous Mining Waste must be removed from the Property and disposed of off-site pursuant to the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and/or other Applicable laws, the Property owner shall notify Grantor and Grantor shall be responsible for the removal and disposal of such Hazardous Mining Waste.

2. Benefitted Properties. The restrictive covenants shall be for the benefit of the real properties that are adjacent to or contiguous with the Property.

3. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the benefitted properties by reason of the restrictive covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment on, or in the vicinity of, the benefitted properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

1. General. The release and covenant not to sue and restrictive covenants referenced in this Amended and Corrected Quitclaim Deed are intended to be covenants which run with the land and shall be binding upon Grantee and its Successors in Interest and Assigns.

2. Provisions of Subsequent Conveyance Instruments. Grantee hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation any grant of an easement burdening the Property or any grant of a lease of all or any part of the Property), the Grantee shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Amended and Corrected Quitclaim Deed and modified only so as to fit appropriately in the context of the conveyance instrument):

Grantee hereby agrees to: (i) accept the Property subject to the

restrictive covenants set forth in that certain Amended and Corrected Quitclaim Deed dated _____, and recorded on _____, at Book _____, Page _____ in the real property records of Anaconda-Deer Lodge County, Montana (the "Covenant Deed"), (ii) abide by the restrictive covenants as owner of the Property in accordance with the terms and conditions of the Covenant Deed, and (iii) be bound by the release and covenant not to sue provisions set forth in the Covenant Deed.

Grantee hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute a deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

3. Binding Effect. Notwithstanding the foregoing, any person or entity who acquires any right, title or interest in all or any part of the Property shall be conclusively deemed to have consented and agreed to the provisions of Paragraph F.2, whether or not any reference to this Amended and Corrected Quitclaim Deed or these provisions is contained in the deed or other conveyance instruments by which such person or entity acquires an interest in the Property.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each restrictive covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the restrictive covenants set forth in this Amended and Corrected Quitclaim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor or its designee shall be entitled to enforce the provisions of the restrictive covenants against Grantee and its Successors in Interest and Assigns pursuant to the terms and conditions of this Amended and Corrected Quitclaim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the restrictive covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall

be available to adjacent property owners in such proceedings.

c. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The restrictive covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by AR, ADLC and the owner of the Parcel burdened by the restrictive covenant to be modified. EPA and the state shall be provided prior written notice of such proposed modifications. Such written approval by AR, ADLC and the parcel owner may be evidenced by execution of the instrument created to amend the restrictive covenants.

b. Recordation of Modification. In order to be effective, any modification of the restrictive covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original restrictive covenants. For purposes of these provisions, a modification of the restrictive covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing restrictive covenants.

The parties have executed this Amended and Corrected Quitclaim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, Delaware corporation

By: _____
Name: _____
Title: _____

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: _____

Name: _____

Title: _____STATE OF _____)

) ss.

COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.

My commission expires: _____

_____

Notary Public

STATE OF MONTANA)

) ss.

COUNTY OF DEER LODGE `)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.

My commission expires: _____

_____

Notary Public

ATTACHMENT 1
(to Amended and Corrected Quitclaim Deed for Mill Creek Parcel)

PROPERTY DESCRIPTION
Mill Creek Parcel

That certain real property described in Plat No. 193-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana.

Also known as:

Tracts 1, 2 and 3 of Parcel "G" Minor Subdivision, Plat No. 193-B recorded on April 25, 1994 at Reception No. 144923G in the real property records of Deer Lodge County, Montana.

ATTACHMENT 2
(to Amended and Corrected Quitclaim Deed for Mill Creek Parcel)

Mill Creek Parcel

(Map)

Exhibit 20
(Old Works Historic Trail Amended Parcel Quitclaim Deed)

After Recording, Return to:
Anaconda-Deer Lodge County
Attn: Carl Nyman
800 South Main
Anaconda, MT 59711

QUITCLAIM DEED

(Reconfigured Old Works Historic Trail Parcel)

THIS QUITCLAIM DEED ("Quitclaim Deed") is made effective as of _____, 2016, between ATLANTIC RICHFIELD COMPANY ("AR" or "Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701,and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("ADLC" or "Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

RECITALS

A. By Quitclaim Deed dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 182 of the ADLC real property records, AR previously conveyed to ADLC certain real property situated in Deer Lodge County, Montana commonly known as the "Old Works Historic Trail Parcel".

B. By Quitclaim Deed dated _____, 2016 and recorded on _____, 2016 in Book ____, at Page ____of the ADLC real property records, the Old Work Historic Trail Parcel was reconveyed to AR as part of a plan to resurvey and reconfigure the plat for the Old Works Historic Trail Parcel and certain adjacent properties and the existing "ADDITIONAL PROVISIONS" applicable to the Old Works Historic Trail Parcel were terminated.

C. AR and ADLC have completed the resurvey and reconfiguration of the Old Works Historic Trail Parcel and certain adjacent properties.

D. AR now desires to convey to ADLC the reconfigured Old Works Historic Trail Parcel and to provide for revised and updated "ADDITIONAL PROVISIONS" applicable to the reconfigured Old Works Historic Trail Parcel on the terms and conditions set forth in this Quitclaim Deed.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its Successors in Interest and Assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, ditch and ditch rights, situated on or appurtenant to the Property , or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature (the "Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Additional Provisions set forth below.

Pursuant to that certain Access Agreement dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 146 of the Anaconda-Deer Lodge County real property records (the "Access Agreement"), ADLC previously granted to AR an ongoing right of access to the Property and certain additional properties. ADLC and AR hereby acknowledge and agree that the Access Agreement shall continue in full force and effect with respect to the Property and all other properties to which it applies in accordance with its terms and conditions.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this Quitclaim Deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quitclaim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Development Permit System shall mean the Anaconda-Deer Lodge County Development Permit System adopted by the Anaconda-Deer Lodge County Commission as the same may be amended or supplemented from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 *et seq*.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 *et seq*.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 *et seq*.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) *et seq*.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 *et seq*.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 *et seq*.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 *et seq*.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 *et seq*.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 *et seq*.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property, other than repair, maintenance, realignment or replacement of the Old Works Historic Trail System on the Property by Grantor.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 *et seq*.) and/or the Resource Conservation and Recovery Act (42 U.S.C. Section 6901 *et seq*.); or (iii)

which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Hazardous Mining Waste shall mean Mining Waste which is unacceptable for disposal at the Anaconda Development Repository or the Anaconda-Deer Lodge County Landfill because of the specific characteristics and/or constituents of the Mining Waste.

Institutional Controls Agreement shall mean that certain Institutional Controls Agreement by and between Grantor, Grantee and Old Works Golf Course, Inc. dated effective _____, 2016 and filed on _____, 2016 in the permanent files of the Anaconda-Deer Lodge County Clerk & Recorder at Miscellaneous Files _____ and any amendments thereto.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan for the Property.

O&M Plan shall mean the Anaconda-Deer Lodge County (ADLC) Superfund Inspection and Maintenance (I&M) Plan attached as Exhibit ___ to the Institutional Controls Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the OW/EADA ROD, including any operation and maintenance requirements of such remedy.

Old Works Historic Trail System shall mean the dedicated trail development identified in the OW / EADA ROD and located as shown in the O&M Plan for the Property.

Operation and Maintenance or O&M shall mean those measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan to maintain the effectiveness of the OW/EADA Remedy on the Property.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever.

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to the Property, or any portion thereof, subsequent to the execution of this Quitclaim Deed.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUITCLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations Whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable

Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials or Mining Wastes at, to, or from the Property into the environment; and

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quitclaim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by ARCO relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property;

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW / EADA Remedy in accordance with the requirements of CERCLA and the National Contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW / EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Except as provided in Paragraph E.1 below with respect to Hazardous Mining Waste, Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; (2) implementation and operation and maintenance of the OW / EADA Remedy or other Remedial Action on, about, beneath or related to the Property; and (3) ownership, use or operation of the Old Works Historic Trail System. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C above entitled "Property Disclosures." The foregoing release and covenant not to sue shall burden the Property and is intended to be, and shall be construed as, a covenant of Grantee and its Successors in Interest and Assigns which runs with the land.

E. RESTRICTIVE COVENANTS.

1. Covenants Running with the Land. Subject to the terms of the Institutional Controls Agreement, the following restrictive covenants shall burden the Property and are intended to be, and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that

Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the measures required of Grantee pursuant to the O&M Plan for the Property;

c. No development shall be permitted on the Property, other than repair, maintenance, realignment and replacement of the Old Works Historic Trail System in accordance with the OW/EADA Remedy. Further, the Property may only be used for open space purposes;

d. Any fencing erected by Grantor in accordance with the requirements of the OW/EADA Remedy shall be maintained by the Property owner in good condition and repair in accordance with the O&M Plan for the Property;

e. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including without limitation EPA or the state)) shall be prohibited;

f. The Old Works Historic Trail System as constructed by Grantor shall be maintained by the Property owner in good condition and repair in accordance with the OW/EADA Remedy and as described in the O&M Plan for the Property;

g. Residential development shall be prohibited;

h. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

i. Except as otherwise provided in this Paragraph E.1 below with respect to Hazardous Mining Waste, the Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

j. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited;

k. Access to structures along the Old Works Historic Trail System, including but not limited to historic flues and foundations, shall be prohibited. The Property owner shall take such measures as may be required by the OW/EADA Remedy to prohibit such access; and

l. Any Commercial or Industrial activities (as such terms are defined in the Development Permit System) if otherwise permitted by the restrictive covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator.

Notwithstanding the terms of Paragraph E.1.i above, in the event and to the extent the Property owner discovers any Hazardous Mining Waste during any Future Development of the Property and such Hazardous Mining Waste must be removed from the Property and disposed of off-site pursuant to the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and/or other Applicable laws, the Property owner shall notify Grantor and Grantor shall be responsible for the removal and disposal of such Hazardous Mining Waste.

2. Benefitted Properties. The restrictive covenants shall be for the benefit of the real properties that are adjacent to or contiguous with the Property.

3. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the benefitted properties by reason of the restrictive covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment on, or in the vicinity of, the benefitted properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

1. General. The release and covenant not to sue and restrictive covenants set forth in this Quitclaim Deed are intended to be covenants which run with the land and shall be binding upon Grantee and its Successors in Interest and Assigns.

2. Provisions of Subsequent Conveyance Instruments. Grantee hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation any grant of an easement burdening the Property or any grant of a lease of all or any part of the Property), the Grantee shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Quitclaim Deed

and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the restrictive covenants set forth in that certain Quitclaim Deed dated _____, and recorded on _____, at Book _____, Page _____ in the real property records of Anaconda-Deer Lodge County, Montana (the "Covenant Deed"), (iii) abide by the restrictive covenants as owner of the Property in accordance with the terms and conditions of the Covenant Deed, and (iv) be bound by the release and covenant not to sue provisions set forth in the Covenant Deed.
>
> Grantee hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute a deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

3. Binding Effect. Notwithstanding the foregoing, any person or entity who acquires any right, title or interest in all or any part of the Property shall be conclusively deemed to have consented and agreed to the provisions of Paragraph F.2, whether or not any reference to this Quitclaim Deed or these provisions is contained in the deed or other conveyance instruments by which such person or entity acquires an interest in the Property.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each restrictive covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the restrictive covenants set forth in this Quitclaim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor or its designee shall be entitled to enforce the provisions of the restrictive covenants against Grantee and its Successors in Interest and Assigns pursuant to the terms and conditions of this Quitclaim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the restrictive covenants to the fullest extent permitted by Montana law.

Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The restrictive covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by AR, ADLC and the owner of the Parcel burdened by the restrictive covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. Such written approval by AR, ADLC and the parcel owner may be evidenced by execution of the instrument created to amend the restrictive covenants.

b. Recordation of Modification. In order to be effective, any modification of the restrictive covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original restrictive covenants. For purposes of these provisions, a modification of the restrictive covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing restrictive covenants.

The parties have executed this Quitclaim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: _____
Name: _____
Title: _____

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: _____
Name: _____
Title: _____

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ____ day of _____, 2016 by _____ as _____of Atlantic_Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

ATTACHMENT 1
(to Quitclaim Deed for Reconfigured Trail Parcel)

PROPERTY DESCRIPTION

Old Works Trail System Parcel

Tracts C and D, Certificate of Survey No. ____ recorded on _____, 2016 at Reception No. _____in the real property records of Deer Lodge County, Montana.

Exhibit 21
(Red Sands/Arbiter Amended Parcel Quitclaim Deed)

After Recording, Return to:
Anaconda-Deer Lodge County
Attn: Carl Nyman
800 South Main
Anaconda, MT 59711

QUITCLAIM DEED

(Reconfigured Red Sands - Arbiter Parcel)

THIS QUITCLAIM DEED ("Quitclaim Deed") is made effective as of _____, 2016, between ATLANTIC RICHFIELD COMPANY ("AR" or "Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("ADLC" or "Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

RECITALS

A. By Quitclaim Deed dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 230 of the ADLC real property records, AR previously conveyed to ADLC certain real property situated in Deer Lodge County, Montana commonly known as the "Red Sands - Arbiter Parcel".

B. By Quitclaim Deed dated _____, 2016 and recorded on _____, 2016 in Book ____, at Page ____of the ADLC real property records, a portion of the Red Sands - Arbiter Parcel was reconveyed to AR as part of a plan to resurvey and reconfigure the plat for the Red Sands-Arbiter Parcel and certain adjacent properties and the existing "ADDITIONAL PROVISIONS" applicable to the Red Sands-Arbiter Parcel were terminated.

C. AR and ADLC have completed the resurvey and reconfiguration of Red Sands-Arbiter Parcel and certain adjacent properties.

D. AR now desires to convey to ADLC the reconfigured Red Sands - Arbiter Parcel and to provide for revised and updated "ADDITIONAL PROVISIONS" applicable to the reconfigured Red Sands-Arbiter Parcel on the terms and conditions set forth in this Quitclaim Deed.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its Successors in Interest and Assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, ditch and ditch rights, situated on or appurtenant to the Property, or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature (the "Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Additional Provisions set forth below.

Pursuant to that certain Access Agreement dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 146 of the Anaconda-Deer Lodge County real property records (the "Access Agreement"), ADLC previously granted to AR an ongoing right of access to the Property and certain additional properties. ADLC and AR hereby acknowledge and agree that the Access Agreement shall continue in full force and effect with respect to the Property and all other properties to which it applies in accordance with its terms and conditions.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this Quitclaim Deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quit Claim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever

that EPA has established as the administrative record with respect to the Anaconda Smelter Site, the OW/EADA OU, or any other operable units of the Anaconda Smelter Site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Development Permit System shall mean the Anaconda-Deer Lodge County Development Permit System adopted by the Anaconda-Deer Lodge County Commission as the same may be amended or supplemented from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 *et seq*.); the Federal Water Pollution control Act (33 U.S.C. §§ 1251 *et seq*.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 *et seq*.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) *et seq*.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 *et seq*.; the Montana Water Quality Act (M.C.A. §§ 75-10- 701 *et seq*.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 *et seq*.); the Natural Streambed and Land Preservation Act (M.C.A. §§ 75-7-101 *et seq*.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 *et seq*.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental Conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property, other than repair, maintenance, realignment or replacement of the Old Works Historic Trail System on the Property by Grantor.

Hazardous Materials shall mean any substance (i) the presence of which requires

investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 *et seq*.) and/or the Resource Conservation and Recovery Act (42 U.S.C. Section 6901 *et seq*.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Hazardous Mining Waste shall mean Mining Waste which is unacceptable for disposal at the Anaconda Development Repository or the Anaconda-Deer Lodge County Landfill because of the specific characteristics and/or constituents of the Mining Waste.

Institutional Controls Agreement shall mean that certain Institutional Controls Agreement by and between Grantor, Grantee and Old Works Golf Course, Inc. dated effective _____, 2016 and filed on _____, 2016 in the permanent files of the Anaconda-Deer Lodge County Clerk & Recorder at Miscellaneous Files _____ and any amendments thereto.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste Piles.

O&M Obligations shall mean those Operation and Maintenance measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan for the Property.

O&M Plan shall mean the Anaconda-Deer Lodge County (ADLC) Superfund Inspection and Maintenance (I&M) Plan attached as Exhibit ___ to the Institutional Controls Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable Units at the Anaconda Smelter NPL site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the OW/EADA

ROD and attachments thereto, including any operation and maintenance requirements of such remedy.

Old Works Historic Trail System shall mean the dedicated trail development identified in the OW/EADA ROD and located as shown in the O&M Plan for the Property.

Operation and Maintenance or O&M shall mean those measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan to maintain the effectiveness of the OW/EADA Remedy on the Property.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying, discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever;

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to the Property, or any portion thereof, subsequent to the execution of this Quit Claim Deed.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUITCLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE

OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials or Mining Wastes at, to, or from the Property into the environment; and

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quit Claim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by AR relating to the title to the property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the Property:

a. EPA has listed the Anaconda Smelter site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy in accordance with the requirements of CERCLA and the National contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Except as provided in Paragraph E.1 below with respect to Hazardous Mining Waste, Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the Property; (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property; and (3) ownership, use or operation of the Old Works Historic Trail System. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably

releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C above entitled "Property Disclosures." The foregoing release and covenant not to sue shall burden the Property and is intended to be, and shall be construed as, a covenant of Grantee and its Successors in Interest and Assigns which runs with the land.

E. RESTRICTIVE COVENANTS.

1. Covenants Running with the Land. Subject to the terms of the Institutional Controls Agreement, the following restrictive covenants shall burden the Property and are intended to be, and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the measures required of Grantee pursuant to the O&M Plan for the Property;

c. Residential development shall be prohibited on the Property;

d. The Property may only be used for the Old Works Historic Trail system and development for Commercial, Industrial or Light Industrial purposes, as such terms are defined in the Development Permit System, including but not limited to development of a Class III landfill;

e. All use, construction and/or drilling of water wells for any purposes (except for any testing, sampling or monitoring wells which are required by or in conjunction with the OW/EADA Remedy or any other Remedial Action and which are approved by any governmental entities with jurisdiction over such matters (including without limitation EPA and the state) shall be prohibited;

f. The Old Works Historic Trail System shall be maintained by the Property owner in good condition and repair in accordance with the OW/EADA Remedy as described more specifically in the O&M Plan for the Property;

g. Unlined pond systems shall be prohibited. No liquid storage or disposal of any kind shall be permitted on the Property unless the liquids are containerized or contained within lined storage areas in accordance with the requirements of Applicable Laws and Environmental Laws;

h. Except as otherwise provided in this Paragraph E.1 below with respect to Hazardous Mining Waste, the Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws;

i. Exploration for, mining, milling, processing, drilling, and/or any other method of development and/or production of any minerals, sand, gravel, clay or other naturally occurring substances or mineral rights shall be prohibited;

j. Access to structures along the Old Works Historic Trail System, including but not limited to historic flues and foundations, shall be prohibited. The Property owner shall take such measures as may be required by the OW/EADA Remedy to prohibit such access;

k. Any commercial or Industrial activities (as such terms are defined in the Development Permit system) if otherwise permitted by the restrictive covenants set forth herein, which require or allow Hazardous Materials to be brought upon, generated, treated, stored, handled or disposed upon, about or beneath the Property shall be prohibited, except for those Commercial or Industrial activities which would qualify as a Small Quantity Generator; and

1. The Property owner shall maintain all caps and drainage control structures installed by Grantor or its agents on this Parcel in good condition and repair and shall not interfere with their operations, as described more specifically in the O&M Plan.

Notwithstanding the terms of Paragraph E.1.h above, in the event and to the extent the Property owner discovers any Hazardous Mining Waste during any Future Development of the Property and such Hazardous Mining Waste must be removed from the Property and disposed of off-site pursuant to the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and/or other Applicable laws, the Property owner shall notify Grantor and Grantor shall be responsible for the removal and disposal of such Hazardous Mining Waste.

2. Benefitted Properties. The restrictive covenants shall be for the benefit of the real properties that are adjacent to or contiguous with the Property.

3. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the benefitted properties by reason of the restrictive covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment on, or in the vicinity of, the benefitted properties; and

b. The maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

1. General. The release and covenant not to sue and restrictive covenants set forth in this Quitclaim Deed are intended to be covenants which run with the land and shall be binding upon Grantee and its Successors in Interest and Assigns.

2. Provisions of Subsequent Conveyance Instruments. Grantee hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation any grant of an easement burdening the Property or any grant of a lease of all or any part of the Property), the Grantee shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Quitclaim Deed and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the restrictive covenants set forth in that certain Quitclaim Deed dated _____, and recorded on _____, at Book _____, Page _____ in the real property records of Anaconda-Deer Lodge County, Montana (the "Covenant Deed"), (ii) abide by the restrictive covenants as owner of the Property in accordance with the terms and conditions of the Covenant Deed, and (iii) be bound by the release and covenant not to sue provisions set forth in the Covenant Deed.
>
> Grantee hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute a deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the

agreements set forth in the immediately preceding paragraph.

3. Binding Effect. Notwithstanding the foregoing, any person or entity who acquires any right, title or interest in all or any part of the Property shall be conclusively deemed to have consented and agreed to the provisions of Paragraph F.2, whether or not any reference to this Quitclaim Deed or these provisions is contained in the deed or other conveyance instruments by which such person or entity acquires an interest in the Property.

G. ENFORCEMENT RIGHTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each restrictive covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the restrictive covenants set forth in this Quitclaim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor or its designee shall be entitled to enforce the provisions of the restrictive covenants against Grantee and its Successors in Interest and Assigns pursuant to the terms and conditions of this Quitclaim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the restrictive covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The restrictive covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by AR, ADLC and the owner of the parcel burdened by the restrictive covenant to be modified. EPA and the state shall be provided prior written notice of such proposed modifications. Such written approval by AR, ADLC and the parcel owner may be evidenced by execution of the instrument created to amend the restrictive covenants.

b. Recordation of Modification. In order to be effective, any modification of

the restrictive covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original restrictive Covenants. For purposes of these provisions, a modification .of the restrictive covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing restrictive covenants.

The parties have executed this Quit Claim Deed effective for all purposes as of the date first above written.

GRANTOR:
ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: _____
Name: _____
Title: _____

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the state of Montana

By: _____
Name: _____
Title: _____

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ____ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

ATTACHMENT 1

(to Quitclaim Deed for Reconfigured Red Sands - Arbiter Parcel)

PROPERTY DESCRIPTION
Red Sands - Arbiter Parcel

Tract B, Certificate of Survey No. ____ recorded on _____, 2016 at Reception No. _____in the real property records of Deer Lodge County, Montana.

Exhibit 22
(Stucky Ridge Amended Parcel Quitclaim Deed)

After Recording, Return to:
Anaconda-Deer Lodge County
Attn: Carl Nyman
800 South Main
Anaconda, MT 59711

AMENDED AND CORRECTED QUITCLAIM DEED

(Stucky Ridge Parcel)

THIS AMENDED AND CORRECTED QUITCLAIM DEED ("Amended and Corrected Quitclaim Deed") is made effective as of _____, 2016, between ATLANTIC RICHFIELD COMPANY ("AR" or "Grantor"), a Delaware corporation duly authorized to do business in the State of Montana, whose address is 317 Anaconda Road, Butte, Montana 59701, and Anaconda-Deer Lodge County, a consolidated governmental entity organized under the Constitution and laws of the State of Montana ("ADLC" or Grantee"), whose address is 800 South Main, Anaconda, MT 59711.

RECITALS

A. AR previously conveyed to ADLC the real property described in Attachment 1 ("Property") to that certain Quitclaim Deed (Mill Creek Parcel) dated as of May 5, 1994 and recorded on May 5, 1994 in the Anaconda-Deer Lodge County real property records in Book 96 at Page 216 as corrected by that certain Corrective Quit Claim Deed recorded on July 8, 1994 in the Anaconda-Deer Lodge County real property records in Book 97 at Page 453 (collectively, the "Original Deed").

B. The Original Deed contained various provisions governing the ownership, use and disposition of the Property. Certain of the provisions are outdated, cumbersome and/or inconsistent with the provisions governing other properties conveyed by AR to ADLC.

C. AR and ADLC have decided to amend and correct the applicable provisions of the Original Deed as provided in this Amended and Corrected Quitclaim Deed.

D. This Amended and Corrected Quitclaim Deed supersedes and replaces in its entirety the Original Deed as it applies to the Property.

WITNESSETH:

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its successors and assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer-Lodge county, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, water and water rights, ditch and ditch rights, situated on or appurtenant to the property , or any thereof, or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature ("Property").

Grantor's conveyance of the Property to Grantee is made as a charitable contribution by Grantor to Grantee. In addition, Grantee has agreed to (i) take the Property subject to certain restrictive covenants, and (ii) assume certain obligations as more particularly described in the Additional Provisions set forth below.

Pursuant to that certain Access Agreement dated May 5, 1994 and recorded on May 5, 1994 in Book 96 at Page 146 of the Anaconda-Deer Lodge County real property records (the "Access Agreement"), ADLC previously granted to AR an ongoing right of access to the Property and certain additional properties. ADLC and AR hereby acknowledge and agree that the Access Agreement shall continue in full force and effect with respect to the Property and all other properties to which it applies in accordance with its terms and conditions.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this Amended and Corrected Quitclaim Deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Amended and Corrected Quitclaim Deed, the following capitalized terms shall have the meanings ascribed to them below.

Administrative Record shall mean all factual and legal information, documents, data, analyses, reports, correspondence, calculations, opinions, statements, maps, charts, logs, documents, tapes, disks and other information of all types and description whatsoever that EPA has established as the administrative record with respect to the Anaconda Smelter site, the

OW/EADA OU, or any other operable units of the Anaconda Smelter site, as specified herein.

Applicable Law shall mean all applicable laws, statutes, regulations, ordinances, decrees or orders of Federal, State or local governmental or judicial entities, as the same may change from time to time.

Development Permit system shall mean the Anaconda-Deer Lodge County Development Permit System adopted by the Anaconda-Deer Lodge Board of Commissioners as the same may be amended or supplemented from time to time.

EPA shall mean the United States Environmental Protection Agency.

Environmental Conditions shall mean any condition, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes, including without limitation any condition, circumstance, quality, quantity or other state of the land, subsurface strata, air, surface water, ground water, fish, wildlife, biota, Hazardous Materials or Mining Wastes arising out of, related to or resulting from: 1) the Release or threatened Release, generation, transport, handling, treatment, storage, disposal, management, presence of or exposure to any Hazardous Materials; or 2) any mining, milling, smelting, processing, refining or other operations by Grantor or its predecessors.

Environmental Laws shall mean any past, present or future federal, state or local laws, regulations, ordinances, permits, approvals or authorizations pertaining to natural resources, Environmental Conditions, protection of human health, welfare or the environment or historic, archeological or cultural preservation, including without limitation CERCLA; the Clean Air Act (42 U.S.C. §§ 7401 et seq.); the Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.); the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901 et seq.); the Safe Drinking Water Act (42 U.S.C. §§ 300(f) et seq.); the National Historic Preservation Act (16 U.S.C. § 470); the Comprehensive Environmental Cleanup and Responsibility Act, as amended ("CECRA"), M.C.A. §§ 75-10-701 et seq.; the Montana Water Quality Act (M.C.A. §§ 75-10-701 et seq.); the Clean Air Act of Montana (M.C.A. §§ 75-2-101 et seq.); the Natural Streambed and Land Preservation Act (M.C.A. § 5 75-7-101 et seq.); and the Montana Floodplain and Floodway Management Act (M.C.A. §§ 76-5-101 et seq.); all as amended and as may change from time to time; and Applicable or Relevant and Appropriate Requirements (ARARS) for the OW/EADA Remedy; and any provisions or theories of common law providing for any cause of action remedy or right of recovery with respect to, arising from or related to Environmental conditions, as any such provisions or theories may change from time to time.

Future Development shall mean any and all development on, about, beneath, or otherwise affecting the Property.

Hazardous Materials shall mean any substance (i) the presence of which requires investigation of or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or (ii) which is defined as a "hazardous waste," "hazardous substance," pollutant or contaminant under any federal, state or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive

Environmental Response, Compensation and Liability Act (42 U.S.C. Section 9601 et seq.) and/or the Resource Conservation and Recovery Act (42 U.S.C. Section 6901 et seq.); or (iii) which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or hazardous; or (iv) the presence of which causes or threatens to cause a nuisance or poses or threatens to pose a threat to human health, safety or the environment; or (v) without limitation which contains gasoline, diesel fuel or other petroleum hydrocarbons; or which contains polychlorinated bipheynols (PCBs), asbestos or urea formaldehyde foam insulation.

Hazardous Mining Waste shall mean Mining Waste which is unacceptable for disposal at the Anaconda Development Repository or the Anaconda-Deer Lodge County Landfill because of the specific characteristics and/or constituents of the Mining Waste.

Institutional Controls Agreement shall mean that certain Institutional Controls Agreement by and between Grantor, Grantee and Old Works Golf Course, Inc. dated effective _____, 2016 and filed on _____, 2016 in the permanent files of the Anaconda-Deer Lodge County Clerk & Recorder at Miscellaneous Files _____ and any amendments thereto.

Mining Waste shall mean a solid, liquid or gaseous waste materials and their constituents resulting from or related to mining, milling, smelting, processing or refining operations, and any structures and debris associated with such operations, including without limitation the following waste materials and their constituents resulting from or related to the extraction, beneficiation, or processing of ores and minerals: waste rock, overburden, tailings, slag, flue dust, Red Sands, Arbiter waste materials and Old Works Waste piles.

O&M obligations shall mean those Operation and Maintenance measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan for the Property.

O&M Plan shall mean the Anaconda-Deer Lodge County (ADLC) Superfund Inspection and Maintenance (I&M) Plan attached as Exhibit ___ to the Institutional Controls Agreement.

OW/EADA OU shall mean the Old Works/East Anaconda Development Area Operable Unit, which is one of several Operable units at the Anaconda Smelter NPL Site in or near Anaconda, Montana.

OW/EADA ROD shall mean the Record of Decision issued by EPA on March 8, 1994, with respect to selection of the remedy of the OW/EADA OU, and any attachments thereto.

OW/EADA Remedy shall mean the remedy selected by EPA in the OW/EADA ROD and attachments thereto, including any operation and maintenance requirements of such remedy.

Operation and Maintenance or O&M shall mean those measures required of Grantee pursuant to the Institutional Controls Agreement and the O&M Plan to maintain the effectiveness of the OW/EADA Remedy on the Property.

Release shall mean any spilling, leaking, pumping, pouring, emitting, leaching, emptying,

discharging, injecting, escaping, dumping, burying, disposal or emanation whatsoever.

Remedial Action shall mean any response, removal, or remedial action within the meaning of those terms under CERCLA, regardless of whether such actions are undertaken pursuant to CERCLA authority, and any reclamation, restoration, or rehabilitation actions undertaken pursuant to or required by any Environmental Laws.

Residential shall have the same meaning as set forth in the Development Permit System.

Small Quantity Generator shall mean a generator of hazardous waste as defined under RCRA who: 1) generates less than 100 kilograms of hazardous waste in a calendar month; 2) never accumulates on site more than 600 kilograms of hazardous waste; and 3) manages such hazardous waste strictly in accordance with the requirements of RCRA, Environmental Laws and any other applicable laws.

State shall mean the State of Montana.

Successor in Interest and Assigns shall mean any "person" as defined in section 101(21) of CERCLA, 42 U.S.C. § 9601(21), who is granted, acquires or receives right title or interest, including through sale or lease, to the Property, or any portion thereof, subsequent to the execution of this Amended and Corrected Quitclaim Deed.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and ,agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS AMENDED AND CORRECTED QUITCLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in paragraph C. below;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials or Mining Wastes at, to, or from the Property into the environment;

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Amended and Corrected Quitclaim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record and provided by AR relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property.

b. The information described in the Property Disclosures in paragraph C. below, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter site and the OW/EADA OU contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

1. Grantor's Disclosures. Grantor hereby makes the following disclosures to Grantee and Grantee hereby acknowledges receipt of such disclosures and any documents more particularly described below concerning the Environmental Conditions of the Property and the existence of any easements, restrictive covenants or other title matters burdening the property:

a. EPA has listed the Anaconda Smelter site on the National Priorities List under CERCLA. The Property is located within the OW/EADA OU on the Anaconda Smelter site.

b. Grantor and others have performed investigations or evaluations under CERCLA at the Anaconda Smelter site or the OW/EADA OU which have been fully disclosed to Grantee.

c. EPA has selected the OW/EADA Remedy in accordance with the requirements of CERCLA and the National contingency Plan, 40 C.F.R. Part 300 and has confirmed and approved the selection of the OW/EADA Remedy in the OW/EADA ROD. Grantor hereby discloses the OW/EADA Remedy as it may affect the Property.

2. Other Matters. The Grantor and Grantee acknowledge that other matters and documents may exist with respect to the Property that are not identified above. Grantee assumes the responsibility to identify, review, analyze, and form their own opinions with respect to such other matters and records.

D. RELEASE AND COVENANT NOT TO SUE.

Except as provided in Paragraph E.1 below with respect to Hazardous Mining Waste, Grantee, for itself and its Successors in Interest and Assigns, hereby releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees in any private cost recovery suit, contribution action, or any other action under CERCLA, Environmental Laws or the common law arising out of or related to: (1) any Environmental Conditions on, about, beneath, from or related to the property; and (2) implementation and operation and maintenance of the OW/EADA Remedy or other Remedial Action on, about, beneath or related to the Property. Grantee, for itself and its Successors in Interest and Assigns, hereby fully and irrevocably releases and covenants not to sue Grantor, its affiliates, subsidiaries, officers, directors, agents, representatives, contractors, and employees for any and all claims, causes of action or liabilities that it may now have or hereafter acquire against such individuals or entities for any cost, loss, liability, damage, expense, demand, action or cause of action arising from or related to any errors, omissions or other conditions, including information disclosed pursuant to paragraph C. above entitled "Property Disclosures." The foregoing release and covenant not to sue shall burden the Property and is intended to be, and shall be construed as, a covenant of Grantee and its Successors in Interest and Assigns which runs with the land.

E. RESTRICTIVE COVENANTS.

1. Covenants Running with the Land. The following restrictive covenants shall burden the property and are intended to be and shall be construed as, covenants of Grantee and its Successors in Interest and Assigns which run with the land:

a. The Property owner shall not take, authorize or allow any direct or indirect action which interferes with, is inconsistent with, hinders, delays, diminishes, or frustrates the implementation, effectiveness, purposes, integrity, or O&M of the OW/EADA Remedy, or any Remedial Action required under Applicable Law or by any federal, state or local governmental entity, or any other actions that Grantor deems necessary or advisable to address Environmental Conditions on or related to the Property;

b. The Property owner shall maintain the Property in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy including the measures required of Grantee pursuant to the O&M Plan for the Property; and

c. Except as otherwise provided in this Paragraph E.1 below with respect to Hazardous Mining Waste, the Property owner shall be solely responsible for any additional remediation which may be necessary to accommodate Future Development of the Property. For purposes of this provision, the phrase "additional remediation which may be necessary to accommodate Future Development" shall mean any and all Remedial Action beyond that which Grantor is required to implement at the OW/EADA OU as part of the OW/EADA Remedy in the absence of Future Development. Any such additional remediation must be undertaken in accordance with and in a manner consistent with the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and other Applicable Laws.

Notwithstanding the terms of Paragraph E.1.c above, in the event and to the extent the Property owner discovers any Hazardous Mining Waste during any Future Development of the Property and such Hazardous Mining Waste must be removed from the Property and disposed of off-site pursuant to the requirements of the OW/EADA Remedy, the Development Permit System, Environmental Laws and/or other Applicable laws, the Property owner shall notify Grantor and Grantor shall be responsible for the removal and disposal of such Hazardous Mining Waste.

2. Benefitted Properties. The restrictive covenants shall be for the benefit of the real properties that are adjacent to or contiguous with the Property.

3. Benefits to Benefitted Properties. Grantor and Grantee acknowledge that the benefits to the benefitted properties by reason of the restrictive covenants include without limitation the following:

a. The reduction or minimization of potential risk to human health and the environment on, or in the vicinity of, the benefitted properties; and

b. The "maintenance, use and potential development of the Property in such a manner as to allow economic, cultural and historic benefits to accrue to adjacent property owners and other property owners located in Anaconda-Deer Lodge County while protecting human health and the environment.

F. TRANSFERS OF PROPERTY.

1. General. The release and covenant not to sue and restrictive covenants set forth in this Amended and Corrected Quitclaim Deed are intended to be covenants which run with the land and shall be binding upon Grantee and its Successors in Interest and Assigns.

2. Provisions of Subsequent Conveyance Instruments. Grantee hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation any grant of an easement burdening the Property or any grant of a lease of all or any part of the Property), the Grantee shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Amended and Corrected Quitclaim Deed and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the restrictive covenants set forth in that certain Amended and Corrected Quitclaim Deed dated _____, and recorded on _____, at Book _____, Page _____ in the real property records of Anaconda-Deer Lodge County, Montana (the "Covenant Deed"), (ii) abide by the restrictive covenants as owner of the Property in accordance with the terms and conditions of the Covenant Deed, and (iii) be bound by the release and covenant not to sue provisions set forth in the Covenant Deed.
>
> Grantee hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute a deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

3. Binding Effect. Notwithstanding the foregoing, any person or entity who acquires any right, title or interest in all or any part of the Property shall be conclusively deemed to have consented and agreed to the provisions of Paragraph F.2, whether or not any reference to this Amended and Corrected Quitclaim Deed or these provisions is contained in the deed or other conveyance instruments by which such person or entity acquires an interest in the Property.

G. ENFORCEMENT RIGHTS - RESTRICTIVE COVENANTS.

1. Enforcement of Restrictive Covenants. Grantor and Grantee hereby agree that each restrictive covenant set forth above is intended to and shall be a covenant running with the land binding upon any and all persons or entities who acquire any interest or interests in any or all of the Property, including without limitation all Successors in Interest and Assigns of Grantee.

2. Parties Eligible to Enforce Restrictive Covenants. Each of the restrictive covenants set forth in this Amended and Corrected Quit Claim Deed shall be enforceable in perpetuity as follows:

a. In Contract. Grantor or its designee shall be entitled to enforce the provisions of the restrictive covenants against Grantee and its Successors in Interest and assigns pursuant to the terms and conditions of this Amended and Corrected Quit Claim Deed. Grantor and Grantee hereby agree that the remedy of "specific performance" shall be available to Grantor in such proceedings.

b. Adjacent Property Owners. All adjacent property owners shall be entitled to enforce the restrictive covenants to the fullest extent permitted by Montana law. Grantee hereby specifically agrees that the remedy of "specific performance" shall be available to adjacent property owners in such proceedings.

c. Waiver of Defenses. Grantee hereby waives, to the fullest extent permitted by Montana law, any rights which it may have to argue that specific performance is an inappropriate remedy.

H. MODIFICATION OF RESTRICTIVE COVENANTS.

The restrictive covenants may be modified from time to time as follows:

a. Required Approvals. Any proposed modification must be approved in writing by AR, ADLC and the owner of the Parcel burdened by the restrictive covenant to be modified. EPA and the State shall be provided prior written notice of such proposed modifications. Such written approval by AR, ADLC and the parcel owner may be evidenced by execution of the instrument created to amend the restrictive covenants.

b. Recordation of Modification. In order to be effective, any modification of the restrictive covenants must be (i) in writing, (ii) executed by each of the persons described in paragraph a. above, with such signature duly notarized (to the extent required by Montana law), and (iii) duly recorded in the Anaconda-Deer Lodge County real property records.

Any modification which complies with the foregoing requirements shall be deemed duly created and enforceable from and after the effective date thereof to the same extent as the original restrictive covenants. For purposes of these provisions, a modification of the restrictive covenants may include (i) the imposition of new restrictive covenants, or (ii) the termination of all or part of the existing restrictive covenants.

The parties have executed this Amended and Corrected Quitclaim Deed effective for all purposes as of the date first above written.

GRANTOR:

ATLANTIC RICHFIELD COMPANY, Delaware corporation

By: _____
Name: _____
Title: _____

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: _____
Name: _____
Title: _____

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____

Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE `)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

ATTACHMENT 1

(to Amended and Corrected Quitclaim Deed for Stucky Ridge Parcel)

PROPERTY DESCRIPTION
Stucky Ridge Parcel

That certain real property described in Certificate of Survey No. 99-B recorded on April 25, 1994 in the real property records of Deer Lodge County, Montana

Exhibit 23
(Portion of 1982 Parcel Quitclaim Deed)

After Recording, Return to:
Anaconda- Deer Lodge County
Attn: Carl Nyman
800 South Main,
Anaconda, Montanan 59711

QUITCLAIM DEED
(Portion of 1982 Deed Parcel)

THIS QUITCLAIM DEED ("Quitclaim Deed"), made and entered into this ____ day of _____, 2016, by and between ATLANTIC RICHFIELD COMPANY, a Delaware corporation, hereinafter referred to as Grantor, and ANACONDA-DEER LODGE COUNTY, a political subdivision of the State of Montana, hereinafter referred to as Grantee.

WITNESSETH:

That the Grantor, for and in consideration of the sum of One Dollar ($1.00) to it in hand paid by the said Grantee, the receipt whereof is hereby acknowledged, has remised, released and quitclaimed, and by these presents does remise, release and quitclaim, for an industrial park and related purposes only, unto the said Grantee, and to its successors and assigns, forever, any of its right, title and interest in and to the surface only of the following described property, situated in the County of Deer Lodge, State of Montana:

Remainder Block 5, Anaconda Industrial Park Addition, Certificate of Survey No. _____, recorded on _____, 2016 at Reception No. _____ of the real property records of Deer Lodge County, Montana.

Excepting and reserving, however, from this conveyance, all ores and minerals, including gas and oil and other hydrocarbon substances, beneath the surface of the above described property, or contained therein or thereon, with the right to mine for and extract the same.

It is the understanding and intention of the parties hereto that the Grantor quitclaims any of its right, title and interest in and to the surface only of the hereinabove described lands for use as an industrial park and related purposes only, and if said land or any part thereof is not or ceases to be used for said purposes, then the ownership, right, title and interest herein conveyed shall immediately revert to and revest in the Grantor, its successors assigns.

This conveyance is also expressly made subject to any and all rights-of-way and easements heretofore granted, laid out, used or established and now existing upon the said premises for any purpose whatsoever, and subject also to all reservations and exceptions contained in the United States Patents or in any deed of record.

As covenants running with the above described and conveyed premises and as a further consideration for the execution and delivery of this Quitclaim Deed, it is understood and agreed that no structure shall be erected or operation conducted that shall constitute a public or private nuisance upon the property thereby conveyed.

IN WITNESS WHEREOF, the Grantor has caused this Quitclaim Deed to be executed by its representatives thereunto duly authorized the day and year first above written.

GRANTOR:
ATLANTIC RICHFIELD COMPANY, a Delaware corporation

By: _____
Name: _____
Title: _____

GRANTEE:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the state of Montana

By: _____
Name: _____
Title: _____

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ____ day of _____, 2016 by _____ as _____ of Atlantic Richfield Company on behalf of Atlantic Richfield Company.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ___ day of _____, 2016 by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

Exhibit 24
(C-Hill Parcel Conveyance Quitclaim Deed)

Currently Under Review

Exhibit 25
(C-Hill Parcel Re-conveyance Quitclaim Deed)

Currently Under Review

Exhibit 26
(Third Party Quitclaim Deed)

After Recording, Return to:
_____
_____
_____

QUITCLAIM DEED
(Third Party)

THIS QUITCLAIM DEED ("Quitclaim Deed") is made effective as of _____ , 20___, by ANACONDA-DEER LODGE COUNTY ("Grantor"), a consolidated governmental entity organized under the Constitution and laws of the State of Montana, whose address is 800 South Main, Anaconda, MT 59711, and _____ ("Grantee"), whose address is _____.

I. QUITCLAIM

GRANTOR has remised, released and QUITCLAIMED and hereby remises, releases and QUITCLAIMS to Grantee, its Successors in Interest and Assigns forever, all right, title and interest of Grantor in and to the real property situated in Deer Lodge County, State of Montana, described on Attachment 1 attached hereto and incorporated herein by this reference together with any and all right, title and interest of said Grantor in and to the Water Rights and all mineral rights (including without limitation, oil and gas rights and sand and gravel rights) and Mining Wastes located on the Property, together with the improvements, buildings, structures and fixtures located on the Property, together with all rights-of-way, easements, ditch and ditch rights, situated on or appurtenant to the Property, or owned or used in connection therewith, and the right to use the same together with, all and singular, the tenements, hereditaments, privileges, appurtenances and appropriations of every kind and nature (the "Property").

Grantor hereby reserves an easement for the benefit of itself, the United States Environmental Protection Agency, the State of Montana, and Atlantic Richfield Company and each of their respective employees, agents, contractors, subcontractors, representatives, agents, successors, assigns and designees, to access, enter upon, and use any or all of the Property for purposes of ensuring compliance with, implementing or causing to be implemented any action required pursuant to CERCLA and/or the Institutional Controls Agreement. Nothing in this paragraph shall be deemed to relieve Grantee of any of Grantee's obligations with respect to the Property or to impose on Grantor, the United States Environmental Protection Agency, the State of Montana or Atlantic Richfield Company any obligation to perform any action with respect to the Property.

ADDITIONAL PROVISIONS

The following provisions are an integral part of the conveyance of the Property from Grantor to Grantee. By execution of this Quitclaim Deed and acceptance of the conveyance of the Property, Grantee acknowledges that (i) the conveyance of the Property subject to these Additional Provisions was specifically bargained for in the transaction; (ii) the Additional Provisions are a material part of the consideration to Grantor in making the conveyance; and (iii) Grantor would not have conveyed the Property to Grantee if the Additional Provisions were not included as a part of the conveyance transaction.

A. DEFINED TERMS.

For purposes of this Quitclaim Deed, the term "Covenant Deed" shall mean that certain Quitclaim Deed dated _____, ____ and recorded on _____, ____, at Roll ___, Card ___ in the real property records of Anaconda-Deer Lodge County. All other capitalized terms contained in this Quitclaim Deed shall have the meaning ascribed to such terms in the Covenant Deed.

B. DISCLAIMER OF WARRANTIES.

1. No Warranties by Grantor. Grantee acknowledges and agrees that GRANTOR HAS NOT MADE, DOES NOT MAKE AND SPECIFICALLY NEGATES AND DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES, PROMISES, COVENANTS, AGREEMENTS OR GUARANTIES OF ANY KIND OR CHARACTER WHATSOEVER WHICH ARE NOT SPECIFICALLY AND AFFIRMATIVELY SET FORTH IN THIS QUITCLAIM DEED, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, PAST, PRESENT OR FUTURE, INCLUDING WITHOUT LIMITATION WITH RESPECT TO THE SUITABILITY OF THE PROPERTY FOR ANY AND ALL ACTIVITIES AND USES WHICH GRANTEE MAY CONDUCT THEREON, OR THE HABITABILITY, MERCHANTABILITY, MARKETABILITY, PROFITABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY. Specifically, without limiting or abrogating in any way any of the foregoing, Grantor has not made, does not make, and specifically disclaims any representations whatsoever, express or implied, with respect to the following matters:

a. The value, nature, quality or condition of the Property, including, without

limitation, the Environmental Conditions of the Property;

b. The income, if any, to be derived from the Property;

c. The truth, accuracy, completeness or representative nature of the information provided to Grantee as described in the Property Disclosures in Paragraph C of the Covenant Deed;

d. Compliance of any past or present operations or conditions with any Applicable Law, permits, regulations, ordinances, court orders, or contract provisions, including without limitation Environmental Laws and those pertaining to protection of cultural or historic resources or sites, land use or the public health, safety and welfare;

e. The disposal or presence of any Hazardous Materials or Mining Wastes on, at, under or associated with the Property, or the occurrence or existence of any past or present Release of any Hazardous Materials or Mining Wastes at, to, or from the Property into the environment; and

f. The ability to obtain any permits (if required) or any regulatory approvals with respect to any of Grantee's activities or obligations under this Quitclaim Deed.

2. Grantee's Inspection of the Property. Grantee acknowledges and agrees that Grantee has been given the opportunity to inspect the Property. By accepting conveyance of this Property, Grantee assumes the responsibility for, and has relied and will rely upon, Grantee's own review, analysis, and opinions, including without limitation their own review, analysis, and opinions of the following:

a. Documents of record relating to the title to the Property including without limitation documents evidencing easements, restrictions, rights-of-way liens and other encumbrances affecting the Property;

b. The information described in the Property Disclosures in Paragraph C of the Covenant Deed, subject to the disclaimers set forth above with respect to the truth, accuracy, completeness or representative nature of such information;

c. Grantee's own inspection of the Property and the Environmental Conditions on the Property; and

d. Documents concerning the Anaconda Smelter Site contained in the Administrative Record or otherwise publicly available.

3. No Other Representation. Grantor is not liable or bound in any manner by any oral or written statements, representations or information pertaining to the Property, or the operation thereof, furnished by any representative, real estate broker, agent, employee, servant or other person.

4. "As Is" Nature of Transfer of the Property. GRANTEE ACKNOWLEDGES AND AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE

TRANSFER OF THE PROPERTY AS PROVIDED FOR HEREIN IS MADE ON AN "AS IS" CONDITION AND BASIS WITH ALL FAULTS.

C. PROPERTY DISCLOSURES.

Grantee hereby acknowledges the Property Disclosures set forth in Paragraph C of the Covenant Deed.

D. RELEASE AND COVENANT NOT TO SUE.

Grantee hereby agrees to be bound by the release and covenant not to sue provisions set forth in Paragraph D of the Covenant Deed.

E. RESTRICTIVE COVENANTS.

Grantee hereby agrees to (i) accept the Property subject to the restrictive covenants set forth in Paragraph E of the Covenant Deed, and (ii) abide by the restrictive covenants as owner of the Property in accordance with the terms and conditions of the Covenant Deed.

F. TRANSFERS OF PROPERTY.

Grantee hereby agrees that in any subsequent conveyance of all or any part of the Property, or any interest in the Property (including without limitation any grant of an easement burdening the Property or any grant of a lease of all or any part of the Property), Grantee shall include the following provisions in the deed or other conveyance instrument (completed appropriately to refer to this Quitclaim Deed and modified only so as to fit appropriately in the context of the conveyance instrument):

> Grantee hereby agrees to: (i) accept the Property subject to the restrictive covenants set forth in that certain Quitclaim Deed dated _____, and recorded on _____, at Book _____, Page _____ in the real property records of Anaconda-Deer Lodge County, Montana (the "Covenant Deed"), (ii) abide by the restrictive covenants as owner of the Property in accordance with the terms and conditions of the Covenant Deed, and (iii) be bound by the release and covenant not to sue provisions set forth in the Covenant Deed.
>
> Grantee hereby also agrees that in any subsequent deed or other conveyance instrument, it shall require the grantee in such deed or conveyance instrument to either (a) execute a deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph, or (b) execute a separate acknowledgment attached to the deed or conveyance instrument which contains the agreements set forth in the immediately preceding paragraph.

Notwithstanding the foregoing, any person or entity who acquires any right, title or interest in all or any part of the Property shall be conclusively deemed to have consented and agreed to the provisions above, whether or not any reference to the Covenant Deed or these provisions is contained in the deed or other conveyance instruments by which such person or entity acquires an interest in the Property.

The parties have executed this Quitclaim Deed effective for all purposes as of the date first above written.

GRANTOR:

ANACONDA-DEER LODGE COUNTY, a consolidated governmental entity organized under the Constitution and laws of the State of Montana

By: _____
Name: _____
Title: _____

GRANTEE:

_____

By: _____
Name: _____
Title: _____

STATE OF MONTANA)
) ss.
COUNTY OF DEER LODGE)

The foregoing instrument was acknowledged before me this ____day of _____, _____ by _____ as _____ of Anaconda-Deer Lodge County on behalf of Anaconda-Deer Lodge County.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of ____, 20___ by _____ as _____ of _____ on behalf of _____.

Witness my hand and official seal.
My commission expires: _____

_____
Notary Public

Exhibit 27
(Community Enhancement Deferral/Early Disbursement Request Form)

Currently Under Review

Exhibit 28
(ADLC Certificate of Insurance)

CERTIFICATE OF WORKERS' COMPENSATION COVERAGE

ISSUE DATE (MM/DD/YYYY)
7/1/2016

POOLED RISK RETENTION GROUP

MONTANA MUNICIPAL INTERLOCAL AUTHORITY (MMIA)
PO BOX 6669
HELENA, MT 59604-6669
PH: (406) 443-0907 FAX: (406) 449-7440

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE MMIA MEMORANDUM OF WORKERS' COMPENSATION COVERAGE.

COVERED PARTY

Anaconda Deer Lodge County
800 S Main
Anaconda MT 59711

TYPE OF COVERAGE

WORKERS' COMPENSATION

COVERAGE INFORMATION

THIS IS TO CERTIFY THAT A MEMORANDUM OF COVERAGE HAS BEEN ISSUED TO THE COVERED PARTY NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE COVERAGE AFFORDED BY THE MEMORANDUM IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH MEMORANDUM.

TYPE OF COVERAGE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS
WORKERS' COMPENSATION	1002WC	07/01/2016 12:01 am	06/30/2017	**STATUTORY**

Remarks (Including Special Conditions)

As Regards: AERL Access Agreement

CERTIFICATE HOLDER

ARCO Environmental Remediation, LLC
317 Anaconda Road
Butte MT 59701

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED MEMORANDA BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE MEMORANDA PROVISIONS.

AUTHORIZED REPRESENTATIVE

CERTIFICATE OF LIABILITY COVERAGE

ISSUE DATE (MM/DD/YYYY)
7/1/2016

POOLED RISK RETENTION GROUP

MONTANA MUNICIPAL INTERLOCAL AUTHORITY (MMIA)
PO BOX 6669
HELENA, MT 59604-6669
PH: (406) 443-0907 FAX: (406) 449-7440

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE MMIA MEMORANDUM OF LIABILITY COVERAGE EFFECTIVE AS OF JULY 1, 2015 AND ITS DECLARATIONS. ANY STATEMENT ON THIS CERTIFICATE DOES NOT CONFER RIGHTS TO THE CERTIFICATE HOLDER IN LIEU OF REQUISITE ENDORSEMENT(s).

COVERED PARTY

Anaconda Deer Lodge County
800 S Main
Anaconda MT 59711

TYPES OF COVERAGE

COVERAGE LETTER

A General Liability
B Auto Liability

COVERAGE INFORMATION

THIS IS TO CERTIFY THAT A COVERAGE MEMORANDUM HAS BEEN ISSUED TO THE COVERED PARTY NAMED ABOVE FOR THE COVERAGE PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE COVERAGE AFFORDED BY THE MEMORANDUM IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH MEMORANDUM.

COV LTR	TYPE OF COVERAGE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS OF LIABILITY	
A	**GENERAL LIABILITY** X Occurrence	1002RP	07/01/2016 12:01am	06/30/2017	EACH CLAIM EACH OCCURRENCE	750,000 1,500,000
B	**AUTO LIABILITY** X Occurrence	1002RP	07/01/2016 12:01 am	06/30/2017	EACH CLAIM EACH OCCURRENCE	750,000 1,500,000
	DAMAGES UNDER COVERAGE A or B THAT ARE NOT SUBJECT TO LIMITATIONS ON GOVERNMENTAL LIABILITY AS SET FORTH IN MCA, SECTION 2-9-108 X	1002RP	07/01/2016 12:01 am	06/30/2017		THESE DAMAGES ARE SUBJECT TO THE AGGREGATE LIMITS OF LIABILITY SET FORTH BY DECLARATION

Remarks (Including Special Conditions)

As Regards: ARCO Environmental Remediation, LLC and Atlantic Richfield Company are named as additional covered party subject to the terms and conditions of Endorsement #FY17-1002-30 To the MMIA Memorandum of Liability Coverage as it regards the AERL Access Agreement.

CERTIFICATE HOLDER

ARCO Environmental Remediation, LLC
317 Anaconda Road
Butte MT 59701

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED MEMORANDA BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE MEMORANDA PROVISIONS.

AUTHORIZED REPRESENTATIVE

MONTANA MUNICIPAL INTERLOCAL AUTHORITY
ADDITIONAL COVERED PARTY ENDORSEMENT UNDER THE MEMORANDUM OF LIABILITY COVERAGE

Member Entity: **Anaconda-Deer Lodge County**	**Contract #:** **AERL Access Agreement**
Original Issue Date: **July 1, 2016**	**Endorsement #:** **FY16-1002-30**
Policy Year: **July 1, 2016 to July 1, 2017**	

Additional Covered Party: ARCO Environmental Remediation, LLC (AERL) and Atlantic Richfield Company

Reference Activities: Per Section 1 of the agreement, construct and install storm water system replacements and improvements on AERL real property.

In reliance on the representations made in the Entity's application for an Additional Covered Party Endorsement, the Montana Municipal Interlocal Authority (Authority) agrees to provide coverage for the Additional Covered Party named above under the Memorandum of Liability Coverage (Memorandum).

Subject to the LIMITS OF LIABILITY, EXCLUSIONS, CONDITIONS and other terms of the Memorandum of Liability Coverage, the Authority agrees to pay on behalf of the Additional Covered Party all sums in excess of the DEDUCTIBLE which the Additional Covered Party shall become legally obligated to pay as Damages, as those terms are defined in the Memorandum and to which the Memorandum applies, arising solely from the Member Entity's actions, activities and operations in fulfillment of the responsibilities outlined in the **Reference Activities** noted above as identified in the **AERL Access Agreement** which is attached to and made a part hereof, and caused by an Occurrence during the Policy Year noted above.

Coverage under this Endorsement applies only to that coverage afforded under of the Memorandum of Liability Coverage, and any reinsurance coverage that follows the form of the Memorandum of Liability Coverage.

As set forth in the Entity's Application for Additional Covered Party Endorsement coverage under the Memorandum, the undersigned Additional Covered Party understands that this endorsement for coverage is limited to liability arising solely out of the Member Entity's actions, activities and operations in fulfillment of the responsibilities outlined in the **Reference Activities** noted above which is made a part hereof, and is contingent upon the Additional Covered Party being in compliance with the terms and conditions of the above referenced contract.

_____

MMIA AUTHORIZED REPRESENTATIVE

ACCESS AGREEMENT

ARCO Environmental Remediation, L.L.C. ("AERL") whose address is 317 Anaconda Road, Butte, Montana 59701, and Anaconda-Deer Lodge County ("ADLC") whose address is 800 South Main Street, Anaconda, Montana 59701, enter into this Access Agreement ("Agreement"), effective upon signature of both parties as set forth below, and agree as follows:

1. Grant of Access. AERL hereby grants to ADLC, including its employees, agents and contractors, the right to enter on AERL's real property as described and depicted in Exhibits A and B, attached hereto and incorporated by this reference (the "Property"), to construct and install storm water system replacements and improvements in accordance with the plans and specifications set forth in that certain *Uplands Remedial Design Unit (RDU) 3 Engineered Storm Water Controls Plan (ECSCP)* dated March 2, 2015, the receipt of which is hereby acknowledged by AERL (the "Work Activities"). AERL represents to the ADLC that, to AERL's knowledge, AERL has the right and authority to grant ADLC access to the Property to conduct the Work Activities.

2. Notice of Commencement of the Work Activities. At least 24 hours prior to first entering the Property pursuant to this Agreement, ADLC and/or its contractors, if any, shall notify Rob Jordan (406-723-1836) either verbally or in writing.

3. Inspection/Assumption of Risk. ADLC hereby acknowledges that it has conducted an independent investigation of the Property and is satisfied with its investigation and the condition of the Property. Further, ADLC has had the opportunity to make all inquiries concerning the Property that it deems necessary or advisable and AERL has responded adequately to all inquiries directed to AERL. ADLC's and its contractors' use of the Property shall be on an "AS IS" basis. ADLC, for itself and on behalf of its contractors, hereby agrees to assume all risks and liabilities in connection with its performance of the Work Activities on the Property as set forth in this Agreement.

4. HSSE Requirements. ADLC shall initiate, maintain and supervise all necessary safety precautions and programs in connection with the Work Activities and shall take all necessary precautions to prevent damage, injury or loss to all persons on the Property, and all persons who may be affected by the Work Activities. Notwithstanding the foregoing sentence, ADLC shall cause all personnel entering the Property to wear the appropriate personal protective equipment at all times. The personal protective equipment shall, at a minimum, include: steel toe boots, high visibility vest or outer layer, hard hat, safety glasses with side shields, and gloves. ADLC acknowledges that AERL shall have the right, but shall not be obligated, to audit the ADLC's compliance with the requirements of this paragraph. ADLC further acknowledges that the failure of ADLC's personnel to comply with the requirements of this paragraph, or the conduct of any

actions by ADLC's personnel while on the Property which are deemed unsafe by AERL, may result in the immediate termination of this Agreement.

5. ADLC's Work Obligations. ADLC shall maintain the current surface storm water drainage patterns on this previously reclaimed Property and shall otherwise use reasonable efforts to minimize any inconvenience to AERL during its presence on the Property. ADLC shall consult with AERL to address any concerns that AERL may have concerning the activities performed on the Property or the condition of the Property following completion of the Work Activities. ADLC acknowledges and understands the Work Activities shall in no way impede, prevent or encroach upon any work being conducted by AERL or its affiliate, Atlantic Richfield Company ("AR"), or their respective employees, agents, contractors, and representatives. ADLC shall be responsible for acquiring and maintaining any applicable federal, state or local permits or authorizations necessary for conduct of the Work Activities. ADLC shall be responsible for all re-vegetation (re-seeding using Montana Department of Environmental Quality vegetation specifications) and reclamation of any impacted areas. ADLC shall also follow all applicable requirements set forth in ADLC's Development Permit System, as amended.

6. Release and Covenant Not to Sue. ADLC agrees to fully and irrevocably release and hereby covenants not to sue AERL and AR, together with all of their respective predecessors and successors (merged, acquired or otherwise), parents, affiliates, divisions and subsidiaries and all of their respective shareholders, directors, officers, employees, attorneys, contractors, agents, transferees and assigns (collectively, the "AR Parties") for any action, claim or liabilities, under any theory, statute or other law, that ADLC may have or subsequently acquire for any costs, loss, liability, damage, expense, demand, action or cause of action arising under or out of or related to: (i) the performance of the Work Activities on the Property and (ii) the use of the Property by ADLC or ADLC's contractor(s) while performing the Work Activities.

7. Indemnity. ADLC shall indemnify, defend and hold harmless the AR Parties from and against any actions, claims, damages, losses, liabilities, costs or expenses, including reasonable attorneys fees (collectively, "Liabilities") which the AR Parties may incur, or which may be asserted against them, arising from or by reason of, (i) the performance of the Work Activities on the Property, (ii) ADLC's breach of, or failure to perform, any of its obligations under this Agreement, and (iii) the use of the Property, by ADLC or ADLC's contractor(s) while performing the Work Activities. ADLC's obligations under this paragraph include the obligation to defend the AR Parties against any asserted Liabilities for which the AR Parties may be indemnified under this paragraph.

8. Contractor Agreements. If ADLC uses any contractors to perform the Work Activities, in its agreement(s) with its contractor(s) for performance of the Work Activities, ADLC shall require that the contractor(s) abide by the terms and conditions of this Agreement in performance of any Work Activities on the Property. In addition,

ADLC shall require that the contractor(s) agree to indemnify, defend, protect and hold harmless the AR Parties from any and all claims of any nature arising from (i) their performance of Work Activities on the Property, (ii) their breach of the requirements of this Agreement and (iii) their use of the Property while performing Work Activities. The agreements(s) shall include provisions requiring the contractor(s) to defend the AR Parties against any claims for which they may be indemnified under this paragraph.

9. ADLC Insurance. ADLC shall purchase and shall keep in effect until this Agreement is terminated, the types and policy limits of insurance set forth in the Certificate of Liability Insurance and Certificate of Workers' Compensation Insurance, both dated March 24, 2016 and attached hereto as Exhibit C. The policy limits of insurance required under this paragraph shall be increased, as appropriate, in the event and to the extent that the limitations on ADLC's liability for damages in tort, as currently set forth in Mont. Code Ann. § 2-9-108, are increased. AERL shall not be responsible for payment of ADLC's insurance premiums. Any deductibles in ADLC's insurance shall be assumed by ADLC. Except for Workers' Compensation Insurance, AERL and AR shall be included in each policy of insurance purchased by ADLC to satisfy these requirements as additional insureds. Further, ADLC will furnish AERL with copies of the underlying insurance policies at AERL's request.

10. Contractor's Insurance. ADLC shall cause its contractors and/or subcontractors, if any, to purchase and shall keep in effect during the term of this Agreement, the following insurance: (i) Workers' Compensation Insurance in compliance with all statutory limits; (ii) Employer's Liability Insurance with a limit of not less than $500,000 per accident; (iii) Commercial or General Liability Insurance, including coverage for premises and operations, operations of Independent Contractor, contractual liability, products and completed operations, with limits as required by law or with a combined general aggregate limit of not less than $3,000,000, with bodily injury and property damage coverages of not less than $1,000,000 per occurrence; (iv) Automobile Liability Insurance (including owned, non-owned, and hired vehicles) with limits as required by law or with a combined single limit for bodily injury, death, and property damage of not less than $1,000,000 per occurrence, whichever is greater, (v) Excess Liability Insurance above said employer's liability, commercial or general liability, and automobile liability insurance with a combined single limit for bodily injury, death, and property damage of not less than $1,000,000 per occurrence and $3,000,000 aggregate; (vi) Professional Liability Insurance (Errors and Omissions) with limits of at least $3,000,000 per claim/aggregate; and (vii) Contractors Pollution Liability Insurance with limits of at least $3,000,000 per claim/aggregate. Except for Workers' Compensation Insurance, Atlantic Richfield shall be named as an additional insured in each of the policies required pursuant to this Paragraph 10, and the additional insured endorsement shall state that coverage is afforded the additional insured with respect to claims and occurrences arising out of work or operations performed by or on behalf of ADLC. All policies required under this paragraph shall be endorsed to provide that underwriters and insurance companies of ADLC shall not have any right of subrogation against Atlantic Richfield its affiliates, underwriters and insurance companies. Upon

request at anytime, ADLC shall require that any contractor(s) furnish Certificates of Insurance to Atlantic Richfield evidencing the insurance required under this Paragraph 10. Each certificate shall provide that at least 30 days prior written notice shall be given Atlantic Richfield in the event of cancellation or material change in the policies. All Certificates of Insurance must contain reference to endorsements (i.e., additional insureds, waiver of subrogation, etc.) as required herein. In no event shall any failure of Atlantic Richfield to receive Certificates of Insurance required under this Agreement or to demand receipt of such certificates be construed as a waiver by Atlantic Richfield of ADLC's obligation to require contractor(s) to obtain insurance pursuant to this Agreement. The obligation to require contractors to procure and maintain the insurance described in this Paragraph 10 is a separate responsibility of ADLC and independent of the duty to furnish a Certificate of Insurance. ADLC shall require the contractor(s) to furnish Atlantic Richfield with copies of the underlying insurance policies at Atlantic Richfield's request.

11. Interest in the Property. ADLC acknowledges that the right to access granted by this Agreement is a license to use AERL's property solely for the purposes provided herein. This Agreement is a license agreement that shall not create any right, title or interest in the Property.

12. Termination. AERL may terminate this Agreement with or without cause at any time by delivery of written or verbal notice of termination to ADLC. In addition, if not previously terminated, this Agreement will terminate on December 31, 2016, unless the parties extend the Agreement by execution of a written extension agreement.

13. Miscellaneous.

(a) ADLC may not assign its rights or delegate its obligations under this Agreement, or any part of it, without the prior written consent of AERL.

(b) No delay or failure on the part of AERL in exercising any rights under this Agreement, and no partial or single exercise of those rights, shall constitute a waiver of the right or of any other rights under this Agreement.

(c) In the performance of the Work Activities under this Agreement, ADLC shall be an independent contractor, and not an employee, representative or agent of AERL. As such, ADLC shall pay all salaries, wages, expenses, social security taxes, federal and state unemployment taxes and any similar taxes relating to the performance of the Work Activities.

(d) Any notice given under this Agreement is sufficient if delivered in writing to the parties designated representatives at the following addresses:

i. AERL's representative for this Agreement shall be Rob Jordan. Notices sent to AERL's representative under this Agreement shall be addressed as follows:

ARCO Environmental Remediation, L.L.C.
317 Anaconda Road
Butte, MT 59711
Attn: Rob Jordan

ii. ADLC's representative for this Agreement shall be the ADLC's chief executive. Notices sent to ADLC's representatives under this Agreement shall be addressed as follows:

Anaconda-Deer Lodge County
800 South Main St.
Anaconda, MT 59711
Attn: Chief Executive

(e) This Agreement constitutes the entire agreement and understanding between the parties relating to ADLC's access to the Property to perform the Work Activities and supersedes any all prior oral and written agreements and understandings with respect to the subject matter hereof. No covenants or representations not contained in this Agreement shall be binding upon the parties. This Agreement may be amended or modified only by a writing executed by both parties.

(f) This Agreement does not and shall not be construed to create any partnership or agency whatsoever between the parties hereto. The provisions of this subparagraph shall survive the dissolution or termination of this Agreement.

(g) Except as otherwise expressly provided herein, nothing in this Agreement, express or implied, is intended to nor shall confer upon any person or entity other than the Parties any rights (including without limitation any right of reimbursement), benefits, or remedies of any nature whatsoever under or by reason of this Agreement.

(h) The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement.

(i) This Agreement shall be governed by and construed in accordance with the laws of the State of Montana.

(j) If either party shall institute litigation against the other party arising from the terms and conditions of this Agreement, the prevailing party shall be entitled to award of its costs in connection with such litigation including, without limitation, reasonable attorneys' fees.

IN WITNESS WHEREOF, AERL and ADLC have executed this Agreement on the dates written below. This Agreement shall be effective only after signature of both parties, and the effective date of this Agreement shall be the later of the dates of signature.

ARCO Environmental Remediation, L.L.C.

By: Patricia Gallery

Name: PATRICIA GALLERY
(Print)

Title: PORTFOLIO MANAGER

Date: APRIL, 11, 2016

Anaconda-Deer lodge County

By Connie Teresa Daniels

Name: Connie Teresa Daniels
(Print)

Title: Chief Executive

Date: April 11, 2016

EXHIBIT "A"
(to Access Agreement)

Legal Description of Property

Section 2, Township 4 North, Range 11 West
Portion of Southeast quarter of Southeast quarter of Southwest quarter
(SE1/4SE1/4SW1/4)
Lying south of Lots 3,4,5 & 6 of Block 60-A of Eastern Addition

More particularly depicted on the attached map Exhibit "B"
Deer Lodge County, Montana

EXHIBIT "B"
(to Access Agreement)

Map Depicting Property

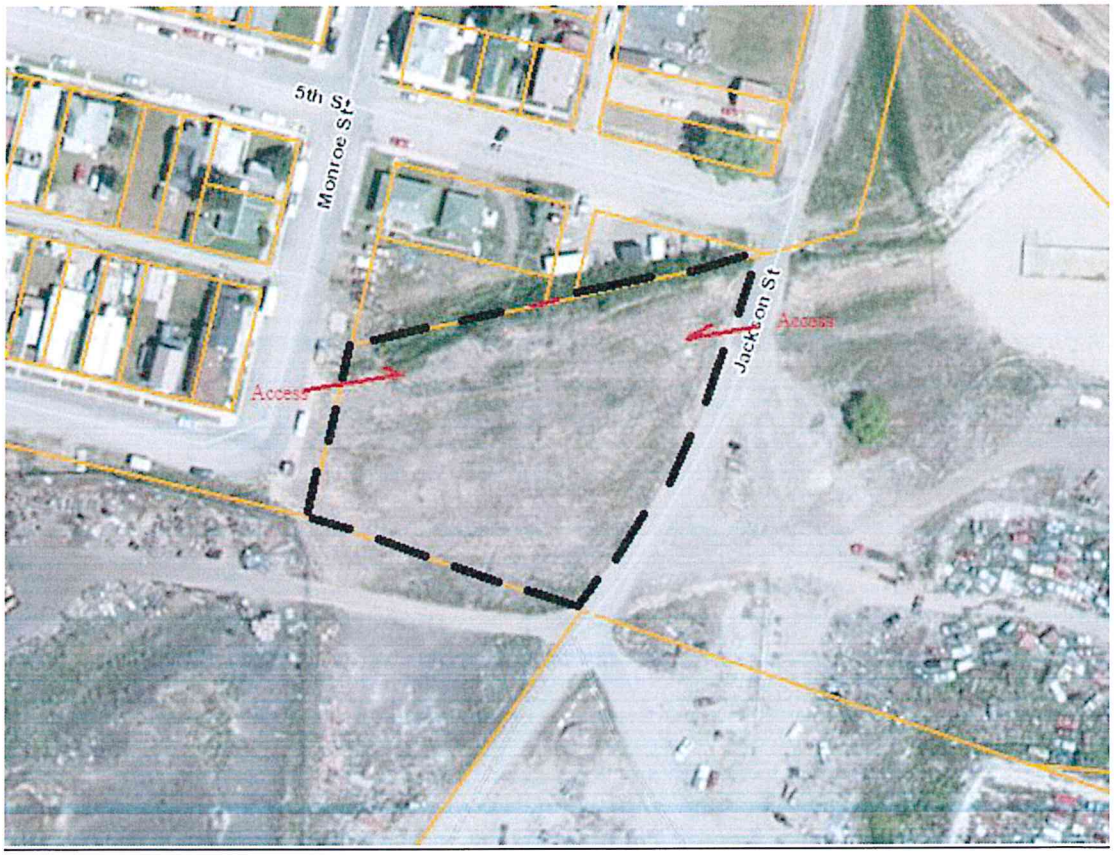


EXHIBIT "C"
(to Access Agreement)

Memorandum of Coverage

CERTIFICATE OF LIABILITY COVERAGE

ISSUE DATE (MM/DD/YYYY)
3/24/2016

POOLED RISK RETENTION GROUP

MONTANA MUNICIPAL INTERLOCAL AUTHORITY (MMIA)
PO BOX 6669
HELENA, MT 59604-6669
PH: (406) 443-0907 FAX: (406) 449-7440

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE MMIA MEMORANDUM OF LIABILITY COVERAGE EFFECTIVE AS OF JULY 1, 2015 AND ITS DECLARATIONS. ANY STATEMENT ON THIS CERTIFICATE DOES NOT CONFER RIGHTS TO THE CERTIFICATE HOLDER IN LIEU OF REQUISITE ENDORSEMENT(s).

COVERED PARTY

Anaconda Deer Lodge County
800 S Main
Anaconda MT 59711

TYPES OF COVERAGE

COVERAGE LETTER	
A	**General Liability**
B	**Auto Liability**

COVERAGE INFORMATION

THIS IS TO CERTIFY THAT A COVERAGE MEMORANDUM HAS BEEN ISSUED TO THE COVERED PARTY NAMED ABOVE FOR THE COVERAGE PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE COVERAGE AFFORDED BY THE MEMORANDUM IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH MEMORANDUM.

COV LTR	TYPE OF COVERAGE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS OF LIABILITY	
A	**GENERAL LIABILITY** X Occurrence	1002RP	07/01/2015 12:01 am	06/30/2016	EACH CLAIM EACH OCCURRENCE	750,000 1,500,000
B	**AUTO LIABILITY** X Occurrence	1002RP	07/01/2015 12:01 am	06/30/2016	EACH CLAIM EACH OCCURRENCE	750,000 1,500,000
	DAMAGES UNDER COVERAGE A or B THAT ARE NOT SUBJECT TO LIMITATIONS ON GOVERNMENTAL LIABILITY AS SET FORTH IN MCA, SECTION 2-9-108 X	1002RP	07/01/2015 12:01 am	06/30/2016		THESE DAMAGES ARE SUBJECT TO THE AGGREGATE LIMITS OF LIABILITY SET FORTH BY DECLARATION

Remarks (Including Special Conditions)

Certificate of Liability Policy does not exclude work within 50 feet of railroad property.
As Regards: ARCO Environmental Remediation, LLC and Atlantic Richfield Company are named as additional covered party subject to the terms and conditions of Endorsement #FY16-1002-30 To the MMIA Memorandum of Liability Coverage as it regards the AERL Access Agreement.

CERTIFICATE HOLDER

ARCO Environmental Remediation, LLC
317 Anaconda Road
Butte MT 59701

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED MEMORANDA BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE MEMORANDA PROVISIONS.

AUTHORIZED REPRESENTATIVE

CERTIFICATE OF WORKERS' COMPENSATION COVERAGE

ISSUE DATE (MM/DD/YYYY)
03/24/2016

POOLED RISK RETENTION GROUP

MONTANA MUNICIPAL INTERLOCAL AUTHORITY (MMIA)
PO BOX 6669
HELENA, MT 59604-6669
PH: (406) 443-0907 FAX: (406) 449-7440

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE MMIA MEMORANDUM OF WORKERS' COMPENSATION COVERAGE.

COVERED PARTY	TYPE OF COVERAGE
Anaconda Deer Lodge County 800 S Main Anaconda MT 59711	**WORKERS' COMPENSATION**

COVERAGE INFORMATION

THIS IS TO CERTIFY THAT A MEMORANDUM OF COVERAGE HAS BEEN ISSUED TO THE COVERED PARTY NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE COVERAGE AFFORDED BY THE MEMORANDUM IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH MEMORANDUM.

TYPE OF COVERAGE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS
WORKERS' COMPENSATION	1002WC	07/01/2015 12:01 am	06/30/2016	**STATUTORY**

Remarks (Including Special Conditions)

As Regards: AERL Access Agreement

CERTIFICATE HOLDER	CANCELLATION
ARCO Environmental Remediation, LLC 317 Anaconda Road Butte MT 59701	**SHOULD ANY OF THE ABOVE DESCRIBED MEMORANDA BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE MEMORANDA PROVISIONS.** **AUTHORIZED REPRESENTATIVE**

Exhibit 29
(Golf Course Authority Certificate of Insurance)

OLDWORK-01 ZFRIEZ

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 8/4/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER

Butte Office
PayneWest Insurance, Inc.
3475 Monroe Ave.
Butte, MT 59702-0102

CONTACT NAME:
PHONE (A/C, No, Ext): (406) 494-8000 FAX (A/C, No): (406) 494-7641
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Cincinnati Insurance Companies	10677
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

Old Works Golf Course, Inc.
P.O. Box 100
Anaconda, MT 59711

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR	X		GCC0008288	01/01/2016	01/01/2017	DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
							MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
A	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO			GCC0008288	01/01/2016	01/01/2017	BODILY INJURY (Per person)	$
	ALL OWNED AUTOS / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS / NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
A	X UMBRELLA LIAB X OCCUR			GCC0008288	01/01/2016	01/01/2017	EACH OCCURRENCE	$ 5,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$
	DED RETENTION $						Aggregate	$ 5,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						PER STATUTE OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	N / A					E.L. EACH ACCIDENT	$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

Atlantic Richfield Company
4 Centerpointe Dr
La Palma, CA 90623

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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The ACORD name and logo are registered marks of ACORD

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

COMMERCIAL GENERAL LIABILITY BROADENED ENDORSEMENT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. Endorsement - Table of Contents:

Coverage: **Begins on Page:**

1. Employee Benefit Liability Coverage **2**
2. Unintentional Failure to Disclose Hazards **7**
3. Damage to Premises Rented to You **7**
4. Supplementary Payments **9**
5. Medical Payments **9**
6. 180 Day Coverage for Newly Formed or Acquired Organizations **9**
7. Waiver of Subrogation **9**
8. Automatic Additional Insured - Specified Relationships: **9**
- Managers or Lessors of Premises;
- Lessor of Leased Equipment;
- Vendors; and
- State or Political Subdivisions - Permits Relating to Premises

9. Property Damage to Borrowed Equipment **12**
10. Employees as Insureds - Specified Health Care Services: **12**
- Nurses;
- Emergency Medical Technicians; and
- Paramedics

11. Broadened Notice of Occurrence **12**

B. Limits of Insurance:

The Commercial General Liability Limits of Insurance apply to the insurance provided by this endorsement, except as provided below:

1. Employee Benefit Liability Coverage

Each Employee Limit:	$ 1,000,000
Aggregate Limit:	$ 3,000,000
Deductible:	$ 1,000

3. Damage to Premises Rented to You

The lesser of:

a. The Each Occurrence Limit shown in the Declarations; or

b. $500,000 unless otherwise stated $ _____

4. Supplementary Payments

a. Bail bonds: $ 1,000

b. Loss of earnings: $ 350

5. Medical Payments

Medical Expense Limit: $ 10,000

9. Property Damage to Borrowed Equipment

Each Occurrence Limit:	$ 10,000
Deductible:	$ 250

C. Coverages

1. Employee Benefit Liability Coverage

a. The following is added to **SECTION I - COVERAGES: Employee Benefit Liability Coverage.**

(1) Insuring Agreement

(a) We will pay those sums that the insured becomes legally obligated to pay as damages caused by any act, error or omission of the insured, or of any other person for whose acts the insured is legally liable, to which this insurance applies. We will have the right and duty to defend the insured against any "suit" seeking those damages. However, we will have no duty to defend against any "suit" seeking damages to which this insurance does not apply. We may, at our discretion, investigate any report of an act, error or omission and settle any claim or "suit" that may result. But:

1) The amount we will pay for damages is limited as described in **SECTION III - LIMITS OF INSURANCE;** and

2) Our right and duty to defend ends when we have used up the applicable limit of insurance in the payment of judgments or settlements.

No other obligation or liability to pay sums or perform acts or services is covered unless explicitly provided for under Supplementary Payments.

(b) This insurance applies to damages only if the act, error or omission, is negligently committed in the "administration" of your "employee benefit program"; and

1) Occurs during the policy period; or

2) Occurred prior to the effective date of this endorsement provided:

a) You did not have knowledge of a claim or "suit" on or before the effective date of this endorsement.

You will be deemed to have knowledge of a claim or "suit" when any "authorized representative";

i) Reports all, or any part, of the act, error or omission to us or any other insurer;

ii) Receives a written or verbal demand or claim for damages because of the act, error or omission; and

b) There is no other applicable insurance.

(2) Exclusions

This insurance does not apply to:

(a) Bodily Injury, Property Damage or Personal and Advertising Injury

"Bodily injury", "property damage" or "personal and advertising injury".

(b) Dishonest, Fraudulent, Criminal or Malicious Act

Damages arising out of any intentional, dishonest, fraudulent, criminal or malicious act, error or omission, committed by any insured, including the willful or reckless violation of any statute.

(c) Failure to Perform a Contract

Damages arising out of failure of performance of contract by any insurer.

(d) Insufficiency of Funds

Damages arising out of an insufficiency of funds to

meet any obligations under any plan included in the "employee benefit program".

(e) Inadequacy of Performance of Investment / Advice Given With Respect to Participation

Any claim based upon:

1) Failure of any investment to perform;

2) Errors in providing information on past performance of investment vehicles; or

3) Advice given to any person with respect to that person's decision to participate or not to participate in any plan included in the "employee benefit program".

(f) Workers' Compensation and Similar Laws

Any claim arising out of your failure to comply with the mandatory provisions of any workers' compensation, unemployment compensation insurance, social security or disability benefits law or any similar law.

(g) ERISA

Damages for which any insured is liable because of liability imposed on a fiduciary by the Employee Retirement Income Security Act of 1974, as now or hereafter amended, or by any similar federal, state or local laws.

(h) Available Benefits

Any claim for benefits to the extent that such benefits are available, with reasonable effort and cooperation of the insured, from the applicable funds accrued or other collectible insurance.

(i) Taxes, Fines or Penalties

Taxes, fines or penalties, including those imposed under the Internal Revenue Code or any similar state or local law.

(j) Employment-Related Practices

Any liability arising out of any:

(1) Refusal to employ;

(2) Termination of employment;

(3) Coercion, demotion, evaluation, reassignment, discipline, defamation, harassment, humiliation, discrimination or other employment-related practices, acts or omissions; or

(4) Consequential liability as a result of **(1), (2)** or **(3)** above.

This exclusion applies whether the insured may be held liable as an employer or in any other capacity and to any obligation to share damages with or repay someone else who must pay damages because of the injury.

(3) Supplementary Payments

SECTION I - COVERAGES, SUPPLEMENTARY PAYMENTS - COVERAGES A AND B also apply to this Coverage.

b. Who is an Insured

As respects Employee Benefit Liability Coverage, **SECTION II - WHO IS AN INSURED** is deleted in its entirety and replaced by the following:

(1) If you are designated in the Declarations as:

(a) An individual, you and your spouse are insureds, but only with respect to the conduct of a business of which you are the sole owner.

(b) A partnership or joint venture, you are an insured. Your members, your partners, and their spouses are also insureds but only with respect to the conduct of your business.

(c) A limited liability company, you are an insured. Your members are also insureds, but only with respect to the conduct of your business.

Your managers are insureds, but only with respect to their duties as your managers.

(d) An organization other than a partnership, joint venture or limited liability company, you are an insured. Your "executive officers" and directors are insureds, but only with respect to their duties as your officers or directors. Your stockholders are also insureds, but only with respect to their liability as stockholders.

(e) A trust, you are an insured. Your trustees are also insureds, but only with respect to their duties as trustees.

(2) Each of the following is also an insured:

(a) Each of your "employees" who is or was authorized to administer your "employee benefit program".

(b) Any persons, organizations or "employees" having proper temporary authorization to administer your "employee benefit program" if you die, but only until your legal representative is appointed.

(c) Your legal representative if you die, but only with respect to duties as such. That representative will have all your rights and duties under this Coverage Part.

(3) Any organization you newly acquire or form, other than a partnership, joint venture or limited liability company, and over which you maintain ownership or majority interest, will qualify as a Named Insured if no other similar insurance applies to that organization. However, coverage under this provision:

(a) Is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier; and

(b) Does not apply to any act, error or omission that was committed before you acquired or formed the organization.

c. Limits of Insurance

As respects Employee Benefit Liability Coverage, **SECTION III - LIMITS OF INSURANCE** is deleted in its entirety and replaced by the following:

(1) The Limits of Insurance shown in Section **B. Limits of Insurance, 1. Employee Benefit Liability Coverage** and the rules below fix the most we will pay regardless of the number of:

(a) Insureds;

(b) Claims made or "suits" brought;

(c) Persons or organizations making claims or bringing "suits";

(d) Acts, errors or omissions; or

(e) Benefits included in your "employee benefit program".

(2) The Aggregate Limit shown in Section **B. Limits of Insurance**, **1. Employee Benefit Liability Coverage** of this endorsement is the most we will pay for all damages because of acts, errors or omissions negligently committed in the "administration" of your "employee benefit program".

(3) Subject to the limit described in **(2)** above, the Each Employee Limit shown in Section **B. Limits of Insurance**, **1. Employee Benefit Liability Coverage** of this endorsement is the most we will pay for all damages sustained by any one "employee", including damages sustained by such "employee's" dependents and beneficiaries, as a result of:

(a) An act, error or omission; or

(b) A series of related acts, errors or omissions, regardless of the amount of time that lapses between such acts, errors or omissions,

negligently committed in the "administration" of your "employee benefit program".

However, the amount paid under this endorsement shall not exceed, and will be subject to the limits and restrictions that apply to the payment of benefits in any

plan included in the "employee benefit program".

(4) Deductible Amount

(a) Our obligation to pay damages on behalf of the insured applies only to the amount of damages in excess of the deductible amount stated in the Declarations as applicable to Each Employee. The limits of insurance shall not be reduced by the amount of this deductible.

(b) The deductible amount stated in the Declarations applies to all damages sustained by any one "employee", including such "employee's" dependents and beneficiaries, because of all acts, errors or omissions to which this insurance applies.

(c) The terms of this insurance, including those with respect to:

1) Our right and duty to defend the insured against any "suits" seeking those damages; and

2) Your duties, and the duties of any other involved insured, in the event of an act, error or omission, or claim,

apply irrespective of the application of the deductible amount.

(d) We may pay any part or all of the deductible amount to effect settlement of any claim or "suit" and, upon notification of the action taken, you shall promptly reimburse us for such part of the deductible amount as we have paid.

d. Additional Conditions

As respects **Employee Benefit Liability Coverage, SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS** is amended as follows:

(1) Item **2. Duties in the Event of Occurrence, Offense, Claim or Suit** is deleted in its entirety and replaced by the following:

2. Duties in the Event of an Act, Error or Omission, or Claim or Suit

a. You must see to it that we are notified as soon as practicable of an act, error or omission which may result in a claim. To the extent possible, notice should include:

(1) What the act, error or omission was and when it occurred; and

(2) The names and addresses of anyone who may suffer damages as a result of the act, error or omission.

b. If a claim is made or "suit" is brought against any insured, you must:

(1) Immediately record the specifics of the claim or "suit" and the date received; and

(2) Notify us as soon as practicable.

You must see to it that we receive written notice of the claim or "suit" as soon as practicable.

c. You and any other involved insured must:

(1) Immediately send us copies of any demands, notices, summonses or legal papers received in connection with the claim or "suit";

(2) Authorize us to obtain records and other information;

(3) Cooperate with us in the investigation or settlement of the claim or defense against the "suit"; and

(4) Assist us, upon our request, in the enforcement of any right against any

person or organization which may be liable to the insured because of an act, error or omission to which this insurance may also apply.

d. No insured will, except at that insured's own cost, voluntarily make a payment, assume any obligation, or incur any expense without our consent.

(2) Item **5. Other Insurance** is deleted in its entirety and replaced by the following:

5. Other Insurance

If other valid and collectible insurance is available to the insured for a loss we cover under this Coverage Part, our obligations are limited as follows:

a. Primary Insurance

This insurance is primary except when **c.** below applies. If this insurance is primary, our obligations are not affected unless any of the other insurance is also primary. Then, we will share with all that other insurance by the method described in **b.** below.

b. Method of Sharing

If all of the other insurance permits contribution by equal shares, we will follow this method also. Under this approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first.

If any of the other insurance does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers.

c. No Coverage

This insurance shall not cover any loss for which the insured is entitled to recovery under any other insurance in force previous to the effective date of this Coverage Part.

e. Additional Definitions

As respects **Employee Benefit Liability Coverage, SECTION V - DEFINITIONS** is amended as follows:

(1) The following definitions are added:

1. "Administration" means:

a. Providing information to "employees", including their dependents and beneficiaries, with respect to eligibility for or scope of "employee benefit programs";

b. Interpreting the "employee benefit programs";

c. Handling records in connection with the "employee benefit programs"; or

d. Effecting, continuing or terminating any "employee's" participation in any benefit included in the "employee benefit program".

However, "administration" does not include:

a. Handling payroll deductions; or

b. The failure to effect or maintain any insurance or adequate limits of coverage of insurance, including but not limited to unemployment insurance, social security benefits, workers' compensation and disability benefits.

2. "Cafeteria plans" means plans authorized by applica-

ble law to allow "employees" to elect to pay for certain benefits with pre-tax dollars.

3. "Employee benefit programs" means a program providing some or all of the following benefits to "employees", whether provided through a "cafeteria plan" or otherwise:

a. Group life insurance; group accident or health insurance; dental, vision and hearing plans; and flexible spending accounts; provided that no one other than an "employee" may subscribe to such benefits and such benefits are made generally available to those "employees" who satisfy the plan's eligibility requirements;

b. Profit sharing plans, employee savings plans, employee stock ownership plans, pension plans and stock subscription plans, provided that no one other than an "employee" may subscribe to such benefits and such benefits are made generally available to all "employees" who are eligible under the plan for such benefits;

c. Unemployment insurance, social security benefits, workers' compensation and disability benefits; and

d. Vacation plans, including buy and sell programs; leave of absence programs, including military, maternity, family, and civil leave; tuition assistance plans; transportation and health club subsidies.

(2) The following definitions are deleted in their entirety and replaced by the following:

21. "Suit" means a civil proceeding in which money damages because of an act, error or omission to which this insurance applies are alleged. "Suit" includes:

a. An arbitration proceeding in which such damages are claimed and to which the insured must submit or does submit with our consent;

b. Any other alternative dispute resolution proceeding in which such damages are claimed and to which the insured submits with our consent; or

c. An appeal of a civil proceeding.

8. "Employee" means a person actively employed, formerly employed, on leave of absence or disabled, or retired. Employee" includes a "leased worker". "Employee" does not include a "temporary worker".

2. Unintentional Failure to Disclose Hazards

SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS, 7. Representations is hereby amended by the addition of the following:

Based on our dependence upon your representations as to existing hazards, if unintentionally you should fail to disclose all such hazards at the inception date of your policy, we will not reject coverage under this Coverage Part based solely on such failure.

3. Damage to Premises Rented to You

a. The last Subparagraph of **SECTION I - COVERAGES, COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY, 2. Exclusions** is hereby deleted and replaced by the following:

Exclusions **c.** through **q.** do not apply to damage by fire, explosion, lightning, smoke or soot to premises while rented to you or temporarily occupied by you with permission of the owner.

b. The insurance provided under **SECTION I - COVERAGES, COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY** applies to "property damage" arising out of water damage to premises that are both rented to and occupied by you.

(1) As respects Water Damage Legal Liability, as provided in Paragraph **3.b.** above:

The exclusions under **SECTION I - COVERAGES, COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY, 2. Exclusions,** other than **i. War** and the **Nuclear Energy Liability Exclusion**, are deleted and the following are added:

This insurance does not apply to:

(a) "Property damage":

1) Assumed in any contract; or

2) Loss caused by or resulting from any of the following:

a) Wear and tear;

b) Rust, corrosion, fungus, decay, deterioration, hidden or latent defect or any quality in property that causes it to damage or destroy itself;

c) Smog;

d) Mechanical breakdown including rupture or bursting caused by centrifugal force;

e) Settling, cracking, shrinking or expansion; or

f) Nesting or infestation, or discharge or release of waste products or secretions, by insects, birds, rodents or other animals.

(b) Loss caused directly or indirectly by any of the following:

1) Earthquake, volcanic eruption, landslide or any other earth movement;

2) Water that backs up or overflows from a sewer, drain or sump;

3) Water under the ground surface pressing on, or flowing or seeping through:

a) Foundations, walls, floors or paved surfaces;

b) Basements, whether paved or not; or

c) Doors, windows or other openings.

(c) Loss caused by or resulting from water that leaks or flows from plumbing, heating, air conditioning, or fire protection systems caused by or resulting from freezing, unless:

1) You did your best to maintain heat in the building or structure; or

2) You drained the equipment and shut off the water supply if the heat was not maintained.

(d) Loss to or damage to:

1) Plumbing, heating, air conditioning, fire protection systems, or other equipment or appliances; or

2) The interior of any building or structure, or to personal property in the building or structure caused by or resulting from rain, snow, sleet or ice, whether driven by wind or not.

c. Limit of Insurance

The Damage to Premises Rented to You Limit as shown in the Declarations is amended as follows:

(2) Paragraph **6.** of **SECTION III - LIMITS OF INSURANCE** is hereby deleted and replaced by the following:

6. Subject to **5.** above, the Damage to Premises Rented to You Limit is the most we will pay under **COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY** for damages because of "property damage" to premises while rented to you or temporarily occupied by you

with permission of the owner, arising out of any one "occurrence" to which this insurance applies.

(3) The amount we will pay is limited as described in Section **B. Limits of Insurance**, **3. Damage to Premises Rented to You** of this endorsement.

4. Supplementary Payments

Under **SECTION I - COVERAGE, SUPPLEMENTARY PAYMENTS - COVERAGES A AND B:**

a. Paragraph **2.** is replaced by the following:

Up to the limit shown in Section **B. Limits of Insurance**, **4.a.** Bail Bonds of this endorsement for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.

b. Paragraph **4.** is replaced by the following:

All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to the limit shown in Section **B. Limits of Insurance**, **4.b.** Loss of Earnings of this endorsement per day because of time off from work.

5. Medical Payments

The Medical Expense Limit of Any One Person as stated in the Declarations is amended to the limit shown in Section **B. Limits of Insurance**, **5. Medical Payment** of this endorsement.

6. 180 Day Coverage for Newly Formed or Acquired Organizations

SECTION II - WHO IS AN INSURED is amended as follows:

Subparagraph **a.** of Paragraph **4.** is hereby deleted and replaced by the following:

a. Insurance under this provision is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier;

7. Waiver of Subrogation

SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS, 9. Transfer of Rights of Recovery Against Others to Us is hereby amended by the addition of the following:

We waive any right of recovery we may have because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a written contract requiring such waiver with that person or organization and included in the "products-completed operations hazard". However, our rights may only be waived prior to the "occurrence" giving rise to the injury or damage for which we make payment under this Coverage Part. The insured must do nothing after a loss to impair our rights. At our request, the insured will bring "suit" or transfer those rights to us and help us enforce those rights.

8. Automatic Additional Insured - Specified Relationships

a. The following is hereby added to **SECTION II - WHO IS AN INSURED**:

(1) Any person or organization described in Paragraph **8.a.(2)** below (hereinafter referred to as additional insured) whom you are required to add as an additional insured under this Coverage Part by reason of:

(a) A written contract or agreement; or

(b) An oral agreement or contract where a certificate of insurance showing that person or organization as an additional insured has been issued,

is an insured, provided:

(a) The written or oral contract or agreement is:

1) Currently in effect or becomes effective during the policy period; and

2) Executed prior to an "occurrence" or offense to which this insurance would apply; and

(b) They are not specifically named as an additional insured under any other provision of, or endorsement

added to, this Coverage Part.

(2) Only the following persons or organizations are additional insureds under this endorsement, and insurance coverage provided to such additional insureds is limited as provided herein:

(a) The manager or lessor of a premises leased to you with whom you have agreed per Paragraph **8.a.(1)** above to provide insurance, but only with respect to liability arising out of the ownership, maintenance or use of that part of a premises leased to you, subject to the following additional exclusions:

This insurance does not apply to:

1) Any "occurrence" which takes place after you cease to be a tenant in that premises.

2) Structural alterations, new construction or demolition operations performed by or on behalf of such additional insured.

(b) Any person or organization from which you lease equipment with whom you have agreed per Paragraph **8.a.(1)** above to provide insurance. Such person(s) or organization(s) are insureds solely with respect to their liability arising out of the maintenance, operation or use by you of equipment leased to you by such person(s) or organization(s). However, this insurance does not apply to any "occurrence" which takes place after the equipment lease expires.

(c) Any person or organization (referred to below as vendor) with whom you have agreed per Paragraph **8.a.(1)** above to provide insurance, but only with respect to "bodily injury" or "property damage" arising out of "your products" which are distributed or sold in the regular course of the vendor's business, subject to the following additional exclusions:

1) The insurance afforded the vendor does not apply to:

a) "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that the vendor would have in the absence of the contract or agreement;

b) Any express warranty unauthorized by you;

c) Any physical or chemical change in the product made intentionally by the vendor;

d) Repackaging, unless unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;

e) Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products;

f) Demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in

connection with the sale of the product;

g) Products which, after distribution or sale by you, have been labeled or relabeled or used as a container, part or ingredient of any other thing or substance by or for the vendor.

2) This insurance does not apply to any insured person or organization:

a) From whom you have acquired such products, or any ingredient, part or container, entering into, accompanying or containing such products; or

b) When liability included within the "products-completed operations hazard" has been excluded under this Coverage Part with respect to such products.

(d) Any state or political subdivision with which you have agreed per Paragraph **8.a.(1)** above to provide insurance, subject to the following additional provision:

This insurance applies only with respect to the following hazards for which the state or political subdivision has issued a permit in connection with premises you own, rent or control and to which this insurance applies:

1) The existence, maintenance, repair, construction, erection, or removal of advertising signs, awnings, canopies, cellar entrances, coal holes, driveways, manholes, marquees, hoist away openings, sidewalk vaults, street banners, or decorations and similar exposures; or

2) The construction, erection, or removal of elevators; or

3) The ownership, maintenance, or use of any elevators covered by this insurance.

(3) Any insurance provided to an additional insured designated under Paragraph **8.a.(2)** Subparagraphs **(a), (b)** and **(d)** does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the sole negligence or willful misconduct of the additional insured or their agents, "employees" or any other representative of the additional insured.

b. SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS is hereby amended as follows:

Condition **5. Other Insurance** is amended to include:

(1) Where required by a written contract or agreement, this insurance is primary and / or noncontributory as respects any other insurance policy issued to the additional insured, and such other insurance policy shall be excess and / or noncontributing, whichever applies, with this insurance.

(2) Any insurance provided by this endorsement shall be primary to other insurance available to the additional insured except:

(a) As otherwise provided in **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS, 5. Other Insurance, b. Excess Insurance**; or

(b) For any other valid and collectible insurance available to the additional insured as an additional insured by attachment of an endorsement to another insurance policy that is written on an excess basis. In such case, the coverage provided under this endorsement shall also be excess.

9. Property Damage to Borrowed Equipment

a. The following is hereby added to Exclusion **j. Damage to Property** of

Paragraph **2.**, **Exclusions** of **SECTION I - COVERAGES, COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY.**

Paragraphs **(3)** and **(4)** of this exclusion do not apply to tools or equipment loaned to you, provided they are not being used to perform operations at the time of loss.

b. With respect to the insurance provided by this section of the endorsement, the following additional provisions apply:

(1) The Limits of Insurance shown in the Declarations are replaced by the limits designated in Section **B. Limits of Insurance**, **9. Property Damage to Borrowed Equipment** of this endorsement with respect to coverage provided by this endorsement. These limits are inclusive of and not in addition to the limits being replaced. The Limits of Insurance shown in Section **B. Limits of Insurance**, **9. Property Damage to Borrowed Equipment** of this endorsement fix the most we will pay in any one "occurrence" regardless of the number of:

(a) Insureds;

(b) Claims made or "suits" brought; or

(c) Persons or organizations making claims or bring "suits".

(2) Deductible Clause

(a) Our obligation to pay damages on your behalf applies only to the amount of damages for each "occurrence" which are in excess of the deductible amount stated in Section **B. Limits of Insurance**, **9. Property Damage to Borrowed Equipment** of this endorsement. The limits of insurance will not be reduced by the application of such deductible amount.

(b) SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS, 2. Duties in the Event of Occurrence, Offence, Claim or Suit, applies to each claim or "suit" irrespective of the amount.

(c) We may pay any part or all of the deductible amount to effect settlement of any claim or "suit" and, upon notification of the action taken, you shall promptly reimburse us for such part of the deductible amount as has been paid by us.

10. Employees as Insureds - Specified Health Care Services

It is hereby agreed that Paragraph **2.a.(1)(d)** of **SECTION II** - **WHO IS AN INSURED**, does not apply to your "employees" who provide professional health care services on your behalf as duly licensed:

a. Nurses;

b. Emergency Medical Technicians; or

c. Paramedics,

in the jurisdiction where an "occurrence" or offense to which this insurance applies takes place.

11. Broadened Notice of Occurrence

Paragraph **a.** of **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS, 2. Duties in the Event of Occurrence, Offence, Claim or Suit** is hereby deleted and replaced by the following:

a. You must see to it that we are notified as soon as practicable of an "occurrence" or an offense which may result in a claim. To the extent possible, notice should include:

(1) How, when and where the "occurrence" or offense took place;

(2) The names and addresses of any injured persons and witnesses; and

(3) The nature and location of any injury or damage arising out of the "occurrence" or offense.

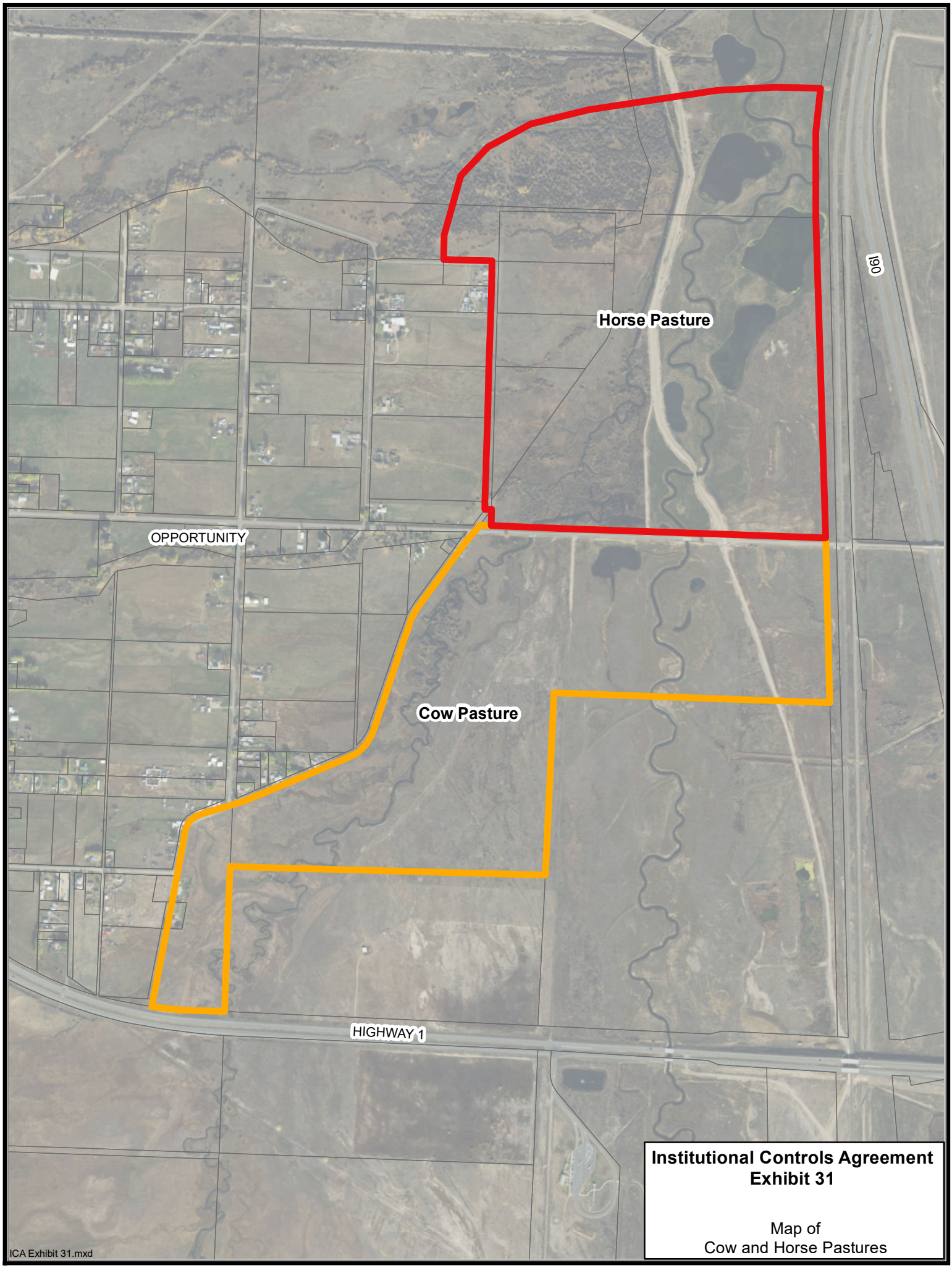
This requirement applies only when the "occurrence" or offense is known to an "authorized representative".

Exhibit 30
(Community Enhancement Incentive Payment Schedule)

Community Enhancement Incentive Payment Schedule

Payment Due Date	Payment Amount
On or before July 1, 2020	$750,000.00
On or before July 1, 2025	$750,000.00
On or before July 1, 2030	$750,000.00
On or before July 1, 2035	$750,000.00
On or before July 1, 2040	$750,000.00
On or before July 1, 2045	$750,000.00
On or before July 1, 2050	$750,000.00
On or before July 1, 2055	$750,000.00
On or before July 1, 2060	$750,000.00
On or before July 1, 2065	$4,500,000.00

Exhibit 31
(Map of Cow and Horse Pastures)



Institutional Controls Agreement
Exhibit 31

Map of
Cow and Horse Pastures