ADMINISTRATIVE RECORD

1282724 - R8 SDMS

EXPLANATION OF SIGNIFICANT DIFFERENCES
ROCKER TIMBER FRAMING AND TREATING PLANT OPERABLE UNIT (OU 7)
SILVER BOW CREEK/BUTTE AREA NPL SITE (Original Portion)
SILVER BOW COUNTY, MONTANA

September 2014

U.S. ENVIRONMENTAL PROTECTION AGENCY
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List of Acronyms

ACMC	Anaconda Copper Mining Company
AR	Atlantic Richfield Company (formerly ARCO)
ARAR	applicable or relevant and appropriate requirement
BA&P	Butte, Anaconda, & Pacific Railway Company
BP	British Petroleum
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act, as amended
CFR	Code of Federal Regulations
CGWA	Controlled Groundwater Area
CTEC	Citizen's Technical Environmental Committee
cy	cubic yards
DEQ	Montana Department of Environmental Quality
DNRC	Montana Department of Natural Resources and Conservation
EPA	U.S. Environmental Protection Agency
ESD	explanation of significant differences
FR	Federal Register
ICs	institutional controls
MCL	maximum contaminant level
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
NCP	National Contingency Plan
NPL	National Priorities List
O&M	operation and maintenance
PAHs	polycyclic aromatic hydrocarbons
ppb	parts per billion
RAO	remedial action objectives
Rocker OU	Rocker Timber Framing and Treatment Plant Operable Unit
ROD	Record of Decision
SEIP	Statistical Evaluation and Implementation Plan
SSTOU	Streamside Tailings Operable Unit
TI	technical impracticability

Section 1

Introduction

This document presents an explanation of significant difference (ESD) from the December 22, 1995 Record of Decision (ROD) for the Rocker Timber Framing and Treatment Plant Operable Unit (Rocker OU) of the Silver Bow Creek/Butte Area National Priorities List (NPL) site. The U.S. Environmental Protection Agency (EPA) is the lead agency for the Rocker OU. The Montana Department of Environmental Quality (DEQ) is the support agency for the Rocker OU.

Section 1 of this document describes the site name and location, the statement of purpose for the ESD, and where this document will be made publicly available.

1.1 Site Name and Location

The Rocker OU covers approximately 16 acres and associated groundwater contamination and is located to the south of U.S. Interstate 15/90 near Rocker, Montana, approximately 3 miles west of Butte, in Silver Bow County (Figure 1-1). The surface area of the Rocker OU is bounded on the north by Silver Bow Creek and on the south by railroad lines and sidings owned by the Butte, Anaconda, & Pacific (BA&P) Railway Company. The BA&P Railway Company has two small storage sheds at the western end of the OU and a historic office building east of the repository remains. The small community of Fredericksburg lies to the south while the community of Rocker is located immediately to the north of Silver Bow Creek, near the Rocker OU. The boundaries of the Rocker OU adjoin the Streamside Tailings Operable Unit (SSTOU) of the Silver Bow Creek/Butte Area NPL Site.

1.2 Statement of Purpose

As noted above, the remedy was selected, and the ROD for the Rocker OU was issued by EPA, the lead agency, in 1995. Remedial design and remedial action to implement the ROD occurred thereafter, governed by the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA), administrative orders, and a Rocker OU Consent Decree (CD) entered by the federal district court of Montana on November 7, 2000 in U.S. v. ARCO (D. Mt.).

Since selection of the remedy at the Rocker OU, the drinking water standard for arsenic, a contaminant of concern at the Rocker OU, was revised and promulgated by both EPA and the State of Montana. As a result, the third five-year review report for the Rocker OU, dated June 27, 2011 (EPA 2011a), recommended that EPA issue an ESD that adopts the new arsenic groundwater performance standard as a replacement for the previous standard.

Under CERCLA, cleanup standards for groundwater are taken from the federal and state Safe Drinking Water Act maximum contaminant level (MCL) and non-zero MCL goal standards when contaminated groundwater is part of a Superfund site and such standards exist. These standards become applicable or relevant and appropriate requirements (ARARs) for Superfund cleanups. The Arsenic Rule, which established a new MCL drinking water standard, was promulgated by EPA in the Federal Register (FR) on January 22, 2001 (FR 2001). This changed the arsenic MCL standard from 50 micrograms per liter (µg/L) to 10 µg/L, with the new standard becoming enforceable on January 23, 2006. The State of Montana adopted this standard under its Safe Drinking Water Act in 2008. The new standard was

promulgated based on a finding that the 10 µg/L standard was necessary for the protection of human health.

The National Contingency Plan (NCP) states ARARs for Superfund sites are "frozen" at the time of the ROD unless new, post-ROD standards are "necessary to ensure that the remedy is protective of human health and the environment" (40 Code of Federal Regulations [CFR] Section 430(f)(1)(ii)(B)(1)). The new arsenic standard is based on human health protection. Furthermore, the NCP also states that new performance standards can be adopted for a remedy using an ESD rather than a ROD modification (40 CFR Section 300.435(c)(2) and accompanying preamble language at 55 FR 8772).

CERCLA provides for an ESD document that explains the reasons for changes that are significant differences from the ROD such as ARAR changes. The pertinent section of CERCLA, Section 117(c), requires the lead agency to address post-ROD significant changes in the following instances:

> *After adoption of a final remedial action plan (1) if any remedial action is taken [under section 104 or 120]; (2) if any enforcement action under section 106 is taken; or (3) if any settlement or consent decree under section 106 or section 122 is entered into, and if such action, settlement or decree differs in any significant respects from the final plan [the ROD] the [lead agency] shall publish an explanation of significant differences and the reasons such changes were made.*

Section 435(c)(2) of the NCP, 40 CFR § 300.435(c)(2), states the same criteria and direction. EPA's remedy selection guidance, "A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents" (Office of Solid Waste and Emergency Response Dir. No. 9200.1-23P [EPA 1999]), further explains the nature of significant differences and states that considering whether a change in the remedy's scope, cost, and performance constitutes a significant difference, and therefore requires an ESD, is a site-specific determination. According to the guidance, significant differences generally involve a change to a component of a remedy that does not fundamentally alter the overall cleanup approach.

1.3 Document Availability

The ESD and associated documents that support this change in the Rocker OU remedy are part of the administrative record for the Rocker OU, as required by NCP Section 300.825(a)(2), and are located at the EPA Records Center and in a local information repository in Butte, Montana.

The full administrative record for the Rocker OU, including this ESD and its supporting documents, is housed at the following address:

U.S. EPA Montana Office Records Center
10 W. 15th Street, Suite 3200
Helena, Montana 59626
Hours: Monday through Friday 8:00 am to 4:30 pm, except holidays

The local information repository is the Citizen's Technical Environmental Committee (CTEC). The repository also contains the administrative record for the Rocker OU, including this ESD and its supporting documents. The address and business hours are as follows:

CTEC
27 W. Park Street
Butte, Montana 59701
Hours: Monday through Friday 1:30 pm to 5:30 pm

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Section 2

Site History, Contamination, and Selected Remedy

The Silver Bow Creek/Butte Area NPL site addresses historic mining and metals contamination in Butte and downstream along Silver Bow Creek to the upper Clark Fork. This NPL Site includes several operable units, including the Rocker OU. This ESD addresses only the Rocker OU (OU 7).

The complete description of the Rocker OU, its history, the contamination at the Rocker OU and its potential threats to human health and the environment, and the remedy selected can be found in the Rocker OU ROD Silver Bow Creek/Butte Area NPL Site, December 1995 (EPA/ DEQ 1995), Declaration and Decision Section, Parts 1 and 2. This is a summary of that information.

2.1 Silver Bow Creek/Butte NPL Site

General site history, important events, and relevant dates for the Silver Bow Creek/Butte Area Site and the Rocker OU are summarized below. The identified events are illustrative not comprehensive.

- 1864 – First placer gold claims in the Butte area were staked and worked. However, silver and copper ore also drew attention of early miners.
- 1870 – Dozens of silver and copper claims had been located and developed, prompting construction of mills and smelters capable of refining arsenic-laden copper ores.
- 1881 – Copper baron Marcus Daly marked a significant turning point for Butte by rapidly acquiring surrounding mining properties and operations on the Butte Hill. At about this time, there were over 300 operating copper mines, at least 10 silver mines, 5 smelters, and over 4,000 posted claims.
- 1909 – The Rocker Timber Framing and Treatment Plant was constructed by the Anaconda Copper Mining Company (ACMC). The facility was used to produce and treat timber for use in mines.
- 1910 – Butte had become the largest producer of copper in North America, and large quantities of mine waste and tailings were disposed of in ponds or dumped in Silver Bow Creek. A series of consolidations and mergers resulted in almost all facilities in Butte being operated and owned by ACMC.
- 1955 – Open pit mining began in Butte with the formation of the Berkeley Pit. Previously, all mining in Butte was completed underground.
- 1957 – The Rocker Timber Framing and Treatment Plant closed.
- 1977 – The Atlantic Richfield Company (AR, formerly ARCO) merged with ACMC. Open pit mining operations were conducted in the Berkeley Pit until 1982 and in the Continental Pit until 1983 when all mining operations were suspended by ARCO, the successor to ACMC.
- 1983 – The Rocker OU became part of the original Silver Bow Creek Superfund site that was listed on the NPL in September 1983.

- 1984 – ARCO closed the Anaconda Smelter.
- 1987 – Recognizing the importance of Butte as a source of contamination to Silver Bow Creek, EPA concluded that Butte and Silver Bow Creek should be treated as one site under CERCLA. EPA subsequently modified the existing Silver Bow Creek Site to include the Butte area, and the formal name changed to the "Silver Bow Creek/Butte Area NPL Site."
- 1989 – The State of Montana directed AR to remove contaminated soils and debris with concentrations exceeding 10,000 milligrams per kilogram (mg/kg) arsenic from the Rocker OU site. Approximately 1,000 cubic yards (cy) of contaminated material were removed to a licensed disposal facility. Areas involved in the removal action were subsequently covered with approximately 1 foot of "clean" fill material from a nearby offsite area. Nevertheless, other materials exceeding 10,000 mg/kg arsenic were identified at three locations remaining on the Rocker OU.
- 1985 - 1995 – Numerous technical investigations were conducted at the site to characterize the nature and extent of soil and groundwater contamination.
- 1995 – Technical investigations culminated with the final remedial investigation report in March 1995 (AR 1995a) and the final feasibility study in July 1995 (AR 1995b).
- 1995 – ROD for the Rocker OU was signed on December 22, 1995 (EPA/DEQ 1995).
- 1996 – Unilateral Administrative Order for Rocker OU (remedial design/remedial action) issued March 29, 1996.
- 1997 – Remedy implementation (April through October).
- 1998 to Present – Remedy operations and maintenance (O&M).
- 2000 – AR becomes a wholly owned subsidiary of the British Petroleum (BP) collection of companies.
- 2000 – In November 2000, EPA and AR entered into a CD for further implementation of the Rocker OU ROD, including O&M.
- 2000 – Initial Five-Year Review completed for the Silver Bow Creek/Butte Area NPL Site.
- 2001 and 2002 – Supplemental treatments of contamination at the Rocker OU in support of SSTOU construction activities.
- 2005 – Second Five-Year Review completed for the Silver Bow Creek/Butte Area NPL Site.
- 2011 – Third Five-Year Review completed for the Silver Bow Creek/Butte Area NPL Site.

2.2 Rocker Operable Unit

The Rocker Timber Framing and Treating Plant was constructed in 1909 and operated until the plant was closed in approximately 1957. ACMC, predecessor in interest to AR, owned and operated the site. Initially, the facility treated mining timbers with a creosote solution. Subsequently, the facility began using arsenic trioxide solutions for treatment, and this formulation became the primary treatment process up to the final days of plant operation.

During the approximate 48-year history of plant operations, spilled process materials (arsenic trioxide powder), treated wood chip residues, and dripped or leaked process solutions (creosote and caustic heated arsenic brines) caused the release of hazardous substances into the environment at the plant. Prior to response activities at the site, these releases resulted in contaminated soils throughout the plant site and significant groundwater contamination beneath the plant site. Rocker wood treating wastes were also mixed with contaminated tailings, and other mining waste washed downstream to Rocker from mining/smelting facilities in Butte.

Arsenic in the soils and groundwater at the Rocker site is the primary contaminant of concern. Arsenic trioxide used in the treatment process at the Rocker OU was obtained from the Anaconda Smelter, which was also operated by ACMC. Since its solubility in water is low, the arsenic trioxide was dissolved into a heated and high pH (13.4) solution of caustic soda and water. The resultant mixture, containing about 6 percent dissolved arsenic as arsenic (III), was used to treat wood timbers in a retort. Environmental contamination at the Rocker OU from the arsenical wood treating compounds is the result of incidental spills of arsenic trioxide powder and the saturated arsenic solution, onsite disposal of debris from the retort, and treatment solution that dripped or washed off the treated timbers while they dried or awaited shipment. Contamination was found in the surface and subsurface soils as well as in the groundwater. Arsenic and metals contamination from mine waste was also present at various locations at the Rocker OU. In the 1995 ROD, EPA concluded that contaminated soils and groundwater at the Rocker site may pose an imminent and substantial endangerment to workers, trespassers, and future potential residents at or near the Rocker site.

For surface soils, greater than 95 percent of the cancer and non-cancer risk was due to the presence of arsenic. No other contaminant (including other metals, creosote, and polycyclic aromatic hydrocarbons [PAHs]) was determined to pose a cancer or non-cancer risk in excess of EPA's acceptable risk range. For groundwater, arsenic contributed over 99 percent of the future potential cancer risk of consuming groundwater from the shallow, intermediate, and deep alluvial groundwater systems. No other contaminant detected in the Rocker OU groundwater posed an unacceptable excess cancer risk although ARARs were not met for several other contaminants.

2.3 Selected Remedy

The remedy for the Rocker OU, described in the 1995 ROD, is summarized as follows:

- Groundwater Source Material Removal and Treatment of Shallow Groundwater: Excavate contaminated soils in areas where groundwater arsenic concentrations exceed 10,000 µg/L. Treat excavated soils with iron sulfate and lime amendments, and dispose of treated soils in an onsite repository. Treat contaminated groundwater and rely on natural attenuation to achieve cleanup standards outside of the waste unit boundary.

- Contaminated Surface and Near-Surface Soils: Excavate surface soils with arsenic concentrations in excess of 1,000 mg/kg to a depth of 18 inches. Treat excavated soils with iron sulfate and lime amendments, and dispose of treated soils in an onsite repository. Cover soils with arsenic concentrations ranging from 380 to 1,000 mg/kg with 18 inches of clean soil and revegetate. Implement institutional controls (ICs) to permanently prevent future non-residential use of the Rocker OU and to prevent domestic groundwater use until cleanup is achieved.

- Well Ban and Alternative Water Supply: Implement a groundwater well ban for new wells within a 1/4-mile radius of the site in any of the three aquifer units. Construct an expanded capacity water supply system for the community of Rocker.
- Groundwater Monitoring: Monitor and demonstrate that the requirements of the ROD have been met. Return the groundwater resource to the community after cleanup levels are achieved and provide O&M of the repository and soil covers.

The selected remedy for the site was implemented in April with construction completed in October 1997. The ROD for the Rocker OU recognized that achieving the arsenic concentrations acceptable for drinking water within the area of the arsenic plume was a goal that could take several years to achieve. Further development and use of groundwater resources in the area was restricted via a well ban, implemented under state law as a Controlled Groundwater Area (CGWA), to temporarily prevent direct consumption of groundwater via wells and prevent migration of the contaminated groundwater into the deeper, high quality groundwater systems in the area. The ROD stated that when it can be verified that the arsenic plume has been controlled sufficiently to achieve cleanup standards outside of the waste unit boundary and the threat of further migration through the development and use of wells in the surrounding area has been prevented, the restrictions on groundwater development will be lifted for at least some of the aquifers.

Section 3

Description of Significant Differences and Basis for Decision

The following section provides a summary of the significant difference from the ROD that has been identified and will be adopted in this decision document for the Rocker OU.

3.1 Attainment of Groundwater Standard

One of the remedial action objectives (RAOs) for groundwater at the Rocker OU is to attain groundwater standards ARARs or other risk-based levels for inorganic (primarily arsenic) and organic contaminants of concern for groundwater underlying the site (outside of the waste unit) to ensure the protection of human health at the site.

The state drinking water standard for arsenic in groundwater at the time the ROD was prepared was 18 µg/L. This standard was adopted as an ARAR. Due to the nature of the groundwater contamination, the aquifers of preferred use, and the quality/quantity of water available from water producing zones within the Rocker OU, this standard and the RAO described above are especially important in order to prevent further contamination of the two lower aquifers.

The arsenic groundwater ARAR is applicable to the shallow aquifer, which is classified as a potential domestic water supply. Although classified as a potential drinking water source under state regulations, which classify aquifers, the shallow alluvial aquifer yields less water than other water bearing zones in the area, is generally not developed currently as a water resource, and has a lower water quality than the deeper sources. Therefore, reducing contaminant concentrations in the arsenic plume and the shallow alluvial aquifer to ARAR standards is considered a secondary objective to the primary objective of protecting the two lower aquifers. Nevertheless, meeting ARAR standards is an objective of the ROD and is secondary only in the sense that it will be achieved over time, whereas protection of the two lower aquifers was required in the near term.

Change to ROD Language

The change made by this ESD is as follows: The ARAR for arsenic in groundwater is changed from 18 µg/L to 10 µg/L.

Explanation of Change

The arsenic standard for groundwater that may be used for drinking water has been changed to10 µg/L. Both the EPA and the State of Montana adopted the new standard because the old standards of 50 µg/L (federal) and 18 µg/L (state) were determined not to be protective of human health based on findings relating to the toxicity of arsenic. The lower arsenic ARAR standard of 10 µg/L is adopted for the Superfund cleanup of the Rocker OU and is now applied as the performance standard for the Rocker OU, replacing the prior state standard of 18 µg/L. This change is made to ensure the Rocker OU remedy is protective of human health. Ongoing monitoring, continued implementation of ICs,

controlling site access, O&M activities, and other requirements identified in the third five year review report are also required to ensure long-term protectiveness.

Currently, the shallow groundwater system in the area of the Rocker OU is not used as a drinking water source. Other aspects of the remedy ensure that the remedy is currently protective of human health and the environment, with land use controls in place to prevent residential development and a ban on well installation within the Rocker OU still in place. As noted above, the Montana Department of Natural Resources and Conservation (DNRC) instituted a CGWA as an IC for the Rocker area, and the Rocker residents were provided with an alternate community water system.

Existing wells within the CGWA can still be utilized, and well owners have been notified of the potential risks. If any domestic well within the Rocker OU boundary is found to exceed the 10 µg/L performance standard, a point of use treatment system or other mitigation may be required to ensure that water from the well meets the current drinking water standard.

Based on recent monitoring data, two of the existing domestic wells (Town Pump and Ayers) may be impacted by the new performance standard though additional domestic wells could be impacted in the future. The Town Pump well has two adsorptive arsenic media treatment tanks installed to ensure the water meets current drinking water standards. Recent water sampling by DEQ at the Town Pump confirmed the treated water meets the new 10 µg/L standard. The Ayers well has arsenic concentrations below the old 18 µg/L standard but may have concentrations, at times, above the 10 µg/L standard. Continued sampling and monitoring is required to ensure the Town Pump treatment system is functional and to determine if additional action is required to ensure the Ayers, and all other domestic wells in the area meet drinking water standards.

At this time, the Statistical Evaluation and Implementation Plan (SEIP) for the Contingent Remedy (EPA 2000), which is part of the work plan attached to the Rocker OU CD, will remain unchanged. Under the SEIP, the trigger for action is an exceedance in the contingency wells (see Figure 3-1) of 18 µg/L. However, the SEIP and its trigger value has no bearing on the new ARAR standard adopted in this ESD, and maintaining the contingency plan trigger is not a waiver of the 10 µg/L performance standard. Other provisions of the Superfund law and the Rocker OU CD will require additional action, in part, because of the adoption of the new ARAR standard in this ESD.

For example, an analysis of the remedy and groundwater flow in the Rocker OU area will be performed at which point the contingent remedy trigger will be re-evaluated. The analysis will also determine whether the implemented remedy can meet the goals and requirements of the ROD as amended and whether the groundwater at the Rocker OU (outside of the waste unit boundary) can meet the 10 µg/L arsenic standard. This analysis will also determine whether further remedial action is required or if a technical impracticability (TI) waiver of the arsenic groundwater standard would be considered.

3.2 Next Steps

The Rocker OU ROD states, *"Groundwater in all aquifers must meet the 18 parts per billion (ppb) arsenic standard and all other standards for site constituents at appropriate points of compliance determined by the Agencies during remedial design."* This performance standard is currently not met for the prior arsenic groundwater standard or the updated groundwater arsenic standard adopted in this ESD at points outside of the waste unit. Data evaluated during the third five-year review (EPA 2011a), show 6 of the 10 contingency wells (Ayers, RH-36R, RH-46, RH-52, RH-53, and Town Pump) have had a

quarterly arsenic concentration equal to or greater than 10 µg/L. More recent monitoring data show that since the first quarter of 2011, only the Ayers, RH-53, and Town Pump wells have quarterly arsenic concentrations equal to or greater than 10 µg/L. Some contingency wells show a gradual trend of decreasing arsenic concentrations. However, the new standard is exceeded in some contingency wells. In addition, 21 of the 24 wells that are part of the monitoring program, but are not contingency wells, have had quarterly arsenic concentrations exceeding 10 µg/L, with some showing an increase in arsenic concentrations over time. Figure 3-1 shows all wells that have had arsenic concentrations greater than or equal to 10 µg/L at some point since the first quarter of 2011. Several of these wells also do not meet the old 18 µg/L standard; thus it is clear the remedy has failed to meet the RAOs for the Rocker OU. Consequently, additional steps to review current conditions and evaluate other actions and technologies that can be suitably applied in order to attain RAOs at the Rocker OU are necessary. See, *Groundwater Road Map, Recommended Process for Restoring Contaminated Groundwater at Superfund Sites* (EPA 2011b) and *Groundwater Remedy Completion Strategy, Moving Forward with the End in Mind* (EPA 2014) for general guidance from EPA that is relevant to the current conditions at the Rocker OU.

Given that the contaminant plume is not currently contained, technologies to be evaluated shall include, but not be limited to:

- Additional source removals
- Physical or hydraulic containment
- Reactive barriers
- Additional source controls
- Pumping and treatment of groundwater

This list is not complete, but is an indication of the type of remedial technologies that must be considered as part of the evaluation.

After the evaluation is completed, EPA and DEQ will determine whether additional source removal/control measures, treatment, and/or a waiver of the arsenic standard in portions of the Rocker OU are appropriate.

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Section 4

Support Agency Concurrence

In accordance with 40 CFR §300.425(c)(2), EPA has notified the Montana Department of Environmental Quality (DEQ) of the modifications to the ROD described in the Explanation of Significant Differences (ESD), dated September 2014, for the Rocker Timber Framing and Treatment Plant Operable Unit of the Silver Bow Creek/Butte Area NPL Site. DEQ concurs with the ESD and a signature, indicating such concurrence, is below.

Tracy Stone-Manning
Director
Montana Department of Environmental Quality

9.30.14
Date

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Section 5
Public Participation Compliance

In accordance with NCP Section 300.435(c)(2)(i), to issue an ESD, the lead agency shall:

> *(A) Make the explanation of significant differences and supporting information available to the public in the administrative record established under NCP § 300.815 and the information repository; and*
>
> *(B) Publish a notice that briefly summarizes the explanation of significant differences, including the reasons for such differences, in a major local newspaper of general circulation;*

The lead agency, EPA, has published a public notice in the *Montana Standard* and *Butte Weekly* that briefly summarizes the changes presented in the ESD with a brief explanation for such differences. These are local newspapers of general circulation in accordance with NCP Section 300.435(c)(2)(i)(B). Additionally, a copy of this ESD and supporting information will be placed in the Rocker OU administrative record and in a local information repository as described in Section 1 of this ESD.

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Section 6

Statutory Determinations

Considering the new information presented and the changes that have been made to the selected remedy in this ESD, EPA and DEQ believe that the selected remedy, as modified by this ESD and its requirements, remains protective of human health and the environment, complies or will comply with federal and state requirements that are applicable or relevant and appropriate to this Remedial Action or involves appropriate waivers of these requirements, and is cost effective.

APPROVAL

Martin Hestmark
Assistant Regional Administrator
Office of Ecosystems Protection and Remediation
EPA Region 8

9/29/14
Date

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Section 7
References

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Figures

Figures

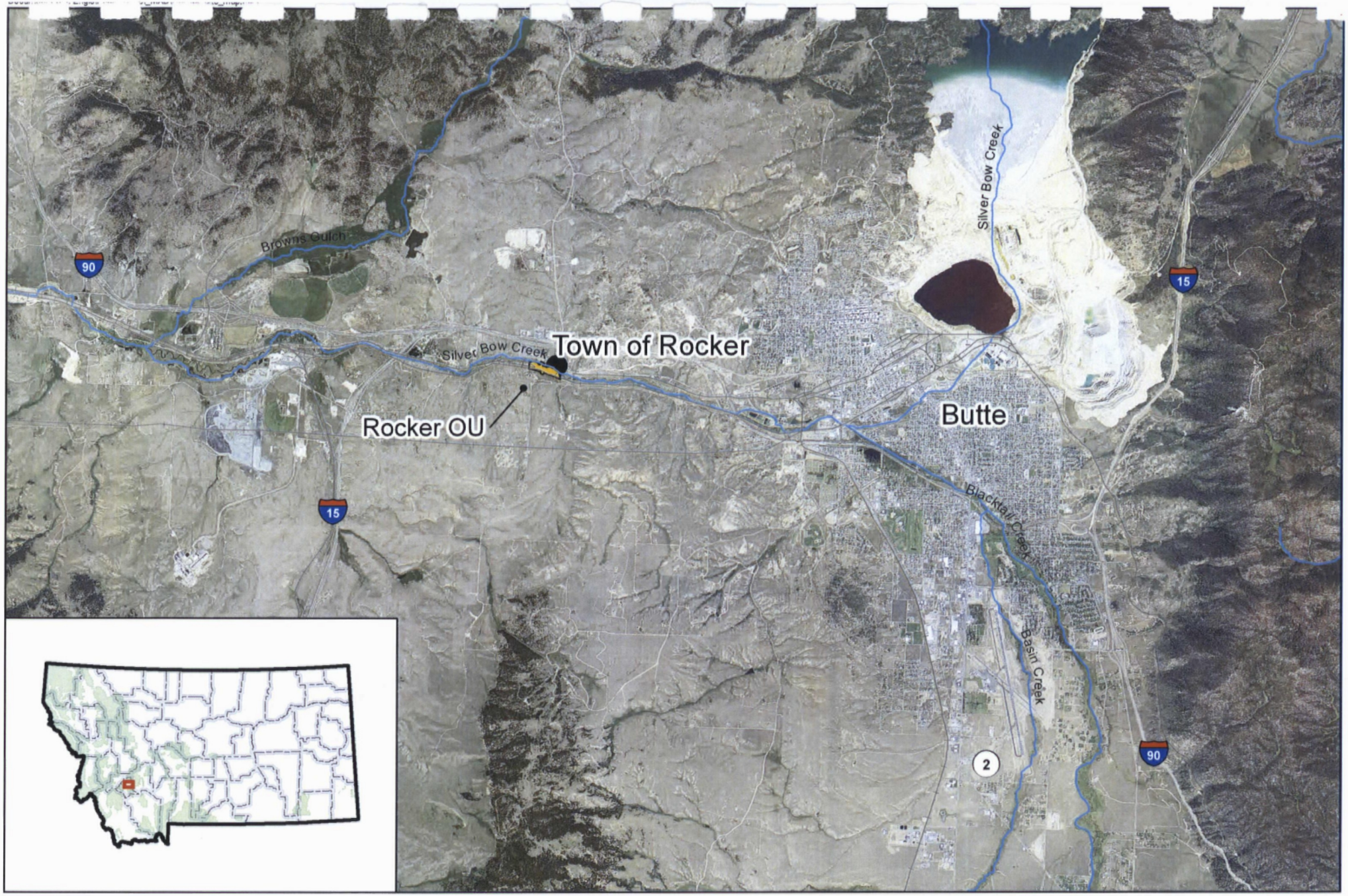

Figure 1-1
Rocker OU Location Map
Silver Bow Creek/Butte Area

0 0.5 1 2 3 4 Miles

N

CDM Smith

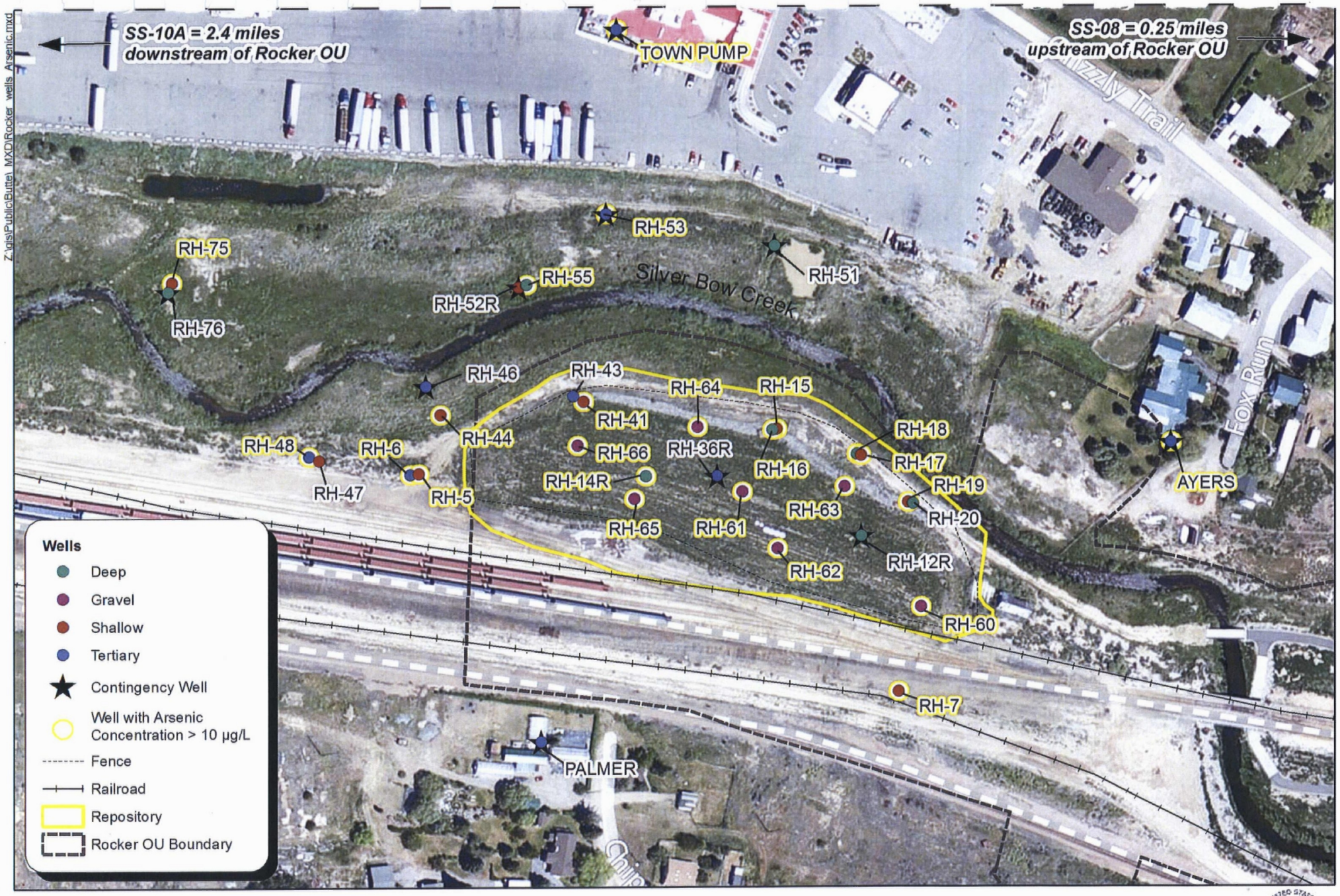

Figure 3-1. Wells with Arsenic Concentrations Greater than 10 µg/L since First Quarter 2011

Rocker OU

Silver Bow Creek/Butte Area

Source: Aerial imagery courtesy of Bing maps.

CDM Smith