

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MONTANA  
HELENA DIVISION

**FILED**  
JUN 26 2018  
Clerk, U.S. District Court  
District Of Montana  
Missoula

ASARCO LLC, a Delaware corporation,

CV 12-53-H-DLC

Plaintiff,

vs.

FINDINGS OF FACT,  
CONCLUSIONS OF LAW  
AND JUDGMENT

ATLANTIC RICHFIELD COMPANY, a  
Delaware corporation,

Defendant.

**INTRODUCTION**

This is a civil action for contribution brought by Plaintiff ASARCO LLC (“Asarco”) pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (“CERCLA”), 42 U.S.C. § 9613, against Defendant Atlantic Richfield Company (“Atlantic Richfield” or “ARCO”) for costs and damages incurred by Asarco at a location in East Helena Montana, known as the East Helena Site, a National Priorities List or “Superfund” site (“East Helena Site” or “Site”). The parties are both citizens of the State of Delaware. This Court has subject matter jurisdiction based upon the existence of a federal question, 28 U.S.C. § 1331. Personal jurisdiction is not contested. Venue

is proper in this Court as the events occurred in East Helena, Montana. D. Mont. L. R. 1.2(c)(4), 3.2(b).

The Court held a bench trial from May 29, 2018 to June 7, 2018. Asarco was represented by Kris McLean, Gregory Evans, and Rachel H. Parkin. Atlantic Richfield was represented by Randy J. Cox, Kenzo Kawanabe, and Benjamin B. Strawn. Approximately 160 exhibits were admitted and the subject of testimony by 12 witnesses, including 3 expert witnesses.<sup>1</sup> Having carefully reviewed the evidence, the applicable law, and the testimony and arguments of the parties as presented at trial and in their written submissions, the Court makes the following findings of fact and conclusions of law pursuant to Federal Rule of Civil Procedure 52.

### **FINDINGS OF FACT**

#### **I. THE PARTIES AND HISTORICAL OPERATIONS AT THE EAST HELENA SITE**

1. Plaintiff Asarco is a limited liability company organized under the laws of the State of Delaware.
2. Asarco is the successor in interest to the American Smelting and

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<sup>1</sup> The testimony of Asarco witness Antonio Toccafondo was presented by a perpetuation deposition. The parties hi-lited the transcript portions of this deposition for the Court's reading. The Court read these excerpts after hours outside the presence of counsel.

Refining Company. Asarco is the resulting corporate entity that emerged from the Chapter 11 bankruptcy reorganization of the American Smelting and Refining Company in 2009.

3. Asarco and its predecessors owned a lead smelting facility at the Site, which was in operation from approximately 1888 until 2001. Asarco brought various ores, concentrates, and other materials to the site for smelting, which contained as much as 19% arsenic (190,000 parts per million or “ppm”). It is undisputed by Asarco that its lead smelting facility was the largest operation at the site, and that its operations caused significant groundwater contamination. Asarco continued to own and manage the Site until it emerged from bankruptcy in 2009.

4. Defendant Atlantic Richfield is a Delaware corporation. Atlantic Richfield is the successor-in-interest to Anaconda, formerly named Anaconda Copper Mining Company. Atlantic Richfield was also referred to as ARCO throughout the proceedings in this case.

5. On March 1, 1927, Asarco and Anaconda entered into an Option Agreement whereby Anaconda agreed to purchase blast furnace slag produced by Asarco’s lead smelting operation, which Anaconda intended to process at the Site for the recovery of zinc fume.

6. On December 20, 1927, Asarco and Anaconda entered into a Lease

Agreement whereby Anaconda leased a tract of land at the Site for the purposes of constructing and operating a zinc fuming plant for the recovery of zinc from the slag it purchased from Asarco.

7. Pursuant to these two Agreements, Anaconda constructed and operated a zinc fuming plant on land leased from Asarco at the site for 45 years, from 1927 to 1972. Anaconda's zinc fuming operation was directly adjacent to Asarco's lead smelting operation.

8. Anaconda had two sources of slag at the site. One source was molten slag which Anaconda conveyed from Asarco's lead smelter to its zinc fuming facility. The second source was hardened, cold slag stockpiled on the Site which Anaconda mined and transported to its zinc fuming facility. Both sources of slag were then fumed by Anaconda in its facility for the purposes of recovery and sale of zinc. Anaconda placed this molten and cold slag into its zinc fuming blast furnace, which heated the slag to approximately 2,000 degrees Fahrenheit, resulting in zinc fume. The molten and mined cold slag which was transported, purchased and utilized by Anaconda contained arsenic.

9. Anaconda used coal to fuel the blast furnace. Coal contains 0.0006% (6 ppm) arsenic. The coal was delivered to the facility by railcar. The coal arrived in relatively small pieces and first needed to be dried before it was used in the

furnace. This process was accomplished through the use of a coal or kiln dryer. The kiln dryer utilized a horizontal turning heater that served to drive off the moisture in the coal. The dried coal was then passed from the kiln dryer to a pulverizer, which involved a milling process that reduced the coal into fine pieces so that it could be conveyed by high pressure air to the blast furnace.

10. As a protective measure, the blast furnace was completely surrounded with water jackets. Cooling water was pumped through the water jackets under pressure to route the water around the furnace. In the furnace, coal and air were injected into the molten slag material, and as that oxygen made contact with the zinc, it created zinc oxide dust, which was then conveyed through a series of cooling flues into a large building referred to as the bag house.

11. Once in the bag house, the zinc oxide dust was collected on a row of large woolen bags. The remaining air and particulates which were not collected on the woolen bags were then released through vents in the bag house into the atmosphere outside the bag house. The woolen bags would be shaken to dislodge the material into a series of augers, which would then convey the white zinc oxide material to a series of other augers and eventually into open-top railcars, and later to close-top railcars.

12. Anaconda's zinc fuming plant operated 24 hours a day, 7 days a

week, 355 days per year.

13. Anaconda sold the zinc fuming operation to Asarco in 1972. Asarco then operated the zinc fuming plant for 10 more years, until 1982, at which time it ceased operations.

14. Two other entities operated at the Site. American Chemet Corporation (“ACC”), at various points in time, conducted operations at the Site, including a zinc oxide plant and a zinc fuming process, and produced a number of products, including roasted zinc dross, talc and copper oxides. Burlington Northern Santa Fe (“BNSF”) operated railway lines on and near the Site. BNSF and its predecessors transported ores and other feed materials from mines and other facilities to Asarco’s lead smelter beginning in 1888.

## **II. THE SITE AND CLEANUP EFFORT**

15. The Site is located in Lewis and Clark County in the State of Montana. The Site is south of the City of East Helena, and separated by US Highway 12. The majority of the Site is at a higher elevation than the City of East Helena. Prickly Pear Creek is a naturally occurring stream that originates at a higher elevation south of the Site, and travels in a northerly direction along the eastern and northern boundaries of the Site, under US Highway 12, through a portion of the City of East Helena, and ultimately into Lake Helena.

16. In 1984, EPA added the Site to the National Priorities List of sites under CERCLA that require environmental remediation pursuant to federal law.

17. The groundwater underneath the Site is contaminated with arsenic and selenium. Arsenic is the primary contaminant of concern. Although passing mention of selenium was made during the course of the trial, neither party offered any testimony, expert or otherwise, or evidence regarding the presence or absence of selenium in the groundwater, the source or sources of any selenium contamination, what costs are associated with the selenium contamination, or who should bear responsibility for any such costs. Thus, the focus of this order is the same as the focus at trial, arsenic contamination in the groundwater.

18. Atlantic Richfield does not dispute that Anaconda's operations may have caused some contamination at the site, but it does dispute that Anaconda's operations are the source of the arsenic found in the polluted groundwater under the Site that is the subject of the cleanup. In fact, as will be explained later in these findings of fact, Anaconda and its successor, Atlantic Richfield, have historically been consistent and steadfast in denying any contribution of arsenic to the groundwater from its operations at the Site. In contrast, Asarco has never denied that its operations at the Site contributed to the presence of arsenic in the groundwater, which is evidenced by the forthcoming approach it has taken with

the State of Montana and the Environmental Protection Agency during the cleanup process. Thus, based on these diametrically opposed positions, it is no surprise that the focus of the cleanup effort has been on the Site activities of Asarco, and not Anaconda/Atlantic Richfield.

19. Asarco's acceptance of responsibility at the Site was manifested through three CERCLA consent decrees and one Resource Conservation and Recovery Act ("RCRA") consent decree, which are described in more detail below.

**A. The 1990 CERCLA Consent Decree**

20. In 1990, the district court approved and entered a Settlement and Consent Decree between Asarco and EPA regarding the Site, which resolved claims EPA brought against Asarco under CERCLA § 106 and § 107. The 1990 CERCLA Consent Decree concerned only specific Site features, which were the process water ponds and process water management systems, some of which were associated with only Asarco's operations, and some of which were associated with the operations of both Asarco and Anaconda (collectively, the "Process Ponds").

21. Specifically, Asarco was required to implement certain remedial measures selected in the Record of Decision ("ROD") for the Process Ponds, which EPA had issued on November 22, 1989.



22. The 1990 CERCLA Consent Decree covered four Process Ponds: (1) Lower Lake; (2) the speiss granulating pond and pit; (3) the acid plant water treatment facility; and (4) former Thornock Pond or Lake, and the associated process water management systems. The operations of both Asarco and Anaconda delivered wastewater to Thornock Pond or Lake and Lower Lake. The speiss granulating pond and pit and the acid plant water treatment facility were used solely by Asarco.

23. Asarco was required to carry out the remedial measures selected by EPA for the Process Ponds, in accordance with the 1990 CERCLA Consent Decree and Process Ponds ROD.

24. Asarco completed substantially all of the cleanup activities required under the 1990 CERCLA Consent Decree by 1997.

**B. The 1998 RCRA Consent Decree**

25. Prior to 1998, Asarco and EPA engaged in negotiations to resolve operational compliance issues at Asarco facilities nationwide in a cooperative manner, including at Asarco's facilities in East Helena.

26. In 1998, Asarco and EPA entered into another Settlement and Consent Decree relating to Asarco's facilities in East Helena (the "RCRA Decree"), which resolved claims EPA brought against Asarco under RCRA and

the Clean Water Act, but did not include the settlement of any claims under CERCLA.

27. Under the RCRA Decree, jurisdiction over the cleanup at Asarco's facilities was transferred from EPA's CERCLA program to its RCRA program.

28. The only portion of the cleanup that was not transferred from the CERCLA program to the RCRA program was the cleanup of certain off-Site contaminated residential soils (e.g., yards, roads, parks) and other undeveloped lands in the City of East Helena, which were referred to as Operable Unit 2 ("OU2").

**C. Asarco's Bankruptcy and the February and June 2009 CERCLA Consent Decrees**

29. On August 9, 2005, Asarco filed a bankruptcy petition under Chapter 11 of the United States Bankruptcy Code in the Bankruptcy Court for the Southern District of Texas (the "bankruptcy court").

30. In the bankruptcy, numerous governmental entities filed proofs of claim regarding Asarco's outstanding environmental liabilities, including the United States and State of Montana Department of Environmental Quality, alleging joint and several liability under CERCLA ("proofs of claim"). The proofs of claim made various allegations and provided placeholder claim demands, which

were later supplemented by expert reports. The allegations were not restricted solely to Asarco owned properties, and included claims for contamination to off-Site properties not owned by Asarco.

31. In its initial proof of claim, the United States made a claim against Asarco for “response costs and costs of assessment of injuries to natural resources under the Comprehensive Environmental Response, Compensation, and Liability Act (‘CERCLA’), 42. U.S.C. §§ 9601–9675, incurred by the United States...” at sites including the East Helena Superfund Site.

32. The United States filed its Supplemental Proof of Claim against Asarco for “response costs incurred and to be incurred by the United States under the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”), 42 U.S.C. §§ 9601–9675 at various sites,” including the East Helena Superfund Site.

33. The State of Montana Department of Environmental Quality filed a Proof of Claim alleging that “Asarco is liable under CERCLA ... for all remediation expense” with respect to the East Helena Superfund Site. Furthermore, the Department claimed future remediation expense, including “a protective contingent claim” “[t]o the extent Debtor does not undertake remedial action as required under CERCLA or RCRA and as directed by the United States,

the Department cost match would be an estimated \$14,300,000 in future remediation, operation, and maintenance expense. Pursuant to CERCLA, the Department would be entitled to recover \$14,300,000 from Debtor.”

34. In addition to the United States’ claim and the Montana Department of Environmental Quality’s claim for the East Helena Site, the State of Montana also submitted a Proof of Claim against Asarco in the bankruptcy proceedings for CERCLA Natural Resource Damages for an estimated \$20 million.

35. Asarco understood that these Proofs of Claim were CERCLA claims asserted “for future response costs and injuries to natural resources going forward ... response costs for groundwater contamination.” Asarco further understood that because the governmental claims were CERCLA claims, that “Asarco could be held responsible for all of the cleanup costs, 100 percent, regardless of if there were other PRPs on the site.”<sup>2</sup>

36. In support of the various claims, the State of Montana submitted the expert reports of William H. Bucher, P.E., and Ann Maest, Ph.D., which established that a \$99 million pump-and-treat system was necessary to remediate the off-site groundwater plume underlying the City of East Helena.

37. Ann Maest, Ph.D., a geologist and geochemist, served as an expert

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<sup>2</sup> PRP is the acronym for potentially responsible party.

witness on behalf of the State of Montana during approval proceedings related to the CERCLA Decree and attested that since 2000, the focus of the cleanup has been on restoration of groundwater, with arsenic being the primary contaminant.

38. On February 6, 2009, a Settlement and Consent Decree between Asarco, the United States, and the State of Montana was entered by the bankruptcy court which resolved Asarco's liabilities under CERCLA with respect to OU2 (the off-Site residential soils and undeveloped lands), but did not address contaminated groundwater. Pursuant to this February 2009 CERCLA Consent Decree, Asarco was required to pay \$13,209,783 to fund the remaining cleanup of OU2. Again, this Decree covered only OU2, and expressly stated it did not apply to any other aspect of the East Helena Site, including groundwater.

39. Asarco, the United States, and the State of Montana reached a second Settlement and Consent Decree (the "June 2009 CERCLA Consent Decree") which resolved all of Asarco's outstanding environmental liabilities at several sites in Montana, including the remaining liabilities under CERCLA at the East Helena Site.

40. The June 2009 CERCLA Consent Decree recognizes the previously entered February 2009 CERCLA Decree, which it refers to as the "Separately Settled East Helena Matters." The June 2009 CERCLA Consent Decree does not

incorporate or cover the work required under the February 2009 CERCLA Decree.

41. Asarco's Director of Environmental Services, Donald Robbins, submitted a declaration in support of Asarco's motion in the bankruptcy proceedings for an order approving the June 2009 CERCLA Consent Decree, and stated in his declaration that the two major variable factors remaining at East Helena were "the size of the groundwater plume; and the scope of the remedy."

42. Notice of this CERCLA Decree was published in the Federal Register, and the EPA received public comments.

43. On June 5, 2009, the CERCLA Consent Decree and Settlement between Asarco, the United States, and the State of Montana was entered by the bankruptcy court. The June 2009 CERCLA Consent Decree resolved all Asarco's outstanding environmental liabilities at several sites in Montana, which collectively were referred to as the "Montana Designated Properties." The Montana Designated Properties included the East Helena Site.

44. The June 2009 CERCLA Consent Decree established a Custodial Trust for the Montana Designated Properties. The Custodial Trust was to be established on the effective date of Asarco's Plan of Reorganization, as approved by the bankruptcy court.

45. The Montana Environmental Trust Group ("METG") was appointed

as the Custodial Trustee for the East Helena Site to administer the Custodial Trust and Custodial Trust Accounts.

46. Asarco was required to “transfer all of their right, interest in, and title to” the Montana Designated Properties to the Custodial Trust.

47. The June 2009 CERCLA Decree established separate “Custodial Trust Cleanup Accounts” for each of the Montana Designated Properties. The purpose of the Cleanup Accounts was to provide funding for future “Environmental Actions” with respect to each Montana Designated Property.

48. “Environmental Actions” is defined as “all environmental activities related to the Montana Designated Properties, including but not limited to response or remedial actions, removal actions, corrective action, closure, or post-closure care, natural resource restoration, reclamation, investigations, studies, remediation, interim actions, final actions, emergency actions, water treatment, implementation of engineered structures and controls, obtaining and maintaining reasonable financial assurance, monitoring, repair and replacement of engineered structures, monitoring equipment and controls, operation and maintenance, and implementation, operation and maintenance of institutional controls, coordination and integration of reuse and remedial efforts and initiatives (including, without limitation, multi-stakeholder communications), and, if appropriate, long-term

stewardship and perpetual custodial care activities . . .” in addition to “. . . any and all environmental activities related to the Designated Properties...and activities related to releases of hazardous substances, hazardous waste, or hazardous constituents from any portion of the Montana Designated Properties, including all areas affected by natural migration of such hazardous substances, hazardous waste, or hazardous constituents from the Montana Designated Properties.”

49. The June 2009 CERCLA Consent Decree designated EPA as the “Lead Agency” for the East Helena Site in charge of selecting, approving, and authorizing all work performed and funds expended from the Custodial Trust Cleanup Account for the East Helena Site by METG.

50. Under the June 2009 CERCLA Consent Decree, Asarco was required to pay a total of \$138,300,000 to fund all of the Custodial Trust Cleanup Accounts for the Montana Designated Properties.

51. Asarco paid approximately \$111.4 million to address environmental impacts caused by all parties, including Anaconda, at the East Helena Site. This includes the following payments:

- a. \$99.294 million into the East Helena Custodial Trust Cleanup Account for a groundwater remedy to clean up the off-site groundwater at the East Helena Site, which was based upon the



estimates for a pump and treat remedy advanced by the State of Montana's experts, William H. Bucher, P.E., and Ann Maest, Ph.D.

- b. \$8.9 million to "establish the Custodial Trust and to fund the Custodial Administrative Account for the purposes of administration of the Custodial Trust," of which the proportionate share for the East Helena Site would be \$6,403,743.
- c. \$706,000 to fund United States Department of the Interior natural resource restoration and future oversight costs for the East Helena Site.
- d. \$5 million to the State of Montana for the East Helena Site in compensatory natural resource damages ("NRD").

52. Pursuant to the June 2009 CERCLA Consent Decree, Asarco received contribution protection and a covenant not to sue under CERCLA. Thus, Asarco's "outstanding obligations" were "fully resolved" under CERCLA.

53. In the June 2009 CERCLA Consent Decree, Asarco expressly reserved all claims past or future against third parties "for any matter arising at or relating in any manner to the Montana Sites and/or claims addressed herein."

54. Asarco's Seventh Amended Plan of Reorganization reserved Asarco's rights and interests in CERCLA contribution actions not discharged or settled in bankruptcy.

55. On December 9, 2009, Asarco's Seventh Amended Plan of Reorganization became effective, enabling disbursement of funds for environmental settlements, including funds for the East Helena settlements.

56. Notwithstanding the fact that the initial proofs of claim exceeded the amount paid by Asarco, Asarco nevertheless fully funded the agreed upon settlement amount in the June 2009 CERCLA Consent Decree at one hundred cents on the dollar.

57. Asarco paid \$1.8 billion to settle all allowed environmental claims related to hazardous waste in the bankruptcy proceedings.

58. Atlantic Richfield did not contribute to Asarco's settlement with the United States and the State of Montana regarding the East Helena Site, and has paid nothing to clean-up the East Helena Site despite Anaconda's operation of the zinc fuming facility for 45 years.

59. Asarco admitted that BNSF shared some responsibility for its contamination at the Site. In the bankruptcy proceeding, Asarco listed BNSF as a PRP that Asarco could sue after bankruptcy. There was no evidence presented at

trial regarding the contribution that BNSF's operations made, if any, to the arsenic in the groundwater at the Site. Regardless, in 2011, Asarco conclusively resolved any contribution from BNSF at the East Helena Site in a multi-site settlement agreement, in which BNSF paid Asarco a total of \$675,000 as follows: \$625,000 for environmental costs associated with the Tri States Lawsuit and \$50,000 for all other claims and environmental costs, at over 40 sites including East Helena. In exchange for this consideration, Asarco released BNSF from contribution liability for numerous sites, including East Helena.<sup>3</sup>

**D. The Montana Environmental Trust Group and East Helena Site Remedial Work**

60. METG administers and uses the trust account to fund environmental actions at the Site. Asarco made the payments described above in December, 2009, and METG assumed responsibility for the remediation work at the Site, under the direction of the EPA as the Lead Agency, in consultation with the State of Montana.

61. On January 17, 2012, the district court issued the 2012 First Modification to Consent Decree ("2012 Modification"), which, among other

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<sup>3</sup> American Chemet Corporation was named as a Defendant in this recovery action. Asarco subsequently moved to dismiss ACC as a Defendant on March 27, 2014 (Doc. 127), and the Court ordered ACC's dismissal on March 31, 2014. (Doc. 128.) The details of the settlement between Asarco and ACC are unknown to the Court.

things, amended the 1998 RCRA Consent Decree to substitute METG for Asarco.

62. The 2012 Modification deleted certain requirements that Asarco was initially required to perform under the 1998 RCRA Consent Decree, including a supplemental environmental project and stipulated penalties. METG is no longer required to perform such obligations under the 1998 RCRA Consent Decree, as carried forward by the 2012 Modification.

63. The 2012 Modification lists the exclusive purposes of the Custodial Trust—one is “to manage and/or fund implementation of future investigation and cleanup activities approved by EPA with respect to the Asarco Properties and contaminated groundwater.”

64. The 2012 Modification also consolidates all of Asarco’s remaining obligations at the East Helena Site, including remediation of the groundwater, under the 1990 CERCLA Consent Decree, the OU2 ROD, and the MDEQ AOC with the remaining obligations of the 1998 RCRA Consent Decree.<sup>4</sup>

65. The 2012 Modification provides that “[b]ased upon new information and/or changed circumstances, EPA may determine or the Trustee of the Custodial Trust may propose that certain tasks, including investigatory work, engineering

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<sup>4</sup> ROD is the acronym for Record of Decision, and AOC is the acronym for Administrative Order of Consent.

evaluations, or procedure/methodology modifications, are necessary in addition to or in lieu of the tasks included in any EPA-approved work plan.”<sup>5</sup>

66. Under the 2012 Modification, METG is not limited to only doing work at the Site under the pre-existing Consent Decrees, and has a number of duties at the East Helena Site, including:

“ . . . own the ASARCO Properties, carry out administrative and property management functions related to them, manage and invest funds transferred by ASARCO to the Trustee of the Custodial Trust under the Plan of Reorganization, manage and/or fund implementation of future investigation and cleanup activities approved by EPA with respect to the ASARCO Properties and contaminated groundwater, and ultimately to sell, transfer or otherwise dispose and/or provide for the long-term stewardship of all or part of the ASARCO Properties, if possible, and engage in activities related thereto consistent with the fiduciary obligations of the Trustee of the Custodial Trust all for the benefit of the Governments;”<sup>6</sup>

67. Since 2009, METG has used a portion of the \$99.294 million Asarco paid into the trust to fund a series of environmental actions intended to address

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<sup>5</sup> Ex. 25 at 25-0033 ( ¶¶ 50–54).

<sup>6</sup> Ex. 25 at 25-0012 (Recitals).

and remediate contaminated water at the Site. METG's Site activities are the focus of any potential allocation responsibility because it is the work being funded by Asarco. Asarco does not seek reimbursement for any remediation work it performed at the Site performed prior to July 2009.

68. METG's environmental actions to date consist of three projects referred to as interim measures ("IMs"). The general purpose of the IMs in this case "is to prevent and minimize the spread of hazardous waste and hazardous constituents while long term corrective measures were being evaluated."<sup>7</sup> EPA approved METG's planned IMs in 2012 and, since that time, all three IMs have been fully implemented.

69. The three IMs are summarized as follows:

- a. The first IM, referred to as the South Plant Hydraulic Control IM, was implemented to reduce migration of inorganic contaminants in groundwater by changing the hydrogeologic conditions at the southern end of the Site, including lowering the groundwater table, which also reduced the velocity at which groundwater moves under and away from the site. This IM has included dewatering of Upper and Lower Lakes, realignment of

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<sup>7</sup> Ex. 976-0037.

Prickly Pear Creek by moving it eastward, removal of the Wilson Ditch Diversion Dam and the Smelter Dam to eliminate water impoundment, and removal of reservoir sediments.

- b. The second IM, referred to as the Source Removal IM, was implemented to reduce the mass loading of contaminants to groundwater by reducing the volume of soil with high concentrations of inorganic contaminants that were subject to infiltration or flow-through leaching to groundwater. This was accomplished by excavating the most highly contaminated soils at the Site to prevent those soils from serving as an ongoing source of arsenic contamination to groundwater. This IM also removed sediments from Lower Lake and from the Upper Lake marsh area.
- c. The third IM, referred to as the ET Cover System IM, involved the construction by METG of a new cover of soil and vegetation over the majority of the Site with the exception of the slag pile and the former Upper and Lower Lake areas, and was implemented to further reduce the potential for inorganic soil contaminants to leach to groundwater by eliminating or

reducing the amount of infiltration through contaminated materials. This IM provides for a clean surface for runoff, and is designed to eliminate human and wildlife exposure to potentially contaminated soils, and prevent windblown or storm water induced migration of potentially contaminated soils. The ET Cover System encompasses a 57 acre area of the facility, which includes the area where Anaconda's zinc fuming plant and its process water circuits were located.

70. While remediation work has been done under the 1998 RCRA Consent Decree and the 2012 Modification, the work is supervised by EPA and has been done consistent with and pursuant to CERCLA standards, and as such the work is in substantial compliance with the National Contingency Plan.

71. In addition to the three completed IMs described above, METG proposes, as future remediation work, to cap the portion of the slag pile at the Site that consists of unfumed slag, which is slag that was not processed a second time for metals recovery in Anaconda's zinc fuming process, due to the potential for the unfumed slag to leach arsenic to groundwater.

72. METG, working with local authorities, has established a set of institutional controls for the Site and surrounding areas. These institutional



controls will not reduce the arsenic in the groundwater, but instead are intended to prevent property owners from using their domestic water wells in an effort to prevent contact with contaminated groundwater.

73. The EPA has determined that the remedial work done to address source areas contributing to ground water contamination “are expected to be protective of human health and the environment upon completion” and that “[i]n the interim, remedial activities completed to date have adequately addressed all exposure pathways that could result in unacceptable risk . . . .”

74. Though METG’s remedial efforts have been focused on groundwater cleanup, that work has not been completed yet, and METG’s own consultant has noted that the offsite arsenic plume will not achieve MCLs (maximum contaminant levels) or achieve drinking water standards within the next thirty years, a fact confirmed by both Asarco’s and Atlantic Richfield’s experts.

75. Based on the most recent accounting as of September 30, 2017, METG has spent approximately half of the trust funds, leaving METG with approximately \$50 million for remaining cleanup and groundwater remediation.<sup>8</sup> METG has recommended that the final remedies at the Site consist of the three IMs, a speiss-dross slurry wall built by Asarco, the cover for the unfumed portion

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<sup>8</sup> Ex. 922.

of the slag pile, and the previously described institutional controls. Atlantic Richfield's expert, Brian Hansen ("Hansen") has estimated that the ongoing costs for operations and maintenance is \$9.2 million, and METG has estimated the cost of covering the unfumed slag at \$3.7 million. Thus, expert Hansen estimates that the final costs subject to the CERCLA claim total \$61,447,991. Expert Hansen also predicts, without any basis, that EPA is likely to adopt and approve METG's proposed final remedies.<sup>9</sup>

76. Atlantic Richfield contends that METG has ruled out a pump-and-treat remedy, as not being cost effective. METG also contends that a pump-and-treat system would be technically ineffective and could affect the stability of the arsenic-contaminated groundwater plume, which extends from the Site in a northwesterly direction into the City of East Helena.

77. Asarco's expert, Margaret W. Staub ("Staub"), disagrees with expert Hansen. Her disagreement is based on the simple fact that the three IMs employed by METG, in combination with the final remedies described in paragraph 71 and 72 above, will not address the elevated levels of arsenic and selenium that exist in

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<sup>9</sup> Expert Hansen relies on a 2-page EPA Fact Sheet (Ex. 925) in support of his opinion that EPA approval will be forthcoming. This Fact Sheet is nothing more than a cursory summary of METG's efforts to date, and concludes with the statement: "Groundwater remedy performance will be monitored for many years." The Fact Sheet is silent on the issue of EPA approval.

the groundwater plume that is migrating under the City of East Helena, and will not restore this groundwater to background levels or achieve MCLs and drinking water standards within the next thirty years as described in paragraph 74 above. Thus, expert Staub reasons that the recommendation made years ago by State of Montana experts Maest and Bucher (see paragraph 51.a. above) that a pump-and-treat system would be necessary to address arsenic and selenium contamination in the off-site groundwater, will be the most likely final remedial outcome.

78. Staub's opinion is bolstered by the fact that this was the remedy contemplated at the time of the bankruptcy settlement and associated consent decrees, and contemplated by the 2012 Modification, which authorizes the EPA to modify and enlarge the Site remediation work being performed by METG (see paragraph 65 above). The Court adopts Staub's reasoning and concludes that unless and until the groundwater is restored to achieve MCLs and drinking water standards, something more substantial will need to be done. Whether there remains sufficient funds in the trust to accomplish this task, and whether a pump and treat system is the ultimate solution, are not the controlling questions. Regardless of the answer to those two questions, and notwithstanding Atlantic Richfield's arguments to the contrary, the Court is convinced that the balance of the approximate \$50 million in the trust will most likely be expended to achieve

the mandated remediation results.

79. The Court now turns to an analysis of the relative contributions of arsenic to the groundwater caused by the respective operations of Asarco and Anaconda which are the subject of the clean-up costs incurred by Asarco pursuant to the June 2009 CERCLA Consent Decree.<sup>10</sup>

### **III. ASARCO'S CONTRIBUTION OF ARSENIC TO THE GROUNDWATER**

80. Asarco concedes, and it was uncontroverted at trial, that the majority of the groundwater contamination METG is remediating at the Site was caused by Asarco's operations. Notwithstanding this concession by Asarco, Atlantic Richfield's case in chief was largely dedicated to proving the nature and extent of Asarco's pollution, and in the process, minimizing Anaconda's contribution of pollution.

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<sup>10</sup> It is important to recognize that until the advent of federal and state environmental laws in the early 1970s, mining and smelter operations such as those involved in this case were largely unregulated with the exception of regulations designed to generally protect worker safety and address air pollution. In hindsight, compared to today's standards, the amount of pollution generated by these types of facilities is difficult to fathom. Pollutants were discharged to the air, groundwater, and naturally occurring rivers, streams and lakes with little regard for the long-term consequences. The Court makes this observation to provide context for the sparse historical record that exists in this case, which does not include, prior to the 1970s and 1980s, very much in the way of detailed information that would allow a fact finder to determine the precise nature and amount of pollutants that were released to the environment by Asarco's and Anaconda's operations. Nevertheless, the Court is satisfied that discovery in this case has revealed enough information to understand the history of the operations of Asarco and Anaconda at the Site. And, of greater importance, since the 1980s the Site has been the subject of extensive environmental study and analysis, allowing us to understand how these operations impacted the groundwater.

81. Asarco's lead smelter operation at the Site recovered lead and other metals by smelting a variety of foreign and domestic concentrates, ores, fluxes and other non-ferrous, metal-bearing materials and byproducts, referred to as feed stocks or feed materials. Although Asarco's smelting operation changed over time, the components of its operation included: (a) raw materials storage and handling; (b) a sintering plant; (c) an acid plant; (d) a blast furnace; (e) a dross plant; (f) a speiss handling area; and (g) a slag dump. In addition, Asarco's lead smelter operation utilized large quantities of water, which were circulated through the component operations utilizing several surface water features, such as pits, ponds and ditches, and underground water pipeline circuits.

82. In the early years of its operations, Asarco smelted arsenic-bearing ores using an open roasting process. These operations produced arsenic contamination in various locations at the Site.

83. The smelter feed stocks were delivered to the Site via railcar or truck. For a period of time, these feed stocks were stored in two primary locations: the Upper Ore Storage Area and the Lower Ore Storage Area. The ores Asarco smelted contained as much as 19% (190,000 ppm) arsenic. These materials were stored in uncovered piles on concrete slabs or on the bare ground, and were exposed to the elements, which includes wind, rain and snow. Asarco also

regularly performed high pressure washdowns throughout its facilities, utilizing contaminated process waters.

84. Later, Asarco modified its process by building furnaces. The first steps in Asarco's handling process involved sampling, crushing, blending, mixing, and proportioning crude ore materials to prepare them for the smelting process. Some of these materials were then sent directly to the blast furnace for smelting, but the majority of the feed materials were sent to the sintering plant, where the materials were pulverized and roasted on grates. This process reduced the sulfur content in the materials, creating a product known as sinter. The sinter, like the feed materials themselves, contained arsenic. The gas and dust produced in the sintering plant was either captured in a series of hooding systems and vented to the atmosphere, or, in more recent times, sent to Asarco's acid plant. The gases were converted to sulfuric acid, a marketable product, which was captured, stored in tanks and eventually shipped offsite. This process generated an arsenic-bearing sludge that was dried on a pad located near Lower Lake. The acid plant was a source of groundwater contamination.

85. After the sinter was conveyed to the blast furnace, it was mixed with coke—a form of coal used for fuel—as well as other materials, such as scrap metal. Asarco charged this mixture to its blast furnace and heated it to a

temperature of approximately 2000 degrees Fahrenheit, which created lead bullion and slag. The lead bullion was then transferred from the blast furnace in 5-ton lead pots to the dross plant for further processing. Some spillage occurred from the 5-ton pots. This spilled material contained arsenic, selenium, lead, and other constituents. At the dross plant, the molten lead was cooled, which caused a copper-bearing material known as dross to float to the surface. Asarco then cooked the dross in a reverberatory furnace to form copper-bearing materials known as matte and speiss. The speiss contained as much as 17% arsenic (170,000 ppm).

86. The lead smelting operation generated large volumes of waste slag, which was deposited at the slag dump located on the east-northeast portion of the Site. As previously indicated, from 1927 until 1982, some of the slag was processed at Anaconda's, and later Asarco's, zinc fuming plant located at the Site.

87. Managing arsenic was a constant problem for Asarco. There was an imbalance of arsenic at the site, that is, because of the processes employed by Asarco, there was more arsenic coming in to the Site than was going out.

88. Asarco used large amounts of process waters and four main process water ponds in its lead smelting operations: (1) Lower Lake; (2) the speiss granulating pond and pit; (3) the acid plant water treatment facility; and (4)

Thornock Pond or Lake. The process ponds were connected to the lead smelting operations by an underground piping network known as the process water circuit.

89. The speiss granulating pond and pit are considered to be the most significant source of arsenic contamination to the groundwater at the Site because they were connected to Asarco's process waters circuit and to Lower Lake.

90. Lower Lake was a man-made process water pond fed by Prickly Pear Creek. It was unlined, and approximately 7 acres in surface area, and 11 million gallons in volume.<sup>11</sup>

91. The acid plant water treatment facility was used to settle particulates from the acid plant scrubber blowdown water, which was recirculated to the scrubbers or to the sinter plant. The components of the acid plant treatment facility were a trough, settling dumpsters and a concrete lined settling pond. The settling pond was 68 feet long by 35 feet wide and 9 feet deep. Arsenic-bearing fluids migrated to the groundwater as a result of this treatment process.

92. Thornock Lake was constructed by Asarco in 1971 as a collection and settling pond for lead smelter process waters and storm water runoff. Thornock Lake was originally about 70 feet long by 40 feet wide and 8 feet deep, with a

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<sup>11</sup> In approximately 1990, Asarco replaced Lower Lake as an active process pond with two 1-million gallon storage tanks. As part of the remediation process, Lower Lake was subsequently de-watered and the sediments in the lake have been removed.



capacity of approximately 100,000 gallons. In October 1986, Asarco replaced Thornock Lake with a 100,000-gallon, 40-foot diameter steel holding tank.

Before Thornock Lake was constructed, there was a natural depression in the same location which was used for the same purposes. This was referred to as Thornock Pond, or Pond 2.

93. Asarco's process water circuit was a system of primarily underground pipes that conveyed water from Lower Lake to various portions of Asarco's smelting process. Prior to 1975, the process water circuit discharged directly to Prickly Pear Creek. Beginning in 1975, Asarco began discharging its process water into Lower Lake. Asarco used the process water to wash down various portions of its waters and to suppress dust around the plant, including the slag pile. Plant washdowns occurred on a daily basis. The process water circuit also included a system of drains that collected process waters and runoff from various parts of Asarco's operation and conveyed that water back into the circuit. This process water circuit was old and leaked, releasing process water into the ground below the smelter. Based on pressure testing of the main process water circuit pressure lines conducted in March 1988 and March 1989, the Comprehensive Remedial Investigation and Feasibility Study for the Site theoretically estimated that as much as 105,000 to 2.2 million gallons leaked from Asarco's process water

circuit every year.<sup>12</sup>

94. The use by Asarco of arsenic-bearing materials and water resulted in contamination to the groundwater at the Site, again, a fact that Asarco has not contested in this case. Expert Hansen estimated that the concentrations of arsenic found in the soils and sediments at the most contaminated parts of the site are as follows:

- Speiss pond/pit - 14% arsenic (140,000 ppm)
- Thornock Lake - 12% arsenic (120,000 ppm)
- Lower Lake - 2.25% arsenic (22,500 ppm)
- Acid Plant - 1.16% arsenic (11,600 ppm)

95. Expert Hansen also estimated that the fluids involved in Asarco's use of the process ponds contained the following concentrations of arsenic:

- Speiss pond/pit - 3,733 mg/L
- Acid plant - 2,867 mg/L
- Lower Lake - 200 mg/L
- Process fluids circuit - 60 mg/L
- Thornock Lake - 40 mg/L

96. There is a clear connection between Asarco's operations, which used

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<sup>12</sup> Ex. 797-0180.

arsenic-bearing materials and waters, and the arsenic portions of the groundwater plume mapped by METG. In fact, the majority of the arsenic found in the groundwater plume can be attributed to Asarco's operations, a fact which Asarco also does not contest. What is contested in this case is Anaconda's contribution of arsenic to the groundwater plume that has been the subject of METG's remediation efforts. As will be developed later in these findings of fact, Atlantic Richfield has steadfastly maintained for decades that its zinc fuming operation did not contribute any arsenic contaminants to the groundwater at the Site. Thus, it comes as no surprise to the Court that all of the studies and investigations performed at this Site since the 1980s focus on Asarco's operations. However, as explained in the next section of these findings of fact, Anaconda's zinc fuming operation also contributed arsenic to the groundwater plume.

#### **IV. ANACONDA'S CONTRIBUTION OF ARSENIC TO THE GROUNDWATER**

97. Anaconda operated a zinc fuming plant at the Site for 45 years, from 1927 to 1972. During this period of time, Anaconda had at least eleven different discharge points at the East Helena Site where arsenic releases occurred: (1) zinc dust from the bag house; (2) zinc dust left on the ground by the flue; (3) the unlined burning coal area; (4) the unlined slag pile pond (Pond 3); (5) washdown

waters; (6) unlined Thornock Pond and Lake (Pond 2); (7) unlined Wilson Ditch; (8) leaks in the pipe transporting process water from Lower Lake to the furnace; (9) the unlined return ditch to Lower Lake; (10) leaks from water jackets in the furnace; and (11) unlined Lower Lake (Pond 1).

**A. Zinc Dust Released From the Anaconda Bag House**

98. As previously explained, after the zinc fume traveled from the blast furnace through the flues, it was deposited at Anaconda's bag house, where the zinc particulates and dust collected on the outside of a long row of large woolen bags.

99. The bags were routinely shaken so that the zinc dust would drop off the bags into augers, and then was deposited into uncovered railcars for shipment.

100. Anaconda's fume bag house had five trapezoidal vents on the roof, which discharged zinc fume containing arsenic to the atmosphere.

101. Anaconda's bag house did not have a stack.

102. Throughout Anaconda's tenure, bag house dust was visible on the ground around the bag house, and along the railroad tracks where fumed zinc was loaded into open railcars.

103. In an internal Anaconda memorandum documenting an OSHA visit and exit interview, dated March 21, 1972, an Anaconda representative, in

summarizing comments made by an OSHA assistant regional administrator, noted “[t]he fume loading area still has a lot of material blowing around there,” and “[i]t still is fairly dusty in the area [around the bag house] due to the wind and openings.”<sup>13</sup>

104. In the same memorandum, referring to comments made by another individual, an additional source of dust was identified: “One problem there is the loading of open rail cars . . .”<sup>14</sup>

105. In 1971, the Montana Department of Health specifically noted, “the Anaconda Company baghouse stacks were all putting out a very persistent particulate discharge—it was blowing toward the west southwest and was visible for about 3000 feet.”<sup>15</sup>

106. In a letter dated June 1, 1970, the Montana Health Department issued a notice to Anaconda that the zinc fuming plant emissions violated health standards, and threatened enforcement proceedings. The letter was titled “Re: Dust Emissions from E. Helena Plant,” and was addressed to Maurice Villeneuve,

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<sup>13</sup> Ex. 103 at 103-0002.

<sup>14</sup> Ex. 103 at 103-0003.

<sup>15</sup> Ex. 425.

Superintendent, Anaconda Slag Treating Plant.<sup>16</sup>

107. According to Asarco's expert, Dr. Andy Davis ("Davis"), Anaconda's zinc fume bag house dust had a high arsenic concentration at 3500 milligrams per kilogram. Expert Davis further testified that Anaconda's zinc fume emissions from the bag house settled on the surrounding soils, as well as in open ponds (Lower Lake and Thornock Pond and Lake) and ditches which were filled with process water (Wilson Ditch and the unlined return ditch), where it would percolate into the groundwater and thereby contributed appreciably to arsenic in the groundwater.

**B. Zinc Dust Left on the Ground by the Flue**

108. A 1954 aerial photograph of the zinc fuming plant shows what appears to be zinc fume which was deposited on the ground around the flue.<sup>17</sup>

109. According to the testimony of expert Davis, soil samples from the METG database show 3300 parts per kilogram of arsenic in the soil in the area where the white dust is shown.

110. Jon Nickel, who began working at the zinc fuming plant in 1973, one year after Asarco purchased the zinc plant from Anaconda, testified to the practice

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<sup>16</sup> Ex. 109.

<sup>17</sup> Exs. 517 and 520.

of removing zinc dust from the flue system with the use of large hoe.

111. According to both experts Hansen and Davis, Anaconda's zinc dust contains 3500 milligrams per kilogram of arsenic.

112. Expert Davis further testified that the arsenic in this dust would percolate to the groundwater and increase the groundwater contamination at the Site.

113. METG's data shows that dissolved arsenic in the groundwater was measured at 56 mg/L and 22 mg/L in the area close to the flue, which is as much as three orders of magnitude above the MCL, or maximum allowable amount of a contaminant in drinking water.

### **C. Unlined Burning Coal Area**

114. Anaconda's zinc fuming furnace required a heat source of approximately 1800 degrees Fahrenheit. Coal was the exclusive fuel source for the zinc fuming furnace. Before the coal was introduced into the furnace, it was pulverized in a grinding facility in order to create a particulate size that would ignite in the furnace and create a heat source sufficient to fume the zinc out of the slag. Anaconda routinely introduced 10 to 15 tons of pulverized coal and 57 tons of slag into the furnace during each two-hour furnace cycle, and routinely used 140 tons of coal each day in its operations. Anaconda estimated that they used

45,000 tons of coal per year, totaling 2.025 million tons of coal over the 45 years of operations

115. From approximately 1927 until sometime in the early 1960s, Anaconda's coal fines that collected at Thornock Pond were reportedly flushed out with a fire hose and the discharge was carried by gravity flow through a pipeline to the base of the slag dump.

116. The coal burning area can be seen in the 1954 aerial photograph at the top left of the slag pile.<sup>18</sup>

117. In a letter dated July 31, 1958 from the superintendent of the zinc fuming plant to another Anaconda employee, a photograph of this area is provided, with the following written description:

In the coal drying process, extremely fine particles of coal dust that passes through the dust collecting system of the dryer are sprayed with water and collected as a coal-water mixture which flows to a settling pond outside the dryer building. About twice each week, this pond is flushed out with a fire hose and the discharge is carried by gravity flow through a pipe line to the base of the slag dump. This picture shows in the distance the outlet of the pipe and the accumulation of coal extending from the outlet to the bottom of a dirt dike in the foreground. This coal may be 5 to 6 feet deep in places and is gradually covered by the approaching slag dump. Coal is burning where the slag has reached the coal and also in the

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<sup>18</sup> Demonstrative Ex. 520.



foreground along the base of the dirt dike.<sup>19</sup>

118. As indicated in the previous paragraph, the coal fines collected at the toe of the slag pile were combustible, and after catching fire would have generated coal ash or fly ash.

119. An Anaconda map designated this area as the “burning coal area.”<sup>20</sup>

120. Anaconda knew of and acknowledged that “underneath the top layer of fine ash is burning coal” and that “this burning coal is a bad problem.”<sup>21</sup>

121. In addition, in an undated “Emission Inventory Questionnaire”, prepared by Anaconda for the Montana State Department of Health, Anaconda noted that it collected 234 tons of fly ash from their plant per month, which was “Mixed with slag and disposed on Dump.”<sup>22</sup>

122. The combustion of the coal fines in this area generated readily-leachable coal ash in the vicinity of open settling ponds such as Thornock Pond and Lake and open ditches like Wilson Ditch and the return ditch to Lower Lake.

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<sup>19</sup> Ex. 410 at 410-0003.

<sup>20</sup> Ex. 755.

<sup>21</sup> Ex. 410 at 410-0001, -0005; *see also* Ex. 104; Ex. 105 at 105-0002 (¶ 11).

<sup>22</sup> Ex. 106 at 106-0009.

123. Expert Davis testified that the burning coal area was a contributing source to the arsenic plume.<sup>23</sup>

124. The plume map relied on by expert Hansen shows a light yellow (1 mg/L) plume of arsenic originating from the burning coal area.<sup>24</sup> Expert Hansen admitted during cross-examination at trial that fly ash is a federally regulated substance because of its toxicity.

125. Atlantic Richfield's designated corporate representative at trial, Richard Krablin ("Krablin"), admitted that Anaconda burned coal, creating fly ash which mobilizes the arsenic in the coal into a gas.

126. Anaconda released so much coal dust and burning coal on a regular basis that they were asked by the City Attorney for the City of East Helena to correct the emissions in a letter dated July 11, 1947. The City Attorney wrote that at a meeting of the city council, petitions were presented containing the signatures of numerous residents of the City of East Helena "requesting that some action be taken to eliminate and abate the condition created by coal smoke and dust issuing from your plant." He went on to state that "this dust and smoke settles upon houses and other property in the city, even penetrating into the interior of

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<sup>23</sup> Demonstrative Exs. 516; 488 at 488-0037 and 488-0043; 488-037-A.

<sup>24</sup> Demonstrative Ex. 895 at 895-0020.

buildings."<sup>25</sup>

**D. Unlined Slag Pile Pond (Pond 3)**

127. In the mid-1960s, Anaconda re-routed the coal fines it had previously been dumping into an unlined pond area, and began pumping the fines from the coal house to the top of the slag pile, which they called Pond 3, as depicted in a schematic sketch admitted and referenced at trial.<sup>26</sup>

128. This re-routed coal dust slurry was pumped to Pond 3, located at the top of the slag pile.

129. Anaconda employee A.B. Kane, who was the zinc fuming plant superintendent, wrote in a Memorandum dated August 12, 1962 that “[f]or the last 12 days we have successfully pumped the coal dust slurry to the top of the slag dump where it disappears into the slag. We have had to move the end of the pipe once during this time, when the voids in the slag dump filled up with coal.”<sup>27</sup>

130. Anaconda continued pumping this effluent to Pond 3 until it sold the fuming plant in 1972.

131. Expert Davis testified that this documented discharge of coal slurry

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<sup>25</sup> Ex. 435.

<sup>26</sup> Ex. 82.

<sup>27</sup> Ex. 243.

and fly ash to the slag pile impacted groundwater with arsenic and other metals.

**E. Washdowns**

132. Anaconda introduced approximately 50 tons of molten slag into its blast furnace per cycle, and added cold slag to bring each furnace charge to approximately 57 tons. A furnace cycle was completed approximately every two hours, and visible effluent was released into the atmosphere during the hot slag charging cycle. Because the hot metals and slag accumulated in the ladles and furnace, they would have to be removed through regular tapping cycles. The furnace was tapped approximately ten times per day.

133. During the process of introducing the slag into the furnace, and especially during tapping cycles, emissions and slag debris were deposited throughout the furnace house. Anaconda did not employ a hood or retention system.

134. So much effluent was released from the tapping and charging of the furnace, that the Montana Department of Health issued a Notice of Violation and ordered Anaconda to take corrective action to reduce air emission contaminants.<sup>28</sup>

135. Anaconda routinely pressure-washed the furnace building, including the walls, floors, furnace, and cooling flues, to remove the dust and debris that

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<sup>28</sup> Ex. 111 to the Deposition of Antonio Toccafondo.

resulted from the tapping and charging of the furnace.

136. This washdown process occurred at least three times per day. No attempt was made to capture this washdown water. Anaconda simply washed the dust and debris out the furnace door where it was deposited into the soils and leached into the groundwater.

137. According to expert Davis, these washdown waste waters contained very high levels of arsenic, and would have migrated to Thornock Pond (Pond 2) because it was near the furnace and the lowest topographical point on the zinc plant property. This latter point was confirmed by Atlantic Richfield's designated representative, Richard Krablin.

138. Expert Davis testified that Anaconda's uncontrolled and daily releases of washdown water from the furnace contributed appreciably to arsenic in the groundwater at East Helena.

**F. Thornock Pond and Lake (Pond 2)**

139. It was uncontroverted that the area surrounding and including unlined Thornock Pond is a topographic low, so runoff water from washdowns emanating from the zinc fuming plant would settle in this area.

140. As previously stated, washdown waters were not controlled in any way.

141. Expert Davis testified that washdown water containing coal dust, fume dust and/or slag from the furnace with readily leachable arsenic and other metals migrated to and settled in Thornock Pond (Pond 2).

142. Expert Davis also testified that Thornock Pond received and stored water from the Anaconda circulating cooling system, and coal slurry from the coal pulverizer, and similar to the washdown water, the arsenic in the zinc plant's cooling water percolated to and contaminated area groundwater.

143. Anaconda pumped coal dust slurry from the coal dryer building to Thornock Pond, further contaminating Thornock Pond.

144. It is the opinion of expert Davis that Anaconda discharged significant amounts of coal dust slimes and coal slurry as well as contaminated process waters containing arsenic and selenium into the unlined Thornock Pond (Pond 2), and that these releases are a major contributing source to the arsenic groundwater plumes at the Site.

145. As previously indicated, Thornock Pond has been identified as a key contributor to the arsenic groundwater contamination at the Site.

**G. Wilson Ditch**

146. Wilson Ditch was initially used to transport cooling water from Thornock Pond to Prickly Pear Creek, and was a natural gravity drainage creek.

147. Arsenic-laden process waters would drain from Thornock Pond into a flue that connected to a natural ditch identified on the 1930 Sanborn maps as Wilson Ditch.<sup>29</sup> According to the same maps, Wilson Ditch then drained to Prickly Pear Creek.<sup>30</sup>

148. An Anaconda plant sketch, believed to be dated September 9, 1970, also shows zinc fuming plant process water being discharged to Pond 2 (Thornock Pond) and then out through Wilson Ditch to Prickly Pear Creek.<sup>31</sup>

149. Expert Davis testified that Anaconda's process water transported through the unlined Wilson Ditch contributed to the groundwater contamination in the area.

150. A letter from the Army Corps of Engineers to Anaconda dated July 29, 1971, stated that Anaconda's facility was identified as the source of a discharge or deposit of refuse matter into Prickly Pear Creek.<sup>32</sup>

#### **H. Leaking Cooling Circuit Pipe**

151. Anaconda pumped 2,000 gallons of water per minute through its

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<sup>29</sup> Ex. 461-0004 and 461-0005.

<sup>30</sup> Ex. 461-0004 and 461-0005..

<sup>31</sup> Ex. 441.

<sup>32</sup> Ex. 107.

cooling water circuit up to 1964.

152. In 1964, Anaconda installed a new pump and began pumping 5,000 gallons per minute of water through its cooling water circuit, which continued at this rate until the end of Anaconda's operations in 1972.

153. The cooling water circuit leaked. Anaconda documents indicate that approximately 60 million gallons of cooling circuit water was lost each year "through evaporation, leakage and general use where it is not returnable."<sup>33</sup>

154. Anaconda used a 12-inch, 600-foot steel pipe and pump system to convey cooling water from Lower Lake up to the zinc fuming plant.

155. In a February 1, 1965 internal Anaconda Memorandum, A. B. Kane, superintendent of the zinc fuming plant, noted that Anaconda planned to replace this pipe in the next year after discovering the pipe metal had become thin and was leaking in multiple locations: "A new 12" water line will be installed to replace the 600' line that was put in when the plant was built. We have found several leaks in the present line and detected the metal is getting thin."<sup>34</sup>

156. Anaconda's cooling water intake from the pump at the base of this pipe was measured as containing arsenic at 0.1933 ppm, which is also noted as

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<sup>33</sup> Exs. 88, 447.

<sup>34</sup> Ex. 99.



being above the public health service drinking water standards in 1970.<sup>35</sup>

157. In addition, in a December 21, 1961 letter from A. B. Kane, Anaconda noted that the cooling water pump that had been used to pump water from Lower Lake to the plant since 1927 had holes in it: “The pumps were installed in 1927 when this plant was built and had been used in Anaconda before that. They are 60 years old and quite worn out. Just recently we had one of these pumps repaired and discovered that the impeller had holes worn in it and the rings between the impeller and the casing were worn.”<sup>36</sup>

158. It is the opinion of expert Davis that Anaconda’s process water, which leaked from this supply pipe, contained arsenic and migrated to the groundwater at the Site.

**I. The Unlined Return Ditch to Lower Lake**

159. Anaconda constructed and used a second unlined ditch to return its cooling water from the zinc fuming furnace to Lower Lake.

160. The water was pumped from the furnace area in a pipe for a distance of approximately 50 feet, and then was delivered back to Lower Lake through an open ditch via gravity flow. The location of this return ditch from the zinc fuming

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<sup>35</sup> Ex. 422 at 422-0001.

<sup>36</sup> Ex. 92.

plant to Lower Lake was marked on aerial photographs admitted at trial.<sup>37</sup> The return water was warmer in temperature than the inflow water. Thus, as the marked aerial photographs indicate, the return water was delivered to a different location in Lower Lake than the intake cooling water pipe and pumphouse.

161. Anaconda measured the flow in this ditch and reported that water was pumped through this unlined ditch at a rate of 3,200 gallons per minute as of December 31, 1961.<sup>38</sup>

162. Anaconda continuously used this unlined ditch throughout its 45 years of operation.

163. Expert Davis testified that the return water contained arsenic and percolated through the base of this ditch during transit and ultimately reported to the groundwater.

164. A sample taken from a well at the top of this ditch marked as sample ZP-01 is noted as showing “moderately high levels of arsenic and metals. Total and dissolved arsenic range from a high of 42 mg/L and 16 mg/L, respectively.”<sup>39</sup>

165. The sample is also noted as being “contained in an unlined ditch, and

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<sup>37</sup> Ex. 451A; Ex. 451C.

<sup>38</sup> Ex. 92.

<sup>39</sup> Ex. 415 at 415-0079 and 415-0195.

infiltrates into the ground prior to discharge to Lower Lake.”<sup>40</sup>

166. Expert Hansen testified that the dissolved arsenic level is the amount of arsenic that would infiltrate through the soils and end up in the groundwater.

**J. Furnace Leaks From Water Jackets**

167. Anaconda’s blast furnace was cooled by water jackets, and the flue transporting materials from the furnace to the bag house included a section of water jackets located above the tapping platform, which led from the furnace outlet into a brick section, where water sprays were used to further cool the gases. Anaconda pumped approximately 2,000 gallons of water per minute from Lower Lake to cool its furnace and flue jackets.

168. The exterior of Anaconda’s water jackets for the fuming furnace and flues had ruptures and leaks during its years of operation. In fact, in a September 12, 1966 letter, Anaconda reported, “. . . we were plagued with many forced shutdowns because of water jacket leaks, cooling water pump trouble and coal valve failures.”<sup>41</sup>

169. In addition, Anaconda used open troughs as part of their cooling loop at the top of the furnace where cooling water was exposed to metals in the slag and

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<sup>40</sup> Ex. 415 at 415-0194.

<sup>41</sup> Ex. 100.

emissions in the air. The water in these open troughs would have encountered spillage or emissions from the smelting slag and contain arsenic from those materials.

170. In an April 24, 1952 letter from the State of Montana Industrial Accident Board to Anaconda, it was noted in regards to the furnace that “[t]here was a leak in the water wall that was allowing the cooling water to enter the slag. This was causing boiling and splattering of the slag as it was tapped from the furnace.” This same letter noted that the area around the coal dock and dryer was “extremely dusty and can stand to have a good deal of work done on it to make it into a modern installation.”<sup>42</sup>

171. It is the opinion of expert Davis that Anaconda’s cooling water came into contact with arsenic and other metals through this process, and when the cooling water leaked, it ran through unlined ponds and ditches and migrated to groundwater contributing appreciably to the arsenic contamination of groundwater at the Site.

**K. Lower Lake (Pond 1)**

172. Lower Lake was unlined during Anaconda’s operations.

173. Anaconda used Lower Lake water and discharged its used cooling

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<sup>42</sup> Ex. 436 at 436-0001 (¶ 3).

water back into Lower Lake throughout all 45 years of its operations.

174. Lower Lake is a primary source of one of the two major arsenic groundwater plumes at the Site.

175. Anaconda pumped an average of 1.15 million gallons of cooling water per year to and from Lower Lake.

176. Through this process, Lower Lake received releases of arsenic and other metals from Anaconda's cooling water, which had come into contact with those metals at various points in the cooling circuit as described above.

177. Expert Davis testified that Lower Lake produced the hydraulic head that drove groundwater and affiliated contamination to the north under the slag pile and to the northwest under the City of East Helena, and was a major contributing factor to the arsenic plume in this area.

178. Based on the foregoing findings of fact, the Court has determined that the operations of Anaconda's zinc fuming plant contributed arsenic to the groundwater to an extent that a percentage of allocation should be assigned to Atlantic Richfield for the costs incurred by Asarco pursuant to the June 2009 CERCLA Consent Decree and Settlement.

## **V. TESTIMONY OF THE EXPERTS**

179. Before proceeding to the subject of allocation, the Court will

summarize the opinions of the two primary experts in this case, and the manner in which these opinions factor into the Court's analysis.

180. As previously indicated, Asarco's primary expert is Dr. Andy Davis. Dr. Davis has a B.S. Degree in Applied Biology from Liverpool Polytechnic, a M.S. Degree in Environmental Sciences (Geochemistry) from the University of Virginia, and a Ph.D. Degree in Geology (Geochemistry) from the University of Colorado. Atlantic Richfield's primary expert is Brian G. Hansen. Mr. Hansen has a B.S. Degree in Geology from Fort Lewis College, and a M.E. Degree in Geological Engineering from the Colorado School of Mines. Both experts performed a considerable amount of work in preparing their opinions in this case, and, of interest, both experts have previously performed consulting work for the other party. Both have extensive experience in addressing issues similar to those involved in this matter, and both experts were credible. However, their respective approaches to the case differed in significant respects.

**A. The Opinions of Dr. Davis**

181. In general, expert Davis looked at the relative contributions of both Asarco and Anaconda to the groundwater contamination at the Site, and determined what he believed to be three different allocation strategies.

Notwithstanding the fact that years of environmental studies have been conducted

at this Site, many under the direction of the Environmental Protection Agency, it is the Court's belief that the work of expert Davis in this case represents the only truly comprehensive analysis to date of the contribution that was made by Anaconda's historical operations at the Site to groundwater contamination. His opinions were based upon a thorough review of all the documents produced in discovery, and the actual history of Anaconda's operations. Many of these documents, some of which are described in Section IV above, were never provided by Anaconda or Atlantic Richfield to the state and federal regulators. Davis carefully analyzed and mapped the arsenic plume as it is currently believed to be configured, and for purposes of Anaconda's contribution of contaminants to the groundwater, delineated two plumes, which he describes as the Northwest Plume (consisting of 3,530,000 sq. ft.) and the North Plume (consisting of 5,660,000 sq. ft.).<sup>43</sup>

182. Based on his analysis, Davis proposes the following three allocation strategies for the Court's consideration, which are generally based on the geographic areas (measured in square feet) of the North and Northwest Plumes, as detailed in the immediately preceding paragraph.<sup>44</sup>

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<sup>43</sup> Demonstrative Exs. 488-0037, 488-0037A, 488-00037B, 488-00038 and 488-00043.

<sup>44</sup> Demonstrative Ex. 519.

Strategy	Allocation (%)	
	Anaconda/Atlantic Richfield	Asarco
I	34	66
II	41	59
III	25	75

183. Strategy I assumes that a pump-and-treat system would be employed to address the arsenic plume. Thus, five wells would be required at the property boundary, one in the northwest plume and four to capture the north plume. Davis assigns responsibility to Anaconda or Atlantic Richfield for 50% of the north plume, or 1,420,000 sq.ft., relating to contributions from Lower Lake, and an additional 370,000 sq. ft., or 20% of the northwest plume for the Thornock Pond and Lake area contributions, for a total of 1,790,000 sq. ft. Out of the total 5,230,000 sq.ft. at the Site, this results in a total allocation of 34% to Anaconda or Atlantic Richfield, and 66% to Asarco. Strategy I does not include any adjustment for the time periods of ownership of the respective parties, and does not consider any potential offsite remediation that may be required by EPA.

184. Strategy II allocates equal responsibility for discharges without consideration for the periods of ownership over the entire plume area as opposed



to the site-specific contamination utilized in Strategy I. Under this scenario, Davis assigns to Atlantic Richfield 50% of the north plume, or 2,830,000 sq. ft., and 50% of the Thornock Pond and Lake area plume, or 930,000 sq. ft., for a total of 3,760,000 sq. ft. This results in a total allocation of 41% to Anaconda or Atlantic Richfield, and 59% to Asarco.

185. Strategy III is similar to Strategy II, but includes consideration of the respective periods of ownership of the parties. Anaconda discharged arsenic-contaminated water into Lower Lake for 45 years, from 1927 to 1972. Based on this period of use, Davis attributes 30% percent, or 1,730,000 sq. ft. of the north plume to Atlantic Richfield, corresponding to a 19% allocation. Because the Thornock Pond and Lake area was used by both Asarco and Atlantic Richfield, for 21 years, from 1951 to 1972, Davis concludes that Atlantic Richfield is responsible for 19%, or 660,000 sq.ft., of the northwest plume. In total, Atlantic Richfield is responsible for 2,390,00 sq. ft., or in aggregate, 25% of the total plume. This results in a total allocation of 25% to Anaconda or Atlantic Richfield, and 75% to Asarco.

186. Davis recommends Strategy II, because it is uncertain whether EPA will require some form of groundwater remediation at the Site, which is an assumption in Strategy I. Davis disfavors Strategy III because he thinks it

underestimates Anaconda's releases of arsenic to the groundwater. In any event, Davis argues that all three of these allocation strategies are conservative and favor Atlantic Richfield, because the focus of these three strategies is only on the contamination from Lower Lake and the Thornock Pond and Lake area, and excludes other sources of groundwater contamination caused by Anaconda's operations detailed in Section IV above.

**B. The Opinions of Mr. Hansen**

187. Expert Hansen employed a different approach in analyzing this case. Although he concedes that Anaconda's zinc fuming operations generated arsenic-bearing contaminants, he concludes that METG's remediation efforts are directed to remediating only Asarco's contribution to the contaminated groundwater, and that the remediation efforts made before the June 2009 CERCLA Consent Decree and Settlement addressed and alleviated any contribution of arsenic made by Anaconda at the Site.

188. Hansen focuses on the operations of Asarco, and endeavors to distinguish them from those of Anaconda, thereby minimizing Anaconda's responsibility. For example, Hansen argues that it is not scientifically possible for the concentrations of arsenic in the materials involved in Anaconda's operation, being coal and zinc fume, to have caused the levels of contamination observed at

the Site. Hansen specifically refers to coal, the fuel used in the zinc fuming operation, which has a concentration of 6 ppm of arsenic, and zinc fume, which has a concentration of 3,500 ppm of arsenic, and concludes that these sources of arsenic could not be the cause of the contamination of 120,000 ppm of arsenic found in the sediments underlying the Thornock Pond and Lake area. The logic of this approach is superficially compelling, but ignores the multiple sources of arsenic-bearing contaminants that Anaconda contributed to this Site over the 45 years of its operations. In fact, it was clear to the Court during expert Hansen's cross-examination, that he had failed to consider many of the historical documents referenced in Section IV above that document Anaconda's discharge of arsenic to the atmosphere and groundwater, including the extensive use by Anaconda in its operations of arsenic-laden waters from Lower Lake for 45 years.

189. Regardless, expert Hansen concludes that the allocation percentage to be assigned to Atlantic Richfield is zero.

## **VI. ALLOCATION**

190. One could characterize the conflicting opinions of these two experts as leaving the Court with an "all or nothing" scenario. However, as explained in paragraphs 14, 45, 47 and 50 of the Conclusions of Law section of this order, mathematical certainty in determining the percentage of allocation is rarely

possible, with the court having broad discretion in allocating response costs among liable parties using such equitable factors as the court deems appropriate under the circumstances of the case. These equitable factors will be addressed later in this order.

191. The Court has carefully considered all of the evidence in this case, paying particular attention to the opinion testimony of the two experts summarized in Section V above. As between experts Hansen and Davis, the Court finds the opinions of expert Davis to be compelling and persuasive. Regarding the three allocation strategies proposed by Davis, the Court adopts Strategy III as the appropriate method of allocation, for the simple reason that it is the only strategy that includes the time periods of ownership, which the Court determines to be one of the important factors to be considered in determining allocation. It is not enough to consider only Asarco's contribution of arsenic to this site, as urged by Atlantic Richfield. Expert Davis was the only witness at trial who was qualified by education, training, experience, and the work he performed in this case, to quantify the contribution of arsenic made by Anaconda's 45 years of operation at the Site. Atlantic Richfield's strategy of incessantly focusing on Asarco's operations, while ignoring or minimizing Anaconda's operations, leaves the

majority of expert Davis's opinions largely unchallenged.<sup>45</sup>

192. Therefore, the Court determines that Atlantic Richfield's equitable share of the response costs paid by Asarco under the June 2009 CERCLA Consent Decree and Settlement is 25%. The amount of the response costs subject to this 25% allocation is addressed in the Conclusions of Law, Section II below.

## **VII. ANACONDA MISLED THE EPA REGARDING ITS RELEASES AT THE SITE**

193. From 1987 to 1990, Anaconda received four letters from the EPA either requesting information in the form of a 104(e) letter, or putting Atlantic Richfield on special notice of its liability for response costs under CERCLA as a PRP at the Site.<sup>46</sup>

194. Mr. Krablin assisted Anaconda in responding to the EPA's CERCLA 104(e) requests. Although Mr. Krablin is no longer employed by Atlantic Richfield, he was present throughout the trial and seated at counsel table as Atlantic Richfield's corporate representative, and during the time period in question, Krablin's title was an environmental engineer. Krablin was at the Site

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<sup>45</sup> To be fair, Atlantic Richfield does propose three alternative allocation approaches in its proposed amended post-trial findings of fact and conclusions of law (Doc. 267, ¶ 54). The Court has considered the three options proposed by Atlantic Richfield in this single paragraph in reaching its conclusion regarding the appropriate percentage of allocation.

<sup>46</sup> Exs. 184; 185; 408; and 419.

only once during his entire career with Anaconda, in 1971. He also testified twice during the trial, once in Asarco's case in chief, and later during Atlantic Richfield's case in chief. During cross-examination by Asarco's counsel, Krablin was at times evasive and his answers were frequently non-responsive. The Court was required on occasion to admonish Krablin to directly answer questions. Krablin was also the corporate representative who attested to Atlantic Richfield's discovery responses in this case.

195. On March 12, 1987, Anaconda received its first letter from the EPA which requested information pursuant to Section 104(e) of CERCLA, 42 U.S.C. § 6901(e).<sup>47</sup>

196. The March 12, 1987 letter sought, among other things, the following information from Anaconda: "A narrative explaining the facility's operation throughout your period of ownership/operation. Please document all chemical constituents used in your treatment process and disposal methods practiced for any wastes or by-products. This should include copies of all existing documents relating to the subjects listed above."<sup>48</sup>

197. In response, Anaconda failed to provide documents to the EPA

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<sup>47</sup> Ex. 184.

<sup>48</sup> Ex. 184 at 184-0002.

relating to Anaconda's disposal methods that were responsive to this request, including: (a) a document describing particulate discharge from the baghouse (Ex. 425); (b) a letter from the U.S. Army Corps of Engineers regarding Anaconda's illegal discharges of waste to Prickly Pear Creek (Ex. 107); (c) an internal Anaconda Company Memorandum regarding emissions of coal dust (Ex. 173); (d) an internal Anaconda document that indicated that Anaconda lost 60 million gallons of arsenic-containing water through evaporation, leakage and general use (Ex. 447); and (e) an internal Anaconda Company document regarding leaks from the furnace (Ex. 103).<sup>49</sup>

198. Anaconda also failed to disclose any communications between Anaconda and the State of Montana health officials regarding emissions of pollution from the Anaconda zinc fuming facility, which were responsive to the 104(e) letter.

199. The March 12, 1982, the 104(e) request also asked Anaconda to identify the names of employees who were interviewed for purposes of responding to the request.<sup>50</sup> In response, Anaconda stated that it did not interview any of its

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<sup>49</sup>All of the documents referenced in this section were in Anaconda's files and available for production to the EPA.

<sup>50</sup> Ex. 184.

former employees to find information responsive to the May 12, 1987, 104(e) request.<sup>51</sup>

200. On February 8, 1990, the EPA sent Anaconda a follow-up 104(e) request which stated that “EPA is trying to construct a data base of materials and processes pertaining to the industrial activities that took place and are taking place at the site. For the data base to be complete and accurate, EPA needs complete records of your industrial operations at East Helena.” That request also sought “any records . . . of annual primary and fugitive emissions” from Anaconda’s operations or the “best estimates” of such emissions.<sup>52</sup>

201. Anaconda responded to that letter on March 15, 1990. In that response, Anaconda falsely claimed that: “Generally, annual emission records were not available for the period of Anaconda Company’s operations of the zinc fuming plant.”<sup>53</sup>

202. Anaconda had in its possession documents that indicated Anaconda lost 60 million gallons of arsenic-containing water through evaporation, leakage and general use annually, which were responsive to the February 8, 1990 request,

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<sup>51</sup> Ex. 407 at 407-0003.

<sup>52</sup> Ex. 408 at 408-0001 and 408-0003.

<sup>53</sup> Ex. 459 at 459-0003.



but Anaconda did not disclose those documents to the EPA.

203. On February 23, 1990, the EPA sent Anaconda a Special Notice Letter pursuant to CERCLA Section 122, 42 U.S.C, § 9622, which formally demanded that Anaconda reimburse the EPA for all costs it incurred in connection with response actions at the East Helena Site.<sup>54</sup>

204. On April 25, 1990, Atlantic Richfield responded to the Special Notice Letter. In that response, Atlantic Richfield made the following misrepresentation: “Cooling water was pumped from Lower Lake through a closed transport piping system to non-contact cooling cells in the furnace and then discharged back to the Lower Lake through a closed piping system.”<sup>55</sup>

205. Atlantic Richfield knew, at the time it sent its April 25, 1990 letter, that the cooling water pumped from Lower Lake was not discharged back to Lower Lake through a closed piping system but was instead discharged through an open and unlined ditch.

206. Atlantic Richfield never contacted the EPA to correct this false statement.

207. On April 26, 1990, Atlantic Richfield sent the EPA another letter

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<sup>54</sup> Ex. 185.

<sup>55</sup> Ex. 113 at 113-003l.

containing two affidavits, one by former Anaconda employee Walter H. Unger and another by former Anaconda employee A.B. (Bert) Kane, who was the former zinc plant superintendent.<sup>56</sup>

208. The Unger Affidavit contained the following false and misleading statement: “The system was designed so that no cooling water would escape from the closed-loop system and so that no material would be discharged into the cooling water. The heated water was then returned to Lower Lake. The system was designed such that the water that was being returned to Lower Lake from the cooling system would contain only those materials that were in the water when it was removed from Lower Lake.”<sup>57</sup>

209. The Kane Affidavit contained the following false and misleading statement: “The water was kept in its own piping system and was designed so that no cooling water would escape from the system and so that no material would be discharged into the cooling water.”<sup>58</sup> These two affidavits were the subject of extensive testimony at trial. Krablin reviewed these affidavits before they were submitted to the EPA. During his cross-examination at trial, Krablin labored to

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<sup>56</sup> Ex. 156.

<sup>57</sup> *Id.* at Ex. 156-0003.

<sup>58</sup> *Id.* at Ex. 156-0004.

parse the words in these affidavits by attempting to explain, on multiple occasions, that these affidavits referred to the cooling system within the zinc fuming plant itself, and did not refer to the overall cooling water system, which involved the pumping of arsenic-contaminated water from Lower Lake to the furnace area, and the return of arsenic-laden process water from the furnace area back to Lower Lake through a lengthy, open, unlined ditch. In viewing these two affidavits, and listening to the testimony of Krablin, the Court has concluded that the intent of these affidavits was to mislead the EPA into believing that there was no loss of process water in connection with Anaconda's operations. As previously explained, the process water came from, and returned to Lower Lake. The pumps associated with this process leaked, the pipeline from Lower Lake to the zinc fuming plant furnace leaked, and the return open, unlined ditch to Lower Lake obviously leaked water. This water contained high levels of arsenic, and serves as one of the primary sources of groundwater contamination caused by Anaconda's operations.

210. The Court was further confused and perplexed by Krablin's testimony on this subject when he attempted to explain his conflicting answers regarding the import of these two affidavits by contending that he did not appreciate the distinction between an affidavit and a declaration. In any event, during cross-

examination, Krablin ultimately admitted that if Unger and/or Kane represented in their affidavits that it was a closed piping system, those representations would have been false.

211. On May 15, 1990, the EPA sent a letter to Atlantic Richfield explaining that it determined that “ARCO is a potentially responsible party for the Process Ponds Operable Unit at the East Helena Site.”<sup>59</sup>

212. The May 15, 1990 letter from the EPA also concluded that there were “elevated concentrations of heavy metals in water being discharged from the zinc fuming plant into Lower Lake.”<sup>60</sup>

213. On May 21, 1990, Atlantic Richfield responded to the EPA and made the following misleading claim: “Even assuming that the non-contact discharge water contained elevated concentrations of metals, no evidence exists that these metals were added by the non-contact cooling water system. Rather, the concentrations of metals discharged in the non-contact cooling water were the same as those in the withdrawal from Lower Lake.”<sup>61</sup>

214. Anaconda and Atlantic Richfield made multiple false and misleading

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<sup>59</sup> Ex. 419 and 419-0002.

<sup>60</sup> Ex. 419 at 419-0001.

<sup>61</sup> Ex. 186 at 186-0008.

statements to the EPA regarding its discharges to and its use of cooling water from Lower Lake.<sup>62</sup>

215. Based on Atlantic Richfield's deliberate failure to tell the EPA the truth about its operations, EPA looked solely to Asarco to conduct remedial action at the Site.<sup>63</sup>

216. Additionally, based on Atlantic Richfield's misrepresentations during the subsequent clean-up investigations and issuance of environmental reports, the EPA and later METG, focused on Asarco's operations, and overlooked the contributions of Anaconda's zinc fuming facility. This focus on Asarco's operations, and not Anaconda's, to determine the sources of contamination to the groundwater was exacerbated by the fact that the zinc fuming facility ceased operations in 1982. The subsequent environmental investigations and reports were thus focused on the only operational facility at the Site, which was Asarco's.

217. Atlantic Richfield also repeated those false statements when responding to discovery in this case. In its December 23, 2013 response to Asarco's Request for Admission Number 5, Atlantic Richfield stated the following: "the zinc fuming plant utilized a closed-loop, non-contact cooling water

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<sup>62</sup> Exs. 113 & 156.

<sup>63</sup> Ex. 35 at 35-0019.

system to control the temperature of the furnace and reduce the temperature of zinc oxides and other gases before entry to the baghouse . . . . The cooling water system did not result in contaminant loading to Lower Lake.”<sup>64</sup>

218. At the time Atlantic Richfield provided its response to Asarco’s Request for Admission Number 5, Atlantic Richfield had documents in its possession that showed that Anaconda returned cooling water to Lower Lake via an open ditch, not a closed-loop, non-contact cooling water system.

219. Within days following the deposition of Richard Krablin, Atlantic Richfield amended its response to Asarco’s Request for Admission Number 5, as well as other discovery responses by stating the following: “certain information provided in deposition testimony indicates that the closed-loop, non-contact cooling water system described in Atlantic Richfield’s Previous Responses was modified after construction, but prior to December 21, 1961 to return cooling water from the zinc fuming plant to Lower Lake via an open ditch rather than a closed pipe.”<sup>65</sup>

220. The foregoing misrepresentations by Anaconda constitute a lack of cooperation on the part of Anaconda with the EPA, warranting consideration by

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<sup>64</sup> Ex. 482 at 482-0006.

<sup>65</sup> Ex. 487 at 487-0002 – 487-0003.

the Court of an uncertainty premium or error factor under the sixth Gore Factor, which will be addressed in the following Conclusions of Law.

### **CONCLUSIONS OF LAW**

1. This Court has subject matter jurisdiction based upon the existence of a federal question, 28 U.S.C. § 1331, and Section 113(b) of CERCLA, 42 U.S.C § 9613(b).

2. CERCLA § 113(f) allows “[a] person who has resolved its liability to the United States . . . for some or all of a response action or for some or all of the costs of such action in an administrative or judicially approved settlement” to seek contribution from other potentially responsible persons. 42 U.S.C. § 9613(f)(3)(B).

3. CERCLA has two primary policy goals: (1) to encourage the “expeditious and efficient cleanup of hazardous waste sites,” and (2) to ensure that those responsible for hazardous waste contamination pay for the cleanup. *Asarco LLC v. Atl. Richfield Co.*, 866 F.3d 1108, 1115 (9th Cir. 2017). In keeping with these policy goals, CERCLA § 113 provides for reimbursement of costs incurred by a party that overpaid for its share of the cleanup. *Id.* at 115.

4. In analyzing the merits of a contribution claim under § 113(f) of CERCLA, courts must conduct a two-part inquiry: “First, the court must determine

whether the defendant is ‘liable’ under CERCLA § 107(a); Second, the court must allocate response costs among liable parties in an equitable manner.” *United States v. Kramer*, 644 F. Supp. 2d 479, 488-89 (D.N.J. 2008) (quoting *Goodrich Corp. v. Town of Middlebury*, 311 F.3d 154, 168 (2d Cir. 2002)).

5. The burden of proof in a CERCLA case is a preponderance of the evidence. *Georgia-Pacific Consumer Products LP v. NCR Corp.*, 980 F. Supp. 2d 821, 829 (W.D. Mich. 2013).

**I. ATLANTIC RICHFIELD’S LIABILITY UNDER CERCLA § 107(a)**

6. In order to establish a *prima facie* case for liability under CERCLA § 107(a), the plaintiff must prove the following four elements:

- a. The site on which the hazardous substances are contained is a “facility” under CERCLA’s definition of that term, Section 101(9), 42 U.S.C. § 9601(9);
- b. A “release” or “threatened release” of any “hazardous substance” from the facility has occurred, Section 107(a), 42 U.S.C. § 9607(a)(4);
- c. Such “release” or “threatened release” has caused the plaintiff to incur response costs that were “necessary” and “consistent with the national contingency plan,” Section 107(a), 42 U.S.C. §§ 9607(a)(4)



and (a)(4)(B); and

- d. The defendant is within one of four classes of “persons” subject to the liability provisions of Section 107(a).

*City of Colton v. Am. Promotional Events, Inc.-West*, 614 F.3d 998, 1002-1003 (9th Cir. 2010).

**A. Anaconda’s Zinc Fuming Plant is a “Facility” Under CERCLA**

7. Under Section 101(9) of CERCLA, the term “facility” means:

(A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

8. The East Helena Superfund Site, including Anaconda’s zinc fuming furnace, flues, bag house, water pipes, process ponds, and other appurtenances, is a “facility” within the meaning of Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

**B. Anaconda “Released” a “Hazardous Substance” at the Site**

9. A “release” means, in pertinent part, “any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment . . .” Section 101(22) of CERCLA, 42 U.S.C.

§ 9601(22).

10. A “hazardous substance” is defined under CERCLA to include arsenic. Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); 49 C.F.R. § 172.101, App. A.

11. Anaconda is responsible for disposals or “releases” within the meaning of Section 101(22) of CERCLA, 42 U.S.C. § 9601(22), into the environment at or from the East Helena Site.

12. “Hazardous substances” within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), including but not limited to arsenic, were disposed of, placed, released, or otherwise became located at the East Helena Site by and because of Anaconda and its zinc fuming operations.

**C. Anaconda’s “Release” at the Site Caused Asarco to Incur “Necessary” Response Costs Consistent with the National Contingency Plan (“NCP”)**

13. For a response cost claim, a plaintiff “need not establish a direct causal connection between the hazardous substance released by the Defendants and the incurrence of response costs.” *Coeur D’Alene Tribe v. Asarco Inc.*, 280 F. Supp. 2d 1094, 1124 (D. Idaho 2003) (citing *U.S. v. Alcan Aluminum Corp.*, 964 F.2d 252 (3rd Cir. 1992)).

14. Once a party is liable, it is required to share the costs of response

regardless of whether it is the sole cause of those costs. *Boeing v. Cascade*, 207 F.3d 1177, 1185–1186 (9th Cir. 2000).

15. “A CERCLA contribution plaintiff is not required to prove its case with ‘mathematical precision’ or ‘scientific certainty;’ rather, it must prove its right to contribution by a preponderance of the evidence.” *Asarco LLC v. NL Industries, Inc.*, 106 F. Supp. 3d 1015, 1026 (E.D. Mo. 2015) (citations omitted).

16. CERCLA liability may be inferred from the totality of the circumstances; it need not be proven by direct documentary evidence. *NL Industries, Inc.*, 106 F. Supp. 3d at 1026; *Georgia-Pacific Consumer Products LP v. NCR Corp.*, 980 F. Supp. 2d 821, 829 (W.D. Mich. 2013) (citing *Tosco Corp. v. Koch Indus., Inc.*, 216 F.3d 886, 892 (10th Cir. 2000)); *Alcan.*, 964 F.2d 252 (holding that “virtually every court that has considered this question has held that a CERCLA plaintiff need not establish a direct causal connection between the defendant’s hazardous substances and the release or the plaintiff’s incurrence of response costs.”)

17. The Court must construe the CERCLA statute “liberally to avoid frustration of the beneficial legislative purposes” of protecting and preserving public health and the environment. *NL Industries, Inc.*, 106 F. Supp. 3d at 1026

(citing *U.S. v. Mallinckrodt, Inc.*, 2006 WL 3331220, at \*3 (E.D. Mo. Nov. 15, 2006).

18. Asarco produced substantial and convincing evidence establishing that releases occurred at the Anaconda zinc fuming furnace and flues, at the Anaconda bag house, at the Anaconda slag and coal dumps, through leaking cooling water pipes, and at the unlined process ponds and ditches utilized by Anaconda for cooling and wash-down water, including but not limited to Lower Lake, Thornock Pond and Lake, and Wilson's Ditch.

19. Asarco produced substantial and convincing evidence establishing that these Anaconda releases resulted in the migration of arsenic into the groundwater, which directly contributed to the arsenic plumes that are driving the East Helena Site cleanup.

20. Because Asarco has established that there were several plausible migration pathways via which arsenic released by the Anaconda zinc fuming operations migrated into the groundwater and contributed to the arsenic plume that is driving the East Helena Site cleanup, Asarco has met its burden on causation. Atlantic Richfield has not presented any compelling evidence that disproves Anaconda's causation.

21. Response costs are considered necessary when "an actual and real

threat to human health or the environment exist[s].” *City of Colton*, 614 F.3d at 1003 (citing *Carson Harbor Village, Ltd v. Unocal Corp.*, 270 F.3d 863, 870-71 (9th Cir. 2001) (en banc)).

22. Response costs are considered consistent with the NCP “if the action, when evaluated as a whole, is in substantial compliance” with it. *City of Colton*, 614 F.3d at 1003; 40 C.F.R. § 300.700(c)(3)(i).

23. The NCP “is designed to make the party seeking response costs choose a cost-effective course of action to protect public health and the environment.” *City of Colton*, 614 F.3d at 1003 (quoting *Carson Harbor Village LTD. v. County of Los Angeles*, 433 F.3d 1260, 1265 (9th Cir.2006)).

24. Where costs are incurred pursuant to an Administrative Order issued by the EPA or a Consent Order between the plaintiff and the EPA, there is an irrebuttable presumption that those costs are consistent with the NCP. 40 C.F.R. § 300.700 (c)(3)(ii); *Central Me. Power Co. v. F.J. O’Connor Co.*, 838 F. Supp. 641, 648 (D. Me. 1993); *Action Mfg. Co. v. Simon Wrecking Co.*, 2008 WL 2880324 (3rd Cir. 2008) (unpublished) (citing *Bancamerica Commercial Corp. v. Mosher Steel of Kansas, Inc.*, 100 F.3d 792, 796-97 (10th Cir. 1996)).<sup>66</sup>

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<sup>66</sup> This issue was the subject of pretrial briefing by the parties. See “Defendant Atlantic Richfield Company’s Point Brief Regarding Asarco’s Burden of Proof on Response Costs” (Doc. 241), and “Asarco’s Response in Opposition to Defendant Atlantic Richfield Company’s Point

25. Costs arising from RCRA compliance can be recovered in a CERCLA action, and work performed under a RCRA order or consent decree may still be consistent with the NCP such that the associated costs may therefore still be recoverable under CERCLA. *U.S. v. E.I. du Pont de Nemours & Co.*, 341 F. Supp. 2d 215, 235-37 (W.D.N.Y. 2004);

26. The EPA has stated that “even if a party takes a cleanup action under an authority other than CERCLA (*e.g.*, RCRA corrective action), it may have a right of cost recovery under CERCLA Section 107 if the action was a necessary response to a release of hazardous substances, and was performed consistent with the NCP.” Nat’l Oil and Hazardous Substances Pollution Contingency Plan, 55 Fed. Reg. 8666-01, 8796 (Mar. 8, 1990).

27. Asarco paid \$111.4 million in response costs for the East Helena Site pursuant to the June 2009 CERCLA Consent Decree, which constitutes a Consent Order between the Plaintiff and the United States.

28. The response costs incurred by Asarco for the East Helena Site pursuant to the June 2009 CERCLA Consent Decree, and the subsequent remediation measures paid for out of those response costs and implemented by the METG with the EPA’s oversight, are necessary and consistent with the National

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Brief” (Doc. 256).

Contingency Plan.

29. The remediation at the Site, funded by the June 2009 CERCLA Consent Decree, is and has been primarily focused on remediation of the groundwater plumes. This work is necessary to remediate Anaconda's releases of arsenic into the groundwater.

30. Anaconda's releases at the Site caused Asarco to incur response costs that were necessary and consistent with the National Contingency Plan.

**D. Atlantic Richfield is Within the Classes of Persons Subject to Section 107(a) Liability**

31. The term "person" means "an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, United States Government, State, municipality, commission, political subdivision of a State, or any interstate body." Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

32. The four classes of persons subject to CERCLA's Section 107(a) liability provisions include, in pertinent part: "(1) the owner and operator of . . . a facility, (2) any person who at the time of disposal of any hazardous substance owned or operated any facility at which such hazardous substances were disposed of, (3) any person who by contract, agreement, or otherwise arranged for disposal

or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, by any other party or entity, at any facility or incineration vessel owned or operated by another party or entity and containing such hazardous substances, and (4) any person who accepts or accepted any hazardous substances for transport to disposal or treatment facilities, incineration vessels or sites selected by such person, from which there is a release, or a threatened release which causes the incurrence of response costs, of a hazardous substance . . . .” Section 107(a) of CERCLA, 42 U.S.C. § 9607(a)(1–4).

33. CERCLA imposes “strict liability for environmental contamination” upon these four classes of potentially responsible parties. *BNSF v. U.S.*, 556 U.S. 599, 608 (2009).

34. A showing by a contribution plaintiff that a defendant falls into just one of these categories is sufficient to establish liability. *Control Data Corp. v. S.C.S.C. Corp.*, 53 F.3d 930, 934 (8th Cir. 1995).

35. Corporate successors to owners or operators of a facility succeed to those entities’ CERCLA liabilities. *Atchison T. & S.F. Ry. v. Brown & Bryant, Inc.*, 159 F.3d 358, 361 (9th Cir. 1997).

36. Atlantic Richfield is a “person,” within the meaning of Section



101(21) of CERCLA, 42 U.S.C. § 9601(21).

37. Anaconda is a former “owner” and/or “operator” of a “facility” pursuant to Sections 101(9) and (20) and 107(a)(2) of CERCLA, 42 U.S.C. §§ 9601(9) and (20) and 9607(a)(1) and (2).

38. Anaconda is a person who is liable for owning and/or operating facilities at or from which hazardous substances were disposed under 42 U.S.C. § 9607(a)(2), for arranging transport or disposal of hazardous substances under 42 U.S.C. § 9607(a)(3), and for transporting hazardous substances in or near the East Helena Site under 42 U.S.C. § 9607(a)(4).

39. Atlantic Richfield, as Anaconda’s corporate successor, assumes Anaconda’s CERCLA liability.

40. Because Asarco has established all of the required elements of § 107(a) liability, Atlantic Richfield is liable under § 107(a) of CERCLA, and Asarco may seek contribution pursuant to § 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f).

## **II. ATLANTIC RICHFIELD’S EQUITABLE SHARE OF CONTRIBUTION UNDER CERCLA § 113(f)**

41. Asarco has resolved its CERCLA liability for response actions with the United States through the June 2009 CERCLA Consent Decree, which

included any liability for the Site.

42. Asarco incurred \$111,403,743 in response costs that are consistent with the National Contingency Plan pursuant to 42 U.S.C. § 9607(a)(4)(B).

43. Asarco has paid more than its equitable share of costs at the Site.

44. Atlantic Richfield is liable under Section 113(f) of CERCLA, 42 U.S.C. § 9613(f), for its equitable share of Anaconda's contribution for the response costs paid by Asarco under the CERCLA Decree.

45. Courts regularly approve contribution claims made for future response costs, even where such costs are uncertain. *American Cyanamid Co. v. Capuano*, 381 F.3d 6 (1st Cir. 2004) (allocating future response costs and noting that the “fact that the monetary judgment is entered based on an estimate . . . does not on its own make that judgment unjust”); *RSR Corp. v. Commercial Metals Co.*, 496 F.3d 552 (6th Cir.2007) (permitting a contribution claim for costs that included future response costs); *PCS Nitrogen, Inc. v. Ross Development Corp.*, 4104 F. Supp. 3d 729, 743 (D.S.C. 2015) (holding that “monetary relief for future response costs may be available to [plaintiff] as part of its § 113(f)(1) claim”).

46. CERCLA mandates an equitable allocation. In formulating an allocation for contribution, the court may consider factors other than the actual amounts contributed to the Site, including “such equitable factors as the court

determines are appropriate.” Section 113(f) of CERCLA, 42 U.S.C. § 9613(f).

47. This is a “broad and loose standard” that gives the district court wide discretion, and is the type of decision particularly well suited for case-by-case analysis. *Browning-Ferris Indus. of Illinois, Inc. v. Ter Maat*, 195 F.3d 953, 957 (7th Cir. 1999); *Environmental Transp. Sys., Inc. v. Ensco, Inc.*, 969 F.2d 503, 572 (7th Cir. 1992); *Cadillac Fairview/ California, Inc. v. Dow Chemical Co.*, 299 F.3d 1019, 1027 (9th Cir. 2002), *United States v. Shell Oil Co.*, 294 F.3d 1045, 1060 (9th Cir. 2002) (decision only be reversed upon a finding of “abuse of the discretion to select factors, or for clear error in the allocation according to those factors”).

48. The Court is encouraged to apply standards of fairness and equity in awarding relief to the party that has stepped forward and settled for the cleanup of a contaminated site. *See Alcan I*, 964 F.2d at 264–266; *see also PCS Nitrogen Inc. v. Ashley II of Charleston LLC*, 714 F.3d 161 (4th Cir. 2013) (holding that the plain language of 42 U.S.C. § 9613 (f)(1) grants a court significant discretion to choose which factors to consider in determining equitable allocation of liability).

49. The creation of contribution claims and the reliance on equity stems from the fact that “[d]ue to financial constraints and other impracticalities, the EPA only focuses on a few financially viable PRPs to shoulder the *entire* cost of

the EPA's remediation or removal measures under CERCLA § 107(a)." Jason E. Panzer, *Apportioning CERCLA Liability: Cost Recovery or Contribution, Where Does a PRP Stand?*, 7 FORDHAM ENVTL. L. REV. 437 (2011). Thus, given "[t]he combination of EPA's lack of resources and its ability to utilize joint and several liability militate against EPA compilation of more comprehensive PRP lists at each site." *Id.* at 442, fn. 33 (citing Jerome M. Organ, *Superfund and the Settlement Decision: Reflections on the Relationship Between Equity and Efficiency*, 62 GEO. WASH. L. REV. 1043, 1053-54 (1994) ("[I]t is not unusual for the EPA to identify the minimum number of parties to commence an action.")). "As a result[,] the burden of remediation falls on those whom [the] EPA has identified." *Id.*

50. Mathematical precision in the allocation process is not realistic and is not part of Asarco's burden of establishing the basis for its claim of an equitable share to which it is entitled from Atlantic Richfield. *Kalamazoo River Study Group v. Rockwell Int'l, Inc.*, 107 F. Supp. 2d 817 (W.D. Mich. 2000).

51. As a plaintiff that entered into a court approved settlement with the United States, Asarco is entitled to the "benefit of the doubt as to the equitable factors and factual uncertainty in allocating" responsibility for cleanup costs. *Goodrich Corp. v. Middlebury*, 311 F.3d 154,166 (2d Cir. 2002).

52. While courts may consider any factors they deem relevant, they often use the so-called Gore Factors to guide their allocation analysis. *See Burlington N. & Santa Fe Ry. Co.*, 520 F.3d 918, 940, n.26 (9th Cir. 2008) (reversed on other grounds); *United States v. Consolidation Coal Co.*, 345 F.3d 409, 413–414 & n.1 (6th Cir. 2003); *United States v. Hercules, Inc.*, 247 F.3d 706, 718 (8th Cir. 2001), cert. denied 515 U.S. 1158, 115 S. Ct. 2609, 132 L. Ed. 2d 853 (2001); *Acushnet Co. v. Mohasco Corp.*, 191 F.3d 69, 81 (1st Cir. 1999); *Centerior Serv. Co. v. Acme Scrap Iron & Metal Corp.*, 153 F.3d 344, 354 (6th Cir. 1998); *In re Bell Petroleum Servs.*, 3 F.3d 889, 901 (5th Cir. 1993). The Gore factors include:

- a. the ability of the parties to demonstrate that their contribution to a discharge, release or disposal of a hazardous waste can be distinguished;
- b. the amount of the hazardous waste involved;
- c. the degree of toxicity of the hazardous waste involved;
- d. the degree of involvement by the parties in the generation, transportation, treatment, storage, or disposal of the hazardous waste;
- e. the degree of care exercised by the parties with respect to the hazardous waste concerned, taking into account the characteristics of such hazardous waste; and

- f. the degree of cooperation by the parties with Federal, State, or local officials to prevent any harm to public health or the environment.

*TDY Holdings LLC v. U.S.*, 885 F.3d 1142, 1146, n. 1 (9th Cir. 2018); *Matter of Bell Petroleum Services, Inc.*, 3 F.3d 889, 899–900 (5th Cir. 1993).

53. More than any other factor, cooperation touches directly upon CERCLA’s objective of prompt cleanup at the expense of responsible parties. *United States v. Consolidation Coal Co.*, 184 F. Supp. 2d 723, 751 (S.D. Ohio 2002), *aff’d in part, and vacated in part*, 345 F.3d 409 (6th Cir. 2003). With cooperation that goal is realized, but without cooperation that goal of CERCLA is thwarted. *Ibid.*

54. Courts have considered “[t]he degree of cooperation with government officials to prevent any harm to the public health or the environment as very important to a contribution analysis.” *Cent. Maine Power, Co. v. F.J. O’Connor Co.*, 838 F. Supp. 641, 646 (D. Me. 1993).

55. CERCLA § 104(e) provides the government with the means to enforce cost recovery provisions in CERCLA § 107 by enabling the EPA to obtain information regarding those responsible for hazardous waste disposal and their ability to pay for cleanup costs.

56. Specifically, CERCLA § 104(e)(1) authorizes information requests

under CERCLA § 104(e)(2) for purposes of “determining the need for response, or choosing or taking any response action under this subchapter or otherwise enforcing the provisions of this subchapter.” 42 U.S.C. § 9604(e)(1).

57. Indeed, “[t]he EPA’s use of information request letters is the cornerstone of the Superfund enforcement program.” *United States v. Ponderosa Fibres of America, Inc.*, 178 F. Supp. 2d 157, 160 (N.D.N.Y. 2001).

58. A court’s consideration of “equitable factors” in determining an allocation extends to applying an “uncertainty premium” or “error factor” increasing a defendant’s contribution where precise allocation or final costs cannot be determined. *See, e.g., Burlington Northern and Santa Fe Ry. Co. v. U.S.*, 556 U.S. 599, 616-17 (2009) (approving allocation based upon comparison of plaintiff and defendant’s surface area use of the overall site, years of use of the site, and volume of release on the property, and then increasing allocable contribution of 6% by half so that defendant’s allocable share was increased to 9% to account for “calculation errors”); *Action Mfg. Co. v. Simon Wrecking Co.*, 2008 WL 2880324 (3rd Cir. 2008) (unpublished) (noting with approval the district court’s use of an “uncertainty premium” which increased the defendant’s allocable share by 50%, requiring it to pay 9.38% of the allocable costs rather than the 6.25% of the allocable costs the district court determined the defendant was actually responsible

for).

59. In light of the foregoing, Atlantic Richfield's equitable share of the response costs is 25% of the \$111,403,743 million Asarco paid under the June 2009 CERCLA Consent Decree for the East Helena Site, which is equal to \$27,850,936.

60. Pursuant to the sixth Gore Factor, the degree of cooperation by the parties with Federal, State, or local officials, Anaconda and Atlantic Richfield's ongoing misrepresentations to the EPA, and to Asarco throughout the course of this litigation, supports an additional \$1 million award.

### **III. THE 1972 PURCHASE AGREEMENT DOES NOT BAR ASARCO'S CLAIM**

61. Under a Purchase and Sale agreement entered by the parties on July 3, 1972 ("1972 Sales Agreement"), Anaconda sold the zinc fuming plant to Asarco, and at the same time terminated the lease of the land from Asarco.<sup>67</sup> Under the 1972 Sales Agreement, Asarco agreed to purchase the zinc fuming plant, including all facilities, materials, and documents related to the operation. Anaconda agreed to leave all operational documents with Asarco at the plant.<sup>68</sup>

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<sup>67</sup> Ex. 49.

<sup>68</sup> Ex. 49-0002 to 49-0003.



62. Article VIII of the 1972 Sales Agreement contains the following provisions:

1. Except as provided in Paragraph 2 of this Article, Anaconda with respect to the purchased assets, agrees to indemnify and hold Asarco harmless against any and all claims, liabilities, damages, losses, costs or expenses whatsoever arising out of or resulting from the ownership and operation by Anaconda of the purchased assets prior to the effective date, or any breach of warranty or misrepresentation by Anaconda, or the non-performance of any covenant or obligation to be performed on the part of Anaconda under this Agreement, or from any misrepresentation or omission from any certificate, instrument or paper delivered or to be delivered by Anaconda to Asarco pursuant to this Agreement or in connection with the transactions herein contemplated.

2. Anaconda does not assume responsibility for any liability or claim of any nature arising out of the ownership or operation of the purchased assets after the effective date which may be asserted by any agency of the State of Montana or of the United States pursuant to state or federal laws or regulations relating to environmental, health, or safety matters, nor will Anaconda be liable for any cost or expense incurred in order to affect compliance with any such law or regulation.

3. Asarco hereby agrees to indemnify and hold Anaconda harmless against any and all claims, liabilities, damages, losses, costs or expenses whatsoever arising out of or resulting from the ownership and operation by Asarco of the purchased assets after the effective date, or arising out of or resulting from any non-performance of any covenant or obligation to be performed on the part of Asarco under this Agreement.<sup>69</sup>

63. Montana law governs interpretation of the 1972 Agreement.

64. If the terms of the contract are clear, the court must determine the intent

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<sup>69</sup>Ex. 49-009

of the parties from the wording of the contract alone. *Rich v. Ellingson*, 174 P.3d 491, 495 (Mont. 2007) (citing *Wray v. State Compensation Ins. Fund*, 879 P.2d 725, 727 (Mont. 1994)).

65. The court must also consider the document as a whole, giving effect to each part in interpreting it, rather than attaching a meaning to a single word not supported by the rest of the document. Mont. Code. Ann. § 28–3–202.

66. Under the plain language of Article VIII, ¶¶ 1–3 of the 1972 Agreement, Asarco does not assume any liability, environmental or otherwise, arising out of Anaconda’s ownership and operation of the facility.<sup>70</sup>

#### **IV. ASARCO’S CLAIMS ARE NOT BARRED BY THE STATUTE OF LIMITATIONS**

67. Under the “law of the case” doctrine, a court is precluded from

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<sup>70</sup> Atlantic Richfield urges the Court to consider parole evidence in interpreting the indemnification paragraphs of the 1972 Agreement. Specifically, Atlantic Richfield refers to a meeting in 1988 between the EPA and Asarco, which was attended by an Atlantic Richfield attorney, Mr. Spaanstra. According to an ARCO letter memorializing this meeting, Asarco asked Mr. Spaanstra to leave the meeting: “Basing that request in part on the fact that certain private contractual indemnification relationships between ASARCO and ARCO made ARCO’s presence superfluous and, for reasons not enumerated, potentially counter-productive.” (Ex. 153.) Atlantic Richfield argues that the reference to “certain private contractual relationships” was in fact a reference to the 1972 Agreement, and an acknowledgment by Asarco that the agreement somehow mitigated Atlantic Richfield’s obligations under CERCLA. Aside from the fact that the letter is vague at best, parole evidence is not admissible to modify the terms of an unambiguous agreement. Having found the agreement unambiguous, the Court need not resort to parole evidence, and attaches no weight to the contents of Ex. 153. Mont. Code. Ann. § 28–3–303, *see also Mary J. Baker Revocable Trust v. Cenex Harvest St. Cooperatives, Inc.* 164 P.3d 851 (Mont. 2007).

reexamining an issue previously decided by the same court, or a higher court, in the same case. *U.S. v. Miller*, 822 F.2d 828, 832 (9th Cir.1987) (“The rule is that the mandate of an appeals court precludes the district court on remand from reconsidering matters which were either expressly or implicitly disposed of upon appeal”).

68. On appeal following this Court’s grant of summary judgment on statute of limitation grounds, the Ninth Circuit expressly found that "Asarco has a cognizable claim for contribution under CERCLA § 113(F)(3)(B) because it brought a timely action under an agreement that resolved its liability." *Asarco LLC v. Atlantic Richfield Co.*, 866 F.3d 1108, 1129 (9th Cir. 2017).

69. The Ninth Circuit further explained:

We hold that the 1998 RCRA Decree did not resolve Asarco’s liability for at least some of its response obligations under that agreement. It therefore did not give rise to a right to contribution under CERCLA § 113(f)(3)(B). By contrast, the 2009 CERCLA Decree did resolve Asarco’s liability, and *Asarco has brought a timely action for contribution under that agreement*. We therefore vacate the district court’s grant of summary judgment and remand for further proceedings consistent with this opinion. On remand, the district court should determine whether Asarco is entitled to any financial contribution from Atlantic Richfield and, if so, how much.

*Id.* (emphasis added).

70. The Ninth Circuit’s holding that Asarco brought a timely contribution

claim under CERCLA § 113(f) is the law of the case, and precludes Atlantic Richfield's statute of limitations defense.

**V. ASARCO IS ENTITLED TO RECOVER ITS ATTORNEY FEES AND COSTS**

71. In 1987, the Environmental Protection Agency and the State of Montana began investigating the environmental impacts caused by Anaconda's operation of its zinc processing facility on Asarco's property during the period between 1927 and 1972.

72. Anaconda and Atlantic Richfield avoided state and federal environmental enforcement actions by, among other conduct, submitting misleading, untrue and incomplete responses to the EPA's official investigatory demands. As a result of Asarco's prosecution of this case, Anaconda's and Atlantic Richfield's misconduct has been brought to light.

73. Asarco has incurred attorneys' fees and costs in prosecuting this case, which has revealed Anaconda's and Atlantic Richfield's concealment and affirmative misrepresentations regarding their environmental impacts at the Site, and established that Atlantic Richfield and Anaconda caused and contributed arsenic contamination to the groundwater beneath the Site.

74. If there is a shortfall in available funds to remediate the groundwater,

through Asarco's advocacy, EPA and the State of Montana now have evidence and a record with which to pursue Atlantic Richfield and Anaconda under CERCLA.

75. A lawyers' work that is closely tied to the actual cleanup may constitute a necessary cost of response in and of itself under the terms of CERCLA § 107(a)(4)(B). *Key Tronic Corp. v. United States*, 511 U.S. 809, 820 (1994). Work performed in identifying other potentially responsible parties falls into this category. *Id.*

76. The work Asarco's attorneys have performed to identify Atlantic Richfield as a potentially responsible party is a necessary cost of a response.

77. Asarco is entitled to recover its costs and reasonable attorneys' fees for its work in refuting Atlanta Richfield and Anaconda's untrue representations to federal and state regulators. As a result of this work, the EPA and the State of Montana are positioned to pursue each company for any necessary and additional environmental cleanup costs related to the Site.

## **VI. ASARCO IS ENTITLED TO RECOVER PREJUDGMENT INTEREST**

78. Section 107(a)(4) of CERCLA provides for the recovery of prejudgment interest, which "shall accrue from the later of (i) the date payment of

a specified amount is demanded in writing, or (ii) the date of the expenditure concerned.” 42 U.S.C. § 9607(a)(4).

79. In calculating prejudgment interest, the district court is entitled to look to “the judgment creditor’s actual cost of borrowing money or to other reasonable guideposts indicating a fair level of compensation.” *Bosnor, S.A. De C.V. v. Tug L.A. Barrios*, 796 F.2d 776, 786 (5th Cir.1986).

80. On June 5, 2012, Asarco made a written demand on Atlantic Richfield for payment under CERCLA, through the filing of a complaint in this action (Doc. 1).

81. Asarco is entitled to recover prejudgment interest on the amount of Atlantic Richfield’s calculated equitable share of \$28,850,936 (\$27,850,936 + \$1 million) at a reasonable rate of return from June 5, 2012.

### **JUDGMENT**

Pursuant to the foregoing Findings of Fact and Conclusions of Law,

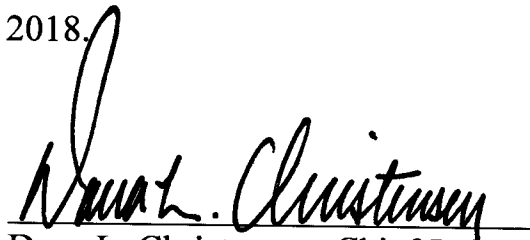
IT IS HEREBY ORDERED that Judgment shall be entered by the Clerk of Court in favor of Plaintiff Asarco, LLC, and against Defendant Atlantic Richfield Company as follows:

1. \$27,850,936.00, representing Atlantic Richfield's equitable share of the response costs Asarco paid under the June 2009 CERCLA Consent Decree;
2. \$1,000,000.00, representing an uncertainty premium or error factor under the sixth Gore Factor;
3. Prejudgment interest, to be determined in subsequent proceedings;<sup>71</sup>
4. Asarco's costs of suit and reasonable attorneys' fees, to be determined in subsequent proceedings.
5. Asarco shall submit to the Court by Friday, July 13, 2018, its claim for attorneys' fees and costs, with all supporting documentation, as well as briefing and documentation on the prejudgment interest rate to be applied to the judgment in this case. Defendant shall file its response briefs by July 27, 2018.

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<sup>71</sup> The Court of Appeals for the Tenth Circuit has explained: "because interest determinations are compounded calculations, it may be impossible for parties to provide accurate calculations prior to the court's allocation of response cost liability. In such instances, parties may submit their interest calculations to the court subsequent to that finding." *Bancamerica Commercial Corp. v. Mosher Steel of Kansas, Inc.*, 100 F.3d 792, 802 (10th Cir.), amended, 103 F.3d 80 (10th Cir. 1996). The Court acknowledges that Asarco indicated in its Proposed Findings of Fact and Conclusions of Law that prejudgment interest should be calculated at 7.5% per annum, however, that percentage has no foundation and requires documentation relating to the average rate of return during the time period in question (2012–2018). (Doc. 268 at 75–76.) Thus, the Court is unable to calculate the appropriate prejudgment interest at this time. The parties shall meet and confer about the appropriate prejudgment interest calculation in this case using the interest rate calculation provided in 26 U.S.C. § 9507(d)(3)(C).

DATED this 26<sup>th</sup> day of June, 2018.

  
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Dana L. Christensen, Chief Judge  
United States District Court