

REVISED PWS for AMENDMENT 2

**PERFORMANCE STATEMENT OF WORK
FIRM FIXED UNIT PRICE CONTRACT
for
RESIDENTIAL SOIL REPLACEMENT/REMEDIAL ACTION
at the
MADISON COUNTY MINES SITE**

**FIRM FIXED UNIT PRICE PERFORMANCE BASED
EXCAVATION/REPLACEMENT/RESTORATION**

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1.0 GENERAL

The purpose of this Performance Work Statement (PWS) is to perform a remedial action for lead-contaminated residential property surface soil at the Madison County Mines Superfund site (Site), Operable Unit 3 (OU-3). The selected remedy consists of excavation and disposal of lead-contaminated residential soil and gravel which have been determined to have with lead concentrations greater than 400 parts per million (ppm); replacement of the contaminated material with “clean” fill and soil or gravel; and revegetation of the area. All actions shall be conducted with respect to the prioritization ranking system outlined in Section 3.7. The remedial action shall be conducted consistent with the OU-3 Interim Record of Decision (ROD) issued in July 2008 (text and ARARs included as Enclosure A), relevant EPA policies (including, but not limited to, OSWER 9285.7-50, Superfund Lead-Contaminated Residential Sites Handbook, August, 2003), and this PWS. Definitions of key terms used in the PWS are included in Enclosure B.

Remediation is being conducted pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), and National Contingency Plan (NCP) requirements. The Contractor shall furnish all necessary services in order to meet the performance standards and successfully accomplish the requirements of this PWS, including labor, materials, equipment, site management, office support, and incidental items. The Contractor shall confine his activities to the property locations designated as requiring remediation (including paths to and from the properties), the soil repository (Conrad tailings pile), backfill source areas, and all transportation routes in between defined by the PWS unless otherwise approved in advance by EPA.

When conducting this work, the Contractor shall remember and communicate to the property owner if necessary, the following general principles:

1. The goal of this CERCLA effort is to remove surface soil that poses a health risk, NOT to enhance or improve any property;
2. Decisions (e.g., remove a tree/stump or dig around it, etc.) made are based on what is in the best interest of the EPA and the health of the community.

Please note: The prospective bidders shall not trespass on residential properties that are private property and are in no way authorized to do so before contract award. Prospective bidders should also not request access from private residential landowners to view their properties.

The Contractor shall provide communication and coordination services with property owners and shall plan and implement all activities in a manner that minimizes adverse impacts to property owners and the general community.

The Contractor shall be responsible for notifying appropriate state and local agencies as to the nature and timing of activities that will be occurring. The Contractor and his shall comply with all substantive requirements of applicable or relevant and appropriate federal and state and local

laws and regulations to meet the performance standards of this PWS including, but not limited to, storm water pollution prevention guidelines.

The Contractor shall be responsible for obtaining data, maintaining records, and preparing all reports and submissions required to satisfy PWS and other regulatory requirements.

EPA signed an Action Memorandum in September 2002, authorizing a time-critical removal action at the site to minimize human exposure to lead-contaminated soil in sensitive population areas (such as daycare centers, public parks, other public recreational facilities, and homes with potentially lead-impacted children). This removal action, which started in 2003, consisted of excavating lead-contaminated soil and gravel at properties with lead concentrations greater than 1,200 ppm in or more areas of with lead concentrations greater than 400 ppm and the presence of a child with an elevated blood lead level up to one foot below ground surface (bgs) and two feet bgs in garden areas and replacing it with clean fill. When the removal action was finished in October 2006, hundreds of residential properties, which included daycare centers, schools, churches, and trailer parks, had been remediated. Some site-specific excavation data from the removal action are included in Enclosure C. Please note that during the removal action, residential properties in OU-1 and OU-3 were tracked separately. For this remedial action, residential properties in OU-1 and OU-3 have been combined and will be addressed under one operable unit, OU-3. Given that no more than one acre will require remediation at each residential property and that the maximum depth will be 2 feet bgs, the maximum volume of material requiring excavation at a residential property is 3,227 cubic yards. Historically, excavated volumes were much less per property. Enclosure C describes the average volume of material excavated during the removal action to be approximately 253 cubic yards. However, as noted earlier, the removal action excavations ceased at 12 inches bgs. During this remedial action excavation depths could be greater, up to 2 feet bgs. Please note that this cleanup addresses all residential soil with lead levels greater than 400 ppm and that the large majority of properties with lead levels greater than 1,200 ppm have previously been addressed.

It is expected that there will be at least 600 known properties requiring remediation under this contract, all of which are shown on the figures included in Enclosure D, including some extra which have already been remediated. Additionally, EPA's sampling contractor (not the contractor who will be selected for this work) will be conducting the initial screening of the remainder of all residential properties in Madison County, currently estimated at approximately 800 properties, within the next 1.5 years. Based on historic data, up to 42% of the 800 properties yet to be screened could require remediation. There could be up to another 300 or so residential properties requiring remediation that are unknown at this time. The Contractor shall be capable of performing the tasks outlined in the PWS at all residential properties identified by EPA to require remediation, provided access has been granted by the landowner. Therefore, the estimated total universe of properties covered by this contract is expected to be approximately 800 to 1,100 properties, although this number is not guaranteed.

Generally, the homes to be addressed are single family dwellings constructed during the 1900s and mobile homes. The Contractor shall proceed with remedial activities at residential properties identified by EPA regardless of the condition of the property. Examples of previously remediated properties will be provided at the scheduled pre-bid conference.

2.0 PERFORMANCE CRITERIA AND REQUIREMENTS

2.1 Performance Objective Statement

The objective of this contract is to alleviate the human health risk associated with lead exposure by removing lead-contaminated soil from residential properties. This requires excavating lead-contaminated soil and gravel from designated properties until an average residual concentration of 400 ppm is reached in the initial foot of excavation from the surface, or until a residual concentration of 1,200 ppm is reached at depths greater than one foot to a maximum depth of two feet, and restoring the affected properties to pre-remedial conditions. Satisfactory completion of the above stated tasks will result in achieving individual property close-outs with the respective landowners and EPA.

2.2 Performance Standards

For the purpose of this contract, remediation of properties involves three distinct phases: 1) pre-remedial actions; 2) remedial actions; and, 3) post-remedial actions. Each of these phases has distinct requirements that are described in the following subsections.

This contract provides financial incentives which address work quality, property owner satisfaction and use of local subcontractors/laborers/goods and services. Details relating to the incentives are described in the Quality Assurance Surveillance Plan (QASP) provided with this solicitation in Enclosure E.

There may be multiple milestones and/or deliverables for each performance objective (see the Section 4). Final decisions regarding the adequacy of milestone and deliverable completion reside with the Contracting Officer's Representative (COR). EPA has the authority to request and review any and all documentation and working papers at any point during contract performance.

2.3 Pre-Remedial Actions Requirements

Prior to beginning any remedial actions the Contractor shall perform the following pre-remedial actions.

Task 1 - Plans

Prior to beginning any remedial actions the Contractor shall complete and obtain EPA approval of the following plans (Section 4): a Project Management Plan (PMP) and a Quality Assurance Project Plan (QAPP). Please note that a Health and Safety Plan (HASP) is required by OSHA regulations. A copy of that plan is to be provided to EPA prior to initiation of work for acceptance (Section 4).

Task 2 - Local Office

The Contractor shall provide work and storage space for the term of the contract. The Contractor shall ensure that the work space has a reception area for interaction with the public, at least three local telephone lines (one of which is a data/fax line), high-speed internet access, and sufficient parking. The Contractor shall also ensure that the work space has sufficient space for contract performance, such as planning and meeting with local citizens and EPA personnel, that is separate from the Contractor's work area. The work space shall also have appropriate environmentally-controlled bathroom facilities. The Contractor shall ensure that the storage space is environmentally controlled so that sample preparation, analysis, and storage as well as equipment storage can be conducted year-round. The space must consist of at least approximately 1,700 feet of commercial space. The space shall be in or located near the city limits of Fredericktown so as to be in a central location for easy landowner access. The current work space at 401 South Chamber Road in Fredericktown meets these requirements. It is expected that a similar space would be acquired by the Contractor. EPA prefers that the Contractor establish a local office prior to the beginning of construction. However, this pre-construction requirement can be exempted by the on-site COR in order to start the construction. However, even in the event of such an exemption, the Contractor shall obtain a local office as soon as possible.

Task 3 - Properties, Site Sketches, and Access Agreements

A list of the properties requiring remediation as of 5/13/09 is included as Enclosure F. As mentioned previously, please note that this list is not set; some properties may already be remediated by the start of this contract and others may be added based on sampling. A CD of field sheets of properties requiring remediation as of 5/13/09 can be provided upon request by contacting Emily Wheeler, the project officer, at wheeler.emily@epa.gov. The site sketches provide graphical depiction of the residential properties and identify the areas in the yards that must be remediated, analytical data, and the foot print of permanent structures. The sketches are not all to scale and may need to be updated if the pre-remedial site walk reveals changes to the property. If a site sketch does not accurately identify the property or the contaminated portions, the Contractor shall notify EPA immediately to have the sketch corrected to reflect what needs to be excavated.

Prior to beginning any remedial activities at each property, the Contractor shall ensure that a current, signed access agreement is on file for this remedial action. For properties in which a signed access agreement is not in place, the Contractor will be required to obtain access. This generally includes mailing out a cover letter (template to be provided by EPA) along with two access agreement/site sketch forms (the template for the access agreement. It may require coordinating with the Madison County Assessors Office and/or calling/visiting property owners. EPA will provide blank stamped envelopes for sending the letters and return stamped envelopes for these letters. The Contractor shall ensure the correct contact information for the property owner is obtained and shall provide any new contact information to EPA. Methods of obtaining access from property owners are not limited to what has been described above; however, alternative methods shall be approved by the EPA.

The Contractor shall document all attempts to contact property owners for the purpose of obtaining access. Should a property owner be non-responsive to three (3) attempts of contact, the Contractor shall notify EPA. Additionally, the Contractor shall maintain a list of property owners that have denied or declined access and inform EPA immediately each time a property has been added to the list. Upon receiving signed access agreements, the Contractor shall provide the original signed access agreement to EPA along with two photocopies, and maintain a copy in the Contractor's property file. A signed access agreement is mandatory prior to initiating a remedial action on a property.

Occasionally, the Contractor may enter into agreements with property owners during the remedial work. For example, these agreements may document areas to be left undisturbed or areas requiring specific restoration actions. The Contractor is responsible for documenting and full compliance with these agreements. If a property owner insists that contamination be left behind in certain areas of a yard, the Contractor shall delineate the areas on a second site sketch and place the site sketch in the on-site records. The Contractor shall give EPA a copy of all such site sketches. Occasionally, the COR may have entered into agreements with property owners that pertain to the cleanup. If such an agreement exists, it will be provided to the Contractor prior to beginning remediation at that particular property. The Contractor shall fully comply with these agreements.

Task 4 - Pre-Remedial Site Walks

The Contractor shall set up the pre-remedial site walks at properties where an access agreement from the property owner has been obtained. This shall involve coordinating the schedules of EPA on-site personnel, property owners and contract personnel and establishing a meeting time at the property to conduct the pre-remedial site walk. The Contractor shall schedule site walks between one to two weeks prior to construction activities at each residential property. The Contractor shall keep a list of scheduled pre-remedial site walks and let EPA know the schedule at least a day in advance.

During the pre-remedial site walk, the Contractor, EPA, and the property owner will discuss the proposed excavation activities and identify any areas of concern. At this time, the Contractor shall discuss any alternate ingress/egress onto the property with the COR and landowner. Should ingress/egress require access to adjacent properties, the Contractor shall obtain approval from the on-site COR and written access from every affected property owner, including city and county municipalities.

During the pre-remedial site walk, the Contractor shall take sufficient dated photographic and/or video evidence of the pre-remedial state of the property the event questions arise during or after the remediation. In the event the pre-remedial photographic and/or video evidence is insufficient to make a determination of fault, should an accusation be made, the Contractor shall be responsible to satisfactorily address the complaint at no cost to EPA. The Contractor shall maintain all photographic and video evidence on-site and make it available to EPA upon request. The Contractor shall ensure that equipment is located on-site to review video/photographic information. The Contractor shall use the site sketch as a guide in determining which areas of the property shall be excavated. EPA will delineate the area requiring remediation and reserves

the right to modify the area of excavation based on any new information from drip zone sampling, site walks, or other sources.

During the site walk (unless another time is approved by the on-site COR) the Contractor shall collect drip zone data from a residential property when requested to do so by EPA. The composite sample should consist of a minimum of four aliquots of surface soil collected between 6 and 30 inches from the exterior walls of the house or other painted building. Each aliquot should generally be collected from the midpoint of each side of the building. Collection of additional aliquots should be considered if other factors exist, such as bare spots, distinct differences in the house exterior, and areas where runoff collects. The Contractor shall collect all aliquots from the top one inch of surface soil. Composite samples should consist of discrete aliquots of equal amounts of soil. The soil from each aliquot should be collected into one clean container, such as a stainless steel bowl or plastic bag, and thoroughly mixed. After mixing, the Contractor shall sieve the composite sample using a No. 10 sieve (2mm) and analyze the composite sample by a portable X-Ray Fluorescence (XRF) device for lead. The Contractor shall analyze the composite sample three times with the XRF for lead. If the three XRF results for lead are within 10% of each other, the Contractor shall average the three results and enter the average lead concentration for the drip zone into the EPA-provided database. If the three XRF results for lead are not within 10% of each other, the Contractor shall thoroughly mix the composite sample again and analyze it with the XRF for lead three times again. If the XRF does not yield three lead results within 10% of each other after thoroughly mixing and analyzing three times, the Contractor shall consult with EPA, who shall make a final determination of what is to be done. The Contractor shall then enter the appropriate data into the EPA-provided database. The Contractor shall place the drip zone composite sample in a clear, non-colored plastic Ziploc-type bag, label it per EPA's naming scheme (ESCPXA-Property ID #), and provide the sample to EPA within two days of collecting the sample. EPA will conduct QA/QC on some of these samples. The Contractor shall also provide the data to the on-site COR at least 2 days in advance of the start of excavation at that residential property. EPA will make a determination if the Contractor shall or shall not excavate the drip zone. EPA will QA a certain percentage of these samples. A separate line item has been included in the bid schedule for sampling drip zones.

The Contractor shall take dated photographic/video documentation of all private, city and county roads planned for use by trucks and other heavy equipment by the Contractor prior to their use in a given area. If after the remediation, accusations of damage are made by a property owner, the city, county or state and no information exists, or quality of information is unacceptable (i.e. truck was traveling too fast to truly view the state of the roads) to make a determination of fault, the Contractor shall make repairs to the roads at no cost to EPA.

Generally, the property owner is responsible for removing personal items from the area to be remediated. In cases **where personal items remain on the property that would interfere with the remedial action**, the Contractor shall temporarily **relocate the** personal items (e.g., stacked wood, swing sets, lawn items, items the landowner is unable to move, etc.) in order to complete the **work unless otherwise allowed by the COR**. As needed for remediation and approved by the landowner, the Contractor shall clear and dispose of, or relocate, limited amounts of bushes, shrubs, and small trees within the excavation area. Permanent structures (houses, additions, patios, porches, decks, sidewalks, or concrete or asphalt structures) shall not be removed. Due to

site conditions, sidewalks and driveways may need to be removed; however, approval from the on-site COR is required on a case-by-case basis. Removal of large trees or large tree stumps or concrete pads is generally not necessary. There may be lead-contaminated material under porches, decks, patios, and inside out-buildings that the Contractor shall have to excavate.

Task 5 – Identify Utilities and Septic Systems

The Contractor shall be responsible for contacting utility companies and having all utilities field located prior to beginning excavation activities. In the event that the Contractor causes damage to utilities, including unexpected utilities, the Contractor shall repair or replace such utilities to the utility company's (where applicable) and COR's satisfaction at the Contractor's cost. In some cases, as determined by the COR, the utility line may not need to be replaced, merely capped.

The Contractor shall make a best effort to interview and locate utilities that are not located by the "one call" or other utility locating service, including thoroughly interviewing homeowners and a thorough site inspection. This specifically includes, but is not limited to, gas lines, electric lines and septic systems that are part of the property and installed by the property owner. The COR shall be contacted by the Contractor where standard excavation will cause harm such as around septic tanks or near utilities (such as fiber optic lines, gas mains etc). In such cases, limited or no excavation may be authorized by the COR. Areas not excavated due to utilities and where contamination is left behind shall be documented by the Contractor on the post-excavation site sketch and kept in the site file. The Contractor shall replace or repair, according local, county, and state regulations, any septic systems damaged during these activities at the Contractor's cost.

2.4 Remedial Action Requirements

Task 6 – Recordkeeping

Beginning on the first day of site mobilization, the Contractor shall make a daily written record of the work progress for each day work is performed at the Site. EPA has the authority to request and review any and all documentation and working papers at any point during contract performance. Generally, the Contractor shall meet with EPA each work day to review the work completed and the work projected for the following day. The Contractor shall keep a record of each property that is remediated which includes, at a minimum, the post-excavation site sketch, volume and type of material backfilled at the property, final excavation area(s) measurements, the dates work was performed at the property (excavation start and completion, backfill start and completion, hydroseeding date), confirmation sampling results, the volume of soil removed from the property, and the number of truck loads of soil removed from the property. The Contractor shall input this data into and maintain an EPA-provided database. The Contractor shall have a copy of Microsoft Access and a computer with Internet access at the local field office for this task.

The Contractor shall be responsible for preparing, obtaining, and maintaining all required permits and licenses for all work involved in this project or fulfilling the substantive requirements of normally-required permits and licenses prior to starting remedial activities. With respect to permits, licenses, or any fulfillment of their substantive requirements, the

Contractor shall notify the appropriate state and local agencies as to the nature and timing of activities that will occur.

The Contractor shall be responsible for obtaining data, maintaining records, and preparing all reports and submissions required to satisfy the PWS and other regulatory requirements. The Contractor shall comply with all substantive requirements of applicable or relevant and appropriate federal and state and local laws and regulations to meet the performance standards of this PWS.

The Contractor shall maintain all site documents in electronic format and shall maintain a copy of all site-related documents in their site office. For example, the Contractor shall maintain the following files including, but not limited to, the post-excavation field sheets they draw up, signed access agreements, any pre-existing conditions documents, closeout forms, property owner satisfaction surveys, etc. Upon request by EPA, the Contractor shall provide to EPA hard copies and/or electronic copies of any site documents.

The Contractor shall provide copies of the pre- and post-excavation photographs taken for each excavated property that year at the end of each contract year. Photographic copies shall be provided on a CD in pdf format or another electronic format approved by the COR. The Contractor shall also provide copies of photos/video taken of private, city, and county roads at the end of each contract year in electronic format approved by the COR.

Task 7 – Excavation of Properties

The objective of the excavation work is to remove lead-contaminated surficial soil above 400 ppm in areas delineated by the COR and consistent with the Interim ROD. For this action, remediation will be performed only to address lead contaminated soil. The area of a residential property to be excavated shall not exceed one acre unless authorized by a COR. In general, remediation areas shall be located within approximately 100 feet of the house structure. Any soil contaminated with substances other than heavy metals shall not be remediated unless it is mixed with lead contamination. If during excavation, the Contractor identifies an old fuel tank or soil that has been contaminated by any other substance (e.g., fuel oil, solvents, etc.), the Contractor shall notify the COR immediately. Generally, the Contractor shall not conduct excavation actions on a cap or within a dense vegetation barrier, unless authorized by the COR. Additionally, the Contractor generally shall not be required to remediate past boundaries, such as the end of a property, into a pasture, or within a buffer zone or riparian corridor of a creek. Children's play areas such as swing sets and sand boxes shall be the Contractor's first priority at a given property unless otherwise approved by the COR.

The Contractor shall confine his activities to the property locations designated as requiring remediation (including paths to and from the properties), the soil repository (Conrad tailings pile), backfill source areas, and all transportation routes in between defined by the PWS unless otherwise approved in advance by EPA.

In areas designated for soil excavation, the Contractor shall excavate in 6 inch lifts. The Contractor shall notify EPA upon starting an excavation and when the Contractor is getting close

to finishing a 6 inch lift removal. Upon reaching the base of each 6 inch lift, the Contractor shall measure the lead concentration in soil samples at the base of the excavation (as described below) to either verify that the cleanup criteria is met or that further excavation needs to be conducted. When the cleanup criteria has been met as verified by the sampling procedure described below, the Contractor shall cease excavation. If the Contractor's in-situ samples indicate a hot spot with a lead level greater than the cleanup goal but the majority of the base of the excavation meets the cleanup criteria, the Contractor shall inform the on-site COR and the readings and, if directed by the on-site COR, shall excavate another 6 inch lift in that hot spot area while considering the remainder of the excavation ready for the final sampling (described below).

The cleanup goal is 400 ppm for lead for an excavation base that is less than 12 inches bgs. For an excavation base equal to or greater than 12 inches bgs, the cleanup goal is 1,200 ppm for lead.

The Contractor shall be responsible for sampling the base of the excavation after each 6 inch lift. The Contractor shall ensure that soil does not "smear" down between each 6 inch lift such that it affects soil samples at a lower depth. At the base of each 6 inch lift for each area or quadrant requiring remediation, the Contractor shall analyze at least five in-situ soil samples with a portable X-Ray Fluorescence (XRF) device for lead and average the lead results together to initially determine if the cleanup goal has been met. This lead average of in-situ soil samples for each excavation lift shall be documented by the Contractor and provided to EPA. The Contractor can analyze additional in-situ soil samples from the current base of the excavation based on the size of the excavation or other factors. The Contractor shall document any other factors that influence the location or number of in-situ samples and provide this information to EPA. The Contractor shall ensure that no in-situ soil samples have a moisture content greater than 15%. If the moisture content is greater than 15%, the Contractor shall do either one of two things. The Contractor can choose to wait until the in-situ samples contain less than a 10% moisture content. Alternately, the Contractor can choose to collect the five or more randomly-located in-situ soil samples from the top 1 inch of the base of the excavation, homogenize and composite them, and dry the composite sample so the moisture content is less than 15%. In this latter case, the Contractor shall collect a composite sample that consists of discrete aliquots of equal amounts of soil. After drying, the Contractor shall sieve the composite sample using a No. 10 sieve (2mm) and analyze the composite sample with a portable XRF device for lead. If the in-situ soil samples or composite sample described above do not meet the cleanup goals, the Contractor shall excavate another 6 inch lift and repeat the process until the base of the excavation is at 24 inches bgs.

When the Contractor's average lead concentration of the in-situ soil samples (or composite sample described previously) meets the cleanup goal **or** if the base of the excavation is 24 inches bgs (whichever is less), the Contractor shall determine the final excavation base lead concentration in the following manner and report it to EPA on the post-excavation field sheet. The Contractor shall use a 5/8" threaded, nickel-plated, 7/8" x 21" soil probe with a slide hammer to collect at least 5 randomly-spaced soil samples from a depth of the final excavation base level to 6 inches below the final excavation base level. The Contractor may propose to EPA a different sample collection tool but it must be approved by the on-site COR in writing prior to its use on-site. The Contractor can collect additional aliquots from this depth based on the size of the excavation or other factors. The Contractor shall document any other factors that

influence the location or number of aliquots collected and provide this information to EPA. The Contractor shall ensure that none of these soil samples have a moisture content greater than 15%. If the moisture content is greater than 15%, the Contractor shall dry the sample such that it has less than a 15% moisture content prior to analysis. The Contractor shall composite these aliquots, homogenize them, sieve the composite sample using a No. 10 sieve (2mm) and analyze the composite sample with a portable XRF device for lead. The Contractor shall analyze the composite sample three times with the XRF for lead. If the three XRF results for lead are within 10% of each other, the Contractor shall consider the average of the three results the final lead concentration and report the three results and their average to EPA on the post-excavation field sheet **unless** the average lead concentration does not meet the cleanup goal. If the average lead concentration from this composite sample from zero to 6 inches below the final excavation base does not meet the cleanup goal, the Contractor shall excavate another 6-inch lift unless the base of the excavation is at 24 inches bgs. If the three XRF results for lead are not within 10% of each other, the Contractor shall thoroughly mix the composite sample again and analyze it with the XRF for lead three times again. If the XRF does not yield three lead results within 10% of each other after thoroughly mixing and analyzing three sets, the Contractor shall consult with the on-site COR, who shall make a final determination of what is to be done.

Additionally, from the base of each excavation level of each 6 inch lift in a quadrant or area, the Contractor shall composite and sieve with a No. 10 sieve the discreet samples from the in-situ locations. The Contractor shall then place each composite sample in a separate clear, non-colored plastic Ziploc-type bag, label them per EPA's naming scheme (Enclosure G), and give all the samples to the on-site COR within 2 days of their collection. EPA will QA a certain percentage of these samples to ensure that the Contractor's XRF is working and that no overexcavation or underexcavation being done.

If at 24 inches bgs the in-situ soil samples indicate an average lead concentration greater than 1,200 ppm but the 24 to 30-inch bgs composite soil sample indicates an average lead concentration less than 1,200 ppm, the Contractor shall inform the on-site EPA personnel immediately. EPA will then determine if the Contractor will excavate to 30 inches bgs or cease excavation. If the 24 to 30-inch bgs composite soil sample indicates an average lead concentration greater than 1,200 ppm, the Contractor shall cease excavation and place a plastic barrier (approved in advance by the COR) at the base of the excavation. The plastic barrier should be tough, resilient, bright, wide-meshed, and should not affect soil hydrology. Prior to backfilling, the Contractor shall record the outline of the barrier placed at depth on the post-remedial site sketch along with latitude/longitude coordinates (in decimal degrees) taken by GPS accurate to 6 inches. Historically, based on similar cleanup actions at over 800 residential properties where the majority of the properties had surface lead concentrations greater than 1,200 ppm, plastic barriers were placed at approximately 20% of residences. It should be noted that for the majority of the properties covered by this contract, the average lead concentrations at the surface are between 400 ppm and 1,200 ppm, whereas the previous removal contract mostly addressed residences with lead concentrations greater than 1,200 ppm at the surface.

Within two days of meeting the cleanup criteria or placing a barrier at depth at a property, the Contractor shall enter the final excavation base data into the EPA-provided database. Also, the Contractor shall provide this data to the on-site COR on a post-excavation field sheet. The

Contractor shall place the composite sample from the zero to six inch depth below the base of the final excavation lift for an area or quadrant in a separate clear, non-colored plastic Ziploc-type bag, label them per EPA's naming scheme (Enclosure G), and give all the samples to the on-site COR within 1 day of their collection. EPA will QA a certain percentage of these samples.

The Contractor shall submit approximately 10% of the composite soil samples collected over the project to a certified laboratory on a routine basis for analysis to confirm that the XRF is working properly. This composite sample can be a drip zone sample or a sample from the bottom of a 6-inch lift. However, the Contractor shall **not** use as a confirmation sample the composite sample from the final base of the excavation. During the course of the contract, the on-site COR may choose to reduce the percentage of confirmation samples requiring laboratory analysis. Additionally, if submitting a composite sample from the base of an excavation lift, the Contractor shall not submit a soil sample if the average lead result is within 100 ppm of the cleanup goal for the depth (400 ppm at less than 12 inches bgs and 1,200 ppm greater than 12 inches).

Excavations are not required to be of uniform depth across the surface area. "Veins" of mine waste have been encountered historically at this Site and due to high lead levels above 400 ppm, may require excavation by the Contractor. The Contractor shall exercise care so contaminated material is not spread onto clean areas.

The Contractor shall excavate soil without damaging houses, sidewalks, curbs, driveways, utilities, and other items at each property. The Contractor shall exercise caution when excavating adjacent to permanent structures (houses, patios, porches, decks, walkways, and retaining walls). Excavation of soil beneath permanent structures (houses, additions, patios, porches, decks, sidewalks, concrete/asphalt driveways) 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 soil underneath the deck can be accessed, the soil shall be excavated. Damage to sidewalks, structures, possessions, landscaping, etc. and subsequent repairs shall be resolved on a case-by-case basis with property owners by the Contractor. The Contractor shall make realistic efforts to resolve property owner concerns about property damage to the property owner's satisfaction. Such activity will not create any financial liability to EPA under this contract. Excavation video and/or photograph documentation may help the Contractor address any damage claims that may be filed by a property owner.

The Contractor shall ensure safe access for all residents to and from their houses throughout the remediation process and shall take all necessary precautions to reduce the production and spread of soil and dust. As necessary, the Contractor shall use construction fencing or obvious "caution tape" along sidewalks and driveways to ensure safe access for residents and the public during construction. Additionally, as necessary, the Contractor shall install temporary barriers for safety where trucks are loading out or where excavators are working. The Contractor shall perform excavation around trees, bushes and shrubs to be left in-place in a manner that leaves the root bulb intact and avoids damage to tree roots. The Contractor shall conduct all remedial activities that minimizes disturbance to clean areas as well as ensure no cross contamination of clean areas. If the Contractor makes modifications to the property (i.e., fence taken down), does damage (i.e., driveway ruts; truck ruts in clean area; trees, bushes and shrubs to be left in place),

the Contractor shall restore the area to its prior state. The Contractor shall avoid swinging buckets across property lines and over uncontaminated areas. If no other options exist, the Contractor shall obtain access from any affected property owner prior to the work and the uncontaminated area will require some level of protection (i.e. plastic sheeting).

Extreme care should be taken when excavation occurs near utility lines and propane tanks. A negative monetary incentive (see Enclosure E) will be assessed to the Contractor for each incidence of a known or marked buried or overhead lines being severed or struck due to Contractor actions at properties being remediated under this contract. If unexpected utilities are encountered during excavation, the Contractor shall exercise caution when excavating around the utilities.

When the Contractor is not doing work, the Contractor shall be available for the on-site COR to contact to discuss and address pressing issues, such as water flooding a basement at a property due to the Contractor's open excavation. Upon opening a property, the Contractor shall be responsible for the work at that property such that if the property needs attention due to the work, the Contractor shall address the issues.

Garden areas – In general, the Contractor shall excavate soil in vegetable garden areas until an average lead concentration of below 400 ppm is reached or the base of the excavation is 24 inches bgs, whichever is a lesser depth. Similar to the excavation method previously outlined, the Contractor shall excavate in 6 inch lifts and conduct sampling at the base of each excavation. At a depth of 24 inches bgs, if the composite soil sample (collected in the manner previously described) from 24 to 30 inches bgs contains an average lead concentration of 1,200 ppm or greater, the Contractor shall place a plastic barrier, similar to the barrier previously identified, in the base of the garden excavation and cease excavation. Prior to backfilling, the Contractor shall record the outline of the barrier placed at depth on the post excavation site sketch along with latitude/longitude coordinates (in decimal degrees) taken by GPS accurate to 6 inches.

Driveways and garage interiors – The Contractor shall excavate driveways in the same manner as previously identified. On occasion, garages may have contaminated gravel or dirt floors that require hand excavation and placement of gravel. Heavy machinery (such as a mini excavator) may be used in garage interiors if approved by the COR in advance. Gravel specifications for the inside of garages are the same as the driveway specifications (see Task 9). Upon consultation and approval by the COR and landowner, the Contractor shall remove deteriorated asphalt driveways in poor condition damaged by the remedial action for replacement with gravel.

Drip zones – A drip zone is an area around the 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 and can only be identified through actual field inspection. A drip zone would require excavation if a pre-excavation composite soil sample from the drip zone is above 400 ppm lead and if at least one other quadrant at the property has a lead level greater than 400 ppm. Unless defined otherwise by the COR in the field through delineation or safety, structural, or other practical field considerations, the Contractor shall excavate a drip zone (within 30 inches of a structure) requiring remediation. The Contractor shall excavate and sample the drip zone around a structure in a manner similar to that defined previously. The Contractor shall excavate

a drip zone by hand to avoid any damage or perception of possible damage by heavy equipment. It is unknown how many drip zones will require remediation.

The maximum depth of drip zone excavations may be limited so that excavation does not jeopardize the structural integrity of the house or structure. This determination will be made in the field on a case-by-case basis by the COR. If it is determined that additional excavation will jeopardize the structural integrity of a foundation, the Contractor shall not be required to perform additional soil excavation even if subsurface soils averaging more than 1,200 ppm lead remain at a depth greater than one foot. During excavation, angling away from the foundation after excavating several inches bgs is acceptable with COR approval. If the drip zone excavation requires the placement of a plastic barrier, the Contractor shall record the outline of the barrier placed at depth on the post remedial site sketch along with latitude/longitude coordinates (in decimal degrees) taken by GPS accurate to 6 inches prior to backfilling.

Potential for naturally occurring lead – Naturally occurring lead ores could be found at the bedrock interface and in undisturbed clay soil near the surface. Another indicator of the presence of naturally occurring lead ores could be a high density of galena crystals in soil or unconsolidated rock in undisturbed soil. When these conditions are encountered, the Contractor shall contact the COR immediately and cease excavating.

Task 8 – Transportation and Disposal

The Contractor shall use fully covering tarps on trucks so that such that nothing can fly out of the truck during transport. The Contractor shall fill trucks to their capacity with contaminated material prior to shipping to the site repository. The Contractor shall maintain a detailed inventory of the number of truck loads and volume of material hauled to the repository from each residential property. On occasion when directed by EPA, the Contractor shall have up to 10% of the trucks used for this project weighed on certified scales. The cost of these random checks shall be absorbed by the Contractor.

The Contractor shall be responsible for disposing excavated soil at the Conrad tailings pile as shown on Figures 3 and 4 in Enclosure D. EPA has obtained an access agreement to the Conrad tailings pile as a soil repository. Physical access to the Conrad tailings pile shall be maintained by the Contractor. At a minimum, this shall consist of maintaining the gate and fence at the entry point into the pile, which should be locked at the end of each work day.

The Contractor shall stockpile in a separate pile soil has an average lead concentration exceeding 1,500 mg/kg total lead. This soil may exceed the TCLP limit for lead, 5 milligrams per liter, although the Contractor shall verify this by sampling, and require treatment with an appropriate lead stabilization chemical. The lead stabilization chemical should be approved by the COR prior to its use. The Contractor is responsible for all segregation of soil with lead levels exceeding 1,500 mg/kg as well as TCLP sampling and treatment of this soil. After treatment, resampling and subsequent re-treatment shall occur until the sample meets the TCLP limit for lead. When the soil is below the TCLP limit for lead, the Contractor shall grade and/or blend this soil with soil at the Conrad tailings pile. The Contractor shall treat contaminated soil at the Conrad tailings pile and not at any residential properties. During the removal activities,

approximately 25% of excavated lead-contaminated residential soil required treatment with a lead stabilization chemical for failing the TCLP limit for lead. During the five months of active construction under the current RA contract, none of the excavated lead-contaminated residential soil required treatment for failing the TCLP limit for lead. Given that the large majority of properties remediated as a removal action had at least one quadrant with a lead level greater than 1,200 ppm and the overwhelming majority of known properties requiring remediation under this contract have lead levels between 400 and 1,200 ppm, EPA expects that less than 5% of lead-contaminated residential soil will require TCLP treatment. **All samples sent to a laboratory, including but not limited to QA, QC, and TCLP samples, must be sent to a third-party laboratory certified for the type of analysis required.**

The Contractor shall place contaminated soil on the Conrad tailings pile in a manner that is consistent with the overall final design of the repository. Additionally, the Contractor shall ensure that no contaminated soil or tailings shall erode or be tracked off the Conrad tailings pile during the contract period. It is suggested that the Contractor stockpile contaminated soil in more stable areas while addressing more unstable tailings areas in order to avoid erosion of contaminated material. The Contractor may conduct minimal clearing and grubbing activities on the Conrad tailings pile and along its edges as necessary. The Contractor shall maintain and protect the to-be-constructed sediment ponds and water diversion piping so these devices continue to function to the best of their ability.

The Contractor shall not dispose of any other solid waste at the repository such as spent plastic sheeting, plywood, water bottles, personal protective equipment, etc. The Contractor shall not allow any of his subcontractors or vendors dispose of solid waste at the repository.

The Contractor shall commit trucks to either the contaminated part of the operation (i.e., transport and disposal of contaminated soil) or the replacement part of the operation (i.e., hauling replacement fill and topsoil to residential properties) and ensure no cross contamination issues arise. In select cases and only when the on-site COR approves, the Contractor may switch a truck from hauling “dirty” material to hauling “clean” material. The Contractor shall decontaminate the trucks by a wet wash at the Conrad tailings pile to the on-site COR’s satisfaction and ensure that no contamination leaves the pile. The Contractor shall wet wash and decontaminate all other equipment when switching from contaminated soil or tailings work to “clean” or replacement soil work. Equipment being transferred between contaminated sites can be decontaminated by dry wash (brushing, scrubbing) prior to being removed from the site by the Contractor. The Contractor is responsible for managing any waste generated by decontamination in a safe manner consistent with local, state, and federal regulations as well as the Contractor’s HASP.

The Contractor shall maintain the private access way from the Conrads’ gate to the Conrad tailings pile during construction. This may mean periodic upgrading, removing washed out tailings across the access way, or installing a washed out culvert. Additionally, the trucks shall use the gated entrance and shall not use the triangle go-around that goes up to the landowner’s residence. Additionally, the Contractor shall be responsible for maintaining Madison County Road 200 in a driveable condition, similar to the road’s state prior to commencement of this contract. This maintenance may include re-grading and additional gravel to ensure safe road

conditions.

The Contractor shall use highways and avoid county roads when possible. The Contractor shall be responsible for repairing roads damaged by the Contractor during the contract. In order to minimize road repairs, the Contractor shall coordinate with Madison County (Gregg Pruett, Madison County Road and Bridge 573-783-2984) the week before beginning an excavation that will require the use of a county, city, or private road.

The Contractor shall not exacerbate contamination at residential properties, on private or public roadways, or at the repository. For example, when wet and muddy site conditions exist, the Contractor shall take measures to prevent mud from being tracked off the residential properties and onto roads. Typically, work stoppage is the measure that has been implemented in the past to address these conditions. The COR has the authority to stop truck traffic at the repository due to mud tracking on to any roads. The Contractor shall eliminate any mud, soil, or mine waste tracking onto roads prior to resuming work.

The Contractor shall immediately address and clean up spillage associated with the using the trucks. Water or other rinsing agents shall not be used to aid in the removal of spilled material. Areas where spilled materials are removed will be swept clean prior to departing the area. The Contractor shall ensure that roadways, alleys, and other public access areas are not “tracked” with soil or mine waste from the excavation or repository areas. The Contractor shall cover all trucks hauling soil during all transport times on public and private roadways. The Contractor shall manage excavations such that trucks can load on undisturbed ground. Trucks hauling clean backfill shall operate in clean areas only and shall not back into lead-contaminated material; otherwise, thorough decontamination will be required.

Special Note: This contract is a fixed unit price contract that will be based on a price per short ton of lead-contaminated soil removed from contaminated properties. Lead-contaminated soil mass for final monthly payment will be measured by contractor-provided scales. The Contractor shall set up the scales at the Conrad tailings pile (soil repository). The exact location of the scales shall be approved by the on-site COR in writing. The scales should be installed and maintained per state regulations (such as Missouri Code of State Regulations, Title 2, Division 90). The scales should be National Type Evaluation Program (NTEP) approved and legal for trade. The Contractor shall install the scales; the requirements are in Title 2, Division 90, Chapter 21. The scales shall be electronic scales with a ticket printer and electronic indicator (data logger) able to electronically log transactions. The electronic logs and tickets should be generated by the scales independently and not from the Contractor manually entering the weights. Every ticket must have a time and date stamp on it from the printer. The time and date stamp cannot be handwritten. The scales shall be able to weigh all axles on a vehicle that crosses it simultaneously. The Contractor shall be installed by a third-party scale company registered with the State of Missouri. This registration and specifications on the scales shall be provided to the on-site COR at least a week in advance of the scales installation. The Contractor shall be responsible for having the scales certified once per year and providing that written documentation to the on-site COR within one week of the certification inspection. If the scales appear to be out of calibration, the Contractor shall

have the scales calibrated. The Contractor shall man the scales and provide all power necessary to run the scales. At the conclusion of the project, the Contractor shall remove the scales and return the area to its previous state, unless otherwise approved by the on-site COR in writing (i.e., on top of tailings).

For measurement and payment purposes, the Contractor shall weigh each truck before going into the repository and have a corresponding ticket printed out. The Contractor shall then unload the lead-contaminated soil at the repository, ensuring that no material sticks to the truck bed. The Contractor shall then weigh each empty truck leaving the repository and have a corresponding ticket printed out. No back credit will be given for material sticking to the truck bed. The Contractor will sign off on tickets or other approved scale records and submit them to the on-site COR on a weekly basis. These signed tickets will also be submitted to EPA with each invoice. The Contractor shall submit to EPA for payment only tickets from work-related trucks. The Contractor shall ensure that only site remediation-generated material, such as lead-contaminated soil, broken asphalt from driveways requiring remediation, or chat, are weighed in the trucks. No other material is to be weighed for payment unless otherwise allowed by the COR in writing.

The Contractor shall also attempt to keep an accurate count of the volume of material (in cubic yards) excavated from each property in two other manners. First, the Contractor shall estimate the excavated volume by using the depth and area of the excavated areas at a property. Second the Contractor shall estimate the excavated volume by tracking the amount of backfill material used in the excavated areas at a property. These, along with the estimated excavated soil from full truck loads, shall be reported by the Contractor in the weekly reports.

The Contractor's personnel, including all truck drivers, must drive responsibly and, at a minimum, below the posted speed limit. The truck drivers shall drive such that the trucks do not lose material.

The Contractor shall take measures to prevent any material from being tracked off the residential properties and onto roads.

Task 9 – Backfill Quality and Grading

The Contractor shall be responsible for locating, gaining access, and sampling suitable backfill sources. EPA shall have access to all potential and accepted backfill sources. The Contractor 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 COR prior to their use. All excavations shall be backfilled with non-contaminated soil, topsoil, and gravel with at least the following characteristics:

1. Contains less than 240 mg/kg average lead;
2. Contains less than 22 mg/kg average arsenic;
3. Contains less than 25 mg/kg average cadmium;

4. Contains less than 1,800 mg/kg average manganese
5. Contains no contaminants at concentrations that pose a risk to human health and the environment. This means that any other substances not listed in numbers 1, 2, 3, and 4 (above) must be below residential soil supporting levels referred to by the Regional Screening Levels for Chemical Contaminants at Superfund Sites. The levels can be found at the following web address: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm; and,
6. Topsoil shall be of sufficient quality to produce heavy growths of grass and sustain vegetable gardens as verified by appropriate nutrient testing. The nutrient testing should include, at a minimum, pH, phosphorous, potassium, calcium, magnesium, organic matter, and cation exchange capacity. Depending on the backfill source chosen by the Contractor and results of the nutrient testing, the Contractor shall fertilize the topsoil upon placing it at a residential property according to, at a minimum, the suggestions made on the University of Missouri Extension Office's website for lawns (<http://extension.missouri.edu/publications/DisplayPub.aspx?P=G6954>). At least two randomly-located soil samples per acre should be collected from 2 to 8 inches bgs for a potential backfill source for nutrient testing. Unless changes are approved in advance by the on-site COR, the Contractor shall follow the suggestions for topsoil source sampling procedures made on the University of Missouri Extension Office's website for pastures (<http://extension.missouri.edu/publications/DisplayPub.aspx?P=G9215>). These sample results will apply to the top 12 inches bgs of soil. If the Contractor would like to use deeper soil after using the top 12 inches as topsoil, the Contractor shall repeat the nutrient testing with the same methodology as described above. If the deeper soil appears to be subsoil instead of topsoil, the Contractor shall not use the subsoil as topsoil.
7. Contains insignificant amounts of debris (tree roots, rocks, etc.).

EPA will not accept backfill or topsoil that does not meet these characteristics. EPA will not accept work done using backfill or topsoil that does not meet these requirements. The Contractor shall not use subsoil (even with compost or other amendments added) as topsoil.

The Contractor may occasionally need to discuss backfill quality issues with concerned property owners, and therefore should be fully prepared to verify/document the quality of backfill used on short notice. The COR may request soil testing results/data (contaminant and nutrient) from the Contractor at regular intervals to assess the quality of backfill being used. The Contractor shall notify the COR in writing prior to selecting a backfill source and they shall notify the COR each time a new backfill source is being considered for use so as to allow for the COR to inspect the backfill site. A minimum of three inches of topsoil shall be used for the upper-most soil backfill. The Contractor shall restore garden areas by placing topsoil and amendments as necessary to restore gardens to approximate pre-excavation quality, including a minimum of three inches of topsoil. The COR has the authority to stop backfilling operations at any point if the COR determines that the backfill is not of sufficient quality. The Contractor will not be allowed consideration for work stoppage due to their use of low quality backfill.

The Contractor shall ensure all equipment used to haul clean material is free of contaminated material. EPA will have access at any time to inspect or sample any truck being used for hauling

clean backfill (soil or gravel) for lead contamination while the truck is performing the transport of clean backfill under this contract. Any truck being used to haul clean backfill for the Site under this contract found to have lead-bearing material in the truck bed or on the outside of the truck will be assessed a monetary negative incentive (see QASP). The Contractor shall promptly inform EPA of any equipment utilized off-site (i.e. for work not associated with the Madison Mine Site project). In addition, the Contractor shall be responsible for the removal and replacement of contaminated backfill from properties excavated under this contract at no cost to EPA.

The Contractor shall ensure adequate compaction of soil for residential use without unacceptable future settlement. The Contractor shall not place backfill in excavations containing snow, ice, or standing water. The Contractor shall accomplish placement of backfill in a manner that will provide positive drainage away from all houses and structures. This can typically be accomplished by raising the drip zone slightly to ensure that runoff flows away from the foundation of the structure. However, the Contractor shall not be responsible for correcting significant pre-existing drainage problems through extensive grading and backfilling. Prior to revegetating or placing gravel, the surface of the backfill shall be rolled smooth to ensure a quality final landscaping product. The Contractor shall bring the final grade to that of the existing terrain and general pre-remedial conditions.

Replacement gravel for driveways, garage floors, walkways, parking areas and other previously graveled areas shall consist of two types of limestone. For the subgrade, the Contractor shall use 1.5-inch minus limestone gravel derived from non lead-bearing geological units. The Contractor shall then place a 1.5-inch top layer of 1.5-inch clean limestone gravel derived from a non lead-bearing geological unit on all areas that receive gravel. The Contractor shall compact the gravel such that it does not rut/deform when an automobile drives on it in the future. If at any time during this contract, a gravel driveway ruts at a property remediated by the Contractor, the Contractor shall be responsible for addressing the problem such that the driveway is not and does not rut or deform. The final grade of gravel shall be brought to that of the existing terrain or previously existing grade unless otherwise approved by the COR. The Contractor shall periodically demonstrate that the gravel source and gravel contain less than 240 ppm lead. Any samples taken shall be in compliance with the approved QAPP. The Contractor will be responsible for remediation of any backfill material not meeting the minimum backfill source requirements listed above.

With the exception of asphalt, the overall guiding principle for backfilling is like for like. Therefore, in some instances, the Contractor shall replace or restore mulch, decorative rock, etc. at residential properties unless otherwise approved by the COR in writing.

The Contractor shall be responsible for maintaining yards that have been backfilled and are awaiting seeding, including but not limited to implementing erosion control measures, keeping paved sidewalks free of mud and gravel, erosion repair and cleanup, and weed control. Temporary walkways to allow access from driveways to home entryways shall be provided while yards are excavated and awaiting backfill and/or lawn establishment. Sidewalks will be kept free of dirt and debris during the excavation and until/while lawns are being re-established. The Contractor shall employ and maintain erosion control measures to prevent soil migration

during rain or other weather events until a property is fully restored, e.g. lawn established, as verified by a close-out inspection by EPA. The Contractor shall promptly repair and, if necessary, upgrade any breached or non-working erosion control measures shall. The Contractor shall remove all erosion control materials such as silt fence and straw bails after lawns have been established, as approved by the COR.

The Contractor shall backfill a property as soon as practical in order to minimize adverse impacts to property owners and the general community. As indicated in the QASP, if the Contractor does not completely backfill a property within two weeks of the start of excavation, excepting for weather and approved by the COR, the Contractor will be assessed a negative incentive

Task 10 – Dust Suppression

As applicable, the Contractor shall employ dust suppression during soil excavation, soil staging operations at residential properties and the soil repository, along Madison County Road 200 leading to the repository, backfilling, and grading activities to address EPA and landowner complaints as well as meet any state, county, or local dust regulations. The Contractor shall also work in such a manner to ensure that dust is not a nuisance or problem when work is not being performed. The Contractor shall describe in the PMP and HASP situations when dust suppression activities will be employed. The Contractor may apply alternative dust suppression activities, such as sealing Madison County Road 200, upon approval by the county (if needed) and the COR. The Contractor shall not allow visible dust emissions from contaminated residential work areas.

Task 11 – Landscaping

The Contractor shall ensure quality landscaping for each remediated property and shall provide materials, equipment and labor necessary such that restoration activities result in final ground surfaces that are smooth with no ponding, allow for adequate drainage, and lawns are adequately re-established. Hydroseeding shall be performed by the Contractor in remediated and disturbed areas. Hydroseeding shall consist of following current business standards and practices. All materials and seed utilized shall be from a certified source. The Contractor shall apply seeding based on the following minimum standards per acre: tall fescue - 40 lbs.; bluegrass mix - 80 lbs.; and annual rye - 120 lbs **unless otherwise allowed in advance by the COR**. Fertilizer shall be applied based on the following minimum standards per acre; Triple 13 - 100 lbs and Triple 19 - 100 lbs. The Contractor shall provide lawn care guidance to each landowner. Some suggestions are located at <http://extension.missouri.edu/explorepdf/agguides/hort/g06720.pdf>, <http://extension.missouri.edu/explorepdf/agguides/hort/g06705.pdf>, and <http://extension.missouri.edu/explorepdf/agguides/hort/g06700.pdf>. The Contractor shall seed only during the seeding windows, which run from August 25 to October 15 and March 15 to May 30. The Contractor shall employ erosion controls at residential properties to maintain the replacement soil and seeding. The Contractor shall replace any backfill soil lost due to erosion prior to or during the reseeding period.

Alternate ground cover and seed mixes may be used in order to stabilize steep slopes where grass hydroseeding is problematic in establishing vegetation ground cover. Alternate ground cover

and seed mixes will not be permitted unless approved in writing by the COR and the property owner. If used alternate ground cover is used, the Contractor shall apply mulch per industry standards.

The Contractor shall be responsible for maintaining re-established lawns for a period of 120 days after hydroseeding at each respective property. At a minimum, the Contractor shall inspect yards that have been hydroseeded to observe and document how the hydroseeded areas are being maintained by the Contractor and/or the landowner. The COR will determine when a lawn has been adequately reestablished based on a satisfactory cover of living grass and in which gaps larger than 9 square inches do not occur. The Contractor shall reseed yards where the COR determines that reseeding is needed and it is not the homeowners' fault that grass did not grow. When reseeding, the Contractor shall reseed during the soonest seeding time window (August 25 to October 15 or March 15 to May 30). **The COR may allow reseeding of properties outside the seeding window.** For each property requiring hydroseeding as part of restoration activities, \$800 of the Contractor payment will be held back for 120 days after hydroseeding and it is determined that the Contractor is not at fault for grass not growing, or until the lawn is established (as determined by the COR) at the respective property.

When a seeding window occurs, the Contractor shall restore all properties previously excavated and backfilled properties within the first four weeks of the seeding window. As indicated in the QASP, if the Contractor does not restore a previously excavated and backfilled property within three weeks of the start of a seeding window, excepting for weather and approved by the COR, the Contractor will be assessed a negative incentive.

Where zoysia grass has been removed for remedial activities, the Contractor shall replace the zoysia grass and be responsible for maintaining it for 6 months. EPA expects that less than 5% of properties requiring remediation have zoysia grass. Unlike hydroseeding, the Contractor shall establish a zoysia lawn in late spring to early summer but no later than July 1 **unless otherwise allowed in advance by the COR.** A reference on planting and maintaining zoysia grass is included on the University of Missouri's Extension Office website at <http://extension.missouri.edu/publications/DisplayPub.aspx?P=G6706>.

The Contractor shall be responsible for maintaining seeded properties for 120 days. **This 120-day maintenance period does not include** November 15 through March 15 when no maintenance is expected to be needed. This means the Contractor may **want** to utilize equipment, such as hoses and sprinklers, to water seeded properties, especially during the critical summer and fall months. The Contractor may want to provide a lawn watering guide to landowners. In some cases, the grass may not grow due to factors outside of the Contractor's control, such as a landowner installing a garden in a newly reseeded area. However, if grass does not grow adequately, the Contractor shall demonstrate to EPA the various actions the Contractor took, such as using hoses and sprinklers periodically to provide water, so EPA can determine if grass not growing in an area was beyond the Contractor's control. Otherwise, maintenance and potential reseeding shall be the responsibility of the Contractor. Under this contract, the Contractor is not **required** to provide water at seeded properties. While the Contractor is not required to water seeded properties, the Contractor ~~is~~ may find it helpful to do so for community relations and for the 120-day maintenance period.

The Contractor shall restore such areas with seeding/fertilizing, decorative gravel, mulch, etc. to a state similar to that which existed prior to the remedial action unless the landowner requests otherwise and the request is approved by the COR. Unless otherwise indicated by the landowner and approved by the on-site COR in writing, the Contractor shall restore residential properties to pre-excavation conditions including landscaping. If any pre-excavation agreement has been made, the Contractor shall restore such areas according to the pre-excavation agreement.

The Contractor shall also be responsible for helping EPA maintain and potentially repair, reseed, re-roll gravel at, etc. residential properties remediated by previous contractors. The COR will indicate to the Contractor what needs to be addressed on a property-by-property basis in these instances. This cost is addressed as a separate line item in the pricing schedule.

The on-site COR may approve select hydroseeding or other landscaping outside the seeding windows on a case-by-case basis.

When replacing landscaping under the Not-To-Exceed line item in the pricing schedule (CLIN 0003 and 1003), the Contractor shall show the on-site COR that the replacements are cost effective replacements (typically by 3 bids on the replacements). The on-site COR will then make a determination of whether or not to approve the replacements prior to their purchase and installation.

Task 12 – Replacement of Removed or Damaged Items

The Contractor shall not be required to replace items removed at the discretion of the property owner. Upon completion of the excavation, backfilling, and restoration, the Contractor shall be responsible for returning the property to pre-excavation conditions (e.g., re-install fences, gates, sprinkler systems, swing sets, etc.) except for items removed by the property owner. If the items are not salvageable after removal (e.g., broken fence posts, fences, or wooden borders) the Contractor shall purchase comparable items acceptable to the property owner and reinstall these items. After completing restoration efforts, the Contractor shall notify the COR within one day. The Contractor shall repair all Contractor-caused property damage and seed appropriate remediated areas before remedial activities are considered complete and close-out can be performed.

2.5 Post-Remedial Activities

Task 13 – Final Property Closeout Inspection

Within 10 working days of completing remedial activities, the Contractor shall schedule and perform a final property closeout inspection with the property owner and COR to discuss completed tasks and, in general, assess all restoration actions. Following the post-excavation walk-through or discussion, the Contractor 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 no damage is evident. On occasion, the Contractor may need to show the property owner the dated pre-excavation video and/or photographs to resolve

restoration or property damage issues. During the final inspection, the following activities at a minimum shall take place:

1. The Contractor shall take sufficient dated photographic and/or video evidence of the post-remedial property for a thorough comparison with the pre-remedial photographic/video evidence.
2. The COR will inspect the completed remedial effort;
3. The Contractor shall obtain the landowner's signature on the Final Property Closeout Form (included in Enclosure H) where the landowner acknowledges that all restoration work was completed appropriately and satisfactorily and no damage is evident.
4. If the performance standards for project completion are met, the COR will approve the Contractor's property closeout request and sign the Final Property Closeout Form;

OR

If additional work is required by the COR under the contract, the property closeout request will not be approved until the Contractor has completed the work satisfactorily, at which point the COR, after conducting another inspection, will approve the property closeout request and sign the Final Property Closeout Form. The Contractor shall attach the pre- and post-excavation field sheets to the signed Final Property Closeout Form, make a copy of the signed form, and give that, along with the signed original, to EPA. The Contractor shall keep a copy of signed Final Property Closeout Forms on-site during the contract period.

At approximately this time, the Contractor shall also take dated videos of the post-remedial state of the private, city, and county roads used by the Contractor during remediation activities at the property at approximately this time. If there are several properties within an area where the Contractor performs remediation more or less concurrently, the Contractor may wait to video the roads until the final property in the area or before the next winter, whichever occurs first. If after the remediation, the post-remedial photographic and/or video evidence of the roads is insufficient (aka, truck was traveling too fast to truly view the state of the roads) to make a determination of fault should accusations be made by a property owner, city or county municipalities, the Contractor shall repair the roads.

Task 14 – Property Owner Satisfaction Survey

Because property owner satisfaction is a key objective, EPA will request that property owners complete a short Property Owner Satisfaction Survey. This survey captures the level of property-owner satisfaction achieved after all remedial actions are completed. The survey shall be provided to property owners by the Contractor along with a stamped envelope (to be provided by EPA) addressed to the EPA Regional Office. The results of the surveys will be compiled at the end of each contract year and will be used to determine eligibility for incentive payment. The survey is attached as Enclosure I.

The Contractor shall be allowed to view the completed and returned surveys at any point during the duration of the contract. Property Owner Satisfaction Survey forms for at least 65% of all properties closed-out must be received by EPA in order for the Contractor to be eligible for the

financial incentive. EPA may contact property owners that fail to submit satisfaction surveys for an explanation of why the survey was not submitted.

2.6 Community Involvement and Communication

The Contractor shall have primary responsibility for addressing problems and complaints submitted by property owners and the general community within the scope of this PWS. The PMP shall identify the Contractor's points of contact and responsibilities and describe how landowner complaints or issues shall be handled. The Contractor shall direct all other inquiries/concerns from state and local regulatory agencies to the COR. The Contractor shall coordinate all field activities with city, county, and state officials prior to performing work.

The Contractor shall inform the COR, to the extent possible, in advance of any media contact and in all cases, shall inform the COR immediately following any media contact.

3.0 TASK MANAGEMENT

3.1 Project Management

The Contractor shall take into account the following when developing their PMP, schedule, and methods for conducting remediation activities:

- No fieldwork of any kind shall be performed at any property before 8:00 AM or after 6:00 PM Monday through Friday, or before 9:00 AM or after 6:00 PM Saturday, in order to minimize disturbances to property owners and neighbors, unless allowed in advance by the COR.
- The Contractor shall obtain approval from the CO and COR before fieldwork of any kind at any property can be conducted on Sundays or national holidays.
- The Contractor shall plan and implement all activities in a manner that minimizes adverse impacts to property owners and the general community.
- The Contractor shall honor local customs and practices, and schedule work around them, such as the County Fair, Pick'in on the Square, the Azalea Festival, and JP's Cubarama Tractor Show. Regarding the various local festivals, the Azalea Festival typically happens in May. The JP Cub-Arama typically occurs in September. The Madison County Fair typically happens in October. There is a parade associated with each of these and lots of activity down at the JC ball park area. Pick'in on the Square typically occurs every Friday through October. These are not intended to be complete work stoppages but the Contractor shall conduct the work to adjust and minimize interference with these local events.
- The Contractor shall promote good behavior on the job site in order to promote good public relations. Foul language, obscene gestures, slogans and logos shall not be tolerated.
- Any and all local trucks and truck drivers used for the project shall disclose whether they haul lead ore or concentrate or any other material for the Doe Run Company prior to being approved for work. The Contractor shall inspect those trucks at the beginning of each work day for any signs of lead-bearing material on the inside of the bed, outside of

- The Contractor shall demonstrate that none of its subcontractors, vendors, or employees are potentially responsible parties at this or any other Superfund site or that their use or employment poses a conflict of interest. In limited cases, the on-site COR may, in writing and in advance, allow the Contractor to use a subcontractor, vendor, or employee that are potentially responsible parties. **The Contractor shall also inform the COR of any “moonlighting” activities that the Contractor or the Contractor’s subcontractors are performing at the same time as working on this contract.**
- The Contractor shall inform EPA of who the “point person” is on each crew in case EPA has specific questions about on-going work when EPA is at a specific property.

3.2 Quality Assurance and Control

The Contractor shall ensure that the quality of all work and products performed or produced under this contract meets the QASP, the approved QAPP, and EPA approval. The Contractor shall provide qualified personnel to conduct inspection of materials, equipment, construction activities, workmanship and the completed properties. The Contractor shall ensure that its personnel are familiar with the specific requirements of these activities.

Due to the performance-based nature of this effort, considerable flexibility is afforded to the Contractor to choose and implement a quality control program that will ensure that quality services are always provided. This quality control program shall be detailed in the QAPP.

Inspection of materials, equipment, construction activities, workmanship and the completed properties shall be performed by qualified personnel familiar with the specific requirements of their activities.

The Contractor shall coordinate all field activities with city, county, and state officials as necessary prior to performing work. The COR will independently review Contractor work to ensure compliance with all applicable or relevant and appropriate requirements. A discussion of applicable or relevant and appropriate requirements for this remedial action is presented in the Interim ROD text and ARARs (Enclosure A).

3.3 Protection of Private and Public Property

The Contractor shall be responsible for any damage that may be caused to private and public property. Any private or public property damaged or destroyed by the Contractor shall be promptly repaired or replaced by the Contractor to a condition similar to the pre-excavation condition.

3.4 Handling of Sensitive Information

All personnel working on this contract shall be responsible for preventing the unauthorized disclosure or release of information provided by EPA and any other document or PWS deliverable containing personal or identifying information.

3.5 Health and Safety Program

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with this PWS. The Contractor shall comply, and shall secure compliance by its employees, agents, and lower-tier subcontractors, with all applicable health and safety laws, regulations, and other requirements, including without limitation, federal OSHA and equivalent OSHA state regulations, city and county ordinances and codes, uniform fire codes, and DOT regulations. At a minimum, the Contractor shall comply with 29 CFR 1910.120.

The Contractor shall establish and maintain, as required by existing conditions and progress of the work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, and notifying the landowners, residents and other users of adjacent properties of potential hazards, as necessary. The Contractor shall advise residents to stay away from active remedial areas to the extent possible.

The Contractor shall notify the COR promptly and in writing if an assertion of non-compliance with the HASP has been made against the Contractor in connection with its performance of the work.

The Contractor shall be responsible for coordinating the dissemination and exchange of Material Safety Data Sheets and other hazard communication information required to be made available to or exchanged between or among employees at the Site in accordance with requirements of federal, state, and local ordinances, laws or regulations.

The COR has the right to remove or bar from the Site any employee of the Contractor or subcontractors for failure to comply with Site health and safety requirements.

The COR has the authority to suspend any and all work activities, at Contractor's expense, if the COR determines that unsafe practices are being employed at any time.

If a Contractor fuel storage area is located within the Site, secondary containment around fuel storage area is required, even when fuel tanks do not have the minimum storage capacity necessary to trigger SPCC requirements.

3.6 EPA Furnished Resources

The EPA will provide the following resources to the Contractor:

- Appropriate property records, reports, data, and information in the available existing site files (e.g., quadrant sketches, paper copy, electronic, tape, floppy disk, CD); and
- Access to EPA policy and guidance documents

- Envelopes for access agreements and pre-stamped envelopes for return of access letters and Property Owner Satisfaction Surveys

3.7 Schedule of Property Cleanups

A list of known properties requiring remediation is included in Enclosure F, all of which are included within Madison County. Please note that this list is general and not all-inclusive or all-exclusive. For example, additional properties may be added during the contract, such as properties where a child with an EBL lives or a property that is screened and requires remediation by EPA during the contract period. Also, properties may be taken off the list for various reasons. For example, a property may be removed from the list if the landowner refuses access or has constructed over the existing contamination, or if the current contractor addresses the property prior to the end of his contract (September 25, 2009). However, EPA expects that the large majority of these properties will be available for the Contractor to remediate under this contract.

In general, the Contractor shall determine the schedule and pace of property cleanups. To determine the cleanup schedule, the Contractor should prioritize the cleanups based on the following system: 1) a child with an elevated blood level (EBL), 2) the presence of children, 3) properties with higher lead concentrations and then, 4) properties in a given area for minimal disturbance of an area. On occasion, EPA may identify new properties with children with EBLs or properties considered high child-impact areas that must be remediated quickly and therefore are of higher priority than currently anticipated properties. EPA retains the authority to make the Contractor address these or other high priority cleanups in a timely manner. However, based on previous experience at this Site, there should be few instances where EPA will find it necessary to do this. On rare occasions, a property may be erroneously included on a remediation list when in fact the property did not require remediation or had already been remediated. The Contractor shall not remediate these properties.

3.8 Requirements of Key Personnel

All degrees referenced below must be from an accredited school. The key personnell's resumes submitted with the bids should reflect that these requirements are met.

Project Superintendent: The Project Superintendent shall have the following minimum qualifications and experience:

- M.S. or MBA degree with 6 years or more experience, as described below; or
- B.S. degree with 8 years or more experience, as described below; or
- 15 or more years experience, as described below.

Experience Factors: Managerial and/or technical experience in remediation services involving the release of hazardous materials and other contaminants or pollutants to the environment. This includes, but is not limited to, knowledge of excavation, transportation and disposal activities or other disciplines directly related to the requirements of this PWS; management of technical and administrative support services; general contract execution skills involving scheduling, resource allocation, performance monitoring, contract administration, budgetary and cost accounting, and

issue resolution. The Project Superintendent must have 40-hour OSHA HAZWOPER training and be up to date on HAZWOPER 8-hour annual refreshers.

Response Manager: The Response Manager is the primary contractor contact with EPA both on and off-site regarding technical and administrative issues. The Response Manager shall be responsible for the management and execution of all remedial actions, and the implementation of the PWS. Response Managers shall have the following minimum requirements:

- B.S. degree with 3 years of direct, on-site field experience in hazardous material cleanup activities. These activities include hazardous material removal and disposal activities, development of site and spill safety plans, heavy equipment operation, field construction. The Response Manager shall have experience managing and supervising professional and laborer hazardous substance cleanup personnel at least 2 of these 3 years; or
- Eight years of direct, on-site field experience in hazardous material cleanup activities. These activities include hazardous material removal and disposal activities, development of site and spill safety plans, heavy equipment operation, field construction. The Response Manager shall have experience managing and supervising professional and laborer cleanup personnel at least 4 of these 8 years; or

In addition to the above requirements, the Response Manager shall have the following knowledge or experience:

- Working knowledge of hazardous material transportation and disposal regulations.
- Ability to prepare written technical reports, such as those in Section 4.0, covering all aspects of the remedial activities.
- Ability to manage and insure proper execution of multiple simultaneous subcontracts and/or vendors of varying types and complexity.
- Ability to track site costs routinely.
- Knowledge of OSHA health and safety regulations regarding hazardous material sites and general construction site operations. The Response Manager must have 40-hour OSHA HAZWOPER training and be up to date on HAZWOPER 8-hour annual refreshers.

Foreman: Directs and oversees remedial activities of cleanup crews at the direction of the Response Manager. The Foreman should have at least 3 years of experience in directing both general labor and hazardous material personnel and is trained for work using the level of personnel protective equipment required for this PWS. The Foreman must have 40-hour OSHA HAZWOPER training and be up to date on HAZWOPER 8-hour annual refreshers.

4.0 DELIVERABLES

The Contractor shall submit the following deliverables required by this PWS in accordance with the schedule identified for each deliverable.

- **Final Project Management Plan** – due to COR within 15 days of receipt of EPA comments on draft – two hard copies and one electronic copy. This site-specific plan gives a detailed description of how the project is going to be managed. This includes, but is not limited to, the approach advocated, a preliminary project schedule, the resources

required, the intended communication process with EPA, the Contractor's points of contact and responsibilities, a description of how landowner complaints or issues will be handled, how the Contractor will maintain the roads, and when and how the Contractor will employ dust suppression problem. The PMP shall also describe the protocols and methods (i.e., hydroseeding specifications, fertilizer application, plan for maintaining reseeded areas) that will be employed to ensure quality landscaping and establishment of lawn growth. If the Contractor plans to attempt gaining the local incentive identified in the QASP, a plan shall be included in the PMP describing the proposed hiring strategy and how local subcontractors/services/laborers are planned to be utilized through the duration of the contract. EPA's comments on the draft must be received by the Contractor before starting field activities. **If the Contractor submits a draft PMP that is essentially the PWS, the Contractor shall be considered non-responsive.**

- **PMP Updates** – due within 10 calendar days of changes. The Contractor shall update the PMP to reflect progress towards achievement of the performance objectives when directed by the COR. The Contractor shall submit two hard copies and one electronic copy of PMP updates to EPA.
- **Final Health and Safety Plan** – due to COR within 15 days of receipt of EPA comments on draft – two hard copies and one electronic copy. This plan outlines how the Contractor shall meet the health and safety requirements of the federal, state, and local laws, regulations, and other requirements, including OSHA regulations at 29 CFR 1910.120. The HASP shall contain hospital route maps and be available and centrally located for all personnel to access. Additionally, the HASP shall describe ongoing requirements, such as daily safety briefings. The final HASP must be received by EPA prior to the Contractor starting field activities.
- **Final Quality Assurance Project Plan** – due to COR within 15 days of receipt of EPA comments on draft – two hard copies and one electronic copy. This site-specific plan shall describe how the Contractor will assure the quality of all work and products including, but not limited to, backfill sources sampling, gravel sampling, and TCLP sampling at the repository, the TCLP amendment planned for use if needed, etc. The plan shall follow the *EPA Requirements for Quality Assurance Project Plans*, EPA QA/R-5, March 2001. Attached in Enclosure J is a copy of EPA's Generic Quality Assurance Project Plan for Region 7's Superfund Lead-Contaminated Sites that can be used as a reference and may have some helpful information. **However, EPA is requiring a site-specific QAPP for this project that covers more and less than is included in the Generic QAPP. The Contractor shall submit as a draft a site-specific QAPP. If the Contractor submits a draft QAPP that is essentially the generic QAPP, the Contractor shall be considered to have not submitted a site-specific QAPP and shall be considered non-responsive.**
- **Weekly Report** – The reports may be sent electronically. The Contractor shall provide a weekly report to all CORs and the PO on the contract. At a minimum, this report shall identify the weekly and cumulative number of properties excavated, backfilled, restored and signed-off by the property owners. It shall also include the number of truckloads of

contaminated material removed from each property that week, the area and volume of a quadrant or area excavated at each property, and the amount of backfill material used at each property. The report shall also provide weekly and cumulative totals for the numbers of properties closed out (aka, a successful final inspection by EPA.)

Additionally, the report shall identify the amount of contaminated soil and gravel in cubic yards weekly and cumulatively over the life of the contract taken to the repository, the total number of cubic yards of soil treated for TCLP for the week and cumulatively, problems encountered and resolved, media contacts, citizen complaints, unique findings that EPA should be aware of, and other relevant information. The report shall also identify all roads used that week by trucks going to and from the repository. The weekly reports shall be submitted each Monday morning before noon.

- **Monthly Diesel Emissions Report** – If pursuing the diesel emissions incentive, the Contractor shall also include all diesel, chemical and particulate emissions data pertinent to the QASP for every calendar month. The reports also need to include receipts showing the purchase of alternative fuel, per the QASP. If using alternative fuel, the report also needs to include a running total of the diesel fuel used daily, per the QASP. The reports may be sent electronically.
- **Final Construction Report** – due to COR within 20 days of receipt of EPA comments on draft – two hard copies and one electronic copy. The Contractor shall submit a draft Final Report each contract year within 45 days after the completion of field activities. The report shall describe all the work completed under this contract 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 properties where work has been completed.
- **Justification for Receipt of Incentive Awards** – This report provides documentation to support award of contract incentives. The Contractor shall submit this report within 45 days after completion of field work each contract year.
- **Final Stormwater Pollution Prevention Plan (SWPPP)** – due to COR within 15 days of receipt of EPA comments on draft – two hard copies and one electronic copy. The site-specific draft plan must be received by EPA at least 30 days prior to the start of construction. This plan outlines how the Contractor shall meet the stormwater pollution prevention and management requirements of the federal, state, and local laws, regulations, and other requirements, including the Clean Water Act, for both the residential properties and the Conrad tailings pile. In general, a SWPPP is a site-specific, written document that identifies potential sources of stormwater pollution at the construction site (residential properties and the soil repository) and describes practices to reduce pollutants (including soil and tailings) in stormwater discharges from the residential properties and soil repository. The SWPPP shall also document how the Contractor plans to ensure no tracking of material onto any road from residential properties and the soil repository. Two websites for guidance on stormwater pollution prevention, management, and SWPPPs are http://www.epa.gov/npdes/pubs/sw_swppp_guide.pdf and

<http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=2000469L.txt>. The final SWPPP must be received by EPA prior to the Contractor starting field activities.

- **SWPPP Updates** - due within 10 business days of the COR indicating to the Contractor that the SWPPP needs to be updated. The Contractor shall update the SWPPP to reflect changes when the COR determines it is needed. This will most likely be the result of a site inspection indicating that BMPs are not effective, are not effective enough, or are not being adequately maintained. The Contractor shall submit two hard copies and one electronic copy of the SWPPP update to EPA.