APPENDIX D

STATEMENT OF WORK
FOR
UNILATERAL ADMINISTRATIVE ORDER FOR REMEDIAL ACTION
WITH THE STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF PARKS

BIG RIVER MINE TAILINGS/ST. JOE MINERALS CORP. SITE
OU01 RESIDENTIAL ACTION
ST. FRANCOIS COUNTY, MISSOURI

I. PURPOSE

The U.S. Environmental Protection Agency Region 7 (EPA or Region 7) issued a Record of Decision (ROD) on September 30, 2011, for remediation of lead contaminated residential yard soils in Operable Unit 1 (OU01) of the Big River Mine Tailings/St. Joe Minerals Corp. Superfund Site (Site). The purpose of this Statement of Work (SOW) is to describe the implementation of the required activities for Remedial Action for Operable Unit 01 under a Unilateral Administrative Order for Remedial Action (UAO) with the State of Missouri, Department of Natural Resources, Division of Parks (Respondent) for the residential properties[1] listed in Appendix A to the UAO (Subject Properties). All of the Subject Properties listed in Appendix A have been sampled by Respondent and found to have at least one quadrant which contains greater than 400 parts per million (ppm) lead. The selected Remedial Action alternative, described below, generally consists of removal and disposal of lead-contaminated soil in designated repositories. Once the contaminated soil is removed it will be replaced with clean soil/gravel and revegetated where applicable. The Remedial Action shall be conducted in accordance with the final plans, as set forth in Task 1- Plans, and all requirements and specifications in this SOW and the UAO, and shall be in conformance with the ROD. Any terms used in this SOW that are defined in the UAO shall have the meanings set forth therein.

II. BACKGROUND

The Site is located in southeastern Missouri entirely within St. Francois County, approximately 70 miles southwest of St. Louis. The first recorded mining in St. Francois County occurred at Mine-a-Gabore between 1742 and 1762. The introduction of the diamond drill in 1869 facilitated the discovery of additional reserves and output from the mines increased dramatically in the late 1800s. Mine output from St. Francois County peaked in 1942 when the concentrate equivalent of 197,430 tons of lead was produced. Mining ceased in the county in 1972 with the closing of St. Joseph Lead Company's Federal mine.

The Site resides within the Old Lead Belt, which is on the northeastern edge of the Precambrian igneous core of the St. Francois Mountains. This area is one of the world's largest lead mining districts, having produced more than nine million tons of pig lead. It has been estimated that some 250 million tons of mill waste tailings and chat were produced in the Old Lead Belt from ore milling and beneficiation processes. The chat has been used extensively as aggregate for ballast in railroads, aggregate in concrete, ice/snow control, road base/shoulders, asphalt, and fill. Some chat is used today as aggregate and fill. Tailings have been used as agricultural amendments due to the lime content.

---

[1] Under the Record of Decision and the UAO, the definition of residential properties includes single and multi-family dwellings, apartment complexes, vacant lots in residential areas, schools, daycare centers, playgrounds, parks and green ways.

Chat deposits include sand- to gravel-sized material resulting from the crushing, grinding, and dry separation of the ore material. Tailings deposits include sand- and silt-sized material resulting from the wet washing or flotation separation of metal concentrates from the ore material. The mine waste contains elevated levels of lead, cadmium, and zinc which pose threats to human health and the environment. These deposits may have contaminated soils, including residential yard soils, sediments, surface water, and groundwater.

This SOW only concerns Operable Unit 01 which includes residential properties located within the Site. The definition of residential properties includes single and multi-family dwellings, apartment complexes, vacant lots in residential areas, schools, daycare centers, playgrounds, parks and green ways.

III. DESCRIPTION OF THE REMEDIAL ACTION

The following section provides a detailed description of the EPA's selected Remedial Action for cleanup of the source material and contaminated residential soils at the Site.

Cleanup Actions

Specific actions to be implemented for OU01 include the engineering components described in the Selected Remedy of the ROD which is Alternative 3 in the ROD. The selected remedy requires remediation at residential properties where a quadrant sample result shows ≥ 400 ppm lead (action level). The requirement to remediate a residential property is triggered when the highest recorded soil sample for any quadrant of the property contains ≥ 400 ppm lead. The entire drip zone will be remediated if the lead concentration in the drip zone is also greater than 400 ppm lead. Residential properties where quadrant samples are not ≥ 400 ppm lead will not be addressed. The selected remedy requires further excavation if the lead concentration is above 1,200 ppm at 12 inches depth. Excavation will continue until either a maximum depth of 24 inches is reached; or the underlying soils at the bottom of the excavation are below 1,200 ppm lead. Placement of a visual barrier is required if at 24 inches below ground surface (bgs) the lead soil concentration is greater than 1,200 ppm. The barrier placed will be an obvious plastic barrier that is permeable, wide meshed, and will not affect soil hydrology or vegetation, such as an orange-mesh plastic sheet. The physical barrier will function as a warning that digging deeper will result in exposure to soils contaminated at a level that EPA has determined to be a human health concern.

Under the UAO, the Respondent is responsible for remediating 22 Subject Properties, which are within 1-mile of the Federal Mine Tailings Pile and listed in Appendix A of the UAO. The Subject Properties subject to remediation contain at least one quadrant with soil concentrations greater than 400 ppm lead.

The application of the action level requires consideration of the depths of excavation and other risk management elements. Due to the distribution of lead contamination in the soil profile at the Site, Region 7 has determined that backfilling of excavated areas to original grade with clean material after reaching a residual soil lead level less than 400 ppm lead in the upper 12 inches, or a residual concentration of less than 1,200 ppm lead at a depth greater than 12 inches, combined with other elements of the selected remedy, is protective of human health. These cleanup criteria are based upon a risk-management determination made by Region 7 in consideration of site-specific conditions at the Site and the experience gained in remediating thousands of properties using this strategy.

The 1,200 ppm lead cleanup level at depth is protective for occupational exposure of utility workers or other construction workers that could potentially contact subsurface soils following soil remediation. Disturbances could include installing or repairing water, sewer or natural gas lines, underground electrical, television or phone cables, fence and mail box posts, basketball poles and similar activities. It also could include planting trees or shrubs. For these types of disturbances, Region 7's underlying premise is reasonable and would be protective of public health.

The selected remedy is also is consistent with the recommendations of the Superfund Lead-Contaminated Residential Sites Handbook. Five-year review procedures will apply to any eligible properties where soil remediation does not achieve the action or cleanup levels specified in this ROD.

Institutional Controls

The selected remedy prescribes disposal of contaminated soil at designated Soil Repositories to be used indefinitely to store the wastes in a manner protective from human and ecological exposure. The capped Soil Repository areas will require institutional controls (ICs) to prevent any human or natural disturbance of the caps that could expose the protected source materials. Formal environmental covenants and restrictions are established with property owners at the current repositories under the Missouri Environmental Covenants Act (MoECA) to control access and prevent activities such as construction, drilling of wells, the use of the property for destructive recreational/residential purposes or any other development that could damage the barriers provided by the constructed engineering or natural components that are intended to prevent exposure to contamination. The covenants and restrictions will also prevent drilling wells in locations of the cap and within a protective perimeter surrounding capped locations under Missouri regulations at 10 CSR 23-1.040.

IV. PERFORMANCE TASKS

Under this SOW which implements the UAO, the Remedial Action at the Site described above is required for the Subject Properties, which are listed in Appendix A. The Respondent is required to complete the Remedial Action for the Subject Properties by September 30, 2018.

The following tasks are required in order to complete the requirements in the ROD. All submissions required under this section shall be provided to EPA Region 7 to the addresses set forth in paragraph 38 of the UAO. All draft documents shall be submitted electronically. Final documents and shall consist of two hard copies and one electronic copy.

Task 1 - Plans

Prior to beginning Site work, the Respondent shall complete and obtain EPA approval of the following plans:

- **Remedial Action Work Plan (RAWP)**. The Respondent shall submit a draft RAWP to EPA within 30 days of the Effective Date as defined in the UAO. The Respondent shall submit the final RAWP to EPA within 15 days of EPA comments on the draft RAWP. This site-specific plan gives a description of how the project will be managed. This includes, but is not limited to, the approach used, the general schedule, which includes the timeline and number of properties to be completed in monthly intervals, the resources required, the intended communication process with EPA, the Respondent's points of contact and responsibilities, a description of how property owner complaints or issues will be handled, how the Respondent shall interact with the respective road authority and maintain the roads, and when and how it shall employ dust suppression measures. The RAWP shall also describe the protocols and methods that will be employed to ensure quality landscaping and establishment of lawn growth. The RAWP shall also include the Repository Operation Plan, which describes the designated Soil Repositories. EPA's approval of the RAWP must be received by the Respondent before starting field activities.

- The Respondent shall submit RAWP updates to EPA within 10 calendar days of changes. The Respondent shall update the RAWP to reflect progress towards achievement of the performance objectives as necessary.

- **Quality Management Plan (QMP)**. The Respondent shall submit a draft QMP to EPA within 30 days of the Effective Date. The Respondent shall submit the final QMP to EPA within 15 days of EPA comments on the draft QMP. The QMP shall document how an organization will plan, implement, and assess the effectiveness of its quality assurance and quality control operations. Specifically, it shall describe how an organization structures its quality system, the quality policies and procedures, areas of application, and roles, responsibilities, and authorities. The elements of a quality system are documented in a QMP.

- **Quality Assurance Project Plan (QAPP)**. The Respondent shall submit a draft QAPP to EPA within 30 days of the Effective Date. The Respondent shall submit the final QAPP to EPA within 15 days of receiving EPA comments on the draft QAPP. This site-specific plan shall describe how the Respondent will assure the quality of all work and products including, but not limited to, subgrade soil

sampling, backfill source sampling and gravel sampling. The plan shall follow the *EPA Requirements for Quality Assurance Project Plans*, EPA QA/R-5, March 2001.

- **Storm Water Pollution Prevention Plan (SWPPP)**. The Respondent shall submit a draft SWPPP to EPA within 30 days of the Effective Date. The Respondent shall submit the final SWPPP to EPA within 15 days of receiving EPA comments on the draft SWPPP. This plan shall outline how the Respondent shall meet the storm water pollution prevention and management requirements of the federal, state, and local laws, regulations, and other requirements, including those under the Clean Water Act, for both the Subject Properties, backfill/topsoil source locations and the designated Soil Repository. In general, the SWPPP shall be a site-specific, written document that identifies potential sources of storm water pollution at the construction site (Subject Properties, backfill source areas, and the Soil Repository) and describes best management practices (BMPs) to contain pollutants (sediment, soil, tailings, etc.) in storm water discharges from the Subject Properties, backfill source area(s), and the Soil Repository. The SWPPP shall also document how the Respondent plans to ensure no tracking of material onto any road from Subject Properties and the Soil Repository. The SWPPP shall generically describe control measures and BMPs that will be applied to the Subject Properties, backfill source area(s), and the Soil Repository; individual property-specific SWPPPs will not be required.

- **Health and Safety Plan (HASP)**. The Respondent shall submit a draft HASP to EPA within 30 days of the Effective Date. The Respondent shall submit the final HASP to EPA within 15 days of receiving EPA comments on the draft HASP. The HASP shall outline the health and safety requirements of the federal, state, and local laws, regulations, and must meet the minimum requirements of OSHA 29 C.F.R. § 1910.120 and 29 C.F.R. § 1926.65. For specific information please consult the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA). A Fact Sheet for Hazardous Waste Operations and Emergency Response is located at: *http://www.osha.gov/OshDoc/data_General_Facts/factsheet-hazardouswaste.pdf*

Task 2 – Subject Properties, Site Sketches, and Access Agreements

The Subject Properties to be addressed under the UAO and this SOW are listed in Appendix A. The Respondent shall obtain a signed access agreement for Subject Properties where access has not already been granted.

Task 3 – Pre-Excavation Site Walks

The Respondent shall schedule pre-excavation site walks with the property owner(s) at each Subject Property prior to initiating excavation. This will involve the following activities:

- Coordinating schedules with the property owners;
- Establishing a meeting time at the property to conduct the pre-excavation site walk;
- Scheduling site walks one to two weeks prior to construction activities at each property; and,
- Keeping a list of scheduled pre-excavation site walks and keeping EPA apprised of the schedule.

The purpose of the pre-excavation site walk is to discuss the proposed excavation activities and identify areas of concern. The Respondent shall take photographs and video, which displays the date taken, of the pre-excavation state of the property and all locations from the street (alleys, crossing sidewalks, etc.) used to access the property. If there is disagreement as to the pre-excavation condition of the property and the photographic and/or video evidence is insufficient to make determination of fault, the Respondent shall use best efforts to address the issue with the property owner.

Generally, the property owner is responsible for removing personal items from the area to be remediated. The Respondent will explain to the property owner what items need to be moved from excavation/access zones during the pre-excavation site walk.

Task 4 – Recordkeeping

The Respondent shall create a record of the work progress for each day work is performed at the Site. The Respondent shall keep a record of each property that is completed which includes but is not limited to: access agreements, records of correspondence, pre and post-excavation site sketches and photo/video (each property's photos and videos will be recorded on an individual property-specific digital video disk (DVD) or other appropriate digital media, with no additional data being collected or stored on that DVD or media), the estimated tons/cubic yards, number of truckloads and type of material removed from the property, final excavation area(s) locations and measurements, the tons and/or cubic yards and the number of truckloads of clean soil/gravel backfilled at the property, the dates work was performed at the property (site walk, excavation start and completion, backfill start and completion, final grade achieved, seeding, and final restoration and closeout), sample results including drip zone, if required, and confirmation sampling results. The Respondent shall input and maintain this data in an EPA-provided MS Access database.

The Respondent shall be responsible for documenting all correspondence with property owners, including those related to homeowner complaints.

Task 5 – Excavation and Remediation of Subject Properties

The objective of the excavation and remedial work is to ensure that material containing lead at levels greater than or equal to 400 ppm is not located in the top 12

inches of completed areas, consistent with the ROD. For this action, excavation and/or remediation will be performed only to address lead contaminated materials. The area of a Subject Property to be addressed should not exceed one acre. In general, areas will be located within approximately 100 feet of an occupied or vacant dwelling as represented on site sketches provided. Occasionally, EPA may require additional remediation outside of the normal parameters of a residential property. This may include play areas or gardens located more than 100 feet from the home. Children's play areas, such as swing sets and sand boxes shall be the Respondent's first priority at a given property unless otherwise approved by the EPA.

In areas designated for soil/gravel excavation, the Respondent shall excavate a minimum of 6-inches. At the base of the 6-inch lift, the Respondent shall measure the lead concentration by taking XRF soil samples to verify that the cleanup criteria is met or if an additional 6-inch excavation is required. This sample should be collected as a 5-aliquot composite from each cell (similar to the surface sample).

If the soil samples do not meet the cleanup goal after excavation of the first 12 inches, an additional 6-inch lift will be excavated. At the base of this 6-inch lift, the Respondent shall measure the lead concentration by taking XRF soil samples to verify that the cleanup criteria is met or if an additional 6-inch excavation is required. After this last 6-inch lift, the Respondent shall measure the lead concentration by taking soil samples to verify that the cleanup criteria is met or if the Respondent shall place a pre-approved visual warning barrier.

When the property cell average lead concentration of the composite sample meets the cleanup goal at or above 12-inches bgs, or 24-inches bgs, the Respondent shall determine the final excavation base lead concentration, also referred to as the confirmation sample, prior to any backfill activities. The confirmation sample is a composite sample of 5 aliquots collected as 6-inch cores from each cell. The aliquot locations shall be collected in close proximity to the surface composite aliquots.

At 24-inches bgs, if the composite soil sample indicates an average lead level of greater than 1,200 ppm, the Respondent shall place an approved warning barrier (approved in advance by the EPA) at the base of the excavation. Prior to backfilling, the Respondent shall document the location and dimensions of any contaminated material left in place and record the location and dimensions of the barrier placed at depth on the post-excavation site sketch.

The Respondent shall excavate soil/gravel without avoidable damage to houses, sidewalks, curbs, driveways, utilities, and other items at each property. The Respondent shall exercise caution when excavating adjacent to permanent structures (houses, patios, pools, decks, walkways, retaining walls, etc.). Excavation of soil beneath permanent structures shall not be performed in cases where these areas are inaccessible. If a deck extends away from a building and it is located in a designated, lead-contaminated area and the area underneath the deck is accessible with no modification to the existing deck, the material under the deck shall be excavated.

Damage to sidewalks, structures, possessions, landscaping, etc. and subsequent repairs shall be thoroughly documented as to the cause, effect and resolution by the Respondent. The Respondent shall use best efforts to resolve property owner concerns about property damage.

Per the Site specific HASP, the Respondent shall establish a "work zone" with highly visible caution tape or impassible construction fence (or other barrier). In non-working areas, the Respondent shall ensure safety of the public and residents from hazards such as slip, trip and fall hazards at all times while the Respondent is active and present at each construction site. The Respondent shall ensure safe access for all residents to and from their houses throughout the remedial process. The Respondent shall be held responsible for any contaminated material leaving the work zone of each respective construction site.

The Respondent shall perform, to the extent possible, excavation around trees, bushes and shrubs to be left in-place in a manner that leaves the root/bulbs intact and avoids damage to the roots. If the Respondent modifies the property (e.g., dismantles the fence), damages the property (e.g., leaves ruts in the driveway, hits trees or other objects with excavator, etc.), the Respondent shall, to the extent possible, restore the area to its prior state or shall use best efforts to resolve any related issues with the property owner.

Garden areas –The Respondent shall excavate soil in vegetable garden areas in 6-inch lifts until the average lead concentration is below 400 ppm or the base of excavation is 24-inches bgs, whichever comes first. If the soil sample (collected in the manner previously described) from 24 inches bgs contains an average lead concentration of 1,200 ppm or greater, the Respondent shall cease excavation, place an approved visual warning barrier in the base of the garden excavation. Prior to backfilling, the Respondent shall document the location and dimensions of any contaminated material left in place and record the location and dimensions of the barrier placed at depth on the post-excavation site sketch.

Driveways and garage interiors – The Respondent shall excavate gravel driveways in the same manner as soil. On occasion, garages may have contaminated gravel or dirt floors that require hand excavation and placement of gravel. If the Respondent chooses to use machinery in these areas, the Respondent assumes all responsibility for damage caused by the Respondent's actions.

Drip Zones – A drip zone is an area around the painted (or previously painted) exterior walls of a house or structure that receives the majority of the rain runoff from the house or structure. Drip zones vary in size from structure to structure but generally should extend 30 inches beyond the foundation of the residence. Drip zones greater than 400 ppm lead at Subject Properties with a yard quadrant over 400 ppm lead shall require excavation in the same manner as all other areas.

The depth of drip zone excavations shall be limited to a maximum of 12-inches bgs so that excavation does not jeopardize the structural integrity of the house/structure. The technique of tapering or angling away from the foundation after excavating several inches bgs is an acceptable practice around sensitive or unstable structures. If the drip zone remains above 1,200 ppm lead at 12-inches bgs, placement of an approved visual warning barrier shall be required.

Task 6 – Transportation and Disposal

The Respondent shall use trucks covered with tarps so that no contaminated material blows out of the truck during transport. The Respondent shall fill trucks to capacity (or to within acceptable limits for the route selected) with contaminated material prior to hauling to a designated Soil Repository. Trucks hauling contaminated material shall proceed directly to the designated Soil Repositories to off-load on the established routes and should not deviate from these routes. Activities prohibited with trucks loaded while hauling contaminated material include, but are not limited to, stopping for lunch and running errands or other non-emergency activities.

Physical access to the Soil Repositories shall be maintained by the Respondent (except that EPA will provide access to its Soil Repositories at Bonne Terre and Park Hills). At a minimum, this shall consist of maintaining a gate and fence that totally restricts unauthorized and/or off-duty vehicular access at the entrance to the Soil Repository, as well as maintenance on the gravel road within the Soil Repository and at the entrances/exits.

Only disposal of contaminated soil/gravel, as described in this SOW and supporting documents shall be disposed of at the Soil Repository. The Respondent shall not dispose of any other solid or hazardous waste/substance at the Soil Repository. The Respondent shall not allow any other person or entity to dispose of any other solid or hazardous waste/substance at the Soil Repository without approval from EPA.

The Respondent shall commit trucks and equipment to either the contaminated part of the operation (i.e., transport and disposal of contaminated soil/gravel) or the backfill part of the operation (i.e., hauling clean backfill, topsoil, and gravel to Subject Properties) and ensure no cross contamination occurs. In select cases and only when the on-site EPA Representative provides prior approval, the Respondent may switch a truck or equipment from handling contaminated material to handling clean material. In such cases, the Respondent shall decontaminate the trucks by a wet wash at the designated Soil Repository so no visual evidence of material is present and ensure that no contamination leaves the Soil Repository. The Respondent will document the decontamination procedures used and photograph the truck or equipment before and after decontamination. The Respondent shall wet wash and decontaminate all other equipment when switching from contaminated soil/gravel work to clean work. Equipment transferred between contaminated construction sites can be decontaminated by dry wash (brushing, scrubbing) prior to being removed from the site by the Respondent, if site conditions allow. The Respondent shall be held

responsible for tracking material out of the established work zones due to improper decontamination of equipment. The Respondent is responsible for managing any waste generated by the decontamination in a manner consistent with local, state, and federal regulations as well as the Site specific HASP.

Task 7 – Backfill Quality and Grading

The Respondent shall be responsible for locating and sampling suitable backfill sources. EPA advises the Respondent to consult the Missouri Inventory of Mining Occurrences and Prospects Database which can be found at the Missouri Spatial Data Information Service (*http://msdis.missouri.edu/*) to help guide in the selection of a backfill source. Many sources of information exist on the history of mining in southeast Missouri, one of which can be found at *http://pubs.usgs.gov/sir/2008/5140/pdf/Chapter1.pdf*. The Respondent shall provide EPA access to all potential and accepted backfill sources. The Respondent shall follow storm water protection regulations with regard to the backfill sources. Backfill sources and sampling methods shall be included in the QAPP for approval by the EPA prior to their use. Site sketches of the backfill source area with GPS reference points are required. Physical markers and GPS located points detailing sample areas at the backfill source area are also a requirement.

All excavations shall be backfilled with non-contaminated soils and gravel that exhibit at least the following characteristics:

1. Contains less than 100 ppm average lead;
2. Contains less than 22 ppm average arsenic;
3. Contains less than 25 ppm average cadmium;
4. Contains less than 1,800 ppm average manganese;
5. Contains no other contaminants at concentrations that pose a risk to human health and the environment (i.e. below residential soil screening levels found at the following web address): *http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm*;
6. Topsoil shall be demonstrated to be of sufficient quality to produce heavy growths of grass and sustain vegetable gardens as verified by appropriate soil nutrient testing (for more information see *http://soilplantlab.missouri.edu/* and ASTM D5268 - 07 Standard Specification for Topsoil Used for Landscaping Purposes). Depending on the backfill source chosen by the Respondent and the results of the nutrient testing, the Respondent shall fertilize the topsoil upon placing it at a residential property according to the recommendations of the nutrient test. Nutrient testing results and fertilizer/lime recommendations must be submitted to EPA and approved prior to use; and,
7. Contains insignificant amounts of debris (tree roots, rocks, grass, etc.).

The Respondent shall not use subsoil (even with compost or other amendments added) as topsoil. A minimum of 4 inches of topsoil is required at the surface of all areas excavated.

The Respondent shall adequately place soil during this task so as to reduce future soil settlement.

Replacement gravel for driveways, walkways, parking areas and other previously graveled areas shall consist of crushed limestone. The Respondent shall place the gravel so as to reduce the tendency to rut from automobile traffic or heavy rain events.

The Respondent shall be responsible for maintaining yards that have been backfilled and are awaiting seeding, including but not limited to, implementing best management practices (BMPs) to control erosion, weed control, etc. When necessary, temporary walkways to enable access from driveways to home entrances shall be provided while yards are excavated and awaiting backfill and/or lawn establishment. Respondent shall take measures to keep sidewalks free of excessive dirt, mud and debris during the excavation and until/while lawns are being re-established. The Respondent shall employ BMPs until a property is fully restored as verified by a close-out inspection by DEQ and the property owner. The Respondent shall promptly repair and, if necessary, upgrade any breached or non-working erosion control measure. The Respondent shall remove all temporary controls such as silt fence and straw bales after lawns have been established, as approved by the EPA.

Task 8 – Dust Suppression

As applicable, the Respondent shall employ dust suppression during soil excavation, soil staging operations at Subject Properties and the Soil Repository, along repository entrances/exits, and during backfilling and grading activities to comply with the Site specific HASP. Dust suppression shall meet all state, county or local regulations. Water for dust suppression shall be obtained from the local publicly owned treatment works unless otherwise approved by EPA. The Respondent shall also ensure that dust is not a nuisance or problem when work is not occurring. The Respondent shall describe in the RAWP and HASP situations when dust suppression activities will be conducted. The Respondent may apply alternative dust suppression activities, such as sealing gravel roads, upon approval by the county (if needed) and the EPA. The Respondent shall not allow visible dust emissions from contaminated residential work areas. In cases of excessive dust, as determined by EPA, the EPA has the authority to stop activity at the worksite or Soil Repository until dust suppression measures are appropriately implemented.

Task 9 - Revegetation and Landscaping

The Respondent shall provide appropriate landscaping for each backfilled property and shall provide materials, equipment, and labor necessary such that restoration activities result in final ground surfaces that are smooth and allow for adequate drainage, and lawns that are adequately revegetated.

Hydroseeding or sod placement shall be performed as appropriate by the Respondent in backfilled and disturbed areas. Hydroseeding shall generally follow current business standards and practices. All materials and seed utilized shall be from a certified source. The Respondent shall hydroseed based on the following minimum standards per acre unless another standard is allowed in advance by the EPA:

Item	Rate/Acre
K31 Fescue	436 lbs
Annual Rye	44 lbs
Hydroseeding Mulch	4000 lbs

If necessary, fertilizer/lime shall be applied based on the backfill nutrient tests and the N-P-K ratio recommended for the specified seed mix. The Respondent shall provide lawn care guidance to each landowner. Some suggestions are located on the University of Missouri-Extension Website, located at:
http://extension.missouri.edu/main/DisplayCategory.aspx?C=64.
The Respondent shall determine appropriate seeding and sod windows to meet growth requirements for property closeout. Recommendations can be found at:
http://extension.missouri.edu/main/DisplayCategory.aspx?C=64
The Respondent is responsible for determining when seeding, fertilizing, and/or sodding is appropriate. The Respondent shall employ BMPs at the Subject Properties to prevent erosion and the Respondent shall replace and re-grade any lost backfill due to significant erosion prior to or during the re-vegetation period.

Task 10 – Replacement of Removed or Damaged Items

Upon completion of the excavation, backfilling, and restoration, the Respondent shall be responsible for returning the property to as close to pre-excavation conditions as practicable (e.g., re-installing fences, gates, swing sets, etc.) except for items removed by, or no longer desired by, the property owner. If items are not salvageable after remediation (e.g., broken fence posts, fences, etc.) the Respondent shall replace with comparable items and reinstall these items. After completing restoration efforts, the Respondent shall notify DEQ within 2 days via email. The Respondent shall repair all Respondent-caused property damage and seed appropriate restored areas before remedial activities are considered complete and close-out activities can be performed.

Task 11 – Final Property Closeout Inspection

The Respondent shall schedule and perform a final property closeout inspection with the property owner to discuss completed tasks and, in general, assess all restoration actions after meeting the closeout criteria described below. Following the post-excavation property site walk, the Respondent shall attempt to obtain the property owner's signature and date on the Final Property Closeout Form that acknowledges that all restoration work was completed appropriately and in accordance with this SOW. On occasion, the Respondent may be required to show the property owner the

dated pre-excavation video and/or photographs to resolve any issues. During the final inspection, the Respondent shall conduct the following activities:

1. Inspect the completed Remedial Action and ensure that it meets the Final Property Closeout form criteria;
2. Take sufficient dated photographic and video evidence of the completed property and the access location from the street to the property for a thorough comparison with the pre-excavation photographic/video evidence; and,
3. Obtain the landowner's signature on the Final Property Closeout Form where the landowner acknowledges that all restoration activities were adequately complete and no damage was evident. Failure to obtain the landowner's signature will not prevent Final Property Closeout.

DEQ will approve the Respondent's property closeout request and sign the Final Property Closeout Form after verification that Performance Standards have been met.

Task 12 – Final Report

The Respondent shall submit a Draft Final Report within 30 days after completion of field activities. The report shall describe all work completed to date as well as any issues of which EPA should be aware. The report shall address all aspects of the work conducted and shall include a table or spreadsheet that shows the Subject Properties where work has been completed, the EPA ID number for each property and the dates of tasks started and completed. The Draft Final Report shall also include property files for all properties not previously submitted. The Final Report, with attachments, shall be submitted to EPA within 20 days after receipt of EPA's comments on the Draft Final Report.

Emergency Response and Reporting Emergency Response and Reporting

If any event occurs during performance of the Work that causes or threatens to cause a release of Waste Material on, at, or from the Site and that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment, Respondent shall: (1) immediately take all appropriate action to prevent, abate, or minimize such release or threat of release; (2) immediately notify the authorized EPA officer; and (3) take such actions in consultation with the authorized EPA officer and in accordance with all applicable provisions of the Health and Safety Plan, the Emergency Response Plan, and any other deliverable approved by EPA under the SOW.

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 notify the authorized EPA officer orally.

The "authorized EPA officer" for purposes of immediate oral notifications and consultations is the EPA Project Coordinator, the EPA Alternate Project Coordinator (if the EPA Project Coordinator is unavailable), or the EPA Emergency Response Unit, Region 7 (if neither EPA Project Coordinator is available).
For any event, Respondent shall: (1) within 14 days after the onset of such event, submit a report to EPA describing the actions or events that occurred and the measures taken, and to be taken, in response thereto; and (2) within 30 days after the conclusion of such event, submit a report to EPA describing all actions taken in response to such event.

The reporting requirements in this SOW are in addition to the reporting required by CERCLA § 103 or EPCRA § 304.

Periodic Review Support Plan (PRSP). Respondent shall submit the PRSP for EPA approval. The PRSP addresses the studies and investigations that Respondent shall conduct to support EPA's reviews of whether the RA is protective of human health and the environment in accordance with Section 121(c) of CERCLA, 42 U.S.C. § 9621(c) (also known as "Five-year Reviews"). Respondent shall develop the plan in accordance with *Comprehensive Five-year Review Guidance*, OSWER 9355.7-03B-P (June 2001), and any other relevant five-year review guidance.