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UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 8

IN THE MATTER OF: Vasquez Boulevard/Interstate 70 site Operable Unit 2 City and County of Denver Respondent Proceeding Under Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622	U.S. EPA Docket No. **CERCLA-08-2015-0006** **ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR REMOVAL ACTION**

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and the City and County of Denver ("Respondent"). This Settlement Agreement provides for the performance of a removal action by Respondent and the payment of certain response costs incurred by the United States at or in connection with Operable Unit 2 of the Vasquez Boulevard/Interstate 70 Superfund site.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 106(a), 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622 ("CERCLA"). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (Jan. 29, 1987), and further delegated to Regional Administrators on May 11, 1994, by EPA Delegation Nos. 14-14-C (Administrative Actions Through Consent Orders) and 14-14-D (Cost Recovery Non-Judicial Agreements and Administrative Consent Orders). The authority in Delegation No. 14-14-C was redelegated by the Regional Administrator of EPA Region 8 to the Assistant Regional Administrator, Office of Ecosystem Protection and Remediation on December 20, 1996 and then was further redelegated by the Assistant Regional Administrator, Office of Ecosystem Protection and Remediation to the Director, Superfund Remedial Response Program and Director, Emergency Response and Preparedness Program on August 30, 2002. The authority in Delegation No. 14-14-D was further delegated by the Regional Administrator of EPA Region 8 to the Assistant Regional Administrator, Office of Enforcement, Compliance and Environmental Justice on December 20, 1996 and then was further redelegated by the Assistant Regional Administrator, Office of Enforcement, Compliance and Environmental Justice jointly to the supervisors in the Legal Enforcement Program and supervisors in the Technical Enforcement Program on October 17, 1997.

3. EPA has notified the State of Colorado (the "State") of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

4. EPA and Respondent recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondent does not admit, and retains the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of facts, conclusions of law, and determinations in Sections IV (Findings of Fact) and V (Conclusions of Law and Determinations) of this Settlement Agreement. Respondent agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the basis or validity of this Settlement Agreement or its terms.

II. PARTIES BOUND

5. This Settlement Agreement is binding upon EPA and upon Respondent and its successors, and assigns. Any change in ownership or corporate status of Respondent including,

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but not limited to, any transfer of assets or real or personal property shall not alter Respondent's responsibilities under this Settlement Agreement.

6. Respondent is liable for carrying out all activities required by this Settlement Agreement.

7. Respondent shall provide a copy of this Settlement Agreement to each contractor hired to perform the Work required by this Settlement Agreement and to each person representing Respondent with respect to the Site or the Work, and shall condition all contracts entered into hereunder upon performance of the Work in conformity with the terms of this Settlement Agreement. Respondent or its contractors shall provide written notice of the Settlement Agreement to all subcontractors hired to perform any portion of the Work required by this Settlement Agreement. Respondent shall nonetheless be responsible for ensuring that their contractors and subcontractors perform the Work in accordance with the terms of this Settlement Agreement.

III. DEFINITIONS

8. Unless otherwise expressly provided in this Settlement Agreement, terms used in this Settlement Agreement that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Settlement Agreement or its attached appendices, the following definitions shall apply:

"Action Memorandum" shall mean the EPA Action Memorandum relating to the Site signed by the Regional Administrator, EPA Region 8, or his/her delegate, and all attachments thereto. The Action Memorandum will be signed concurrently with this Settlement Agreement and will be attached as Appendix A.

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675.

"Day" or "day" shall mean a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or federal or state holiday, the period shall run until the close of business of the next working day.

"Effective Date" shall mean the effective date of this Settlement Agreement as provided in Section XXIX (Effective Date).

"EPA" shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.

"EPA Hazardous Substance Superfund" shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. § 9507.

"CDPHE" shall mean the Colorado Department of Public Health and Environment and any successor departments or agencies of the State.

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"Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs that the United States incurs in reviewing or developing plans, reports, and other deliverables submitted pursuant to this Settlement Agreement, in overseeing implementation of the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Section IX (Access) (including, but not limited to, the cost of attorney time and any monies paid to secure access including, but not limited to, the amount of just compensation), Section XIII (Emergency Response and Notification of Releases), Paragraph 70 (Work Takeover) (including, but not limited to, the costs of any technical assistance grant under Section 117(e) of CERCLA, 42 U.S.C. § 9617(e)), Section XV (Dispute Resolution), and all litigation costs. Future Response Costs shall also include Agency for Toxic Substances and Disease Registry ("ATSDR") costs regarding the Site.

"Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

"National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

"Paragraph" shall mean a portion of this Settlement Agreement identified by an Arabic numeral or an upper or lower case letter.

"Parties" shall mean EPA and Respondent.

"Post-Removal Site Control" shall mean actions necessary to ensure the effectiveness and integrity of the removal action to be performed pursuant to this Settlement Agreement consistent with Sections 300.415(*l*) and 300.5 of the NCP and "Policy on Management of Post-Removal Site Control" (OSWER Directive No. 9360.2-02, Dec. 3, 1990).

"RCRA" shall mean the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992 (also known as the Resource Conservation and Recovery Act).

"Respondent" shall mean the City and County of Denver.

"Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral.

"Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent and all appendices attached hereto (listed in Section XXVIII (Integration/Appendices)). In the event of conflict between this Settlement Agreement and any appendix, this Settlement Agreement shall control.

"Site" shall mean that portion of Operable Unit 2 (OU2) of the Vasquez Boulevard/Interstate 70 Superfund site where the stormwater drainage features are to be constructed and areas in close proximity needed for implementation of the removal action. The Site is depicted generally on the map attached as Appendix B.

"State" shall mean the State of Colorado.

"Statement of Work" or "SOW" shall mean the statement of work for implementation of the removal action to be performed pursuant to this Settlement Agreement, as set forth in Appendix C, and any modifications made thereto in accordance with this Settlement Agreement.

"Vasquez Boulevard/Interstate 70 OU2 Special Account" shall mean the special account within the EPA Hazardous Substance Superfund, established for the Site by EPA pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3), and the 2008 Administrative Settlement Agreement and Order on Consent for Remedial Investigation/Feasibility Study, Region 8, CERCLA-08-2008-0011.

"United States" shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.

"Waste Material" shall mean (a) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (c) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (d) any "hazardous material" under CRS § 25-15-101 et seq. Waste Material is equivalent to the term "contaminated material" used in the Consent Decree settlement between Respondent and CDPHE signed on October 27, 2003.

"Work" shall mean all activities and obligations Respondent is required to perform under this Settlement Agreement except those required by Section XI (Record Retention).

IV. FINDINGS OF FACT

9. The Vasquez Boulevard/Interstate 70 Superfund site was listed on the National Priorities List (NPL) on July 22, 1999. The Site covers a portion of the area where the former Omaha and Grant smelter operated. The Omaha and Grant Smelter facility operated from 1882 until 1903. A lead smelting process was employed at the facility to produce gold, silver, copper, and lead. The process involved the fusing of ore, fuel, and lime to form a melted product. As a result of this process, lead and silver would sink to the bottom of an iron chamber and the slag would float on the surface of the liquid metals. Although detailed information about the wastes from the smelting operations is not well documented, it is known that blast furnace slag was produced from the smelting operations. Ores, fuel, and flux were delivered by rail car directly to the furnace charging doors on the upper levels of the smelter. As the smelting operations proceeded, the intermediate products flowed downhill to a lower level. Smelter workers would run slag onto a dump and load bullion onto rail cars.

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10. After closure in 1903, the smelter buildings were subsequently demolished. Sometime later, all of the slag, with the exception of any residual that could be buried under modern parking lots, was removed. Based on historic aerial photographs, all of the visible slag was removed by 1949.

11. Respondent performed a remedial investigation (RI) for OU2 in 2009 and a feasibility study (FS) in 2010. Development of a proposed plan and record of decision for OU2 has been postponed until EPA completes an additional investigation of groundwater at OU2. This removal action is necessary to address potential releases of and potential worker exposure to hazardous substances that could occur at the portion of OU2, i.e., the Site, where Respondent is planning to construct a stormwater drainage feature. This construction will be conducted in areas known to contain elevated levels of lead and arsenic in surface and subsurface soils.

12. Investigations in and near the Site found many areas where surface and subsurface soils contained levels of arsenic and lead above what was considered background levels: 15 milligrams/kilograms ("mg/kg") for arsenic and 400 mg/kg for lead. In particular, limited sampling of soils along the proposed route of the stormwater drainage feature show arsenic levels up to 48 mg/kg and lead levels up to 1400 mg/kg and sampling on property adjacent to the proposed route showed arsenic levels up to 1400 mg/kg and lead levels up to 100,000 mg/kg. Levels of arsenic and lead well above background levels show a release of a hazardous substance to the environment at the Site. Excavation of these metal contaminated soils threaten additional releases of these hazardous substances to the environment.

13. The Preliminary and Final Baseline Human Health Risk assessments for OU2 identified surface and subsurface soil as the potential media of concern and arsenic and lead in soils as the chemicals of potential concern.

14. The Site is in an historic industrial area of Denver. OU2 encompasses the approximately 50 acres of the original Omaha & Grant Smelter facility and includes a portion of the Globeville Landing Park. The historical land use at OU2 was primarily industrial and included smelting (1883 - 1903) and municipal waste incineration and municipal waste landfilling (1933-1945).

15. The current land use at OU2 and the Site is primarily commercial/industrial, with recreational use at a small portion of the OU located in the western corner immediately adjacent to the South Platte River at the Globeville Landing Park. The ground is largely covered by highways, building structures, and paved parking lots. Grassy or unpaved areas are rare and are mainly restricted to the western most portion of the Site at the Globeville Landing Park and some small areas at some of the commercial properties along Brighton Boulevard and 39th Avenue on the eastern and southern portions of the Site. The potential future land use of OU2 and the Site includes commercial/industrial and recreational areas as well as stormwater drainage features necessitated by the Colorado Department of Transportation I-70 East reconstruction project. The land use surrounding OU2 and the Site is mainly commercial/industrial, interspersed with private residences, and with recreational land use along the South Platte River. None of the current facilities or businesses within OU2 are known to be contributing to the release at OU2 or the Site.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

16. Based on the Findings of Fact set forth above, and the administrative record, EPA has determined that:

a. The Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. The contamination found at the Site, as identified in the Findings of Fact above, includes "hazardous substance(s)" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

c. The Respondent is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

d. The Respondent is the "owner" and/or "operator" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

e. The Respondent is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

f. The conditions described in the Findings of Fact above and in the Action Memorandum to be signed concurrently with this Settlement Agreement constitute an actual or threatened "release" of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

g. The removal action required by this Settlement Agreement is necessary to protect the public health, welfare, or the environment and, if carried out in compliance with the terms of this Settlement Agreement, will be consistent with the NCP, as provided in Section 300.700(c)(3)(ii) of the NCP.

VI. SETTLEMENT AGREEMENT AND ORDER

17. Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the administrative record, it is hereby Ordered and Agreed that Respondent shall comply with all provisions of this Settlement Agreement including, but not limited to, all attachments to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VII. DESIGNATION OF CONTRACTOR, PROJECT COORDINATOR, AND ON-SCENE COORDINATOR

18. Respondent shall retain one or more contractors to perform the Work and shall notify EPA of the name(s) and qualifications of such contractor(s) within 14 days after the Effective Date. Respondent shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work at least 5 days prior to

commencement of such Work. With respect to any proposed contractor, Respondent shall demonstrate that the proposed contractor has a quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995, or most recent version), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP") and EPA's required "Crosswalk" check list for the QMP. The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001; Reissued May 2006) or equivalent documentation as determined by the Agencies. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by Respondent. If EPA disapproves of a selected contractor, Respondent shall retain a different contractor and shall notify EPA of that contractor's name and qualifications within 10 days after EPA's disapproval.

19. Within 14 days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Settlement Agreement and shall submit to EPA the designated Project Coordinator's name, address, telephone number, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within 14 days following EPA's disapproval. Notice or communication relating to this Settlement Agreement from EPA to Respondent's Project Coordinator shall constitute notice or communication to Respondent. Respondent has designated, and EPA has not disapproved, the following individual as Project Coordinator, who shall be responsible for administration of all actions by Respondent required by this Settlement Agreement: Lisa Farrell, Environmental Chemist, City & County of Denver, Department of Environmental Health, Environmental Quality Division, 200 West 14th Avenue, Suite 310, Denver, Colorado 80204, Phone 720.865.5439, Fax 720.865.5534, lisa.farrell@denvergov.org. EPA has designated Dania Zinner of the Superfund Remedial Program, Region 8, as its On-Scene Coordinator ("OSC")/Remedial Project Manager ("RPM"). EPA and Respondent shall have the right, subject to Paragraph 19, to change their respective designated OSC/RPM or Project Coordinator. Respondent shall notify EPA 10 days before such a change is made. The initial notification by Respondent may be made orally, but shall be promptly followed by a written notice.

20. Except as otherwise provided in this Settlement Agreement, Respondent shall direct all submissions required by this Settlement Agreement to the OSC/RPM at:

Dania Zinner
EPA Remedial Project Manager
U.S. Environmental Protection Agency
Region 8
1595 Wynkoop Street
Denver, Colorado 80202-1129
Mail Code: 8EPR-SR
(303) 312-7122
Zinner.dania@epa.gov

Respondent shall submit 3 copies of all plans, reports, or other deliverables required by this Settlement Agreement, the Statement of Work, or any approved work plan. Upon request by EPA, Respondent shall submit such documents in electronic form. All data evidencing Site conditions shall be submitted to EPA in electronic form.

21. The OSC/RPM shall be responsible for overseeing Respondent's implementation of this Settlement Agreement. The OSC/RPM shall have the authority vested in an OSC/RPM by the NCP, including the authority to halt, conduct, or direct any Work required by this Settlement Agreement, or to direct any other removal action undertaken at the Site. Absence of the OSC/RPM from the Site shall not be cause for stoppage of work unless specifically directed by the OSC/RPM.

VIII. WORK TO BE PERFORMED

22. Respondent shall perform, at a minimum, all actions necessary to implement the Statement of Work. As more particularly described in the Statement of Work, Respondent shall design and implement the "environmental components" of a stormwater drainage feature through the Site. The stormwater drainage feature is part of a larger project that is intended to reduce flooding in the Montclair Drainage Basin area and address stormwater management needs associated with projects being developed by Regional Transportation District (RTD), Colorado Department of Transportation (CDOT), and Respondent. The "environmental components" to be addressed by this Removal Action consist of: 1) management and disposal of Waste Material; 2) management and, if necessary treatment and/or disposal, of dewatering liquid during construction; and 3) design and construction of an impermeable barrier system to prevent any Waste Material remaining onsite from adversely impacting stormwater retained within and conveyed by the stormwater drainage feature, as well as prevent stormwater infiltration into contaminated media remaining onsite. Respondent shall also define and implement environmental protection measures needed to protect human health, groundwater, surface water, air, and soils from potential impairment caused by excavation through and downgradient from Operable Unit #2. This shall include: 1) preparation and implementation of a Removal Action Work Plan (RAWP) containing a Sampling and Analysis Plan (SAP), a Quality Assurance Project Plan (QAPP), a Materials Management Plan (MMP), a Health and Safety Plan HASP), and Progress Reporting procedures; 2) implementation of the RAWP; 3) progress reporting; 4) a pre-final inspection; and 5) preparation of a Construction Closeout Report.

23. Work Plan and Implementation.

a. Within 30 days after the Effective Date, Respondent shall submit to EPA for approval a draft work plan for performing the removal action (the "Removal Action Work Plan") generally described in Paragraph above. The draft Removal Action Work Plan shall provide a description of, and an expeditious schedule for, the actions required by this Settlement Agreement.

b. EPA may approve, disapprove, require revisions to, or modify the draft Removal Action Work Plan in whole or in part. If EPA requires revisions, Respondent shall submit a revised draft Removal Action Work Plan within 14 days after receipt of EPA's

notification of the required revisions. Respondent shall implement the Removal Action Work Plan as approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Removal Action Work Plan, the schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Settlement Agreement.

c. Upon approval of the Removal Action Work Plan Respondent shall commence implementation of the Work in accordance with the schedule included therein. Respondent shall not commence any Work except in conformance with the terms of this Settlement Agreement.

d. Unless otherwise provided in this Settlement Agreement, any additional plans, reports, or other deliverables that require EPA approval under the SOW or Removal Action Work Plan shall be reviewed and approved by EPA in accordance with this Paragraph.

24. Health and Safety Plan.

a. Within 30 days after the Effective Date, Respondent shall submit for EPA review and comment a plan that ensures the protection of the public health and safety during performance of on-site work under this Settlement Agreement. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. Respondent shall incorporate all changes to the plan recommended by EPA and shall implement the plan during the pendency of the removal action.

25. Quality Assurance, Sampling, and Data Analysis.

a. Respondent shall use quality assurance, quality control, and other technical activities and chain of custody procedures for all samples consistent with "EPA Requirements for Quality Assurance Project Plans (QA/R5)" (EPA/240/B-01/003, March 2001, reissued May 2006), "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), and subsequent amendments to such guidelines upon notification by EPA to Respondent of such amendment. Amended guidelines shall apply only to procedures conducted after such notification.

b. Prior to the commencement of any monitoring project under this Settlement Agreement, Respondent shall submit to EPA for approval, after a reasonable opportunity for review and comment by the State, a Quality Assurance Project Plan ("QAPP") that is consistent with the SOW, the NCP, and applicable guidance documents. Respondent shall ensure that EPA and State personnel and their authorized representatives are allowed access at reasonable times to all laboratories utilized by Respondent in implementing this Settlement Agreement. In addition, Respondent shall ensure that such laboratories shall analyze all samples submitted by EPA pursuant to the QAPP for quality assurance, quality control, and technical activities that will satisfy the stated performance criteria as specified in the QAPP. Respondent shall ensure that the laboratories they utilize for the analysis of samples taken pursuant to this

Settlement Agreement perform all analyses according to accepted EPA methods. Accepted EPA methods consist of, but are not limited to, methods that are documented in the EPA's Contract Laboratory Program (http://www.epa.gov/superfund/programs/clp/), SW 846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm), "Standard Methods for the Examination of Water and Wastewater" (http://www.standardmethods.org/), 40 C.F.R. Part 136, "Air Toxics - Monitoring Methods" (http://www.epa.gov/ttnamti1/airtox.html)," and any amendments made thereto during the course of the implementation of this Settlement Agreement. However, upon approval by EPA, after a reasonable opportunity for review and comment by the State, Respondent may use other appropriate analytical method(s), as long as (a) quality assurance/quality control ("QA/QC") criteria are contained in the method(s) and the method(s) are included in the QAPP, (b) the analytical method(s) are at least as stringent as the methods listed above, and (c) the method(s) have been approved for use by a nationally recognized organization responsible for verification and publication of analytical methods, e.g., EPA, ASTM, NIOSH, OSHA, etc. Respondent shall ensure that all laboratories they use for analysis of samples taken pursuant to this Settlement Agreement have a documented Quality System that complies with ANSI/ASQC E-4-2004, "Quality Systems for Environmental Data and Technology Programs: Requirements with Guidance for Use" (American National Standard, and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001, reissued May 2006), or equivalent documentation as determined by EPA. EPA may consider Environmental Response Laboratory Network ("ERLN") laboratories, laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP"), or laboratories that meet International Standardization Organization (ISO 17025) standards or other nationally recognized programs (http://www.epa.gov/fem/accredit.htm) as meeting the Quality System requirements. Respondent shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Settlement Agreement are conducted in accordance with the procedures set forth in the QAPP approved by EPA.

c. Upon request, Respondent shall provide split or duplicate samples to EPA and the State or their authorized representatives. Respondent shall notify EPA and the State not less than 7 days in advance of any sample collection activity unless shorter notice is agreed to by EPA. In addition, EPA and the State shall have the right to take any additional samples that EPA or the State deems necessary. Upon request, EPA and the State shall provide to Respondent split or duplicate samples of any samples they take as part of EPA's oversight of Respondent's implementation of the Work.

d. Respondent shall submit to EPA the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondent with respect to the Site and/or the implementation of this Settlement Agreement.

e. Notwithstanding any provision of this Settlement Agreement, the United States and the State retain all of their information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA, and any other applicable statutes and regulations.

26. Community Involvement Plan. EPA will prepare a community involvement plan, in accordance with EPA guidance and the NCP. As requested by EPA, Respondent shall provide information supporting EPA's community involvement plan and shall participate in the preparation of such information for dissemination to the public and in public meetings that may be held or sponsored by EPA to explain activities at or concerning the Site.

27. Post-Removal Site Control. In accordance with the Removal Action Work Plan schedule, or as otherwise directed by EPA, Respondent shall submit a proposal for Post-Removal Site Control, which shall include, but not be limited to: Post-Removal Site Controls could include the following activities, i.e., maintenance of any capped areas either vegetated or paved to prevent any remaining Waste Materials from being exposed or eroding from the Site. Upon EPA approval, Respondent shall either conduct Post-Removal Site Control activities or obtain a written commitment from another party for conduct of such activities, until such time as EPA determines that no further Post-Removal Site Control is necessary. Respondent shall provide EPA with documentation of all Post-Removal Site Control commitments.

28. Reporting.

a. Respondent shall submit a written progress report to EPA concerning actions undertaken pursuant to this Settlement Agreement every 30th day after the date of receipt of EPA's approval of the Work Plan until issuance of Notice of Completion of Work pursuant to Section XXVII, unless otherwise directed in writing by the OSC/RPM. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

29. Final Report. Within 90 days after completion of all Work required by this Settlement Agreement, other than continuing obligations listed in Paragraph 91 (notice of completion), Respondent shall submit for EPA review and approval a final report summarizing the actions taken to comply with this Settlement Agreement. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports." The final report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the Settlement Agreement, a listing of quantities and types of materials removed off-site or handled on-site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests, invoices, bills, contracts, and permits). The final report shall also include the following certification signed by a responsible corporate official of Respondent or Respondent's Project Coordinator: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and

belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

30. Off-Site Shipments.

a. Respondent may ship hazardous substances, pollutants and contaminants from the Site to an off-site facility only if they comply with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent will be deemed to be in compliance with CERCLA Section 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if Respondent obtains a prior determination from EPA that the proposed receiving facility for such shipment is acceptable under the criteria of 40 C.F.R. § 200.440(b). Respondent may ship Investigation Derived Waste (IDW) from the Site to an off-site facility only if Respondent complies with EPA's "Guide to Management of Investigation Derived Waste," OSWER 9345.3-03FS (Jan. 1992).

b. Respondent may ship Waste Material from the Site to an out-of-state waste management facility only if, prior to any shipment, it provides written notice to the appropriate state environmental official in the receiving facility's state and to the OSC/RPM. This written notice requirement shall not apply to any off-site shipments when the total quantity of all such shipments will not exceed ten (10) cubic yards. The written notice must include the following information, if available: (1) the name and location of the receiving facility; (2) the type and quantity of Waste Material to be shipped; (3) the schedule for the shipment; and (4) the method of transportation. Respondent also shall notify the state environmental official referenced above and the OSC/RPM of any major changes in the shipment plan, such as a decision to ship the Waste Material to a different out-of-state facility. Respondent shall provide the written notice after the award of the contract for the removal action and before the Waste Material is shipped.

IX. ACCESS

31. If the Site, or any other real property where access and/or land, water, or other resource use restrictions are needed, is owned or controlled by Respondent:

a. Respondent shall, commencing on the Effective Date, provide the United States, the State, and their representatives, contractors, and subcontractors, with access at all reasonable times to the Site, or such other real property, to conduct any activity regarding the Settlement Agreement including, but not limited to, the following activities:

(i) Monitoring the Work;

(ii) Verifying any data or information submitted to EPA or the State;

(iii) Conducting investigations regarding contamination at or near the Site;

(iv) Obtaining samples;

(v) Assessing the need for, planning, or implementing additional response actions at or near the Site;

(vi) Assessing implementation of quality assurance and quality control practices if QAPP is required by Removal Action Work Plan (see Paragraph 25.a) insert: as defined in the approved QAPP;

(vii) Implementing the Work pursuant to the conditions set forth in Paragraph 70 (Work Takeover);

(viii) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Respondent or its agents, consistent with Section X (Access to Information); and

(ix) Assessing Respondent's compliance with the Settlement Agreement.

32. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements within 30 days after the Effective Date, or as otherwise specified in writing by the OSC/RPM. Respondent shall immediately notify EPA if after using their best efforts they are unable to obtain such agreements. For purposes of this Section, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondent shall describe in writing their efforts to obtain access. EPA may assist Respondent in gaining access, to the extent necessary to effectuate the response actions described in this Settlement Agreement, using such means as EPA deems appropriate. Respondent shall reimburse EPA for all costs incurred, direct or indirect, by the United States in obtaining such access, including, but not limited to, the cost of attorney time and the amount of monetary consideration paid or just compensation, in accordance with the procedures in Section XIV (Payment of Response Costs).

33. Notwithstanding any provision of the Settlement Agreement, EPA and the State retain all of their access authorities and rights, including enforcement authorities related thereto under CERCLA, RCRA, and any other applicable statute or regulations.

X. ACCESS TO INFORMATION

34. Respondent shall provide to EPA and the State, upon request, copies of all records, reports, documents, and other information (including records, reports, documents, and other information in electronic form) (hereinafter referred to as "Records") within Respondent's possession or control or that of its contractors or agents relating to activities at the Site or to the implementation of this Settlement Agreement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information regarding the Work. Respondent shall also make available to EPA and the State, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

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35. Privileged and Protected Claims.

a. Respondent may assert that all or part of a Record requested by EPA is privileged or protected as provided under federal law, in lieu of providing the Record, provided Respondent complies with Paragraph 35.a and except as provided in Paragraph 35.b.

b. If Respondent asserts such a privilege or protection, it shall provide EPA and the State with the following information regarding such Record: its title; its date; the name, title, affiliation (e.g., company or firm), and address of the author, of each addressee, and of each recipient; a description of the Record's contents; and the privilege or protection asserted. If a claim of privilege or protection applies only to a portion of a Record, the Record shall be provided to EPA and the State in redacted form to mask the privileged or protected portion only. Respondent shall retain all Records that they claim to be privileged or protected until EPA and the State have had a reasonable opportunity to dispute the privilege or protection claim and any such dispute has been resolved in Respondent's favor.

c. Respondent may make no claim of privilege or protection regarding:

(i) any data regarding the Site, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, radiological, or engineering data, or the portion of any other Record that evidence conditions at or around the Site; or

(ii) the portion of any Record that Respondent is required to create or generate pursuant to this Settlement Agreement.

36. Business Confidential Claims. Respondent may assert that all or part of a Record provided to EPA and the State under this Section or Section XI (Retention of Records) is business confidential to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Respondent shall segregate and clearly identify all Records or parts thereof submitted under this Settlement Agreement for which Respondent asserts business confidentiality claims. Records submitted to EPA determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies Records when they are submitted to EPA and the State, or if EPA has notified Respondent that the Records are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to Respondent.

37. Notwithstanding any provision of this Settlement Agreement, EPA and the State retain all of their information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XI. RECORD RETENTION

38. Until ten (10) years after EPA provides Respondent with notice, pursuant to Section XXVII (Notice of Completion of Work), that all Work has been fully performed in

accordance with this Settlement Agreement, Respondent shall preserve and retain all non-identical copies of Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to its liability under CERCLA with regard to the Site, provided, however, that a Respondent who is potentially liable as an owner or operator of the Site, must retain, in addition, all Records that relate to the liability of any other person under CERCLA with respect to the Site. Respondent must also retain, and instruct its contractors and agents to preserve, for the same period of time specified above all non-identical copies of the last draft or final version of any Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Work, provided, however, that Respondent (and its contractors and agents) must retain, in addition, copies of all data generated during the performance of the Work and not contained in the aforementioned Records required to be retained. Each of the above record retention requirements shall apply regardless of any corporate retention policy to the contrary.

39. At the conclusion of the document retention period, Respondent shall notify EPA and the State at least 90 days prior to the destruction of any Records, and, upon request by EPA or the State, and except as provided in Paragraph 35 (Privileged and Protected Claims), Respondent shall deliver any such Records to EPA or the State.

40. Respondent certifies that, to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any Records (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by EPA or the State and that it has fully complied with any and all EPA and State requests for information regarding the Site pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927, and State law.

XII. COMPLIANCE WITH OTHER LAWS

41. Nothing in this Settlement Agreement limits Respondent's obligation to comply with the requirements of all applicable state and federal laws and regulations, except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 6921(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). In accordance with 40 C.F.R. § 300.415(j), all on-site actions required pursuant to this Settlement Agreement shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state environmental or facility siting laws. Respondent shall identify ARARs in the Removal Action Work Plan subject to EPA approval.

XIII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

42. Emergency Response. In the event any action or occurrence during performance of the Work causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action. Respondent shall take these actions in accordance with all applicable provisions of this Settlement Agreement,

including, but not limited to, the Health and Safety Plan, in order to prevent, abate, or minimize such release or endangerment caused or threatened by the release. Respondent shall also immediately notify the OSC/RPM or, in the event of his/her unavailability, the Regional Duty Officer, Emergency Response and Preparedness Program, EPA Region 8, at 303-312-6510 of the incident or Site conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondent shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XIV (Payment of Response Costs).

43. Release Reporting. In addition, in the event of any release of a hazardous substance from the Site, Respondent shall immediately notify the On-Scene Coordinator on duty at 1-800-227-8917 or 303-312-6861 and the National Response Center at 1-800-424-8802. Respondent shall submit a written report to EPA within 7 days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, *et seq.*

XIV. PAYMENT OF RESPONSE COSTS

44. Payments for Future Response Costs. Respondent shall pay EPA all Future Response Costs not inconsistent with the NCP.

a. On a periodic basis, EPA will send Respondent a bill requiring payment that includes a cost summary, which includes direct and indirect costs incurred by EPA, its contractors, subcontractors, and the United States Department of Justice. Respondent shall make all payments within 30 days after Respondent's receipt of each bill requiring payment, except as otherwise provided in Paragraph 46, and in accordance with sub-Paragraphs b & c, below. To the extent that Respondent must appropriate money to pay Response Costs, Denver shall seek an appropriation for such costs. The Parties to this Settlement Agreement recognize and acknowledge that Respondent can only pay money to EPA from appropriated funds, or other funds, legally available for such purpose. Nothing in this Settlement Agreement shall be interpreted or construed as a commitment or requirement that Respondent obligate or pay funds to EPA in contravention of Article X, Section 20 or Article XI of the Colorado Constitution.

b. Payment shall be made to EPA by one of the methods prescribed below:

For Fedwire Electronic Funds Transfer ("EFT"):

Payment by Respondent shall be made to EPA by EFT to:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street

New York, NY 10045
Field Tag 4200 of the Fedwire message should read "D 68010727 Environmental Protection Agency"

and shall reference Site/Spill ID Number 089R OU2 and the EPA docket number for this action.

For Automated Clearinghouse ACH payment:

Payment by Respondent shall be made to EPA by ACH to:

PNC Bank
808 17th Street, NW
Washington, DC 20074
Contact – Jesse White 301-887-6548
ABA = 051036706
Transaction Code 22 - checking
Environmental Protection Agency
Account 310006
CTX Format

US Treasury Facility
5700 Rivertech Court
Riverdale, MD 20737

and shall reference Site/Spill ID Number 089R OU2 and the EPA docket number for this action.

For online payment:

Payment shall be made at https://www.pay.gov to the U.S. EPA account in accordance with instructions to be provided to Respondent by EPA.

If Respondent has difficulty making payments using one of the electronic payment methods above, payment may be made by official bank check made payable to "EPA Hazardous Substance Superfund." Each check, or a letter accompanying each check, shall identify the name and address of the party(ies) making payment, the Site name, Site/Spill ID Number 089R OU2, and the EPA docket number for this action, and shall be sent to:

US Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
PO Box 979076
St. Louis, MO 63197-9000

c. At the time of payment, Respondent shall send notice that payment has been made to the OSC/RPM and Enforcement Specialist, Vasquez Boulevard/Interstate 70 Superfund site, US Environmental Protection Agency, Region 8, 1595 Wynkoop Street, Denver,

CO 80202-1129, and to the EPA Cincinnati Finance Office by email at acctsreceivable.cinwd@epa.gov, or by mail to

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

Such notice shall reference Site/Spill ID Number 089R OU2 and the EPA docket number for this action.

d. The total amount to be paid by Respondent pursuant to Paragraph 44 shall be deposited by EPA in the Vasquez Boulevard/Interstate 70 OU2 Special Account to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund, provided, however, that EPA may deposit a Future Response Costs payment directly into the EPA Hazardous Substance Superfund if, at the time the payment is received, EPA estimates that the Vasquez Boulevard/Interstate 70 OU2 Special Account balance is sufficient to address currently anticipated future response actions to be conducted or financed by EPA at or in connection with the Site. Any decision by EPA to deposit a Future Response Costs payment directly into the EPA Hazardous Substance Superfund for this reason shall not be subject to challenge by Respondent pursuant to the dispute resolution provisions of this Settlement Agreement or in any other forum.

45. Interest. In the event that the payments for Future Response Costs are not made within 30 days after Respondent's receipt of a bill, Respondent shall pay Interest on the unpaid balance. The Interest on Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section, including but not limited to, payment of stipulated penalties pursuant to Section XVII (Stipulated Penalties).

46. Respondent may submit a Notice of Dispute, initiating the procedures of Section XV (Dispute Resolution) regarding payment of any Future Response Costs billed under Paragraph 44 if they determine that EPA has made a mathematical error or included a cost item that is not within the definition of Future Response Costs, or if they believe EPA incurred excess costs as a direct result of an EPA action that was inconsistent with a specific provision or provisions of the NCP. Such Notice of Dispute shall be submitted in writing within 30 days after receipt of the bill and must be sent to the OSC/RPM. Any such Notice of Dispute shall specifically identify the contested Future Response Costs and the basis for objection. If Respondent submits a Notice of Dispute, Respondent shall within the 30-day period pay all uncontested Future Response Costs to EPA in the manner described in Paragraph 44. Simultaneously, Respondent shall establish, in a duly chartered bank or trust company, an interest-bearing escrow account that is insured by the Federal Deposit Insurance Corporation ("FDIC"), and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. Respondent shall send to the OSC/RPM a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing

the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. If EPA prevails in the dispute, within 5 days after the resolution of the dispute, Respondent shall pay the sums due (with accrued interest) to EPA in the manner described in Paragraph 44. If Respondent prevails concerning any aspect of the contested costs, Respondent shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to EPA in the manner described in Paragraph 44. Respondent shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XV (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondent's obligation to reimburse EPA for its Future Response Costs.

XV. DISPUTE RESOLUTION

47. Unless otherwise expressly provided for in this Settlement Agreement, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The Parties shall attempt to resolve any disagreements concerning this Settlement Agreement expeditiously and informally.

48. Informal Dispute Resolution. If Respondent objects to any EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs, they shall send EPA a written Notice of Dispute describing the objection(s) within 10 days after such action. EPA and Respondent shall have 20 days from EPA's receipt of Respondent's Notice of Dispute to resolve the dispute through informal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by the Parties, be incorporated into and become an enforceable part of this Settlement Agreement.

49. Formal Dispute Resolution. If the Parties are unable to reach an agreement within the Negotiation Period, Respondent shall, within 20 days after the end of the Negotiation Period, submit a statement of position to the OSC/RPM. EPA may, within 20 days thereafter, submit a statement of position. Thereafter, an EPA management official at the Program Director level or higher will issue a written decision on the dispute to Respondent. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Following resolution of the dispute, as provided by this Section, Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs.

50. The invocation of formal dispute resolution procedures under this Section shall not extend, postpone, or affect in any way any obligation of Respondent under this Settlement Agreement, not directly in dispute, unless EPA provides otherwise in writing. Stipulated penalties with respect to the disputed matter shall continue to accrue but payment shall be stayed pending resolution of the dispute as provided in Paragraph 59. Notwithstanding the stay of payment, stipulated penalties shall accrue from the first day of noncompliance with any applicable provision of this Settlement Agreement. In the event that Respondent does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XVII (Stipulated Penalties).

XVI. FORCE MAJEURE

51. "Force Majeure" for purposes of this Settlement Agreement, is defined as any event arising from causes beyond the control of Respondent, of any entity controlled by Respondent, or of Respondent's contractors that delays or prevents the performance of any obligation under this Settlement Agreement despite Respondent's best efforts to fulfill the obligation. The requirement that Respondent exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure and best efforts to address the effects of any potential force majeure (a) as it is occurring and (b) following the potential force majeure such that the delay and any adverse effects of the delay are minimized to the greatest extent possible. "Force majeure" does not include financial inability to complete the Work or increased cost of performance.

52. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement for which Respondent intend or may intend to assert a claim of force majeure, Respondent shall notify EPA's OSC/RPM orally or, in his or her absence, the alternate EPA OSC/RPM, or, in the event both of EPA's designated representatives are unavailable, the Director of the Superfund Remedial Response Program, EPA Region 8, within 5 Days of when Respondent first knew that the event might cause a delay. Within 10 days thereafter, Respondent shall provide in writing to EPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondent's rationale for attributing such delay to a force majeure; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health or welfare, or the environment. Respondent shall include with any notice all available documentation supporting their claim that the delay was attributable to a force majeure. Respondent shall be deemed to know of any circumstance of which Respondent, any entity controlled by Respondent, or Respondent's contractors knew or should have known. Failure to comply with the above requirements regarding an event shall preclude Respondent from asserting any claim of force majeure regarding that event, provided, however, that if EPA, despite the late or incomplete notice, is able to assess to its satisfaction whether the event is a force majeure under Paragraph 51 and whether Respondent has exercised its best efforts under Paragraph 51, EPA may, in its unreviewable discretion, excuse in writing Respondent's failure to submit timely or complete notices under this Paragraph.

53. If EPA agrees that the delay or anticipated delay is attributable to a force majeure, the time for performance of the obligations under this Settlement Agreement that are affected by the force majeure will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure, EPA will notify Respondent in writing of its decision. If EPA agrees that the delay is attributable to a force majeure, EPA will notify Respondent in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure.

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54. If Respondent elects to invoke the dispute resolution procedures set forth in Section XV (Dispute Resolution), they shall do so no later than 15 days after receipt of EPA's written decision as provided in Paragraph 53. In any such proceeding, Respondent shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondent complied with the requirements of Paragraphs 51 and 52. If Respondent carries this burden, the delay at issue shall be deemed not to be a violation by Respondent of the affected obligation of this Settlement Agreement identified to EPA.

XVII. STIPULATED PENALTIES

55. Respondent shall be liable for stipulated penalties in the amounts set forth in Paragraphs 56 and 57 to EPA for failure to comply with the requirements of this Settlement Agreement specified below, unless excused under Section XVI (Force Majeure). "Compliance" by Respondent shall include completion of all payments and activities required under this Settlement Agreement, or any plan, report, or other deliverable approved under this Settlement Agreement, in accordance with all applicable requirements of law, this Settlement Agreement, the SOW, and any plans, reports, or other deliverables approved under this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement.

56. Stipulated Penalty Amounts - Work (Including Payments and Excluding Plans, Reports, and Other Deliverables).

a. The following stipulated penalties shall accrue per violation per day for any noncompliance identified in Paragraph 56.a:

Penalty Per Violation Per Day	Period of Noncompliance
$250.00	1st through 14th day
$500.00	15th through 30th day
$1000.00	31st day and beyond

b. Compliance Milestones

(i) Failure to submit a draft Removal Action Work Plan

(ii) Failure to commence implementation of the Work in accordance with the schedule in the approved Removal Action Work Plan

57. Stipulated Penalty Amounts - Plans, Reports, and Other Deliverables. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports pursuant to Paragraphs 28 & 29 of this Settlement Agreement:

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Penalty Per Violation Per Day	Period of Noncompliance
$100.00	1st through 14th day
$250.00	15th through 30th day
$500.00	31st day and beyond

58. In the event that EPA assumes performance of all or any portion(s) of the Work pursuant to Paragraph 70 (Work Takeover), Respondent shall be liable for a stipulated penalty in the amount of $50,000.00.

59. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: (a) with respect to a deficient submission under Paragraph 23 (Work Plan and Implementation), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondent of any deficiency; and (b) with respect to a decision by the EPA Management Official at the Director, Superfund Remedial Response Program level or higher, under Paragraph 49 of Section XV (Dispute Resolution), during the period, if any, beginning the 21st day after the Negotiation Period begins until the date that the EPA Management Official issues a final decision regarding such dispute. Nothing in this Settlement Agreement shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement. Penalties shall continue to accrue during any dispute resolution period, and shall be paid within 15 days after the agreement or the receipt of EPA's decision or order.

60. Following EPA's determination that Respondent has failed to comply with a requirement of this Settlement Agreement, EPA may give Respondent written notification of the failure and describe the noncompliance. EPA may send Respondent a written demand for payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified Respondent of a violation.

61. All penalties accruing under this Section shall be due and payable to EPA within 30 days after Respondent's receipt from EPA of a demand for payment of the penalties, unless Respondent invokes the Dispute Resolution procedures under Section XV (Dispute Resolution) within the 30-day period. All payments to EPA under this Section shall indicate that the payment is for stipulated penalties and shall be made in accordance with Paragraph 44 (Payments for Future Response Cost).

62. If Respondent fails to pay stipulated penalties when due, Respondent shall pay Interest on the unpaid stipulated penalties as follows: (a) if Respondent has timely invoked dispute resolution such that the obligation to pay stipulated penalties has been stayed pending the outcome of dispute resolution, Interest shall accrue from the date stipulated penalties are due pursuant to Paragraph 59 until the date of payment; and (b) if Respondent fails to timely invoke dispute resolution, Interest shall accrue from the date of demand under Paragraph 61 until the date of payment. If Respondent fails to pay stipulated penalties and Interest when due, the United States may institute proceedings to collect the penalties and Interest.

63. The payment of penalties and Interest, if any, shall not alter in any way Respondent's obligation to complete the performance of the Work required under this Settlement Agreement.

64. To the extent that Respondent must appropriate money to pay Stipulated Penalties, Denver shall seek an appropriation for such penalty amounts. The Parties to this Settlement Agreement recognize and acknowledge that Respondent can only pay money to EPA from appropriated funds, or other funds, legally available for such purpose. Nothing in this Settlement Agreement shall be interpreted or construed as a commitment or requirement that Respondent obligate or pay funds to EPA in contravention of Article X, Section 20 or Article XI of the Colorado Constitution.

65. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondent's violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(*l*) of CERCLA, 42 U.S.C. § 9622(*l*), provided however, that the EPA shall not seek civil penalties pursuant to Section 122(*l*) of CERCLA for any violation for which a stipulated penalty is provided in this Settlement Agreement, except in the case of a willful violation of this Settlement Agreement.

66. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XVIII. COVENANTS BY EPA

67. In consideration of the actions that will be performed and the payments that will be made by Respondent under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work and Future Response Costs. These covenants shall take effect upon the Effective Date and are conditioned upon the complete and satisfactory performance by Respondent of all obligations under this Settlement Agreement, including, but not limited to, payment of Future Response Costs pursuant to Paragraph 44 (Payments for Future Response Costs). These covenants extend only to Respondent and do not extend to any other person.

XIX. RESERVATIONS OF RIGHTS BY EPA

68. Except as specifically provided in this Settlement Agreement, nothing in this Settlement Agreement shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants, or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing in this Settlement Agreement shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems

appropriate and necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law.

69. The covenants set forth in Section XVIII (Covenants by EPA) do not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement Agreement is without prejudice to, all rights against Respondent with respect to all other matters, including, but not limited to:

a. liability for failure by Respondent to meet a requirement of this Settlement Agreement;

b. liability for costs not included within the definition of Future Response Costs;

c. liability for performance of response actions other than the Work;

d. criminal liability;

e. liability for violations of federal or state law that occur during or after implementation of the Work;

f. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;

g. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and

h. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site not paid as Future Response Costs under this Settlement Agreement.

70. Work Takeover. In the event EPA determines that Respondent has ceased implementation of any portion of the Work, is seriously or repeatedly deficient or late in its performance of the Work, or is implementing the Work in a manner that may cause an endangerment to human health or the environment, EPA may issue a written notice ("Work Takeover Notice") to Respondent and assume the performance of all or any portion(s) of the Work as EPA deems necessary ("Work Takeover"). In the event that Respondent ceases implementation of the Work due to a decision not to build the planned stormwater drainage feature through the Site, ceasing implementation of the Work shall not be grounds for EPA to issue a Work Takeover Notice. Any Work Takeover Notice issued by EPA (which writing may be electronic) will specify the grounds upon which such notice was issued. Respondent may invoke the procedures set forth in Section XV (Dispute Resolution) to dispute EPA's determination that takeover of the Work is warranted under this Paragraph. However, notwithstanding Respondent's invocation of such dispute resolution procedures, and during the pendency of any such dispute, EPA may in its sole discretion commence and continue a Work Takeover until the earlier of the date that Respondent remedies, to EPA's satisfaction, the circumstances giving rise to EPA's issuance of the relevant Work Takeover Notice, or the date

that a written decision terminating such Work Takeover is rendered in accordance with Paragraph 49. Notwithstanding any other provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

XX. COVENANTS BY RESPONDENT

71. Respondent covenants not to sue and agrees not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, Future Response Costs, or this Settlement Agreement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of response actions at or in connection with the Site, including any claim under the United States Constitution, the State Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

c. any claim pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, Section 7002(a) of RCRA, 42 U.S.C. § 6972(a), or State law relating to the Work, or Future Response Costs.

72. These covenants not to sue shall not apply in the event the United States brings a cause of action or issues an order pursuant to any of the reservations set forth in Section XIX (Reservations of Rights by EPA), other than in Paragraph 69.a (liability for failure to meet a requirement of the Settlement Agreement) or 69.d (criminal liability), but only to the extent that Respondent's claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

73. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

74. Respondent reserves, and this Settlement Agreement is without prejudice to, claims against the United States, subject to the provisions of Chapter 171 of Title 28 of the United States Code, and brought pursuant to any statute other than CERCLA or RCRA and for which the waiver of sovereign immunity is found in a statute other than CERCLA or RCRA, for money damages for injury or loss of property or personal injury or death caused by the negligent or wrongful act or omission of any employee of the United States, as that term is defined in 28 U.S.C. § 2671, while acting within the scope of his or her office or employment under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred. However, the foregoing shall not include any claim based on EPA's selection of response actions, or the oversight or approval of Respondent's plans, reports, other deliverables or activities.

XXI. OTHER CLAIMS

75. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent. The United States or EPA shall not be deemed a party to any contract entered into by Respondent or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Settlement Agreement.

76. Except as expressly provided in Section XVIII (Covenants by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages, and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

77. No action or decision by EPA pursuant to this Settlement Agreement shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXII. EFFECT OF SETTLEMENT/CONTRIBUTION

78. Nothing in this Settlement Agreement shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Settlement Agreement. Except as provided in Section XX (Covenants by Respondent), each of the Parties expressly reserves any and all rights (including, but not limited to, pursuant to Section 113 of CERCLA, 42 U.S.C. § 9613), defenses, claims, demands, and causes of action which each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto. Nothing in this Settlement Agreement diminishes the right of the United States, pursuant to Section 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

79. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), and that Respondent is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), or as may be otherwise provided by law, for "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement Agreement are the Work and Future Response Costs. The Parties further agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which Respondent has, as of the Effective Date, resolved its liability to the United States for the Work and Future Response Costs.

80. Respondent shall, with respect to any suit or claim brought by it for matters related to this Settlement Agreement, notify EPA in writing no later than 60 days prior to the

initiation of such suit or claim. Respondent also shall, with respect to any suit or claim brought against it for matters related to this Settlement Agreement, notify EPA in writing within 10 days after service of the complaint or claim upon it. In addition, Respondent shall notify EPA within 10 days after service or receipt of any Motion for Summary Judgment and within 10 days after receipt of any order from a court setting a case for trial, for matters related to this Settlement Agreement.

81. In any subsequent administrative or judicial proceeding initiated by EPA, or by the United States on behalf of EPA, for injunctive relief, recovery of response costs, or other relief relating to the Site, Respondent shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenant by EPA set forth in Section XVIII (Covenants By EPA).

82. Effective upon signature of this Settlement Agreement by Respondent, Respondent agrees that the time period commencing on the date of its signature and ending on the date EPA receives from Respondent the payment(s) required by Section XIV (Payment of Response Costs) and, if any, Section XVII (Stipulated Penalties) shall not be included in computing the running of any statute of limitations potentially applicable to any action brought by the United States related to the "matters addressed" as defined in Paragraph 79 and that, in any action brought by the United States related to the "matters addressed," Respondent will not assert, and may not maintain, any defense or claim based upon principles of statute of limitations, waiver, laches, estoppel, or other defense based on the passage of time during such period. If EPA gives notice to Respondent that it will not make this Settlement Agreement effective, the statute of limitations shall begin to run again commencing ninety (90) days after the date such notice is sent by EPA.

XXIII. INDEMNIFICATION

83. To the extent allowed by law, Respondent shall indemnify, save, and hold harmless the United States, its officials, agents, contractors, subcontractors, employees, and representatives from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Respondent, their officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Respondent agrees to pay the United States all costs incurred by the United States, including but not limited to attorney's fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondent in carrying out activities pursuant to this Settlement Agreement. Neither Respondent nor any such contractor shall be considered an agent of the United States.

84. The United States shall give Respondent notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondent prior to settling such claim.

85. Respondent waives all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, to the extent allowed by law, Respondent shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

XXIV. INSURANCE

86. At least 10 days prior to commencing any on-site Work under this Settlement Agreement, Respondent shall secure, and shall maintain for the duration of this Settlement Agreement, commercial general liability insurance with limits of $ 1 million dollars, for any one occurrence, and automobile insurance with limits of $1 million dollars, combined single limit, naming the EPA as an additional insured with respect to all liability arising out of the activities performed by or on behalf of Respondent pursuant to this Settlement Agreement. Within the same time period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement Agreement, Respondent shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Settlement Agreement. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXV. MODIFICATION

87. The OSC/RPM may modify any plan or schedule or Statement of Work in writing or by oral direction. Any oral modification will be memorialized in writing by EPA promptly, but shall have as its effective date the date of the OSC's/RPM's oral direction. Any other requirements of this Settlement Agreement may be modified in writing by mutual agreement of the parties.

88. If Respondent seeks permission to deviate from any approved work plan, schedule, or Statement of Work, Respondent's Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis. Respondent may not

proceed with the requested deviation until receiving oral or written approval from the OSC/RPM pursuant to Paragraph 87.

89. No informal advice, guidance, suggestion, or comment by the OSC/RPM or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

XXVI. ADDITIONAL REMOVAL ACTION

90. If EPA determines that additional removal actions not included in the Removal Action Work Plan, or other approved plan are necessary to protect public health, welfare, or the environment, and such additional removal actions are consistent with the Statement of Work, EPA will notify Respondent of that determination. Unless otherwise stated by EPA, within 30 days after receipt of notice from EPA that additional removal actions are necessary to protect public health, welfare, or the environment, Respondent shall submit for approval by EPA a work plan for the additional removal actions. The plan shall conform to the applicable requirements of Section VIII (Work to Be Performed) of this Settlement Agreement. Upon EPA's approval of the plan pursuant to Paragraph 23 (Work Plan and Implementation), Respondent shall implement the plan for additional removal actions in accordance with the provisions and schedule contained therein. This Section does not alter or diminish the OSC's/RPM's authority to make oral modifications to any plan or schedule pursuant to Section XXV (Modification).

XXVII. NOTICE OF COMPLETION OF WORK

91. When EPA determines, after EPA's review of the Final Report, that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including Post-Removal Site Controls, payment of Future Response Costs, and record retention, EPA will provide written notice to Respondent. If EPA determines that such Work has not been completed in accordance with this Settlement Agreement, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the Work Plan if appropriate in order to correct such deficiencies. Respondent shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the EPA notice. Failure by Respondent to implement the approved modified Work Plan shall be a violation of this Settlement Agreement.

XXVIII. INTEGRATION/APPENDICES

92. This Settlement Agreement and its appendices constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Settlement Agreement. The following appendices are attached to and incorporated into this Settlement Agreement:

Appendix A – Action Memorandum

Appendix B – Map of the Site

Appendix C - SOW.

XXIX. EFFECTIVE DATE

93. This Settlement Agreement shall be effective upon final signature by the Regional Administrator or his/her delegate.

The undersigned representatives of Respondent certify that they are fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind the party they represent to this document.

Agreed this 1st day of July, 2015.

For Respondent City and County of Denver

D. SCOTT MARTINEZ
Attorney for the City and County of Denver

BY: _____ DATE: 6/29/15
Jessica Brody
Assistant City Attorney
City and County of Denver
Department of Law
201 West Colfax St., #1207
Denver, CO 80202

BY: _____ DATE: 6/29/15
Doug Linkhart
Executive Director of Environmental Health
City and County of Denver
200 West 14th Avenue, Dept. 310
Denver, Colorado 80204

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It is so ORDERED and Agreed this 1st day of July, 2015.

BY: Andrea Madigan DATE: 6/30/15
Andrea Madigan,
CERCLA Supervisory Attorney
CERCLA Response and Recovery Unit
U.S. EPA Region 8

BY: DATE: 6/30/15
Kelcey Land, Director
CERCLA and RCRA Technical Enforcement Program
U.S. EPA Region 8

BY: DATE: 7/1/2015
David Ostrander, Director
Emergency Response and Preparedness Program
U.S. EPA Region 8

BY: DATE: 6/30/15
Bill Murray, Director
Superfund Remedial Program
U.S. EPA Region 8

EFFECTIVE DATE: July 1, 2015

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Appendix A
To
ADMINISTRATIVE SETTLEMENT AGREEMENT
AND
ORDER ON CONSENT FOR REMOVAL ACTION
Vasquez Boulevard/Interstate 70 site – Portion of
Operable Unit 2

Action Memorandum

Ref: 8EPR-SR

ACTION MEMORANDUM

SUBJECT: Approval for a Time-Critical Removal Action at a portion of the Vasquez Boulevard/Interstate 70 site - Operable Unit 2, City and County of Denver, Colorado
Site ID# 089R

FROM: Kerry Guy, Federal On-Scene Coordinator
Emergency Response Program

Dania Zinner, Remedial Project Manager
Superfund Remedial Response Program

THRU: Steve Wharton, Unit Chief
Superfund Remedial Response Program

Laura Williams, Unit Chief
Emergency Response Unit

TO: David A. Ostrander, Director
Emergency Response and Preparedness Program

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the removal action described herein for a portion of Operable Unit 2 (OU2) of the Vasquez Boulevard/Interstate 70 site, City and County of Denver, Colorado. This time-critical removal action will be conducted by the City and County of Denver (CCoD) pursuant to an administrative settlement agreement with EPA entered under the authority of Section 122 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, 42 U.S.C. § 9622. CCoD plans to construct a stormwater drainage feature through a portion of OU2 (see map showing potential area of disturbance in Attachment A). The stormwater drainage feature is a part of a larger project that is intended to reduce flooding in the Montclair Drainage Basin area and address stormwater management needs associated with projects being developed by the Regional Transportation District (RTD), the Colorado Department of Transportation (CDOT), and CCoD. It is estimated that construction of this stormwater drainage feature will require the excavation and handling of substantial volumes of potentially metal impacted (lead and arsenic) soils in OU2. Once excavated, the soils, if contaminated, will be disposed off-site. Conditions existing at OU2 present a threat to public health and the environment and meet the criteria for initiating a removal action under 40 CFR 300.415(b)(2) of the National Contingency Plan (NCP).

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This removal action involves no nationally-significant or precedent-setting issues. This time-critical removal action will not establish any precedent for how future response actions will be taken, and will not commit the US Environmental Protection Agency (EPA) to a course of action that could have a significant impact on future responses or resources.

II. SITE CONDITIONS AND BACKGROUND

Site Name:	Vasquez Boulevard/Interstate 70 site - OU2
Superfund Site ID (SSID):	089R
NRC Case Number:	
CERCLIS Number:	CO0002259588
Site Location:	Denver County, Denver, CO
Lat/Long:	
Potentially Responsible Party (PRP):	City and County of Denver
NPL Status:	Final July 22, 1999
Removal Start Date:	TBD: FY/Qtr
Incident Category:	Time-Critical Removal Action
Response Authority:	CERCLA

A. SITE DESCRIPTION

1. Removal Site Evaluation

The Vasquez Boulevard/Interstate 70 site was listed on the National Priorities List (NPL) on July 22, 1999. Three operable units were identified. OU2 covers the area of the Vasquez Boulevard/Interstate 70 site where the former Omaha & Grant Smelter operated. The Omaha & Grant Smelter facility operated from 1882 until 1903. A lead smelting process was employed at the facility to produce gold, silver, copper, and lead. The process involved the fusing of ore, fuel, and lime to form a melted product. As a result of this process, lead and silver would sink to the bottom of an iron chamber and the slag would float on the surface of the liquid metals. Although detailed information about the wastes from the smelting operations is not well documented, it is known that blast furnace slag was produced from the smelting operations. Ores, fuel, and flux were delivered by rail car directly to the furnace charging doors on the upper levels of the smelter. As the smelting operations proceeded, the intermediate products flowed downhill to a lower level. Smelter workers would run slag onto a dump and load bullion onto rail cars.

After closure in 1903, the smelter buildings were subsequently demolished. Sometime later, all of the slag, with the exception of any residual that could be buried under modern parking lots, was removed. Based on historic aerial photographs, all of the visible slag was removed by 1949. Prior to constructing the Denver Coliseum and associated parking lot in the early 1950s, portions of the site were used as a landfill for disposal of construction debris and municipal solid wastes. The presence of the landfill materials beneath the Coliseum parking lot area is evidenced by the undulating nature of the parking lot pavement owing to differential compaction and decomposition of the underlying solid waste materials.

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The CCoD performed a remedial investigation (RI) for OU2 in 2009 and a feasibility study (FS) in 2010. Development of a proposed plan and record of decision for OU2 has been postponed until EPA completes an additional investigation of groundwater at OU2. This removal action is necessary to address potential releases of and potential worker exposure to hazardous substances that could occur at or near OU2 as the result of CCoD's planned construction of a stormwater feature through a portion of OU2 as shown in Attachment A. This construction will be conducted in areas of OU2 known to contain elevated levels of lead and arsenic in surface and subsurface soils.

Investigations at OU2 have identified the presence of levels of arsenic and lead in soil at concentrations above human health screening levels.

The Preliminary and Final Baseline Human Health Risk assessments for OU2 identified surface and subsurface soil as the potential media of concern and arsenic and lead as the chemicals of potential concern.

2. Physical Location

OU2 is in an historic industrial area of Denver. OU2 encompasses the approximately 50 acres of the original Omaha & Grant Smelter facility and includes a portion of the Globeville Landing Park. OU2 is generally bounded by 1-70 on the north, the South Platte River on the west, Brighton Boulevard on the east, and the southern boundaries of the Globeville Landing Park and the Pepsi Bottling Company property on the south.

Other than the South Platte River, there are no major surface water bodies within OU2. Drainage in OU2 is largely controlled by man-made features, such as ditches, roads and storm sewers, as the majority of OU2 is paved or covered by buildings. Surface water runoff is directed to the South Platte River.

3. Site Characteristics

OU2 consists of the southern portion of the Denver Coliseum property (that portion of the Coliseum property located south of Interstate 70), which is owned by the CCoD, the Forney Transportation Museum property along Brighton Boulevard, the Pepsi Bottling Company property along Brighton Boulevard, and various other commercial properties located along Brighton Boulevard. None of the current facilities or businesses within OU2 are known to be contributing to the release at OU2.

The historical land use at OU2 was industrial and included smelting (1883 - 1903), and municipal waste incineration and landfilling of construction and municipal waste (1933-1945).

The current land use at OU2 is primarily commercial/industrial, with recreational use at a small portion of the OU located in the western corner immediately adjacent to the South Platte River at the Globeville Landing Park. The ground is largely covered by highways, building structures,

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and paved parking lots. Grassy or unpaved areas are rare and are mainly restricted to the western most portion of the OU at the Globeville Landing Park and some small areas at some of the commercial properties along Brighton Boulevard and 39th Avenue on the eastern and southern portions of the OU. The potential future land use of OU2 is multi-family residential, with the approximate size of the multi-family units ranging from 5 to 20 acres.

The land use surrounding OU2 is mainly commercial/industrial, interspersed with private residences, and with recreational land use along the South Platte River.

Other than assessments and investigations, no other removal actions have been conducted at OU2.

4. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant or Contaminant

Investigations in OU2 found many areas where surface and subsurface soils contained levels of arsenic and lead above what was considered background levels: 15 mg/kg for arsenic and 400 mg/kg for lead. (See OU2 RI.) In particular, limited sampling of soils along the route of the proposed stormwater feature found arsenic levels up to 48 mg/kg and lead levels up to 1400 mg/kg, and sampling on property adjacent to the proposed route showed arsenic levels up to 1400 mg/kg and lead levels up to 100,000 mg/kg. Levels of arsenic and lead well above background levels show a release of a hazardous substance to the environment at OU2. Excavation of these metal contaminated soils pose the threat of additional releases of these hazardous substances to the environment.

Lead and arsenic are "hazardous substances" as defined by Section 101(14) of CERCLA, as amended, 42 U.S.C. § 9601(14) and in the NCP at 40 CFR Section 302.4. Adverse human health effects of these metals may include the following:

Arsenic

Large doses of arsenic may be acutely fatal to humans. Symptoms include fever, loss of appetite, enlarged liver and heart rhythm abnormalities. Sensory loss in the peripheral nervous system may also occur. Chronic exposure to arsenic generally results in skin lesions, liver injury and peripheral vascular disease. The peripheral vascular disease may progress to endarteritis obliterans and gangrene of the lower extremities (blackfoot disease). Arsenic is a human carcinogen based on observation of increased lung cancer mortality due to inhalation exposure and increased skin cancer in individuals exposed to arsenic via drinking water.

Lead

Lead is classified as a B2 carcinogen by the EPA. This classification is the result of sufficient animal studies determining that lead compounds are probable human carcinogens. Lead can enter the body via ingestion and inhalation. Children appear to be the segment of the

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population at greatest risk from toxic effects of lead. Initially, lead travels in the blood to the soft tissues (heart, liver, kidney, brain, etc.), then gradually redistributes to the bones and teeth where it tends to remain. The most serious effects associated with markedly elevated blood lead levels include neurotoxic effects, such as irreversible brain damage. Children have exhibited nerve damage, permanent mental retardation, colic, anemia, brain damage, and death.

5. NPL Status

The Vasquez Boulevard/Interstate 70 site was listed on the National Priorities List (NPL) on July 22, 1999. A feasibility study focused on soils at OU2 was completed in 2010 by CCoD. Groundwater investigations are ongoing and are expected to be completed in 2015, with an OU2 proposed plan and record of decision to follow soon thereafter.

6. Maps, Pictures, Other Geographic Representations

A map of OU2 within the Vasquez Boulevard/Interstate 70 site is shown in Attachment B.

B. Other Actions to Date

1. Previous actions

No previous actions other than described above have been conducted at OU2.

2. Current actions

No current actions other than described above are on-going at OU2.

C. State and Local Authorities' Roles

1. State and Local Actions to Date

CCoD conducted a remedial investigation and feasibility study for OU2, which was completed in 2010. CCoD has also conducted additional sampling in OU2 in the last year in anticipation of the construction of the stormwater feature. The State is the support agency for OU2 and has assisted EPA in oversight of the response actions at OU2.

2. Potential for Continued State/Local Response

The CCoD will perform and fund the proposed removal action. The State will continue to be the support agency for response actions at OU2.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

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The conditions at OU2 present a threat to public health and welfare and meet the criteria for initiating a removal action under Section 300.415(b)(2) of the NCP.

EPA has considered all the factors described in 40 CFR 300.415(b)(2) of the NCP and determined that the following factors apply at OU2:

> *Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.*

The proposed stormwater feature construction in OU2 will result in the excavation of substantial volumes of potentially metal impacted soils. If not excavated, handled, and disposed properly, the workers and other nearby human populations could be exposed to unsafe levels of arsenic and lead in these soils.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from OU2, if not addressed by implementing the response action described in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

Develop and implement a materials management plan and workplan in accordance with the statement of work (SOW) attached to the Administrative Settlement Agreement and Order on Consent for Removal Action for the screening, excavation, handling, and disposal of waste materials[1] encountered during the planned construction of a stormwater feature within a portion of OU2 as shown in Figure 1.

2. Contribution to Remedial Performance

The proposed actions will contribute to and not interfere with potential remedial actions for OU2.

3. Engineering Evaluation/Cost Analysis (EE/CA)

This is a time-critical removal action; thus, an EE/CA is not required.

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1 "Waste materials" is a defined term in the Administrative Settlement Agreement and Order on Consent for Removal Action that is being signed concurrently with this Action Memorandum. Even though investigations to date have determined that lead and arsenic in soils are the contaminants of potential concern for OU2, the planned excavations for the stormwater project will be in areas of known landfilling of municipal wastes and other hazardous substances or pollutants and contaminants may be discovered above safe levels and will require proper handling and disposal.

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4. Applicable or Relevant and Appropriate Requirements (ARARs)

Removal actions conducted under CERCLA are required, to the extent practicable considering the exigencies of the situation, to attain ARARs. In determining whether compliance with an ARAR is practicable, the lead agency may consider appropriate factors, including the urgency of the situation and the scope of the removal action to be conducted. A table containing potential ARARs is included in Attachment C.

5. Project Schedule

Anticipated start date is July 2015.

B. Estimated Costs

See below.

TOTAL REMOVAL PROJECT CEILING

This removal action will be conducted by CCoD pursuant to an administrative settlement agreement with EPA that will be signed concurrently with this Action Memorandum. Barring unforeseen events, EPA's costs for this removal action will be limited to project oversight, which will be subject to reimbursement.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

A delay in action or no action will increase the public health risks to the local population and workers posed by the excavation and handling of waste materials encountered during the construction of a stormwater feature within a portion of OU2.

VII. OUTSTANDING POLICY ISSUES

This removal does not set a precedent or constitute a nationally significant issue.

VIII. ENFORCEMENT

Since CCoD will be performing this removal action and reimbursing EPA's oversight costs for this removal action a separate enforcement addendum has not been prepared.

X. RECOMMENDATION

This decision document represents a selected removal action for a portion of OU2 of the Vasquez Boulevard/Interstate 70 site, in the City and County of Denver, Colorado, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for this removal action.

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Conditions at OU2 meet the NCP Section 300.415(b)(2) criteria for a removal, and I recommend your approval of the proposed removal action. This time-critical removal action will be funded by the City and County of Denver (CCoD) pursuant to an administrative settlement agreement with EPA. EPA's costs for this PRP-led removal action will be limited to project oversight, which will be subject to reimbursement.

Approve: _____ Date: 7/1/2015
David A. Ostrander, Director
Emergency Response and Preparedness Program

Disapprove: _____ Date: _____
David A. Ostrander, Director
Emergency Response and Preparedness Program

Attachments:

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REFERENCES

SUPPLEMENTAL DOCUMENTS

Support/reference documents that may be helpful to the reader and/or have been cited in the report are located in the Administrative Record Files for this removal action at the Superfund Records Center for Region 8 EPA, 1595 Wynkoop Street, Denver, Colorado 80202, and are available for review by appointment.

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Attachment A

Potential Area of Disturbance for Stormwater Drainage Feature

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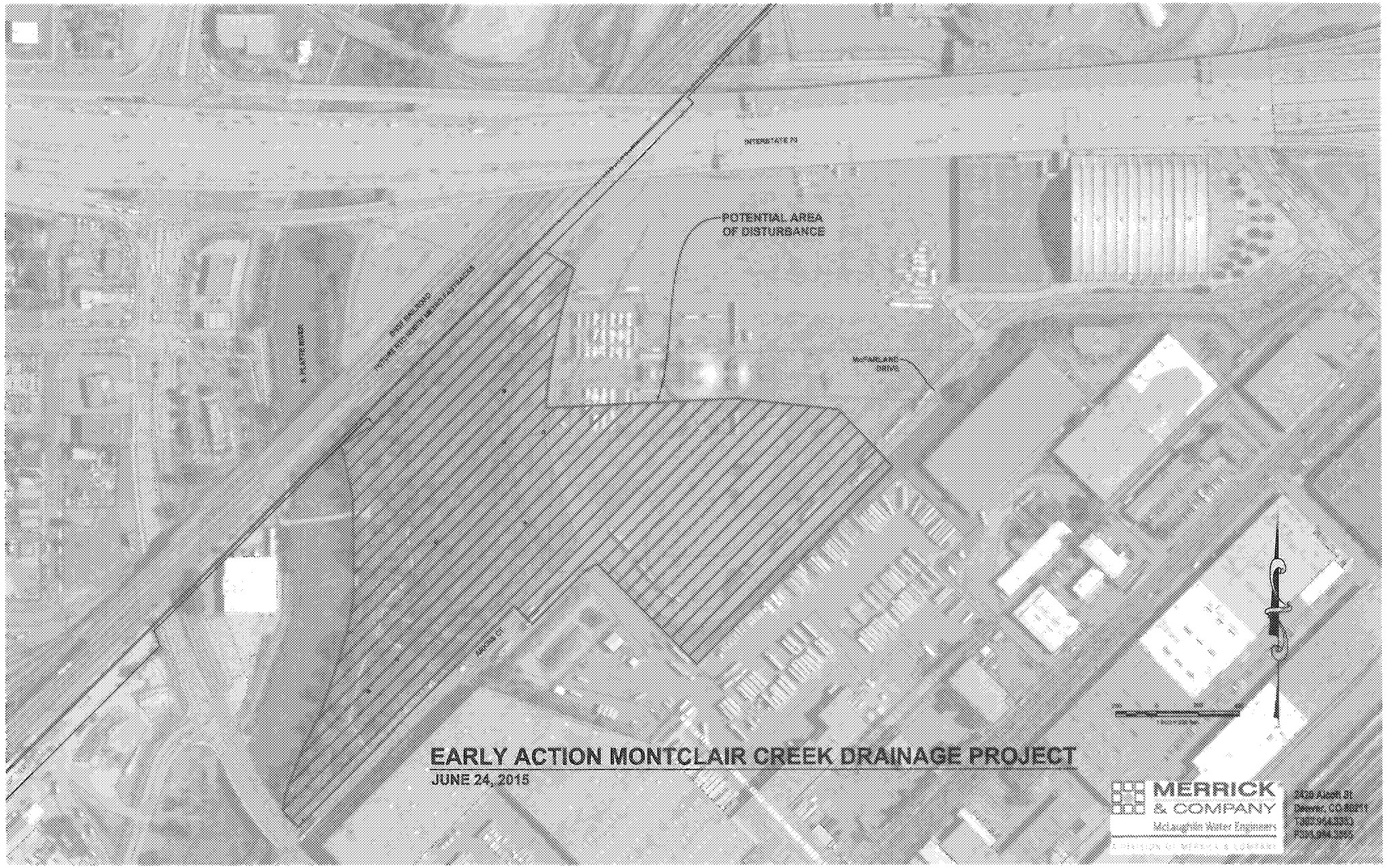
POTENTIAL AREA
OF DISTURBANCE
INTERSTATE 70
EARLY ACTION MONTCLAIR CREEK DRAINAGE PROJECT
JUNE 24, 2015
MERRICK
& COMPANY
McLaughlin Water Engineers

Attachment B

A map of OU2 within the Vasquez Boulevard/Interstate 70 site

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Vasquez Blvd. and I-70

Operable Units

Denver County, Colorado

NPL Boundary

Operable Unit Boundary

*ICs do not exist for this site.

Map Date: January 14, 2011

Map Projection: UTM, Meters, 13 North, NAD83

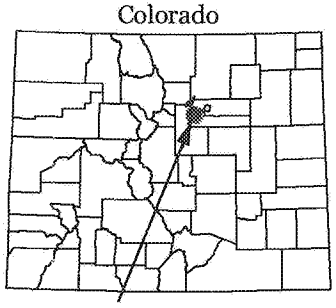
Data Sources: *Boundaries* - U.S. EPA Region 8 (2011); *Imagery* - USDA NAIP 1-meter aerial photo (2009).

N

0 1,000 2,000 Feet

0 250 500 Meters

Colorado



Area Enlarged

*Boundaries are based on the nature and extent of contamination and are subject to change.

Attachment C

Applicable or Relevant and Appropriate Requirements

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Attachment C
Applicable or Relevant and Appropriate Regulations (ARARs)

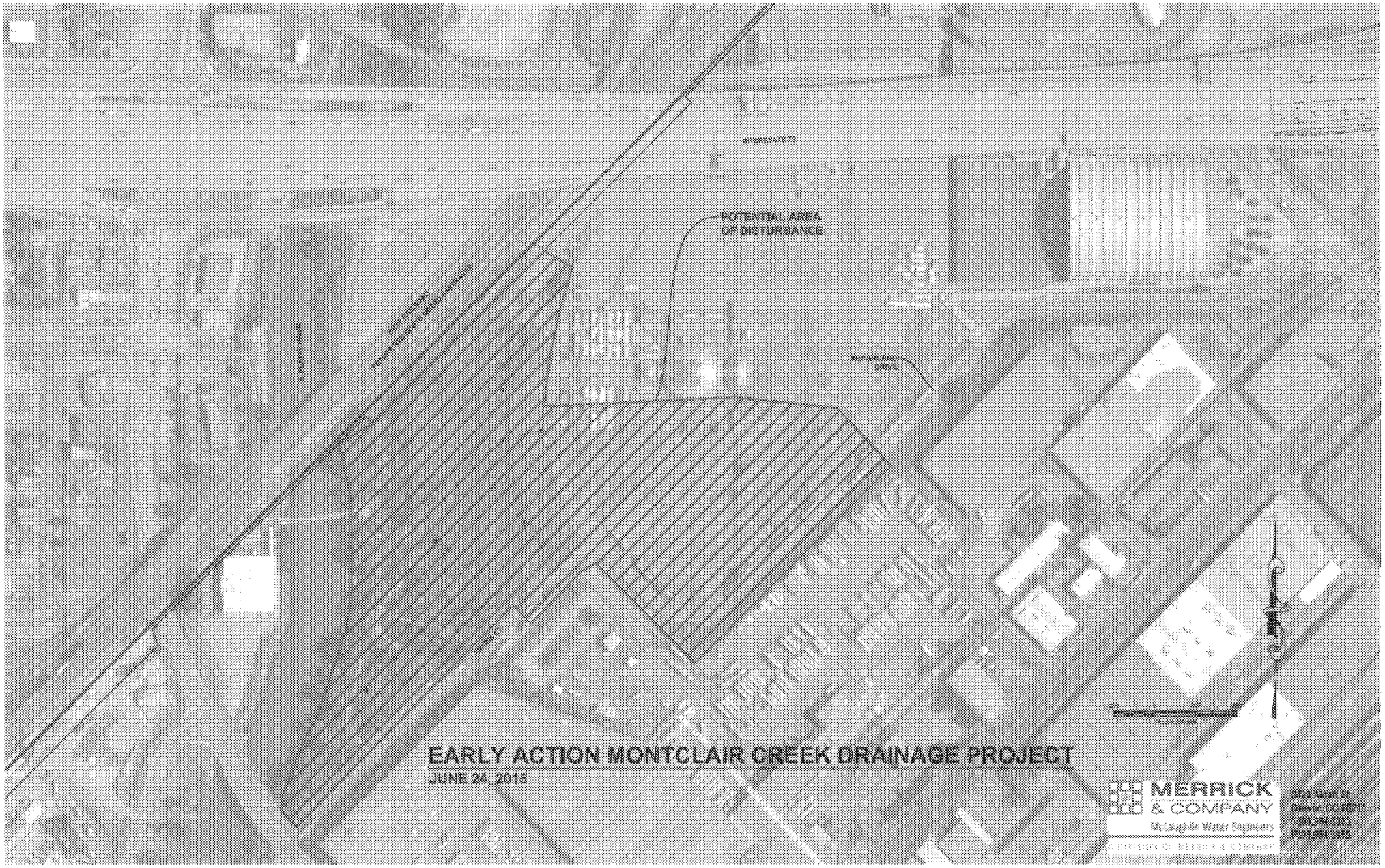
This table contains a listing of potential ARARs for the Removal Action at a Portion of OU2 – VB/I70 site

Standard, Requirement, Criteria, or Limitation	**Citation**	**Description**	**Applicable or Relevant and Appropriate**	**Comments**
Colorado Solid Waste Disposal Sites and Facilities Act	6 CCR 1007-2, pursuant to CRS § 30-20-100.5, et.seq.	Establishes standards for the licensing, locating, constructing, and operating solid waste disposal facilities.	Relevant and Appropriate	This regulation is specifically for non-hazardous solid waste. Certain provisions of these regulations may be considered in implementing this action, such as in capping solid waste in place.
Colorado Water Quality Control Act. Storm Water Discharge Regulations	5 CCR 1002-61	Regulates discharge of storm water during construction activities.	Applicable	Best Management Practices will be implemented to control storm water discharges or run-off during Removal activities.
Colorado Air Pollution Prevention and Control Act	5 CCR 1001-3, pursuant to CRS §§ 25-7-101 et. seq.	Regulates fugitive emissions during construction.	Applicable	Superfund actions do not require permits; however, fugitive emissions will be controlled by implementing dust control during any dirt moving or construction activities.
Colorado Noise Abatement Statute	CRS §§ 25-12-1010, et. seq.	Regulates permissible noise levels.	Applicable	Noise controls will be implemented throughout the Removal Action.

Standard, Requirement, Criteria, or Limitation	Citation	Description	Applicable or Relevant and Appropriate	Comments
Colorado Discharge Permit System Regulations	5 CCR 1002-61, pursuant to CRS §§ 25-8-503, et. seq.	Regulates discharges to State waters	Applicable	If removal activities will impact surface water (i.e., activities will result in a discharge to State waters), substantive provisions will be applicable.

Appendix B
To
ADMINISTRATIVE SETTLEMENT AGREEMENT
AND
ORDER ON CONSENT FOR REMOVAL ACTION
Vasquez Boulevard/Interstate 70 site – Portion of
Operable Unit 2

Map of Site


POTENTIAL AREA
OF DISTURBANCE
EARLY ACTION MONTCLAIR CREEK DRAINAGE PROJECT
JUNE 24, 2015
MERRICK
& COMPANY
McLaughlin Water Engineers

Appendix C
To
ADMINISTRATIVE SETTLEMENT AGREEMENT
AND
ORDER ON CONSENT FOR REMOVAL ACTION
Vasquez Boulevard/Interstate 70 site – Portion of Operable Unit 2

Statement of Work

STATEMENT OF WORK

I. Purpose

The purpose of this Statement of Work ("SOW") is to describe the general content of the Work the City and County of Denver ("Respondent") has agreed to perform pursuant to the Administrative Settlement Agreement and Order on Consent for Removal Action ("Agreement").

The Work entails design and implementation of the "environmental components" of a stormwater drainage feature to be constructed through a portion of Operable Unit 2 of the VB/I70 Superfund site. The stormwater drainage feature is part of a larger project that is intended to reduce flooding in the Montclair Drainage Basin area and address stormwater management needs associated with projects being developed by Regional Transportation District (RTD), Colorado Department of Transportation (CDOT), and Respondent.

The "environmental components" to be addressed by this Removal Action consist of: 1) management and handling of waste material encountered during construction of the stormwater drainage feature; 2) management and, if necessary treatment and/or disposal, of dewatering liquid during construction; and 3) design and construction of an impermeable barrier system to prevent any contaminants remaining within the boundaries of the stormwater drainage feature from adversely impacting stormwater retained within and conveyed by the stormwater drainage feature, as well as prevent stormwater infiltration into contaminated media remaining beneath or surrounding the feature.

The Respondent shall also define and implement environmental protection measures needed to protect human health, groundwater, surface water, air, and soils from potential impairment caused by construction of the stormwater drainage feature. This shall include: 1) preparation and implementation of a Removal Action Work Plan (RAWP) containing a Sampling and Analysis Plan (SAP), a Quality Assurance Project Plan (QAPP), a Materials Management Plan (MMP), a Health and Safety Plan (HASP), and Progress Reporting procedures; 2) a pre-Final inspection; and 3) preparation of a Construction Closeout Report. In addition, if requested by EPA, Respondent shall assist EPA with community relations. Details of these activities are discussed below.

II. Work to Be Performed

This SOW describes the activities that shall be completed to reduce risk to human health and the environment at the Site. The Work to be performed consists of:

1. Management of Waste Material

Construction of the stormwater drainage feature will require the excavation and handling of a substantial volume of soil and solid waste material. Investigations have identified lead and arsenic in soils and subsurface soil as contaminants of concern for OU2. Additionally, municipal wastes were landfilled in this area and investigations have identified volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons

(PAHs), and potentially friable asbestos associated with those materials. Together, these contaminated soils and solid waste are the "waste material" that will need to be removed. It is expected that concentrations of most contaminants of concern in the waste material will be sufficiently low such that most of the material may be managed as a RCRA non-hazardous solid waste. Respondent is planning to dispose all RCRA non-hazardous material, including material containing friable asbestos, at the Denver Arapahoe Disposal Site (DADS) under disposal certificates issued by landfill operator. Respondent will manage RCRA hazardous material as hazardous waste and will treat and/or dispose of such material at a RCRA-licensed Subtitle C treatment, storage, or disposal facility (TSDF). Criteria and protocols for management and disposal of all material shall be incorporated into the Materials Management Plan.

2. Management of Contaminated Groundwater

Historic groundwater sampling has detected VOCs and metals above Colorado Basic Standards for Groundwater and Surface Water. As necessary, groundwater collected during construction dewatering will be treated prior to release to a receiving stream or transported offsite for treatment and disposal. Criteria and protocols for collection, treatment, and disposition of these liquids, as well as any other liquid that comes in contact with the waste material, including washout and decontamination liquids, shall be incorporated into the Materials Management Plan.

3. Barrier System Beneath the Stormwater Channel

Under all portion(s) of the stormwater drainage feature to be constructed as an open channel, Respondent shall design and construct a barrier system, including an impermeable liner, to prevent contact between the remaining contaminated media (i.e., waste material and contaminated groundwater left in place), and stormwater conveyed by the stormwater drainage feature . As appropriate, the barrier system shall also include foundation material beneath the liner and protective material above the liner to ensure liner stability and protection. Respondent shall also design the system to account for historical groundwater flow patterns beneath and adjacent to the liner.

Respondent shall submit the following design documents related to the barrier system for EPA and CDPHE review:

a. **Draft (50 percent) Design.** This submittal shall include the following:

- Design Criteria
- Results of additional field sampling and pre-design work
- Draft plans, drawings, and sketches
- Draft specifications
- Project delivery strategy
- Draft construction schedule

- Draft construction cost estimate

b. **Pre-Final (95 percent) Design.** This submittal shall refine and detail the Draft Design, with revisions addressing comments from EPA and CDPHE. Respondent shall include value engineering assessments. The submittal shall represent the best efforts at a complete design and include drawings, specifications, general conditions, a Basis of Design memorandum, an updated schedule, and an updated cost estimate.

c. **Final Design.** This submittal shall include the complete and final barrier system design. All of the items required for the Draft design submittal, as well as modifications resulting from review of the Draft and Pre-Final design shall be included. Drawings, specifications, and general conditions shall be ready for procurement and implementation.

Respondent shall submit two copies of each design package to EPA and CDPHE for review and comment, and respond to comments in a letter format.

4. Removal Action Work Plan (RAWP)

a. The RAWP shall describe the removal activities to be performed. The RAWP shall discuss:

- Site background;
- Project organization;
- Site characterization;
- Scope of removal action activities to include discussion of:
  - Staging area,
  - Mobilization plan,
  - Site preparation,
  - Excavation of waste material,
  - Treatment of waste material, if necessary, prior to disposal,
  - Disposal procedures,
  - Management of groundwater during removal activities,
  - Stormwater management during removal activities,
  - Dust control measures,
  - Personnel and equipment monitoring and decontamination procedures, and
  - Other activities required to implement the removal action;
- Institutional controls;
- Anticipated community relations activities;
- Schedule of project deliverables with associated submittal dates and proposed construction schedule.

b. Supporting deliverables to the RAWP shall include the following:

- Sampling and Analysis Plan (SAP) - The SAP shall be submitted in accordance with the National Contingency Plan (NCP), Section 300.415(b)(4)(ii) for removal actions. The SAP shall consist of two parts:

  - A Field Sampling Plan (FSP), which describes the number, type, and location of samples and the type of analyses; and

  - A Quality Assurance Project Plan (QAPP), which describes policy, organization, and functional activities and the data quality objectives and measures necessary to achieve adequate quality for use in planning and documenting the removal action.

- Materials Management Plan (MMP) -- Respondent shall submit an MMP describing: 1) the testing, management and disposal requirements for waste material; 2) requirements for management and treatment of and groundwater captured during construction dewatering operations; and 3) management of liquids and solids from design investigations, groundwater sampling, and equipment decontamination.

- Site Health and Safety Plan (HASP) -A Site HASP shall be developed in accordance with OSHA Standard 29 CFR Part 1910 and Part 1926.

c. Monthly Project Reporting. Monthly reports required pursuant to Section V of the Agreement shall contain pertinent new information specified in Superfund Removal Procedures, Removal Response Reporting: POLREP and OSC Reports (EPA, 1994). The monthly report shall include the following sections: Section I - Heading, Section II - Response Information, and Section III – Issues, Resolutions, and Planned Activities . Section I shall include date of report, site name, author of report, recipient of report, and number of report. Section II shall include a description of contaminated media removed pursuant to the Removal Action Work Plan and Materials Management Plan, such as actions completed, sampling results, volume and disposition of waste material removed during the reporting period and total to date, and volume and disposition of dewatering water removed during the reporting period and total to date. . Finally, Section III shall include a description of problems encountered during the reporting period, how they were resolved and if not resolved, recommendations for resolution, and activities planned for the next reporting period.

5. Implementation of the RAWP

Respondent shall implement the RAWP in accordance with the removal action

activities and work schedule presented in the RAWP. Responsibilities for implementing the supporting documents shall be as follows:

a. SAP and QAPP: Respondent shall implement these Plans directly.
b. MPP and HASP: Respondent shall inspect the site activities for compliance with these Plans.
c. Monthly Project Reporting: Respondent shall prepare the reports directly.

6. Pre-Final Inspection

Upon or near completion of key components of the removal action, and before the submittal of the Construction Completion Report, one or more pre-final inspection(s) by EPA and CDPHE shall be arranged by the Respondent. A list of check-points that may be inspected by EPA and CDPHE during removal action implementation shall be developed during design. Possible check points may consist of completion of waste material removal, completion of dewatering, completion of barrier system installation, among others. Respondent shall document any "punch-list" items resulting from these inspections and work to address the punch-list items to the satisfaction of EPA, in consultation with CDPHE. Documention of these partial completion inspections and resolution of punch-list items shall be incorporated into the Construction Completion Report, discussed below.

7. Construction Completion Report

Respondent shall prepare a Construction Completion Report that shall include the following chapters:

Section 1. Introduction: Include a brief description of the location, size, environmental setting, and operational history of the site. Describe the operations and waste management practices that contributed to contamination of the site. Describe the major findings and results of site investigation activities.

Section 2. Operable Unit Background: Summarize requirements specified in the ROD, ESD, and TCRA Memorandum for OU2. Include information on the cleanup goals, institutional controls, monitoring requirements, and other parameters applicable to the design, construction, operation, and performance of the removal action.

Section 3. Construction Activities: Provide a step-by-step summary description of the activities undertaken to construct the remedy (e.g., mobilization and site preparatory work; excavation, screening, handling, and disposition of waste material; construction, operation, and monitoring of the dewatering and water treatment system; construction of the barrier system; and site reclamation).

Record drawings shall be appended to the Report and any minor changes to the original design shall be discussed. .

Section 4. Chronology of Events: Include significant milestones and dates, such as, design submittal and approval; ROD amendments or ESDs; mobilization and construction of the remedy; significant operational events such as treatment system/application start-up, monitoring and sampling events, system modifications, operational down time, variances or non-compliance situations, and final shut-down or cessation of operations; final sampling and confirmation-of- performance results; required inspections; demobilization; and completion or startup of post- construction operation & maintenance activities. To the extent that any significant changes to the removal action required or were caused by an ESD, these changes and their impacts to the project schedule will be addressed in this section.

Section 5. Performance Standards and Construction Quality Control: Describe the overall performance of the technology in terms of comparison to cleanup goals. For non-hazardous waste material removed, include a summary of visual/ACM/or hazardous characteristics screening results, volumes, and shipping manifests. For hazardous wastes, include profiling results, volumes, and completed uniform hazardous waste manifests. For water treated and discharged under the substantial requirements of a Colorado Discharge Permit, include a comparison of effluent quality results to discharge limits. For waters shipped off-site to a RCRA TSDF, include water quality results, profiles, volumes, and shipping manifests.

Section 6. Final Inspection and Certifications: Report the results of the various inspections to include the pre-Final inspection(s), and identify noted deficiencies. If implemented, summarize details of the institutional controls (e.g., the type of institutional control, who will maintain the control, who will enforce the control).

Section 7. Summary of Project Costs: Provide the actual final costs and applicable year for the project. If actual costs are not available, provide estimated costs.

Section 8. Observations and Lessons Learned: Provide site-specific observations and lessons learned from the project, highlighting successes and problems encountered and how resolved.

Section 9. Operable Unit Contact Information: Provide contact information (names, addresses, phone numbers, and contract/reference data) for the major design and remediation contractors, EPA oversight contractors, and the respective RPM and project managers for EPA, the State, and the PRPs, as

applicable.

Appendix A. Record Drawings
Appendix B. Cost and Performance Summary
Appendix C. Waste Manifests

Supplemental Appendices. Place for maps, schematics, references.

8. Community Relations

Respondent shall assist EPA, if requested, in performing the community relations activities specified in Section 300.415(n) of the NCP.

References

EPA, 1994 (June). Superfund Removal Procedures, Removal Response Reporting: POL.REP and OSC Reports. Office of Solid Waste and Emergency Response (OSWER) Directive 9360-3-03, United States Environmental Protection Agency, Washington, D.C. 20460

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