

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 8

August 25, 2020
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Received by
EPA Region VIII
Hearing Clerk

_____))
IN THE MATTER OF:))
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Illinois Gulch Superfund Site))
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TABR Realty Services, LLC,))
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Respondent.))
))
Proceeding under Section 106(a)))
of the Comprehensive Environmental))
Response, Compensation, and Liability))
Act, as amended, 42 U.S.C. § 9606(a).))
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_____))

CERCLA Docket No. CERCLA-08-2020-0003

**UNILATERAL ADMINISTRATIVE
ORDER FOR REMOVAL ACTION**

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Order (“Order”) is issued under the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act, (CERCLA), as amended, 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of the United States Environmental Protection Agency (EPA) by Executive Order No. 12580, 52 Fed. Reg. 2923 (Jan. 23, 1987), and further delegated to the Regional Administrators by EPA Delegation Nos. 14-14A and 14-14B. This authority was further redelegated by the Regional Administrator of EPA Region 8 to the Regional Counsel on April 29, 2019.

2. This Order pertains to property located at the Illinois Gulch Superfund Site in Summit County, Colorado (the “Illinois Gulch Site”) or the “Site.” This Order requires Respondent to conduct removal actions described herein to abate an imminent and substantial endangerment to the public health or welfare or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Site.

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).

II. PARTIES BOUND

4. This Order applies to and is binding upon Respondent and its successors and assigns. Any change in ownership or control of the Site or change in the business organization of Respondent, including, but not limited to, any transfer of assets or real or personal property, shall not alter Respondent’s responsibilities under this Order.

5. Respondent shall provide a copy of this Order to each contractor hired to perform the Work required by this Order 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 Order. Respondent or its contractors shall provide written notice of the Order to all subcontractors hired to perform any portion of the Work required by this Order. Respondent shall nonetheless be responsible for ensuring that its contractors and subcontractors perform the Work in accordance with the terms of this Order.

III. DEFINITIONS

6. Unless otherwise expressly provided in this Order, terms used in this Order 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 Order or in appendices to or documents incorporated by reference into this Order, the following definitions shall apply:

“Affected Property” shall mean all real property at the Site and any other real property where EPA determines, at any time, that access or land, water, or other resource use restrictions are needed to implement the removal action, including, but not limited to, the following properties: (1) the Tecumseh claims—MS 5785-A, MS 5127, and MS 5654;

(2) the Iron Spring Mill Site—MS 5785-B; (3) the Puzzle claim—MS 3597; and (4) Dunkin Hill Sub #2, Lot 1.

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

“Day” or “day” shall mean a calendar day. In computing any period of time under this Order, 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 Order as provided in Section VIII.

“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.

“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.

“Order” shall mean this Unilateral Administrative Order and all appendices attached hereto. In the event of conflict between this Order and any appendix, this Order shall control.

“Paragraph” shall mean a portion of this Order 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 Order consistent with Sections 300.415(1) 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 Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901-6992.

“Respondent” shall mean TABR Realty Services, LLC.

“Section” shall mean a portion of this Order identified by a Roman numeral.

“Site” shall mean the Illinois Gulch Superfund Site, located in Summit County, Colorado including, but not limited to, the following properties: (1) the Tecumseh claims—MS 5785-A, MS 5127, and MS 5654; (2) the Iron Spring Mill Site—MS 5785-B; (3) the Puzzle claim—MS 3597; and (4) Dunkin Hill Sub #2, Lot 1, and depicted generally on the map attached as Appendix B.

“State” shall mean the State of Colorado.

“Statement of Work” or “SOW” shall mean the document describing the activities Respondent must perform to implement the removal action pursuant to this Order, as set forth in Appendix A, and any modifications made thereto in accordance with this Order.

“Transfer” shall mean to sell, assign, convey, lease, mortgage, or grant a security interest in, or where used as a noun, a sale, assignment, conveyance, or other disposition of any interest by operation of law or otherwise.

“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).

“Work” shall mean all activities Respondent are required to perform under this Order, except those required by Section XV (Retention of Records).

IV. FINDINGS OF FACT

7. The Illinois Gulch Site is located southeast of Breckenridge, in Summit County, Colorado. The Site is comprised of several abandoned mines and mine waste piles within the Illinois Gulch watershed, a tributary to the Blue River and a drinking water source to the City and County of Denver, Colorado.

8. The Illinois Gulch Site is situated within an area known as the Breckenridge Mining District where historic mining activities occurred from 1859 into the 1940s. The release of hazardous substances—primarily heavy metals—from the Site are due to the operation and abandonment of discontinued mining operations.

9. There are three historic mining operations that contribute to the release or threatened release of hazardous substances at the Illinois Gulch Site. These include: the Puzzle/Willard Mine, the Ouray Mine, and the Gold Dust Mine.

10. The Puzzle vein was the principal mineral vein within the Breckenridge Mining District. Mine operators first reached this vein in approximately 1885. Construction of the narrow-gage South Park & Pacific Railway from Denver to Breckenridge over Boreas Pass occurred between 1880 and 1884. Electric power was introduced into the area in approximately 1910 by the Central Colorado Power Company and the Summit County Power Company.

11. Material shipped from the Puzzle vein was reported to have been largely a lead ore carrying moderate amounts of silver, iron, and zinc. Around 1897, the ore began to show signs of exhaustion, and although the Puzzle and Gold Dust Mines were worked by lessees for a few years thereafter. By the beginning of 1909, all three mines had been “long abandoned to ruin” according to a USGS report published in 1911.

12. The connected workings of the Puzzle/Willard, Ouray, and Gold Dust mines are extensive, but not deep. The main entrance (adit) level of the Puzzle/Willard Mine is known as the Willard Level and is comprised of two principal adits: Willard #1 and Willard #2. Willard Adits #1 and #2 are both located on the Iron Springs Mill Site claim, MS 5785-B.

13. EPA completed a Combined Assessment of the Illinois Gulch Site in March of 2017. As specified in the Combined Assessment report, the primary sources of contamination at the Site are: mine impacted water (MIW) from draining adits and mine waste piles. This contamination negatively impacts surface water in Illinois Gulch below the Iron Springs Mill. In addition, mine waste piles at or near the Iron Springs Mill Site could impact nearby residents.

14. EPA’s Combined Assessment report concluded that the Puzzle/Willard Mine and Iron Springs Mill were significant contributors of heavy metals to surface water in Illinois Gulch. Those heavy metals include the following hazardous substances, as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14): aluminum, cadmium, cobalt, copper, iron, lead, manganese, nickel, and zinc.

15. Releases of these hazardous substances into surface water from the Iron Springs Mill result in ecological risk. Notably, as specified in the Combined Assessment report, concentrations of zinc are above the acute and chronic aquatic life criteria in Illinois Gulch below the Iron Springs Mill. In addition, concentrations of cadmium in this area are also above chronic aquatic life criteria.

16. EPA’s Combined Assessment report also concluded that there were potential human health risks associated with elevated concentrations of heavy metals on mine waste piles located at or near the Iron Springs Mill. Soil sampling in this area identified in several exceedances of EPA residential soil regional screening levels (RSLs) for arsenic, lead, and thallium. Arsenic, lead, and thallium are hazardous substances, as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

17. Lead can affect almost every organ and system in the body. Elevated blood lead levels in children can result in behavior and learning problems, lower IQ and hyperactivity, slowed growth, hearing problems and anemia. In rare cases, ingestion of lead can cause seizures, coma and even death. During pregnancy, elevated lead in the blood can result in serious effects to the mother and her developing fetus, including reduced growth of the fetus and premature birth. Lead is also harmful to other adults and can cause cardiovascular effects, increased blood pressure and incidence of hypertension, decreased kidney function and reproductive problems.

18. Arsenic is found throughout the environment; the result of both naturally-occurring and industry processes. Industry operations that process or otherwise alter minerals and ores can lead to higher concentrations of arsenic in the environment. Acute inhalation

exposure to arsenic dust can cause gastrointestinal effects (nausea, diarrhea, and abdominal pain) and central and peripheral nervous system disorders. In addition, inorganic arsenic exposure, via inhalation, is strongly associated with lung cancer.

19. Respondent is a Delaware limited liability company, authorized to do business in Colorado. Respondent is the present owner of mining claims at the Illinois Gulch Site, including the Iron Springs Mill Site, M.S. 5785B. Although the Summit County, Colorado County Accessor identifies the owner of these claims as Transamerica Realty Services, Inc., there have been two corporate name changes involving this entity. On December 1, 2002, Transamerica Realty Services, Inc. became Transamerica Realty Services, LLC. Subsequently, on May 14, 2015, Transamerica Realty Services, LLC changed its name to TABR Realty Services, LLC. TABR Realty Services, LLC and its predecessors have owned property at the Site, including the Iron Springs Mill Site claim since 1977.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

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

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

b. Respondent is a “person” as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

c. Respondent is a liable party under one or more provisions of Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

(1) 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).

d. The metals contamination found at the Site, as identified in the Findings of Fact above, includes “hazardous substances” as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14) that may present an imminent and substantial danger to public health or welfare under Section 104(a)(1) of CERCLA, 42 U.S.C. § 9604(a)(1).

e. The conditions described in Paragraphs 13 through 16 of the Findings of Fact above constitute an actual and threatened “release” of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

f. The conditions at the Site may constitute a threat to public health or welfare or the environment, based on the factors set forth in Section 300.415(b)(2) of the NCP. These factors include, but are not limited to, the following:

(1) actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances; this factor is present at the Site due to existence of heavy metals released from the Willard #1 and Willard #2 adits at

the Site, which adversely affect aquatic receptors in downstream receiving waterbodies. EPA's Combined Assessment report indicates adverse ecological risks to aquatic receptors in Illinois Gulch and the Blue River. In addition, the mine waste piles located on or adjacent to the Iron Springs Mill Site elevated levels of hazardous substances. EPA's Combined Assessment report indicates that contamination from these waste piles may pose a threat to human health via direct contact or the air pathway;

(2) actual or potential contamination of drinking water supplies or sensitive ecosystems; this factor is present at the Site due to the existence of several privately-owned wells located within two miles and downgradient of the Site; additionally, Illinois Gulch flows into the Blue River—a body of water that is classified as Aquatic Life Cold Water-Class1 with designated uses for domestic water source, recreation, and agriculture;

(3) high levels of hazardous substances in soils largely at or near the surface, that may migrate; this factor is present at the Site due to the existence of mine waste piles containing concentrations of heavy metals which exceed the EPA's RSLs located at or near the Iron Springs Mill; and

(4) the unavailability of other appropriate federal or state response mechanisms to respond to the release; this factor supports the actions required by this Order at the Site because there are no other appropriate federal or state entities with the funding resources to perform the removal action contemplated in this Order at the Illinois Gulch Site.

g. The conditions described in Paragraphs 13 through 16 of the Findings of Fact above may constitute an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of hazardous substances from the facility within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

h. The removal actions required by this Order are necessary to protect the public health, welfare, or the environment.

VI. ORDER

21. Based upon the Findings of Fact, Conclusions of Law and Determinations set forth above, and the administrative record, Respondent is hereby ordered to comply with all provisions of this Order and any modifications to this Order, including all appendices to this Order and all documents incorporated by reference into this Order.

VII. OPPORTUNITY TO CONFER

22. No later than five days after this Order is signed by the Regional Counsel Respondent may, via email, a) request a conference with EPA to discuss this Order, including its applicability, the factual findings and the determinations upon which it is based, the appropriateness of any actions Respondent is ordered to take, or any other relevant and material issues or contentions that Respondent may have regarding this Order, or b) notify EPA that it

intends to submit via email written comments or a statement of position in lieu of requesting a conference. The conference may be held virtually rather than in person at EPA's discretion.

23. If a conference is requested, Respondent may participate individually or by an attorney or other representative. Any such conference shall be held no later than five days after the conference is requested. Any written comments or statements of position on any matter pertinent to this Order must be submitted no later than five days after the conference or 10 days after this Order is signed if Respondent does not request a conference. This conference is not an evidentiary hearing, does not constitute a proceeding to challenge this Order, and does not give Respondent a right to seek review of this Order. Any request for a conference or written comments or statements should be submitted via email to:

Douglas Naftz, Attorney, CERCLA Enforcement Section,
Office of Regional Counsel (8ORC-C)
U.S. Environmental Protection Agency Region 8
1595 Wynkoop Street
Denver, Colorado 80202-1129
303-312-6942
Naftz.Douglas@epa.gov

VIII. EFFECTIVE DATE

24. This Order shall be effective five days after the Order is signed by the Regional Counsel unless a conference is requested or notice is given that written materials will be submitted in lieu of a conference in accordance with Section VII (Opportunity to Confer). If a conference is requested or such notice is submitted, this Order shall be effective on the 10th day after the day of the conference, or if no conference is requested, on the 10th day after written materials, if any, are submitted, unless EPA determines that the Order should be modified based on the conference or written materials. In such event, EPA shall notify Respondent, within the applicable 10-day period, that EPA intends to modify the Order. The modified Order shall be effective five days after it is signed by the Regional Counsel.

IX. NOTICE OF INTENT TO COMPLY

25. On or before the Effective Date, Respondent shall notify EPA in writing of Respondent's irrevocable intent to comply with this Order. Such written notice shall be sent via email to EPA as provided in Paragraph 23. Respondent's written notice shall describe, using facts that exist on or prior to the Effective Date, any "sufficient cause" defense asserted by Respondent under Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. §§ 9606(b) and 9607(c)(3). The absence of a response by EPA to the notice required by this Paragraph shall not be deemed to be acceptance of any Respondent's assertions. Failure of Respondent to provide such notice of intent to comply within this time period shall, as of the Effective Date, be treated as a violation of this Order by Respondent.

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

26. **Selection of Contractors, Personnel.** All Work performed under this Order shall be under the direction and supervision of qualified personnel. Within 30 days after the Effective Date, and before the Work outlined below begins, Respondent shall notify EPA in writing of the names, titles, addresses, telephone numbers, email addresses, and qualifications of the personnel, including contractors, subcontractors, consultants, and laboratories to be used in carrying out such Work. If, after the commencement of the Work, Respondent retains additional contractors or subcontractors, Respondent shall notify EPA of the names, titles, contact information, and qualifications of such contractors or subcontractors retained to perform the Work at least 10 days prior to commencement of Work by such additional contractors or subcontractors. EPA retains the right, at any time, to disapprove of any or all of the contractors and/or subcontractors retained by Respondent. If EPA disapproves of a selected contractor or subcontractor, Respondent shall retain a different contractor or subcontractor and shall notify EPA of that contractor's or subcontractor's name, title, contact information, and qualifications within 10 days after EPA's disapproval. With respect to any proposed contractor, Respondent shall demonstrate that the proposed contractor demonstrates compliance with ASQ/ANSI E4:2014 "Quality management systems for environmental information and technology programs – Requirements with guidance for use" (American Society for Quality, February 2014), by submitting a copy of the proposed contractor's Quality Management Plan (QMP). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, Reissued May 2006) or equivalent documentation as determined by EPA. The qualifications of the persons undertaking the Work for Respondent shall be subject to EPA's review for verification based on objective assessment criteria (e.g., experience, capacity, technical expertise) and that they do not have a conflict of interest with respect to the project.

27. Within 14 days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of the Work required by this Order and shall submit to EPA the designated Project Coordinator's name, title, address, telephone number, email address, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during the Work. EPA retains the right to disapprove of the designated Project Coordinator who does not meet the requirements of Paragraph 26 (Selection of Contractors, Personnel). If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, title, contact information, and qualifications within 14 days following EPA's disapproval. Respondent shall have the right to change their Project Coordinator, subject to EPA's right to disapprove. Respondent shall notify EPA 10 days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notification. Communications between Respondent and EPA, and all documents concerning the activities performed pursuant to this Order, shall be directed to the Project Coordinator. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by Respondent.

28. EPA has designated Paul Peronard of the Response Section of the Emergency Management Branch, Region 8, as its On-Scene Coordinator (OSC). EPA has designated Martin McComb, Response Section, Emergency Management Branch, Region 8, as the alternate OSC

for this Order. EPA will notify Respondent of a change of its designated OSC. Communications between Respondent and EPA, and all documents concerning the activities performed pursuant to this Order, shall be directed to the OSC in accordance with Paragraph 33.a(1).

29. The OSC shall be responsible for overseeing Respondent's implementation of this Order. The OSC shall have the authority vested in a Remedial Project Manager (RPM) and an OSC by the NCP, including the authority to halt, conduct, or direct any Work required by this Order, or to direct any other response action when s/he determines that conditions at the Site constitute an emergency situation or may present a threat to public health or welfare or the environment. Absence of the OSC from the Site shall not be cause for stoppage or delay of Work.

XI. WORK TO BE PERFORMED

30. Respondent shall perform, at a minimum, all actions necessary to implement the SOW, set forth in Appendix A. As described in Appendix A, these actions will be implemented in three phases and generally include, but are not limited to, the following:

Phase I: Design and Construction

a. (1) Closure of the Willard waste rock pile through the creation of an on-site mine waste repository; (2) lining of the Illinois Gulch channel adjacent to the Puzzle Extension Shaft; (3) removal of accessible portions of the Cally adit waste rock pile; (4) dewater and clean out wet areas impacted by the Willard #1 and Willard #2 adit discharges; (5) remove the Puzzle Extension Shaft waste rock pile and plug the Puzzle Extension Shaft; and (6) implement soil sampling at residential properties on Brooks Hill Drive to the south of Bright Hope Circle.

Phase II: Monitoring and Treatment System Assessment

b. Conduct surface water monitoring and bench-scale testing to assess the efficacy of passive treatment for the Willard 1 and Willard 2 adit discharges.

Phase III: Water Treatment Design, Construction, and Post-Removal Site Control

c. Design, construct, and operate a passive water treatment system for the Willard #1 and Willard #2 adit discharges.

31. For any regulation or guidance referenced in the Order, the reference will be read to include any subsequent modification, amendment, or replacement of such regulation or guidance. Such modifications, amendments, or replacements apply to the Work only after Respondent receives notification from EPA of the modification, amendment, or replacement.

32. Work Plan and Implementation

a. Within 45 days after the Effective Date, in accordance with Paragraph 33 (Submission of Deliverables), Respondent shall submit to EPA for review and approval a draft

work plan for performing the Phase I removal actions that will be implemented in 2020, if feasible (the “2020 Removal Work Plan”) generally described in Paragraph 30 above and in accordance with the SOW, as set forth in Appendix A. Respondent shall submit to EPA for review and approval annual draft work plans for 2021 and subsequent years by March 31 of each year, as necessary to complete the Work activities during that year as described in the SOW. The draft 2020 Removal Work Plan and the annual Work Plans for subsequent years shall provide a description of, and an expeditious approximate schedule for, the Work required by this Order.

b. EPA may approve, disapprove, require revisions to, or modify the draft 2020 Removal Work Plan or work plans submitted for 2021 Work activities and beyond, in whole or in part. If EPA requires revisions, Respondent shall submit a revised Removal Work Plan within 30 days after receipt of EPA’s notification of the required revisions. Respondent shall implement the Removal Work Plan as approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Removal Work Plan, the schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Order.

c. Upon approval or approval with modifications of the annual Removal Work Plan, Respondent shall commence implementation of the Work in accordance with the schedule included therein. Respondent shall not commence or perform any Work except in conformance with the terms of this Order. Respondent shall notify EPA at least 48 hours prior to performing any Work on Site pursuant to the EPA-approved Removal Work Plan.

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

e. Any non-compliance with any EPA-approved plans, reports, specifications, schedules, or other deliverables shall be considered a violation of the requirements of this Order. Determinations of non-compliance shall be made by EPA. Approval of the Removal Work Plan shall not limit EPA’s authority under the terms of this Order to require Respondent to conduct activities consistent with this Order to accomplish the Work outlined in this Section.

33. Submission of Deliverables

a. General Requirements for Deliverables

(1) Except as otherwise provided in this Order, Respondent shall direct all submissions required by this Order in an electronic form to Paul Peronard at Peronard.Paul@epa.gov and Martin McComb at McComb.Martin@epa.gov. Respondent shall submit all deliverables required by this Order, the SOW, or any approved work plan to EPA in accordance with the schedule set forth in such plan.

(2) Concurrently, Respondent shall direct all submissions required by this Order to Mark Rudolph, Project Manager, CDPHE, at mark.rudolph@state.co.us.

(3) Technical specifications for sampling and monitoring data and spatial data are addressed in Paragraph 33.b. All other deliverables shall be submitted to EPA in the form specified by the OSC.

b. Technical Specifications for Deliverables

(1) Sampling and monitoring data should be submitted in standard Regional EDD format. Other delivery methods may be allowed if electronic direct submission presents a significant burden or as technology changes.

(2) Spatial data, including spatially-referenced data and geospatial data, should be submitted: (a) in the ESRI File Geodatabase format; and (b) as unprojected geographic coordinates in decimal degree format using North American Datum 1983 (NAD83) or World Geodetic System 1984 (WGS84) as the datum. If applicable, submissions should include the collection method(s). Projected coordinates may optionally be included but must be documented. Spatial data should be accompanied by metadata, and such metadata should be compliant with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and its EPA profile, the EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor (EME), complies with these FGDC and EPA metadata requirements and is available at <https://www.epa.gov/geospatial/epa-metadata-editor>.

(3) Each file must include an attribute name for each site unit or sub-unit submitted. Consult <https://www.epa.gov/geospatial/geospatial-policies-and-standards> for any further available guidance on attribute identification and naming.

(4) Spatial data submitted by Respondent does not, and is not intended to, define the boundaries of the Site.

34. Sampling and Analysis Plan. No later than April 30, 2021, Respondent shall submit a Sampling and Analysis Plan to EPA for review and approval of the residential property sampling activities described in the SOW. This plan shall consist of a Field Sampling Plan (FSP) and a Quality Assurance Project Plan (QAPP) that is consistent with the SOW, the NCP and, including, but not limited to, “Guidance for Quality Assurance Project Plans (QA/G-5)” EPA/240/R-02/009 (December 2002), “EPA Requirements for Quality Assurance Project Plans (QA/R-5)” EPA 240/B-01/003 (March 2001, reissued May 2006), and “Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3 EPA/505/B-04/900A-900C (March 2005). Upon its approval by EPA, the Sampling and Analysis Plan shall be incorporated into and become enforceable under this Order.

35. **Health and Safety Plan.** Within 45 days after the Effective Date, Respondent shall submit for EPA review and comment a Health and Safety Plan that ensures the protection of on-site workers and the public during performance of on-site Work under this Order. This plan shall be prepared in accordance with “OSWER Integrated Health and Safety Program Operating Practices for OSWER Field Activities,” Pub. 9285.0-OIC (Nov. 2002), available on the NSCEP database at <https://www.epa.gov/nscep>, and “EPA’s Emergency Responder Health and Safety Manual,” OSWER Directive 9285.3-12 (July 2005 and updates), available at <https://www.epaosc.org/HealthSafetyManual/manual-index.htm>. 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 actions.

36. **Post-Removal Site Control.** In accordance with the Removal 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: compliance with the Colorado Environmental Covenants Statute, Colo. Rev. Stat. § 25-15-317 *et seq.*, and maintenance of a passive water treatment system in accordance with Phase III, if necessary. 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.

37. **Progress Reports.** Respondent shall submit a written progress report to EPA concerning actions undertaken pursuant to this Order on a monthly basis, or as otherwise requested by EPA, from the date of receipt of EPA’s approval of the Removal Work Plan until issuance of Notice of Completion of Work pursuant to Section XXV, unless otherwise directed in writing by the OSC. 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.

38. **Phases I and II Construction Completion Report.** Within 90 days after completion of all Phase I and Phase II Work required by this Order and described in the SOW, with the exception of any continuing obligations required by this Order, including Phase III work activities, post-removal site controls, reimbursement of Response Costs, and record retention, Respondent shall submit for EPA review and approval a final report summarizing the Phase I and Phase II Work actions taken to comply with this Order. EPA will review and approve the final report in accordance with Section XXV (Notice of Completion of Work). The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP, “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 Order, 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 actions (e.g., manifests,

invoices, bills, contracts, and permits). The final report shall also include the following certification signed by a responsible corporate official of a 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 have no personal knowledge that the information submitted is other than 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."

39. 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 § 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. § 300.440(b).

b. Respondent may ship Waste Material from the Site to an out-of-state waste management facility only if, prior to any shipment, they provide written notice to the appropriate state environmental official in the receiving facility's state and to the OSC. This notice requirement will not apply to any off-Site shipments when the total quantity of all such shipments will not exceed ten 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 shall also notify the state environmental official referenced above and the OSC 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 notice after the award of the contract for the removal action and before the Waste Material is shipped.

c. Respondent may ship Investigation Derived Waste (IDW) 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), 40 C.F.R. § 300.440, EPA's "Guide to Management of Investigation Derived Waste," OSWER 9345.3-03FS (Jan. 1992), and any IDW-specific requirements contained in the Action Memorandum. Wastes shipped off-Site to a laboratory for characterization, and RCRA hazardous wastes that meet the requirements for an exemption from RCRA under 40 C.F.R. § 261.4(e) shipped off-Site for treatability studies, are not subject to 40 C.F.R. § 300.440.

XII. QUALITY ASSURANCE, SAMPLING, AND DATA ANALYSIS

40. 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 “Uniform Federal Policy for Quality Assurance Project Plans,” Parts 1-3, EPA/505/B-04/900A-900C (March 2005).

41. **Access to Laboratories** Respondent shall ensure that EPA personnel and its authorized representatives are allowed access at reasonable times to all laboratories utilized by Respondent pursuant to this Order. 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 and that sampling and field activities are conducted in accordance with the Agency’s “EPA QA Field Activities Procedure,” CIO 2105-P-02.1 (9/23/2014) available at <https://www.epa.gov/irmpoli8/epa-qa-field-activities-procedures>. Respondent shall ensure that the laboratories they utilize for the analysis of samples taken pursuant to this Order meet the competency requirements set forth in EPA’s “Policy to Assure Competency of Laboratories, Field Sampling, and Other Organizations Generating Environmental Measurement Data under Agency-Funded Acquisitions” available at <https://www.epa.gov/measurements/documents-about-measurement-competency-under-acquisition-agreements> and that the laboratories perform all analyses using EPA-accepted methods. Accepted EPA methods consist of, but are not limited to, methods that are documented in the EPA’s Contract Laboratory Program (<https://www.epa.gov/clp>), SW 846 “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (<https://www.epa.gov/hw-sw846>), “Standard Methods for the Examination of Water and Wastewater” (<http://www.standardmethods.org/>), 40 C.F.R. Part 136, “Air Toxics - Monitoring Methods” (<https://www3.epa.gov/ttnamti1/airtox.html>).” 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 (i) quality assurance/quality control (QA/QC) criteria are contained in the method(s) and the method(s) are included in the QAPP, (ii) the analytical method(s) are at least as stringent as the methods listed above, and (iii) 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 Order have a documented Quality System that complies with ASQ/ANSI E4:2014 “Quality management systems for environmental information and technology programs – Requirements with guidance for use” (American Society for Quality, February 2014), 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 as meeting the Quality System requirements. Respondent shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Order are conducted in accordance with the procedures set forth in the QAPP approved by EPA.

a. 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 seven days in advance of any sample collection activity. 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.

b. Respondent shall submit to EPA and the State, in the next monthly progress report as described in Paragraph 37 (Progress Reports) copies of 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 Order.

XIII. PROPERTY REQUIREMENTS

42. **Agreements Regarding Access and Non-Interference.** For all Affected Property owned or controlled by Respondent, Respondent shall, commencing on the Effective Date, provide EPA, the State, and their representatives, including contractors, with access at all reasonable times to such Affected Property for the purpose of conducting any activity related to this Settlement. For all Affected Property owned by or in possession of someone other than Respondent, Respondent shall use best efforts to obtain all necessary agreements for access, enforceable by Respondent and EPA, within 30 days after the Effective Date, or as otherwise specified in writing by the OSC. Respondent shall use best efforts to secure an agreement, enforceable by Respondent and EPA, providing: (i) EPA, the State, Respondent, and their representatives, contractors, and subcontractors with access at all reasonable times to such Affected Property to conduct any activity regarding the Order, including those activities listed in Paragraph 42.a (Access Requirements); and (ii) refrain from using such Affected Property in any manner that EPA determines will pose an unacceptable risk to human health or to the environment due to exposure to Waste Material, or interfere with or adversely affect the implementation, integrity, or protectiveness of the removal action, including the restrictions listed in Paragraph 42.b (Land, Water, or Other Resource Use Restrictions). Respondent shall provide a copy of such access agreement(s) to EPA.

a. **Access Requirements.** The following is a list of activities for which access is required regarding the Affected Property:

- (1) Monitoring the Work;
- (2) Verifying any data or information submitted to EPA or the State;
- (3) Conducting investigations regarding contamination at or near the Site;
- (4) Obtaining samples;
- (5) Assessing the need for, planning, implementing, or monitoring response actions;
- (6) Assessing implementation of quality assurance and quality control practices as defined in the approved quality assurance quality control plan as defined in the approved QAPP for residential sampling;

(7) Implementing the Work pursuant to the conditions set forth in Section XVIII (Enforcement/Work Takeover);

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

(9) Assessing Respondent's compliance with the Order;

(10) Determining whether the Affected Property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under the Order; and

(11) Implementing, monitoring, maintaining, reporting on, and enforcing any land, water, or other resource use restrictions regarding the Affected Property.

b. **Land, Water, or Other Resource Use Restrictions.** In the event waste is left in place above levels determined by EPA to be unsafe for unrestricted use or if the remedy includes engineered features or structures that require monitoring, maintenance or operation that will otherwise not operate as intended if disturbed, Respondent will record an EPA-approved restrictive notice on all Affected Property owned or controlled by Respondent in accordance with the Colorado Environmental Covenants Statute. Colo. Rev. Stat. § 25-15-317 *et seq.*

43. **Best Efforts.** As used in this Section, "best efforts" means the efforts that a reasonable person in the position of Respondent would use so as to achieve the goal in a timely manner, including the cost of employing professional assistance and the payment of reasonable sums of money to secure access and/or use restriction agreements, as required by this Section. If Respondent is unable to accomplish what is required through "best efforts" it shall notify EPA and include a description of the steps taken to comply with the requirements. If EPA deems it appropriate, it may assist Respondent or take independent action in obtaining such access and/or use restrictions. EPA reserves the right to seek payment from Respondent for all costs, including cost of attorneys' time, incurred by the United States in obtaining such access or agreements to restrict land, water, or other resource use.

44. In the event of any Transfer of the Affected Property, unless EPA otherwise consents in writing, Respondent shall continue to comply with their obligations under this Order, including their obligation to secure access and ensure compliance with any restrictive notices regarding the Affected Property pursuant to the requirements of the Colorado Environmental Covenants Statute. Colo. Rev. Stat. § 25-1-317 *et seq.*

45. Notwithstanding any provision of this Order, EPA and the State retain all of their access authorities and rights, as well as all of their rights to require land, water, or other resource use restrictions, including enforcement authorities related thereto under CERCLA, RCRA, and any other applicable statute or regulations.

XIV. ACCESS TO INFORMATION

46. 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 Order, 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.

47. **Privileged and Protected Claims**

a. Respondent may assert that all or part of a Record requested by EPA or the State is privileged or protected as provided under federal law, in lieu of providing the Record, provided Respondent complies with Paragraph 47.b, and except as provided in Paragraph 47.c.

b. If Respondent asserts a claim of privilege or protection, they 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, Respondent shall provide the Record 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 or a court determines that such Record is privileged or protected.

c. Respondent may make no claim of privilege or protection regarding: (1) 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 evidences conditions at or around the Site; or (2) the portion of any Record that Respondent is required to create or generate pursuant to this Order.

48. **Business Confidential Claims.** Respondent may assert that all or part of a Record provided to EPA and the State under this Section or Section XV (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 UAO for which it asserts business confidentiality claims. Records that Respondent claims to be confidential business information 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.

49. Notwithstanding any provision of this Order, EPA and the State retains 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.

XV. RETENTION OF RECORDS

50. During the pendency of this Order and for a minimum of 10 years after Respondent's receipt of EPA's notification pursuant to Section XXV (Notice of Completion of Work), 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 respect to the Site, provided, however, that Respondent 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 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.

51. At the conclusion of this document retention period, Respondent shall notify EPA and the State at least 90 days prior to the destruction of any such Records, and, upon request by EPA or the State, and except as provided in Paragraph 47, Respondent shall deliver any such Records to EPA or the State.

52. Within 30 days after the Effective Date, Respondent shall submit a written certification to EPA's OSC 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 its potential liability by the United States or the State, and that it has fully complied with any and all EPA 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. Any Respondent unable to so certify shall submit a modified certification that explains in detail why it is unable to certify in full with regard to all Records.

XVI. COMPLIANCE WITH OTHER LAWS

53. Nothing in this Order limits Respondent's obligations 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. § 9621(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 Order 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. The ARARs for the removal action

being conducted under this Order will be listed in the 2020 Removal Work Plan and subsequent Work Plans approved by EPA.

54. No local, state, or federal permit shall be required for any portion of the Work conducted entirely on-site (i.e., within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Work), including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work that is not on-site requires a federal or state permit or approval, Respondent shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Order is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XVII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

55. **Emergency Response.** If any event occurs during performance of the Work that causes or threatens to cause a release of any Waste Material on, at, or from the Site that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action to prevent, abate, or minimize such release or threat of release. Respondent shall take these actions in accordance with all applicable provisions of this Order, including, but not limited to, the Health and Safety Plan. Respondent shall also immediately notify the OSC or, in the event of his/her unavailability, the Regional Duty Officer 303-293-1788 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, EPA reserves the right to pursue cost recovery.

Release Reporting. Upon the occurrence of any event during performance of the Work that Respondent is required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-To-Know Act (EPCRA), 42 U.S.C. § 11004, Respondent shall immediately orally notify the OSC, or, in the event of his/her unavailability, the Regional Duty Officer at 303-293-1788, and the National Response Center at (800) 424-8802. This reporting requirement is in addition to, and not in lieu of, the reporting required by CERCLA § 103 or EPCRA § 304.

56. For any event covered under this Section, Respondent shall submit a written report to EPA within seven days after the onset of such event, setting forth the action or event that occurred and the measures taken, and to be taken, to mitigate any release or threat of release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release or threat of release.

XVIII. ENFORCEMENT/WORK TAKEOVER

57. Any willful violation, or failure or refusal to comply with any provision of this Order may subject Respondent to civil penalties up to the maximum amount authorized by law. CERCLA § 106(b)(1), 42 U.S.C. § 9606(b)(1). As of the date of issuance of this Order, the statutory maximum amount is \$58,328.00 per violation per day. This maximum amount may increase in the future, as EPA amends its civil penalty amounts through rulemaking pursuant to

the 1990 Federal Civil Penalties Inflation Adjustment Act (Public Law 101-410, codified at 28 U.S.C. § 2461), as amended by the 2015 Federal Civil Penalties Inflation Adjustment Act Improvement Act (Section 701 of Public Law 114-74)). The maximum amount to be applied to this violation will be set as the most recent maximum amount set forth in 40 CFR section 19.4 as of the date that the U.S. District Court assesses any such penalty. In the event of such willful violation, or failure or refusal to comply, EPA may unilaterally carry out the actions required by this Order, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606. In addition, nothing in this Order shall limit EPA's authority under Section XXII (Financial Assurance). Respondent may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such failure to comply, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3).

XIX. RESERVATIONS OF RIGHTS BY EPA

58. Nothing in this Order 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 Order shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, 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. EPA reserves the right to bring an action against Respondent under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order or the Site and not paid by Respondent.

XX. OTHER CLAIMS

59. By issuance of this Order, 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 its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Order.

60. Nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Order, 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 under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

61. Nothing in this Order shall be deemed to constitute preauthorization of a claim within the meaning of Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2), or 40 C.F.R. § 300.700(d).

62. No action or decision by EPA pursuant to this Order 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).

XXI. INSURANCE

63. No later than 14 days before commencing any on-site Work, Respondent shall secure, and shall maintain for the duration of this Order, commercial general liability with limits of liability of \$1 million per occurrence, automobile liability insurance with limits of liability of \$1 million per accident, and umbrella liability insurance with limits of liability of \$5 million in excess of the required commercial general liability and automobile liability limits, naming 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 Order. Within the same time period, Respondent shall provide EPA with certificates of such insurance. Respondent shall submit such certificates each year on the anniversary of the Effective Date. In addition, for the duration of the Order, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing Work on behalf of Respondent in furtherance of this Order. 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 a lesser amount, then, with respect to that contractor or subcontractor, Respondent needs to provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor. Respondent shall ensure that all submittals to EPA under this Paragraph identify the Site name, County, State, and the EPA docket number for this action.

XXII. FINANCIAL ASSURANCE

64. In order to ensure completion of the Work, Respondent shall secure financial assurance, initially in the amount of \$1,403,400.00 ("Estimated Cost of the Work"). The financial assurance must be one or more of the mechanisms listed below, in a form substantially identical to the relevant sample documents available from EPA or under the "Financial Assurance - Orders" category on the Cleanup Enforcement Model Language and Sample Documents Database at <https://cfpub.epa.gov/compliance/models/>, and satisfactory to EPA. Respondent may use multiple mechanisms if they are limited to trust funds, surety bonds guaranteeing payment, and/or letters of credit.

a. A trust fund: (1) established to ensure that funds will be available as and when needed for performance of the Work; (2) administered by a trustee that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency; and (3) governed by an agreement that requires the trustee to make payments from the fund only when the Region 8 Superfund Division Director advises the trustee in writing that: (i) payments are necessary to fulfill the Respondent's obligations under the Order; or (ii) funds held in trust are in excess of the funds that are necessary to complete the performance of Work in accordance with this Order;

b. A surety bond, issued by a surety company among those listed as acceptable sureties on federal bonds as set forth in Circular 570 of the U.S. Department of the Treasury, guaranteeing payment or performance in accordance with Paragraph 70 (Access to Financial Assurance);

c. An irrevocable letter of credit, issued by an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency, guaranteeing payment in accordance with Paragraph 70 (Access to Financial Assurance);

d. A demonstration by the Respondent that it meets the relevant financial test criteria of Paragraph 67; or

e. A guarantee to fund or perform the Work executed by a company (1) that is a direct or indirect parent company of the Respondent or has a “substantial business relationship” (as defined in 40 C.F.R. § 264.141(h)) with a Respondent; and (2) can demonstrate to EPA’s satisfaction that it meets the financial test criteria of Paragraph 67.

65. **Standby Trust.** If Respondent seeks to establish financial assurance by using a surety bond, a letter of credit, or a corporate guarantee, Respondent shall at the same time establish and thereafter maintain a standby trust fund, which must meet the requirements specified in Paragraph 64.a, and into which payments from the other financial assurance mechanism can be deposited if the financial assurance provider is directed to do so by EPA pursuant to Paragraph 70 (Access to Financial Assurance). An originally signed duplicate of the standby trust agreement must be submitted, with the other financial mechanism, to EPA in accordance with Paragraph 66. Until the standby trust fund is funded pursuant to Paragraph 70 (Access to Financial Assurance), neither payments into the standby trust fund nor annual valuations are required.

66. Within 30 days after the Effective Date, Respondent shall submit to EPA proposed financial assurance mechanisms in draft form in accordance with Paragraph 64 for EPA’s review. Within 60 days after the Effective Date, or 30 days after EPA’s approval of the form and substance of Respondents’ financial assurance, whichever is later, Respondent shall secure all executed and/or otherwise finalized mechanisms or other documents consistent with the EPA-approved form of financial assurance and shall submit such mechanisms and documents to the Regional attorney.

67. If Respondent seeks to provide financial assurance by means of a demonstration or guarantee under Paragraph 64.d or 64.e it must, within 60 days:

a. Demonstrate that:

(1) the Respondent or guarantor has:

- i. Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and
- ii. Net working capital and tangible net worth each at least six times the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal

environmental obligations financially assured through the use of a financial test or guarantee; and

- iii. Tangible net worth of at least \$10 million; and
- iv. Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee; or

(2) The Respondent or guarantor has:

- i. A current rating for its senior unsecured debt of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A or Baa as issued by Moody's; and
- ii. Tangible net worth at least six times the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee; and
- iii. Tangible net worth of at least \$10 million; and
- iv. Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee; and

b. Submit to EPA for the Respondent or guarantor: (1) a copy of an independent certified public accountant's report of the entity's financial statements for the latest completed fiscal year, which must not express an adverse opinion or disclaimer of opinion; and (2) a letter from its chief financial officer and a report from an independent certified public accountant substantially identical to the sample letter and reports available from EPA or under the "Financial Assurance – Orders" subject list category on the Cleanup Enforcement Model Language and Sample Documents Database at <https://cfpub.epa.gov/compliance/models/>.

68. If Respondent provides financial assurance by means of a demonstration or guarantee under Paragraph 64.d or 64.e it must also:

a. Annually resubmit the documents described in Paragraph 67.b within 90 days after the close of the Respondent's or guarantor's fiscal year;

b. Notify EPA within 30 days after the Respondent or guarantor determines that it no longer satisfies the relevant financial test criteria and requirements set forth in this Section; and

c. Provide to EPA, within 30 days of EPA's request, reports of the financial condition of the Respondent or guarantor in addition to those specified in Paragraph 67.b; EPA may make such a request at any time based on a belief that the Respondent or guarantor may no longer meet the financial test requirements of this Section.

69. Respondent shall diligently monitor the adequacy of the financial assurance. If Respondent becomes aware of any information indicating that the financial assurance provided under this Section is inadequate or otherwise no longer satisfies the requirements of this Section, the Respondent shall notify EPA of such information within 30 days. If EPA determines that the financial assurance provided under this Section is inadequate or otherwise no longer satisfies the requirements of this Section, EPA will notify the Respondent of such determination. Respondent shall, within 30 days after notifying EPA or receiving notice from EPA under this Paragraph, secure and submit to EPA for approval a proposal for a revised or alternative financial assurance mechanism that satisfies the requirements of this Section. Respondent shall follow the procedures of Paragraph 71 in seeking approval of, and submitting documentation for, the revised or alternative financial assurance mechanism. Respondents' inability to secure financial assurance in accordance with this Section does not excuse performance of any other obligation under this Order.

70. Access to Financial Assurance

a. If EPA determines that Respondent (1) has ceased implementation of any portion of the Work, (2) is seriously or repeatedly deficient or late in its performance of the Work, or (3) is implementing the Work in a manner that may cause an endangerment to human health or the environment, EPA may issue a written notice ("Performance Failure Notice") to the Respondent and the financial assurance provider regarding the Respondent's failure to perform. Any Performance Failure Notice issued by EPA will specify the grounds upon which such notice was issued and will provide Respondent a period of 10 days within which to remedy the circumstances giving rise to EPA's issuance of such notice. If, after expiration of the 10-day period specified in this Paragraph, Respondent has not remedied to EPA's satisfaction the circumstances giving rise to EPA's issuance of the relevant Performance Failure Notice, then, in accordance with any applicable financial assurance mechanism, EPA may at any time thereafter direct the financial assurance provider to immediately: (i) deposit any funds assured pursuant to this Section into the standby trust fund; or (ii) arrange for performance of the Work in accordance with this Order.

b. If EPA is notified by the provider of a financial assurance mechanism that it intends to cancel the mechanism, and the Respondent fails to provide an alternative financial assurance mechanism in accordance with this Section at least 30 days prior to the cancellation date, EPA may, prior to cancellation, direct the financial assurance provider to deposit any funds guaranteed under such mechanism into the standby trust fund for use consistent with this Section.

71. **Modification of Amount, Form, or Terms of Financial Assurance.** Respondent may submit, on any anniversary of the Effective Date or following Respondent's request for, and EPA's approval of, another date, a request to reduce the amount, or change the form or terms, of the financial assurance mechanism. Any such request must be submitted to the EPA individual(s) referenced in Paragraph 66, and must include an estimate of the cost of the remaining Work, an explanation of the bases for the cost calculation, a description of the proposed changes, if any, to the form or terms of the financial assurance, and any newly proposed financial assurance documentation in accordance with the requirements of Paragraphs 64 and 65 (Standby Trust). EPA will notify Respondent of its decision to approve or disapprove a requested reduction or change. Respondent may reduce the amount or change the form or terms of the financial assurance mechanism only in accordance with EPA's approval. Within 30 days after receipt of EPA's approval of the requested modifications pursuant to this Paragraph, Respondent shall submit to the EPA individual(s) referenced in Paragraph 66 all executed and/or otherwise finalized documentation relating to the amended, reduced, or alternative financial assurance mechanism. Upon EPA's approval, the Estimated Cost of the Work shall be deemed to be the estimate of the cost of the remaining Work in the approved proposal.

72. **Release, Cancellation, or Discontinuation of Financial Assurance.** Respondent may release, cancel, or discontinue any financial assurance provided under this Section only: (a) after receipt of documentation issued by EPA certifying completion of the Work; or (b) in accordance with EPA's written approval of such release, cancellation, or discontinuation.

XXIII. MODIFICATION

73. The OSC may make modifications to any plan or schedule or to the SOW in writing or by oral direction. Any oral modification will be memorialized in writing by EPA within 30 days, but shall have as its effective date the date of the OSC's oral direction. Any other requirements of this Order may be modified in writing by signature of the Region 8 Regional Counsel and the Director of the Region 8 Superfund and Emergency Management Division.

74. If Respondent seeks permission to deviate from any approved Work Plan or SOW, 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 approval from the OSC pursuant to Paragraph 73.

75. No informal advice, guidance, suggestion, or comment by the OSC 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 Order, or to comply with all requirements of this Order, unless it is formally modified.

XXIV. DELAY IN PERFORMANCE

76. Respondent shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone and email to the OSC within 48 hours after Respondent first knew or should have known that a delay might occur. Respondent shall adopt all reasonable measures to avoid or minimize any such delay. Within 7 days after notifying EPA by telephone and email, Respondent shall provide to EPA written

notification fully describing the nature of the delay, the anticipated duration of the delay, any justification for the delay, all actions taken or to be taken to prevent or minimize the delay or the effect of the delay, a schedule for implementation of any measures to be taken to mitigate the effect of the delay, and any reason why Respondent should not be held strictly accountable for failing to comply with any relevant requirements of this Order. Increased costs or expenses associated with implementation of the activities called for in this Order is not a justification for any delay in performance.

77. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondent under the terms of Paragraph 76 shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondent's obligations to fully perform all obligations under the terms and conditions of this Order.

XXV. NOTICE OF COMPLETION OF WORK

78. When EPA determines, after EPA's review of the final report, that all Work has been fully performed in accordance with this Order, with the exception of any continuing obligations required by this Order, including post-removal site controls, and Record Retention, EPA will provide written notice to Respondent. If EPA determines that any Work has not been completed in accordance with this Order, 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 within 30 days after receipt of the EPA notice. The modified Work Plan shall include a schedule for correcting such deficiencies. Within 60 days after receipt of written approval of the modified Work Plan, 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 Order.

XXVI. ADMINISTRATIVE RECORD

79. EPA has established an administrative record that contains the documents that form the basis for the issuance of this Order. To review the administrative record, please contact Douglas Naftz at Naftz.douglas@epa.gov.

XXVII. SEVERABILITY

80. If a court issues an order that invalidates any provision of this Order or finds that Respondent has sufficient cause not to comply with one or more provisions of this Order, Respondent shall remain bound to comply with all provisions of this Order not invalidated or determined to be subject to a sufficient cause defense by the court's order.

It is so ORDERED.

U.S. ENVIRONMENTAL PROTECTION AGENCY:

BETSY SMIDINGER Digitally signed by BETSY
SMIDINGER
Date: 2020.08.25
09:48:37 -06'00'

Betsy Smidinger
Director
Superfund and Emergency Management Division
Region 8

U.S. ENVIRONMENTAL PROTECTION AGENCY:

**ELYANA
SUTIN**

Digitally signed by
ELYANA SUTIN
Date: 2020.08.25
11:19:58 -06'00'

Kenneth C. Schefski
Regional Counsel
Region 8

EFFECTIVE DATE: _____

Appendix A: Statement of Work

Statement of Work

Illinois Gulch Superfund Site Time-Critical Removal Action – Summit County, CO

Description of Work Activities

The work activities to be undertaken by Respondent are described in three phases. Phases 1 and 2 will commence beginning in 2020 (sequentially) and will be implemented over the next three to four years. Phase 3 will be initiated following completion of the Phase 2 monitoring activities (2023 or 2024). Work activities associated with Phase 3 will be refined based on Phase 1 and 2 analysis and results and EPA's selection of a final passive water treatment technology.

The accompanying Figure 1 illustrates the locations of Site features that are referenced in the work activity descriptions below as well as Respondent's property ownership within the Site. The work activities will occur in both Iron Springs Gulch and Illinois Gulch. Iron Springs Gulch is a tributary to Illinois Gulch.

PHASE 1 – DESIGN AND CONSTRUCTION

1. **Close the Willard waste rock pile (Figure 1, item 1) through the creation of an in-place repository.** This action will reduce exposure risks associated with elevated metals and arsenic concentrations and physical hazards to trespassers. In addition, this action will reduce the release of contaminants from the waste rock to surface water and the potential for airborne transport of metals to adjacent residential properties.

Prior to construction of the in-place repository, an updated cultural resource survey consistent with the substantive requirements of the National Historic Preservation Act will be implemented by a qualified archeologist.

A new access road with locking gate (Figure 1, item 2 showing conceptual location; final configuration/location is subject to revision during design.) will be constructed on Respondent's property to provide access to the Willard waste rock pile from the Boreas Pass Road.

Discharges from the Willard 1 and Willard 2 adits (Figure 1, items 3 and 4, respectively) will be re-routed through pipes or other suitable conveyance to a new settling pond(s) during the excavation work to promote the removal of iron and other metals. The pond water will drain to the north from the settling pond(s) into Iron Springs Gulch.

The existing pond (Figure 1, item 5) adjacent to the Willard waste rock pile will be breached, drained, and removed to reduce water contact with the waste rock and to promote drying of soil/sediment near the repository foundation.

A geotechnical investigation will be conducted after the existing pond is drained to assess subsurface conditions in the Willard waste rock pile, including the extent of waste rock saturation, and to ensure that the pile will be stable over the long term after repository construction.

The Willard waste rock pile will be regraded to reduce its footprint area, eliminate depressions, and promote positive drainage. Final closure of the resulting repository will include the installation of a “clean” soil cover and revegetation. As described below, waste rock and soil from other areas of the Site will be hauled to and co-disposed in the repository prior to closure.

If in-place closure is found to be impractical due to adverse geotechnical conditions within the Willard waste rock pile, or other unforeseen circumstances, the Willard waste rock pile will be excavated and hauled a short distance to an alternative repository location on Respondent’s property. This will necessitate clearing timber and/or the construction of a repository foundation in the wet areas, along with appropriately sized run-on and run-off control channels.

2. **Line Illinois Gulch channel (Figure 1, item 6) adjacent to the Puzzle Extension Shaft (“PES”) (Figure 1, item 7).** USGS studies indicate that some of the streamflow in Illinois Gulch leaks into the PES and contributes to discharge at the Willard 1 adit. Lining of Illinois Gulch for several hundred feet near the PES, which requires access to third-party property, should therefore reduce the discharge at the Willard 1 adit and potentially decrease water treatment requirements.

Lining may be accomplished using poured or pre-cast concrete structure(s), flexible membrane liner, corrugated metal pipe, or other suitable conveyance that is sized to transmit estimated flows resulting from a design storm event (e.g., a 100-year, 24-hour precipitation event).

Groundwater in the Illinois Gulch drainage may also leak into the PES. The practicality of installing a groundwater cutoff wall in Illinois Gulch upstream of the PES will be investigated. The cutoff wall, if constructed, would be designed to force groundwater up and into the lined Illinois Gulch channel to possibly further reduce leakage into the mine workings.

3. **Remove accessible portions of the Cally adit waste rock pile (Figure 1, item 8).** This action will reduce exposure risks associated with elevated metals concentrations and physical hazards to trespassers.

Accessible portions of the waste rock on Respondent’s property on the northern Boreas Pass Road embankment will be removed and transported to the Willard waste rock pile or alternative repository location for inclusion in its final closure. The remaining waste rock

exposed in the road embankment will be covered with “clean” soil and revegetated to the extent practical given the steep slopes at this location.

4. **Dewater and clean out wet areas (Figure 1, item 9) impacted by the Willard 1 and Willard 2 adit discharges.** This action, which requires access to third-party property, will reduce the transport of accumulated, iron-stained sediments from the wet areas during high-flow events.

Removal will be implemented to the extent practical given the physical limitations associated with removal of saturated soil and to limit disturbance of minimally impacted wet areas. The removed sediment will be appropriately dewatered and placed in the new engineered repository.

5. **Remove the PES waste rock pile and plug the PES.** This action, which requires access to third-party property, will reduce potential risks to human health and the environment by relocating the exposed PES waste rock pile and will also eliminate physical hazards associated with the shaft.

The waste rock will be placed in the new engineered repository along with the Willard waste rock material, Cally adit waste rock, and impacted sediment from wet areas. Plugging of the PES will be implemented by or in consultation with the Colorado Division of Reclamation, Mining, and Safety (DRMS) and in accordance with DRMS technical specifications.

Work on the PES will be conducted after lining of Illinois Gulch is completed to limit the possibility of additional creek flow entering the shaft prior to plug construction.

6. **Implement soil sampling at residential properties on Brooks Hill Drive to the south of Bright Hope Circle (Figure 1, items 10 through 16).** EPA previously collected “grab” samples of soil from certain of these residential properties. Analyses of these samples indicate elevated levels of lead and other metals may be present in some locations that were sampled.¹ However, the method used to collect the soil samples did not provide analytical results that are representative of discrete portions of each property (e.g., front yard, back yard, etc.) or each property in its entirety. Therefore, an assessment of potential human health risks related to a residents’ exposure to metals in their yard soil is not currently possible.

Soil samples will be collected by Respondent from properties for which access is granted by the landowner and submitted to a subcontracted laboratory for analyses. The sampling

¹ Weston Solutions, Inc., 2017. Analytical Results Report for Illinois Gulch Phase 2 Residential Soil Sampling, Breckenridge, Summit County, Colorado. Prepared for U.S. EPA Region 8. March.

and analyses will be conducted according to the methodology set forth in the “Superfund Lead-Contaminated Residential Sites Handbook” (“Lead Handbook”).²

EPA will use the analytical data from the samples collected by Respondent to assess potential human health risks associated with the residential properties. Upon completion of the human health risk assessment, EPA and Respondent will meet to discuss the potential risks and any response actions that may be indicated. Any identified response actions will be described in an addendum to this Statement of Work (“SOW”).

PHASE 2 – MONITORING AND TREATMENT SYSTEM ASSESSMENT

Conduct surface water monitoring and bench-scale testing to assess the efficacy of passive treatment for the Willard 1 and Willard 2 adit discharges. EPA has identified passive treatment of the combined discharges from the Willard 1 and Willard 2 adits as an appropriate technology for reducing metals concentrations in surface waters originating in Iron Springs Gulch. Such treatment could be implemented using a bioreactor. Respondent will conduct surface water monitoring of the adit discharges and downstream stations following lining of Illinois Gulch, clean out of the adjacent wet areas, and closure of the Willard waste rock pile to assess the effects of those actions on adit discharge rates and surface water quality. In addition, bench-scale laboratory testing of samples from the adit discharges will be conducted following lining of Illinois Gulch to assess whether such treatment is feasible and, if so, how such a treatment system could be configured.

PHASE 3 – WATER TREATMENT DESIGN/CONSTRUCTION AND SITE OPERATIONS AND MAINTENANCE (O&M)

Design, construct, and operate a water treatment system for the Willard 1 and Willard 2 adit discharges. If bench-scale testing indicates that passive treatment of the adit discharges is viable, a suitable bioreactor (or other low maintenance treatment technology) system will be designed, constructed, and operated. Construction of a water treatment system at this location may require the use of low-permeability liners to limit seepage into the waste rock material if the Willard waste rock pile is closed in place. Treated water would be released to Iron Springs Gulch.

Timeline for Implementation of Work Activities

An estimated timeline for implementation of the Site work activities is described below. The projected timeline is subject to change in the course of the project. The project timeline and sequence of work activities are subject to EPA’s oversight and direction, and dependent upon

² U.S. EPA Office of Emergency and Remedial Response, 2003. OSWER 9285.7-50. PB2004-100017. August.

factors such as weather conditions and success in obtaining access to third-party property for development of design work plans and construction activities.

Phase 1: Design and Construction. This phase will include preparation of draft and final removal action design reports and implementation of a geotechnical investigation, archeological and cultural resource survey, and addressing issues associated with disturbance of wet areas (if needed). Design and construction activities are anticipated to begin in 2020 and continue into 2021, depending upon timing of approvals, weather and other factors. Construction activities will include waste rock grading and relocation, repository construction, lining of Illinois Gulch, wet area cleanout, residential yard sampling (and possible remediation if sampling results indicate remediation is appropriate), removal of waste rock and plugging at the PES, and reclamation of areas disturbed by these construction activities. Construction work that is not completed in 2021 will be carried forward and likely completed in the 2022 construction season.

Phase 2: Monitoring and Treatment System Assessment. Following the completion of Phase 1 construction and site reclamation activities, post-construction water quality monitoring and bench-scale studies/testing will be performed in Phase 2 of the project work to assess the effectiveness of passive treatment technologies and to support selection/design of future water treatment technology. EPA approval of the recommended technology will be required. Monitoring of the adit discharges following Phase 1 construction will be needed to assess the effects, if any, of PES plugging, Illinois Creek lining, and waste rock removal on the adit flow rates/water quality in adit discharges. Phase 2 is expected to begin in 2021 and continue through 2022 and into 2023 for collection of two years of data.

Phase 3: Water Treatment Design/Construction and Site O&M. Following review of the Phase 2 monitoring and bench-scale testing, Respondent will prepare a water treatment technology alternatives analysis for EPA review and approval. The alternatives analysis will describe the monitoring and bench-scale testing results and a recommended permanent water treatment system for the Willard 1 and Willard 2 adit discharges. Design, construction, and O&M of that water treatment system would follow, likely to be located on the Willard waste rock repository. Phase 3 may be initiated as early as 2023 or 2024. The Phase 3 scope will be described in an addendum to this SOW.

Schedule of Phase 1 and Phase 2 Deliverables

The following list of documents and associated delivery dates are based on calendar days. In computing any period of time under this Order, 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.

Document	Delivery Date
Monthly Progress Reports	On the 15 th of each month, commencing in the first full month after signing Order.
Draft 2020 Removal Design Work Plan including Health and Safety Plan (HASP) ³	Not later than 45 days after signing Order.
Final 2020 Removal Design Work Plan including HASP	30 days following receipt of EPA comments on the Draft 2020 Removal Design Work Plan.
Updated Cultural Resources Survey Report	Not later than December 31, 2020.
Draft 2021 Removal Design Work Plan ⁴	Not later than March 31, 2021.
Final 2021 Removal Design Work Plan	30 days following receipt of EPA comments on the Draft 2021 Removal Design Work Plan.
Draft Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) for Residential Properties	Not later than April 30, 2021.
Final SAP and QAPP for Residential Properties	30 days following receipt of EPA comments on the Draft SAP and QAPP for Residential Properties.
Draft Construction Completion Report (Phases 1 and 2)	90 days following the conclusion of all Phase 1 and Phase 2 removal action construction.
Final Construction Completion Report (Phases 1 and 2)	30 days following receipt of EPA comments on the Draft Construction Completion Report.
Draft Post-Removal Site Control (PRSC) Plan (Phases 1 and 2)	90 days following EPA approval of the Final Construction Completion Report (Phases 1 and 2)
Final PRSC Plan (Phases 1 and 2)	30 days following receipt of EPA comments on the Draft PRSC Plan (Phases 1 and 2).
Draft Water Quality Monitoring/Bench-Scale Testing Work Plan	Not later than March 31, 2022.
Final Water Quality Monitoring/Bench-Scale Testing Work Plan	30 days following receipt of EPA comments on the Draft Water Quality Monitoring/Bench-Scale Testing Work Plan.
Draft Monitoring Results/Treatment Recommendations Report	180 days following completion of all activities set forth in the Final Water Quality Monitoring/Bench-Scale Testing Work Plan.
Final Monitoring Results/Treatment Recommendations Report	60 days following receipt of EPA comments on the Draft Monitoring Results/Treatment Recommendations Report.

³ The 2020 Work Plan will address the access road, draining of existing wet areas, re-routing of adit discharges, geotechnical investigation of the Willard waste rock pile, and lining of Illinois Gulch. The HASP will address all planned field activities during Phases 1 and 2.

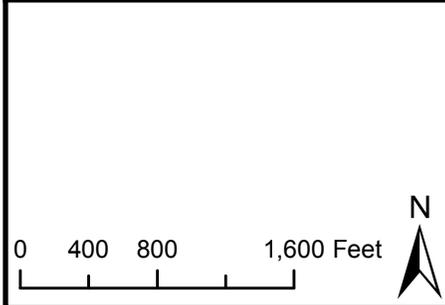
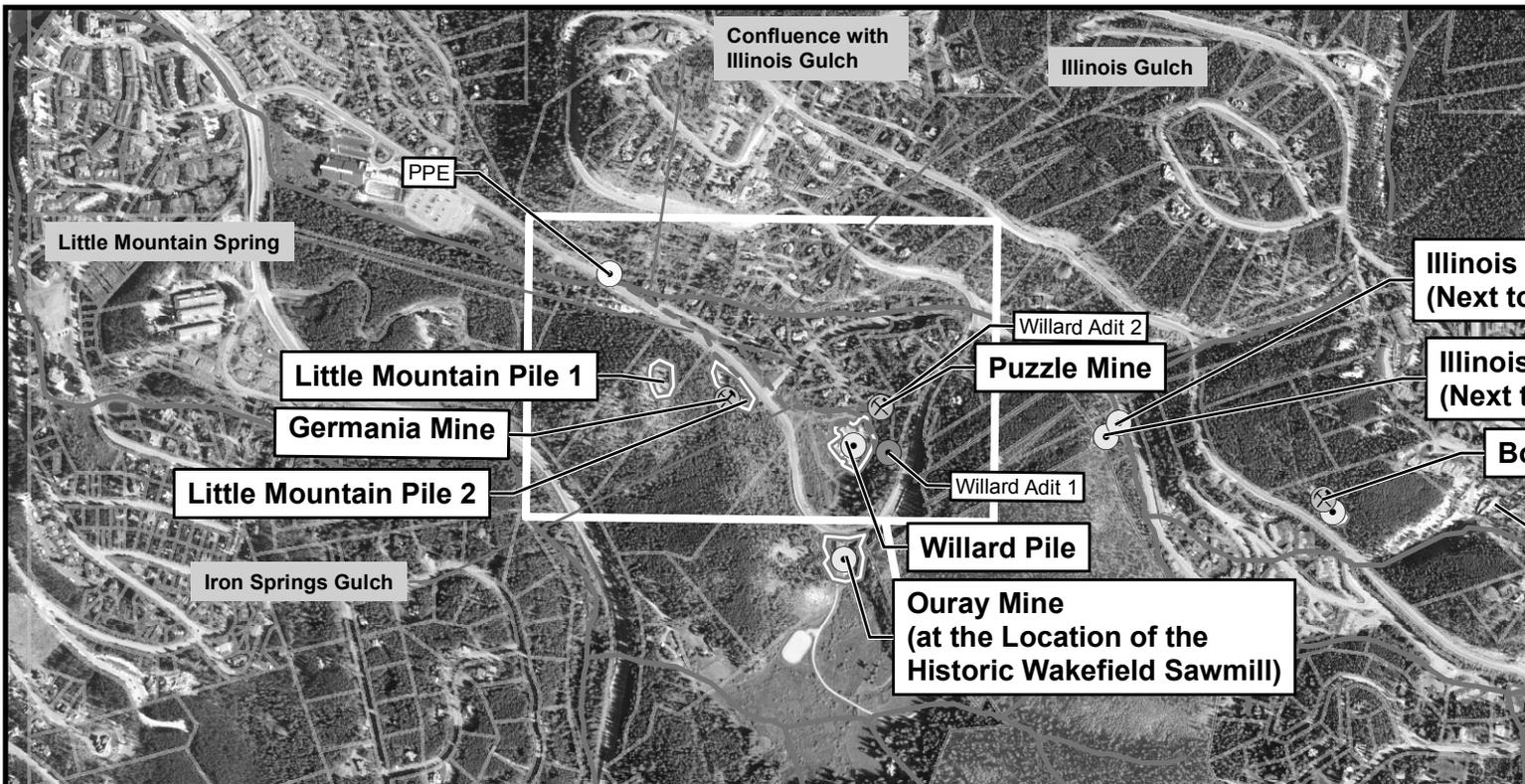
⁴ The 2021 Work Plan will address relocation of the Cally and PES waste rock, plugging of the PES, clean out of sediment from wet areas, and regrading/closure of the Willard waste rock pile.

If evaluation of the residential yard analytical results indicates that yard remediation is warranted, a removal action work plan will be required to describe work. The deliverable schedule for this work plan will be jointly established by EPA and Respondent.

Phase 3 will require additional removal design work plan(s) with HASP, construction completion reports, and PRSC plans. The deliverable schedule for these documents will be established in a Phase 3 addendum to the SOW.



Appendix B: Site Map



Prepared for:
U.S. EPA Region 8



Contract No.:
EP-S8-13-01

TDD:
1504-10

TO:
0004

Prepared By:
Weston Solutions, Inc.
START IV



Suite 100
1435 Garrison Street
Lakewood, CO 80215

Source:
Basemap: USDA NAIP Imagery - 2015
Water: USGS NHD Colorado Dataset - 2015
Waste Material Piles:
Digitized from Google Earth Imagery - 2014
Site Features (Sample Locations, PPE, and Adits):
ESAT GPS - 2014
Mine Features: ESAT GPS - 2015
Private Property Parcels: Summit County GIS - 2014
USFS Property: Summit County Assessor - 1996