



STATE OF IDAHO

DEPARTMENT OF  
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, ID 83706 • (208) 373-0502  
www.deq.idaho.gov

Brad Little, Governor  
John H. Tippetts, Director

May 15<sup>th</sup>, 2020

NOTICE OF SOLICITATION  
REQUEST FOR PROPOSAL (RFP)  
RFP2005RACS  
BUNKER HILL SUPERFUND SITE REMEDIAL ACTION CONSTRUCTION SERVICES  
**PROPOSALS DUE: July 7<sup>th</sup>, 2020**  
**5:00 P.M. MOUNTAIN TIME**

The Idaho Department of Environmental Quality (DEQ) is seeking a construction contractor (Contractor) to provide remedial actions and related construction projects. Following is a complete set of RFP documents for your consideration and use, should you decide to develop a proposal. DEQ is anticipating the need for multiple awards in order to carry out the services needed under this RFP.

The purpose of these RFP is to enlist contractors to perform various services located exclusively at the Bunker Hill Superfund Site (BHSS) for remedial actions and related construction projects. Typical services would range from specific work tasks (as a portion of a project) up to full execution of remedial action projects. The purpose of this RFP is to provide construction management, labor, equipment and materials for completing remedial actions. The resulting contracts will be task order-based, and requires an experienced contractor in remedial action construction and budgeting of federal and state superfund or remedial projects.

An interested offeror must upload (1) electronic copy of both its technical proposal and price proposal to the DEQ Cloud by **July 7<sup>th</sup>, 2020, 5:00 P.M. Mountain Time**. See the RFP for further details regarding proposal submission.

Sealed proposals will be opened publicly on **July 8<sup>th</sup>, 2020 at 9:00 A.M. Mountain Time**. Only the names of the offerors will be identified at the public proposal opening. Proposers may call in to the DEQ State Office where the proposals will be opened by dialing (208) 373-0101 and Press #1 at the prompt.

The DEQ will not respond to telephone inquiries or visitations by prospective offerors or their representatives regarding the technical aspects of the RFP. However, offerors may submit written inquiries by mail or email, received, on or before **Midnight, June 3<sup>rd</sup>, 2020**.

In addition, DEQ will hold a Pre-Proposal On-Line Video Conference to answer questions related to this RFP on **May 27<sup>th</sup>, 2020 from 10:00 a.m. (PT) to approximately 12:00 p.m. (PT) at the following Link:**

<https://ideq.zoom.us/j/94395495778?pwd=R0daVEEvd0trNW54QlJNcS9Db05GUT09>

The pre-proposal On-Line Video Conference will include discussion of the Scope of Work and general RFP requirements. Questions previously submitted by offerors will be answered. Additionally, there will also be

open discussion to address any other questions from offerors that are present. **Written responses to all inquiries will be prepared and distributed to potential offerors approximately one week after the On-Line pre-proposal conference.**

Attendance on the pre-proposal On-Line Video Conference is required. The pre-proposal On-Line Video Conference is the only opportunity to ask questions in-person concerning technical aspects of this RFP.

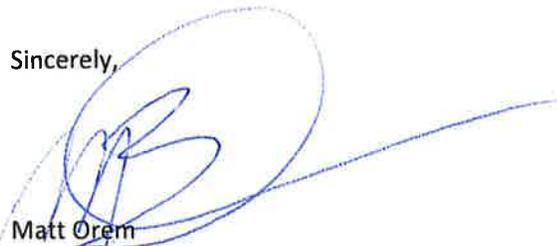
Each timely received proposal will be reviewed to determine if it is complete and all minimum requirements are met before being submitted for evaluation and scoring. See the RFP for further details on delivery, receipt, and evaluation.

If a proposal fails to meet the minimum requirements, the offeror is notified. DEQ will not be providing an opportunity to make changes to a proposal once the proposal due date and time has passed. Therefore, the proposal will not be submitted for evaluation and scoring.

DEQ reserves the right to contract separately for other services within the scope of this project and in the best interest of the State.

Proposals received shall remain confidential until the contract (if any); resulting from this RFP is issued. Thereafter, all proposals submitted in response to this request shall be deemed public record.

Sincerely,



Matt Orem  
Financial Officer  
Idaho Department of Environmental Quality

MO:KT

---

**IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)  
REQUEST FOR PROPOSAL**

**RFP2005RACS  
Bunker Hill Superfund Site  
Remedial Action Construction Services**

**RFP Release Date: May 15<sup>th</sup>, 2020  
Proposal Due Date: July 7<sup>th</sup>, 2020**

---

<b>RFP Contents</b>	<b>Page</b>
1.0 GENERAL INFORMATION	2
1.1 Purpose of This Request for Proposal (RFP)	2
1.2 Background	2
2.0 SCOPE OF WORK	2
2.1 Property Remediation	2
2.2 Drainage Feature Construction & Maintenance	3
2.3 Structure Removal/Demolition	3
2.4 Signage/ Access Controls	4
2.5 Recreation Sites	4
2.6 General Contaminated Soil Removal & Management	5
2.7 Principal Threat Materials Removal & Management	5
3 MINIMUM REQUIREMENTS	6
3.1 Qualifications	6
3.2 Key Project Personnel	7
4 FORMAT FOR PROPOSAL	7
4.1 Cover Letter	7
4.2 Company Capabilities	8
4.3 Relevant Experience	8
4.4 Key Supervisory Personnel	9
4.5 References	9
4.6 Price Proposal	9
5 INSTRUCTIONS FOR PROPOSAL SUBMISSION	10
5.1 Proposal Submission	10
5.1.1 Date, time, number of copies	10
5.1.2 Late Proposals	10
5.1.3 Public Proposal Opening	10
5.2 Offeror Questions and DEQ Response	11
6 SELECTION PROCEDURES	11
6.1 Scoring Criteria	11

6.2	Administrative Review	11
6.2.1	Technical Evaluation and Scoring	12
6.2.2	Price Proposal Evaluation	12
6.3	Final Results	12
7	ADMINISTRATIVE REQUIREMENTS	13
7.1	Contract Term and Payment	13
7.2	GENERAL TERMS	13
7.3	RESERVATION OF RIGHTS BY DEQ	13
7.4	Administrative Appeals	14
	Option to Obtain Services Outside of the Contract Resulting from this Request	
7.5	for Proposals	14
	Public Disclosure of Information Contained in Proposals and Offeror	
7.6	Responsibilities	14
7.7	Changes in RFP	15
7.8	Changes in Proposals	15
7.9	Certification Regarding Debarment	15
7.10	Certification of Independent Price Determination	15
7.11	Contract Terms and Conditions	15
7.12	Incurring Costs	17

## **Appendices**

APPENDIX A: DEQ Standard Contract

APPENDIX B: Certification Regarding Debarment, Suspension and Other Responsibility Matters

APPENDIX C: Certification of Independent Price Determination

APPENDIX D: Price Proposal Form

APPENDIX E: Davis-Bacon Wage Rates – ID20200060

APPENDIX F: Yard Remediation Construction Reference

{This Page Intentionally Left Blank}

## **1.0 GENERAL INFORMATION**

### **1.1 Purpose of This Request for Proposal (RFP)**

The Idaho Department of Environmental Quality (DEQ) is seeking qualified and experienced respondents to submit proposals for remedial actions and related construction projects with the Department. Contractors are to submit proposals by July 7<sup>th</sup>, 2020. DEQ is anticipating the need for multiple awards in order to carry out the services needed under this RFP.

The purpose of these RFP is to enlist contractors to perform various services located exclusively at the Bunker Hill Superfund Site (BHSS) for remedial actions and related construction projects. Typical services would range from specific work tasks (as a portion of a project) up to full execution of remedial action projects. The purpose of this RFP is to provide construction management, labor, equipment and materials for completing remedial actions. The resulting contracts will be task order-based, and requires an experienced contractor in remedial action construction and budgeting of federal and state superfund or remedial projects.

This Request for Proposal (RFP) does not commit DEQ to enter into an agreement, to pay any costs incurred in the preparation of a proposal or in subsequent negotiations, or to procure or contract for any Project. DEQ expects to negotiate work tasks on an on-call basis with respondents to provide the services contemplated by the categories herein included.

### **1.2 Background**

The BHSS in northern Idaho has been the focus of Superfund cleanup work for nearly three decades to address human health and environmental exposures to metals contamination from legacy mining wastes. The cleanup area encompasses the Coeur d'Alene River Basin from Mullan, ID to Harrison, ID. DEQ has been directly involved in securing contracts for yard remediation, mine site cleanup, and remedy protection projects. DEQ is generally responsible for implementing remedial actions within the Bunker Hill Box, and other on-going activities in the Basin, providing a necessity to secure a contractor(s) for the work defined below.

## **2.0 SCOPE OF WORK**

Remedial Actions implemented through this RFP will generally be in the following categories:

### **2.1 Property Remediation**

2.1.1. Primarily, property remediation work will involve BHSS yard remediation work originally refused by the property owner. These remediation refusals are connected to the property owner at the time of refusal. Any change in property ownership – or a rescission of the refusal – immediately prompts the preparation for, and completion of the yard remediation work for the related property.

2.1.2. Yard remediation work shall be carried out according to the “Construction” conditions as detailed in the 1994 Remedial Design Report prepared for BHSS Residential Yard Remedial

Work. The “Construction” segment of that report has been provided as reference for vendors submitting a quote for this solicitation. The document is entitled **Exhibit E - Yard Remediation Construction Reference**, and is attached.

2.1.3. Note: As this report was prepared for the initial completion of yard remediation work within the BHSS area, some of the introductory, site inspection, waste disposal, and jurisdictional details may not apply fully to work completed pursuant to the contract resulting from this solicitation. ***The document has been provided, as a reference, to give submitting vendors a comprehensive picture of the actual construction procedures for quoting purposes.*** The exact administrative/jurisdictional details will be decided on a remediation-by-remediation basis with the Contractor.

2.1.4. In addition to the details of the “Construction” conditions outlined in the Remedial Design Report referenced, property remediation will include the following requirements: a scheduled pre-meeting with DEQ and the property owner, a final meeting with DEQ and the property owner, and the preparation of a final map for the property.

2.1.5. Any work necessary to respond to warranty requests as authorized by DEQ to address damage to property or structures that is determined to have been caused by implementation of the remedial action at a property.

## **2.2 Drainage Feature Construction & Maintenance**

This task will be utilized for installation and maintenance of drainage features where necessary to safely convey surface water and site runoff to protect barriers and prevent migration of contaminated soils. Specific work items may include:

2.2.1. Culverts and Drainage Pipe- all work necessary to install culvert structures such as corrugated metal, plastic, or concrete pipe, concrete box culverts, bottomless structures, etc. Maintenance activities including debris removal, pipe cleaning, and repair.

2.2.2. Drainage Structures – installation and maintenance of catch basins, drain inlets, and storm drain manholes.

2.2.3. Channels – construction and maintenance of drainage channels, stream channel work, bank stabilization, etc.

2.2.4. Site Drainage – site work may include grading to improve surface drainage, installation of drain rock, perforated pipe, French drains, etc. to promote adequate drainage.

## **2.3 Structure Removal/Demolition**

The most common scenarios of work in this subdivision include:

2.3.1. Building Removal – removal of sheds or garages, and proper disposal of waste materials according to Internal Controls Program (ICP) guidance.

2.3.2. Culvert Removal – removal of culverts that no longer serve a useful purpose or those that have been abandoned altogether; and proper disposal of waste materials according to ICP guidance.

2.3.3. Removal of Signs/Kiosks - remove signs and kiosks previously constructed and installed in order to ensure there is no confusion regarding potential human health risks within specific areas of the BHSS. This will include excavation, disassembly, and disposal of signs and kiosks.

## **2.4 Signage/ Access Controls**

The construction/installation of signs and access controls will be for the purpose of posting information regarding the known or potential contamination of different physical areas (e.g., boat docks, picnic areas, etc.) and limiting access to contaminated sites within the BHSS. Design of signs/kiosks and access controls will be directed by, and pre-approved by, the DEQ project officer assigned to the resulting contract.

2.4.1. Signage – build or restore information signs warning the public of potential human health risks along the bike trail, near boat docks, and within picnicking/camping areas. The work also includes digging post holes, setting posts, and installing the signs.

2.4.2. Kiosk – build or restore information kiosks warning the public of potential human health risks along the bike trail, near boat docks, and within picnicking/camping areas. The work also includes digging post holes, setting the structure, and installing the kiosks.

2.4.3. Access controls – installation and/or maintenance of fences, bollards, gates, rock, or vegetation to prevent or minimize public access to contaminated areas at sites identified by DEQ.

## **2.5 Recreation Sites**

The most common scenarios of work in this subdivision include:

2.5.1. Removal and Disposal of Contaminated Soils – Excavation of metals contaminated soils from identified recreation areas to the depths and locations specified by DEQ. Contaminated soils will be hauled to a designated Repository for disposal. All work will be conducted in compliance with the ICP.

2.5.2. Installation of Clean Soil/Gravel Barriers – clean soil and gravel will be used as backfill to establish clean barriers at recreation sites in compliance with the ICP.

- 2.5.3. Hard Surface Barriers – Construction of hard surface barriers at recreation sites may include placement of concrete, asphalt, pavers, or other hard surface over contaminated soils to establish a durable barrier. These may be used for parking facilities, access roads, walkways, trails, etc. Site grading will be required to ensure adequate drainage and to accommodate cleaning of the surface where future deposition of sediment is anticipated.
- 2.5.4. Vegetation – Planting, seeding, sod placement, and other activities as directed by DEQ to promote establishing vegetation at recreation areas. Vegetation may be intended to stabilize soils, promote habitat, prevent noxious weeds, control erosion, serve as part of the cap, or deter use of specific areas.
- 2.5.5. Washing Stations – Temporary or permanent facilities may be installed as directed by DEQ to provide locations for hand washing or rinsing contaminated soils off of items used by the public at recreation sites. Temporary facilities may be placed during specific events or seasons with increased recreation sites that do not have running water or restrooms.

## **2.6 General Contaminated Soil Removal & Management**

General contaminated soils occur throughout the Bunker Hill Site and require ongoing management. Remedial actions may be selected at sites not addressed through Property Remediation or Recreation Sites Programs. Potential sites include historic mine and mill sites, riparian corridors, floodplain areas, roadways, and other places contaminated soils are present. The most common scenarios of work in this subdivision include:

- 2.6.1. Removal and Disposal of Contaminated Soils – Excavation of metals contaminated soils to the depths and locations specified by DEQ. Contaminated soils will be hauled to a designated Repository for disposal. All work will be conducted in compliance with the ICP.
- 2.6.2. Installation of Clean Soil/Gravel Barriers – clean soil and gravel will be used as backfill to establish clean barriers in compliance with the ICP. Barrier thickness will be determined by DEQ. Hard surface barriers such as concrete and asphalt may be utilized on roads, access routes, parking areas, etc.
- 2.6.3. Vegetation – Planting, seeding, soil amendment, and other activities as directed by DEQ to promote establishing vegetation. Vegetation may be intended to stabilize soils, promote habitat, prevent noxious weeds, control erosion, serve as part of the cap, or deter use of specific areas.

## 2.7 Principal Threat Materials Removal & Management

Special procedures will be required for any materials encountered that meet Principal Threat Material concentrations. For any work under this task, the contractor will be required to develop a Health and Safety Plan that specifically addresses work with PTM wastes.

### 2.7.1. Definition of Principal Threat Materials by concentration criteria:

<b>Metal<sup>1</sup></b>	<b>Parts Per Million (ppm)</b>	<b>Percent</b>
Antimony (Sb)	127,000	12.7
Arsenic (As)	15,000	1.5
Cadmium (Cd)	71,000	7.1
Lead (Pb)	84,600	8.46
Mercury (Hg)	33,000	3.3

**Note:**

1. A waste material exceeds the threshold criteria if any of the metals listed are present in the material at or above the associated concentrations listed in this Table.

2.7.2. Removal and Temporary Staging – potential Principal Threat Materials may be excavated and temporarily stored at Page Repository in the designated PTM staging area. The contractor will coordinate with the Page Repository Operator to deliver and secure suspected PTM wastes in the staging area.

2.7.3. Off-Site Disposal – Confirmed PTM may be shipped off-site to an approved facility. Facility approval will be dependent on actual concentrations of waste. Additional testing may be required to identify appropriate disposal. For off-site disposal, the contractor will arrange for shipping and provide all records to document appropriate shipping and disposal.

## 3.0 MINIMUM REQUIREMENTS

### 3.1 Qualifications

Qualified offerors must demonstrate sufficient administrative infrastructure in its organization to provide professional construction services as described above. Qualified offerors must have a minimum of five (5) years of experience in construction and/or maintenance of remedial actions under CERCLA.

Qualified offerors must demonstrate they have substantial experience in scoping and proposing task orders and budgets.

The CONTRACTOR shall perform work in a safe manner, comply with all federal, state and local safety rules and regulations, including, but not limited to, the Occupational Safety and Health Act of 1970.

Specifically the CONTRACTOR shall demonstrate compliance with 29 CFR 1910.120 by submittal of their Health Safety & Health Plan for the scope of this work.

The CONTRACTOR shall have the sole and complete obligation to provide a safe and healthy working environment for its employees and for other persons at the project site who may be exposed to the CONTRACTOR'S work. The CONTRACTOR shall make all possible efforts to prevent injuries to personnel carrying on operations covered by the proposed contract. The CONTRACTOR shall, at all times, maintain its equipment in a safe operating condition.

### **3.2 Key Project Personnel**

The offeror's proposal must include the resumes and personal references of key supervisory personnel who will be directly responsible for this project. All personnel conducting CERCLA remedial action work must have the appropriate HAZWOPER certification.

DEQ will exercise the right to approve all personnel assigned to the project, and any changes in the CONTRACTOR'S personnel whose participation in the project is specifically offered by the CONTRACTOR.

The successful CONTRACTOR agrees that the services of key project personnel named in its proposal are essential to contract performance based on the tasks required by this RFP. If such individual(s) leave the employ of the CONTRACTOR during the term of the resulting contract for any reason, or are unable to continue full-time the work called for in the contract; and if substitute individuals acceptable to the State are not available to continue the work within fourteen (14) calendar days, the State shall have the right to terminate the contract upon fifteen (15) days written notice.

### **4.0 FORMAT FOR PROPOSAL**

Each offeror's submittal must be in two separate documents, the technical proposal and the price proposal. The technical proposal is limited to 20 pages, exclusive of required appendices and the key supervisory personnel attachment (Subsection 4.4), and covers Subsections 4.1 through 4.6. There should be no unnecessary attachments, enclosures, or exhibits. Each section of the proposal will be clearly identified with appropriate headings. Failure to follow these instructions may cause disqualification.

Note: No pricing information should be included within the technical proposal. A failure to meet this requirement may be cause for rejection of an offeror's entire proposal.

#### **4.1 Cover Letter**

All proposals must include a cover letter on official letterhead of the offeror, with name, mailing address, email address, telephone number and fax number of the offeror's authorized agent readily evident. The letter shall identify all material and enclosures being forwarded collectively

as the response to this RFP. The cover letter must be signed by an individual authorized to commit the offeror to the work proposed.

In addition, the cover letter must include:

- a) A statement indicating acceptance of and willingness to comply with the requirements of the RFP and attachments and the terms and conditions of the DEQ Standard Contract;
- b) If the RFP is addenda, a reference to all RFP addendums to confirm that the offeror is aware of such addendum(s); and
- c) A statement affirming the proposal will be firm and binding for ninety (90) days from the date of the receipt of the proposal; and that the prices provided reflect the best possible offer to fully address the requirements defined in this RFP.

#### **4.2 Company Capabilities**

The offeror must provide a summary of their company capabilities. This can be provided in the form of a company resume or capabilities statement. The response should include the following information:

- Company Overview
- Location
- Licenses/Certifications
- NAICS Codes
- Core Competency
- Number and Types of Employees
- Equipment
- Bonding Capacity
- Overview of the type/size of projects completed in recent years

#### **4.3 Relevant Experience**

The offeror must provide between three and six project examples demonstrating experience in the areas listed in the Scope of Work in Section 2. Individual projects that include work from multiple areas can be used to demonstrate experience in several of the required areas. For example, if the offeror completed a project that included removal of contaminated soils, providing barriers for recreation access, and installing access controls, that project could be used to demonstrate experience in three service areas.

The project descriptions should clearly identify which service areas from the Scope of Work are applicable to the project examples provided. The offeror must demonstrate experience in at least five (5) of the following areas:

- Property Remediation
- Drainage Feature Construction and Maintenance
- Structure Removal/Demolition
- Signage and/or Access Controls
- Recreation Sites
- General Contaminated Soil Removal & Management

- Principal Threat Materials Removal & Management

#### **4.4 Key Supervisory Personnel**

Offerors must demonstrate (identify staff, locations or suppliers) that they own, have access to, or can procure the types of labor, equipment and materials listed in Appendix D “Price Proposal”. This demonstration should be included as an attachment to the offeror’s technical proposal (see additional information in Subsection 5.2); and must include resumes as well as personal references of all supervisory personnel (PM, HASP Officer, Administrative Support, and Project Superintendent) who will be directly responsible for the successful completion of all activities listed as tasks above. Current DEQ personnel involved in the oversight of work under this contract should not be listed as personal references.

-Note: Offeror shall clearly mark this attachment as “Response to 4.4 – Key Supervisory Personnel”; and this attachment will not be counted against the 20 page maximum for the technical proposal.

#### **4.5 References**

Offerors must attach (as an appendix) to their proposal, at least three (3) Letters of Reference which include the client’s primary contact, a description of the project completed, technical and management approach used by the offeror to complete the project, and the client’s recommendation regarding the offeror.

#### **4.6 Price Proposal**

The offeror must prepare an estimate (Appendix D – Price Proposal Form) of costs for personnel and equipment in order to successfully address the tasks listed in Section 2.0. Estimated hours and days in the Price Proposal Form are DEQ projections used for proposal evaluation only. Actual hours for completion of each Task listed in Section 2.0 must be specified in Task Orders that will be developed after the contract is awarded. Personnel hourly rates must be fully burdened, and provide for Prevailing Wage Rates for personnel, as appropriate. The estimates for equipment hourly rates must specify for comparable equipment as listed including fuel.

Note: Davis-Bacon prevailing wage rates shall apply to the hourly work performed by those people in the employ of the CONTRACTOR. The respective General Decision Number (ID202000060) for Heavy Construction, which shall be accounted for in the offeror’s proposal, and consequently apply to wage rates for the life of the resulting contract, has been included as Appendix E.

In addition to the estimates and prices entered on the Price Proposal Form, the offeror must also provide a brief narrative containing the statement that these unit prices will be applied to Task Orders that may be developed during the first year for which the contract is in effect. The narrative must also specify the direct and indirect costs, including a profit margin for additional goods or services (beyond

estimations included in the Price Proposal Form) that may be procured under this contract and managed by the CONTRACTOR.

**NOTE:** EPA participation in the salary rate for individual consultants retained either through a contract or by subcontractors, is limited to a maximum daily rate for a GS-18 (40 CFR 31.36(j)). When salary rates are above this limit, the balance must be paid by state funds.

## **5.0 INSTRUCTIONS FOR PROPOSAL SUBMISSION**

### **5.1 Proposal Submission**

#### **5.1.1 Date, time, number of copies**

On March 11, 2020, the World Health Organization (WHO) declared the Novel Coronavirus (COVID-19) a worldwide pandemic. The Idaho Department of Environmental Quality (IDEQ) is taking steps to protect against the potential spread of the virus. We are strongly committed to maintaining the state's human health and the quality of Idaho's air, land and water, while doing everything possible to protect state employees, vendors, and the public.

An important message was released on March 12, 2020 by the Division of Purchasing Administrator concerning updated purchasing procedures and statewide contract purchases related to the Novel Coronavirus (COVID-19) pandemic. The link to this message can be found here: [https://purchasing.idaho.gov/wp-content/uploads/COVID19\\_Letter-from-Administrator-1.pdf](https://purchasing.idaho.gov/wp-content/uploads/COVID19_Letter-from-Administrator-1.pdf)

This change is being made to limit the risk of spreading COVID-19 through contact between IDEQ personnel. Additionally, while we do not currently anticipate closing IDEQ's office, this updated procedure will allow IDEQ to remain operational remotely, if necessary.

As permitted in IDAPA 38.05.01.073 each offeror shall upload (1) electronic copy of both its technical proposal and price proposal to the DEQ Cloud. The link to the DEQ Cloud will be given only to the attendees of the Pre-Proposal On-Line Video Conference. (see section 5.2) The signed cover letter and all other proposal documents must be uploaded no later than **July 7<sup>th</sup>, 2020 by 5:00 p.m. MDT.**

#### **5.1.2 Late Proposals**

Proposals received after the date and time noted above will not be accepted.

#### **5.1.3 Public Proposal Opening**

Sealed bid proposals will be opened publicly at **9:00 a.m. (MDT) on July 8<sup>th</sup>, 2020.** Only the names of the offerors will be identified at the public opening. Proposers may call in to the DEQ State Office where the proposals will be opened by dialing (208) 373-0101 and Press #1at the prompt.

## 5.2 Offeror Questions and DEQ Response

The DEQ will not respond to telephone inquiries or visitations by prospective offerors or their representatives regarding the technical aspects of the RFP. However, offerors may submit written inquiries by mail or email, received, on or before **Midnight, June 3<sup>rd</sup>, 2020**. In addition, DEQ will hold a pre-proposal On-Line Video Conference to answer questions related to this RFP on **May 27<sup>th</sup>, 2020 from 10:00 a.m. (PT) to approximately 12:00 p.m. (PT) at the following Link:**

<https://ideq.zoom.us/j/94395495778?pwd=R0daVEEvd0trNW54QIJNcS9Db05GUT09>

The pre-proposal On-Line Video Conference will include discussion of the Scope of Work and general RFP requirements. Questions previously submitted by offerors will be answered. Additionally, there will also be open discussion to address any other questions from offerors that are present. **Written responses to all inquiries will be prepared and distributed to potential offerors approximately one week after the On-Line pre-proposal conference.**

Attendance on the pre-proposal On-Line Video Conference is required. The pre-proposal On-Line Video Conference is the only opportunity to ask questions in-person concerning technical aspects of this RFP.

## 6.0 SELECTION PROCEDURES

### 6.1 Scoring Criteria

DEQ has assigned possible point values to each area required in Section 4 “Format for Proposal” according to each subsection’s relative importance. This will vary for each RFP. The RFP contains general information for offerors as to the value placed on certain areas of the proposal. For example,

<b>Evaluation Criteria:</b>	<b>Points Possible</b>
Technical Proposal	
4.1 Cover Letter	25
4.2 Company Capabilities	200
4.3 Relevant Experience	250
4.4 Key Supervisory Personnel	75
4.5 References	50
Price Proposal	400
<b>TOTAL</b>	<b>1000.0</b>

### 6.2 Administrative Review

Each proposal will be reviewed to determine if it is responsive (complete and all minimum requirements are met), before being submitted for evaluation and scoring. Once the proposal is received, logged in and opened, it is reviewed for the following minimum requirements:

1. The proposal was received before the date and time specified in the RFP.
2. The proposal is signed by the individual authorized to bind the firm.
3. The proposal states that it is good for ninety (90) days from receipt by DEQ.
4. A complete, signed "Certification Regarding Debarment, Suspension and Other Responsibility Matters" is included.
5. All information required in the RFP is contained in the proposal. This includes responses to the scope of work, technical approach, key personnel, price proposal and any other requirements.

If the proposal fails to meet the minimum requirements, the offeror will be notified in a timely manner that their proposal is non-responsive. There is no opportunity to correct deficiencies once the due date/time for proposals has passed.

### **6.2.1 Technical Evaluation and Scoring**

Responsive proposals will be evaluated/scored by an evaluation committee comprised of at least three individuals who are qualified to evaluate the technical aspects of each proposal. Those technical scores, coupled with the results from Price Proposal scoring, (completed by DEQ's fiscal office per 6.2.2), shall constitute the development of a recommendation for contract award.

### **6.2.2 Price Proposal Evaluation**

Following the technical evaluation, Price Proposals are then opened and evaluated by DEQ's fiscal office using the following formula; where the maximum points for the Price Proposal is 400.

Lowest Proposal Price = 400 points

#### **Calculation for each successive Proposal Price**

Lowest Proposal Price / Successive Proposal Price x 400 = # of points

[Example: \$10,000 / \$12,000 x 400 = 333 points]

-Repeated until each Price Proposal has received a referent score.

### **6.3 Final Results**

A final tally is computed by summing scores from the technical evaluation and price proposal evaluation. The offeror with the most points is ranked #1. Other offerors are ranked

successively. The highest ranked offeror is considered the offeror to whom a contract will be awarded. The final scores are reviewed and approved by the DEQ Financial Officer who then authorizes the Grants/Contracts Officer to proceed with notification. All offerors receive notification of bid evaluation results.

## **7.0 ADMINISTRATIVE REQUIREMENTS**

### **7.1 Contract Term and Payment**

The Idaho Department of Environmental Quality (DEQ) is seeking qualified and experienced respondents (individuals or firms) to submit proposals with the Department.

DEQ expects to award an indefinite delivery/indefinite quantity type of contract to multiple firms.

Contracts shall be awarded for one year beginning on the date of signing by the Financial Officer of the Idaho Department of Environmental Quality. The state shall review each contract at the end of each contract period and may grant an extension based upon satisfactory contractor performance. Contracts may be extended for three (3) additional one-year periods, for a total of four (4) years. Additionally, DEQ reserves the right to cancel the contract for substandard performance at any time.

### **7.2 GENERAL TERMS**

This Request for Proposal (RFP) does not commit DEQ to enter into an agreement, to pay any costs incurred in the preparation of a proposal or in subsequent negotiations, or to procure or contract for any Project. DEQ expects to negotiate work tasks on an on-call basis with respondents to provide the services contemplated by the categories herein included.

### **7.3 RESERVATION OF RIGHTS BY DEQ**

The issuance of this RFP does not constitute an assurance by DEQ that any contract will actually be entered into by DEQ and DEQ expressly reserves the right to:

- Waive any immaterial defect or informality in any response or response procedure
- Reject any and all proposals
- Request additional information and data from any or all respondents
- Supplement, amend, or otherwise modify the RFP or cancel this request with or without the substitution of another RFP
- Disqualify any respondent who fails to provide information or data requested herein or who provides inaccurate or misleading information or data
- Disqualify any respondent on the basis of any real or apparent conflict of interest
- Disqualify any respondent on the basis of past performance on DEQ projects

By responding to this solicitation, each respondent agrees that any finding by DEQ of any fact in dispute as to this solicitation or the responses thereto shall be final and conclusive except as provided herein.

#### **7.4 Administrative Appeals**

DEQ will adhere to the procedures, policies, and regulations outlined in Idaho Code, Title 67, Section 9232 should any administrative appeal arise from this RFP.

#### **7.5 Option to Obtain Services Outside of the Contract Resulting from this Request for Proposals**

DEQ reserves the right to contract separately for other services within the scope of this project and in the best interest of the State.

#### **7.6 Public Disclosure of Information Contained in Proposals and Offeror Responsibilities**

Proposals received shall remain confidential until the contract resulting from this RFP is signed by the DEQ Administrator or designee. Thereafter, all proposals submitted in response to this request shall be deemed public record. In the event that an offeror desires to claim portions of its proposal as exempt from disclosure, **it is incumbent upon the offeror to identify those portions.**

At the time of proposal submittal, each page, or portion thereof claimed to be exempt from disclosure must be clearly identified by placement of a stamped, typed or other notation employing such language as “trade secret”, “proprietary”, or “confidential” in the lower right-hand corner of each relevant page. In addition, if an offeror has claimed certain portions of the proposal to be exempt from disclosure, **the offeror shall provide substantiation of the claim in the proposal**, which shall be included as an additional submittal in which the title makes reference to “trade secret”, “proprietary”, or “confidential”. The substantiation should address the following: the specific portions which are alleged to be entitled to confidential treatment; measures taken by the offeror to guard against nonconsensual disclosure of the information to others, and the means by which such measures will be continued; the extent to which the information has been disclosed to others and the precautions taken; pertinent confidentiality determinations, if any, by other state or federal agencies; any other relevant facts to support the claim that the information meets the definition of “trade secret”; and, if appropriate, the reason that the information is not required to be disclosed by state or federal statute. (IDAPA 58.01.21.014.03)

DEQ will consider an offeror’s request(s) for exemption from disclosure; however, DEQ will make a decision predicated upon applicable law. An assertion by an offeror that the entire proposal is exempt from disclosure will not be honored.

#### **7.7 Changes in RFP**

Changes made in the RFP, as a result of responses made to inquiries or concerns, will be made in writing to all offerors no later than ten (10) working days prior to the deadline for proposal submission. DEQ will not respond to telephone inquiries about RFP changes made by offerors. However, the DEQ will respond to offeror's questions as specified in Section 5.2.

## **7.8 Changes in Proposals**

Modifications of proposals already received by DEQ may be made if they are received by DEQ prior to the scheduled deadline for proposal submission. All modifications must be made in writing over the signature of the offeror. No oral or telephone proposals or modifications will be considered.

## **7.9 Certification Regarding Debarment**

In accordance with 40 CFR, Part 32 all proposals submitted for federal assistance shall include a signed certification document, attached to this RFP as Appendix B. All proposals must contain a complete Appendix B to be considered for contract award.

## **7.10 Certification of Independent Price Determination**

In accordance with 40 CFR 35.6550(b) (3) all proposals submitted for federal assistance shall include a signed Certification of Independent Price Determination, which is attached to this RFP as Appendix C. This document certifies that no collusion, as defined by Federal and State antitrust laws, occurred during proposal preparation. All proposals must contain a completed "Certification of Independent Price Determination" (Appendix C) to be considered for contract award.

## **7.11 Contract Terms and Conditions**

The successful offeror will be required to sign the DEQ Standard Contract and adhere to all terms and conditions. The DEQ Standard Contract is included with this RFP as Appendix A, and incorporated by reference thereto. The proposal of the successful offeror, this RFP, and any addenda will become part of the resulting contract. Any questions regarding the DEQ Standard Contract must be addressed in accordance with Subsection 5.2.

The following is a brief explanation of the insurance coverages that the DEQ requires of the CONTRACTOR. A certificate of insurance will be required of the CONTRACTOR selected.

- 1) Worker's Compensation. The CONTRACTOR, its subcontractor(s), if any, and all employers providing work, labor or materials under this contract are subject employers under the Idaho Worker's Compensation Law, and shall comply with Idaho Statutes regarding Worker's Compensation.

For the duration of this contract, and until all work specified herein is complete, the CONTRACTOR, its subcontractor(s), if any, and all employers providing work, labor or materials under this contract shall provide Idaho Worker's Compensation coverage that satisfies Idaho law for all their subject workers.

The CONTRACTOR must have a valid Worker's Compensation insurance policy in effect prior to the DEPARTMENT generating the contract. The CONTRACTOR must show proof of such coverage by presenting to the DEPARTMENT a valid certificate of insurance showing statutory coverage.

2) Employer's Liability. This coverage is written in conjunction with Worker's Compensation and provides insurance for the employer's liability to its employees in circumstances where the injury is not covered by the Worker's Compensation law and the employer may be subject to common law liability. Employer's liability insurance shall be a minimum amount of \$100,000 per occurrence.

3) Liability Insurance. For the duration of the contract and until all work specified in the contract is completed, the CONTRACTOR shall have and maintain, at CONTRACTOR'S expense, the liability insurance set forth below and shall comply with all limits, terms and conditions of such insurance.

Work under this contract shall not commence until evidence of all required insurance is provided to the DEPARTMENT. Evidence of insurance shall consist of a completed certificate of insurance signed by the insurance agent for the CONTRACTOR and made a part of this contract.

Required Insurance:

1. Commercial General Liability Insurance. The CONTRACTOR shall have and maintain Commercial General Liability (CGL) Insurance covering bodily injury and property damage. This insurance shall include personal injury liability coverage; blanket contractual liability coverage for the indemnity provided under this contract and products/completed operations liability. The combined single limit per occurrence shall not be less than \$1,000,000 or the equivalent. Each annual aggregate limit shall not be less than \$2,000,000, when applicable, and will be endorsed to apply separately to each job site or location.

Additional requirements:

1. State of Idaho as Additional Insured. The liability insurance coverage required for performance of the contract shall include the State of Idaho, the Department of Environmental Quality and its division, officers and employees as additional insured, but only with respect to the CONTRACTOR'S activities to be performed under this contract.
2. Notice of Cancellation or Change. The CONTRACTOR shall ensure that all policies of insurance are endorsed to read that there shall be no cancellation, material change, potential exhaustion of aggregate limits or intent not to renew insurance coverage(s) without sixty (60) days prior written notice from the CONTRACTOR or its insurer to the Department of Environmental Quality. CONTRACTOR shall further ensure that all policies of insurance are endorsed to read that any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the

coverage(s) provided to the State of Idaho, Department of Environmental Quality and its divisions, officers and employees.

#### **7.12 Incurring Costs**

DEQ will not be liable for any costs associated with the preparation and presentation of a proposal submitted in response to this RFP.

## APPENDIX A

### DEQ STANDARD CONTRACT

#### I. DEFINITIONS

- A. DEPARTMENT shall mean the Department of Environmental Quality of Idaho, any division, section, office, unit, or other entity of that DEPARTMENT, or any of the officers or other officials lawfully representing that DEPARTMENT.
- B. CONTRACTOR shall mean that individual, partnership, corporation, or other entity performing services under this CONTRACT. It shall include any subcontractor retained by the prime CONTRACTOR as permitted under the terms of this CONTRACT. It shall mean acting in an independent capacity, not as an officer, employee, or agent of the DEPARTMENT. It shall mean one who can provide the same or similar services to individuals or entities other than the DEPARTMENT.
- C. CONTRACTING OFFICER shall mean that person appointed by the DEPARTMENT to administer this CONTRACT on behalf of the DEPARTMENT. The term includes, except as otherwise provided in this CONTRACT, an authorized representative of the CONTRACTING OFFICER acting within the scope of his/her authority.
- D. CONTRACT shall mean the originally negotiated and executed CONTRACT (including Riders and Appendices), any negotiated and executed AMENDMENT to this contract and/or any TASK ORDER negotiated, executed and implemented pursuant to provisions of this contract.

#### II. RELATION OF PARTIES

- A. The parties intend to establish an Independent Contractor/Principal relationship by this contract.
1. CONTRACTOR certifies that they are an Independent Contractor, and as an Independent Contractor will file all required forms and make the necessary payments appropriate to his Independent Contractor tax status.
2. CONTRACTOR acknowledges that their status as an Independent Contractor complies with Treasury Regulations, Subchapter C, Sec. 31.3121 (d)-1.
- B. The DEPARTMENT is interested only in the quality of services provided and the final results to be achieved; the conduct and control of the worker will lie solely with the CONTRACTOR.

C. The CONTRACTOR is not to be considered an agent or employee of the DEPARTMENT for any purpose, and neither the CONTRACTOR nor their employees are entitled to any benefits of employment provided by the DEPARTMENT to its employees.

D. It is understood that the DEPARTMENT does not agree to use CONTRACTOR exclusively, and that CONTRACTOR is free to contract to perform similar services for other parties while under contract to the Department, so long as there is no interference with the performance of this Contract.

### III. TERMINATION FOR CONVENIENCE

A. The DEPARTMENT or CONTRACTOR may cancel this Contract at any time with or without cause upon thirty (30) days' written notice to the other party, and specifying the date of termination.

B. Cancellation of the Contract by either party shall terminate the obligations or liabilities of the parties, except that the obligations or liabilities incurred prior to the termination date shall be honored.

### IV. TERMINATION FOR DEFAULT

A. CONTRACTOR default occurs if the CONTRACTOR fails to perform any of the covenants or conditions of this Contract; and the CONTRACTOR does not cure such defects in performance within ten (10) days after receipt of any written notice from the CONTRACTING OFFICER informing the CONTRACTOR of such defects in performance.

B. Upon default, the DEPARTMENT may cancel this Contract without any notice and may pursue any and all legal, equitable, and other remedies available to the DEPARTMENT.

C. If termination for default is effected by the DEPARTMENT, an equitable adjustment in the price provided in this CONTRACT shall be made, but:

1. The DEPARTMENT shall withhold any uncommitted funds for work not performed;
2. No amount shall be allowed for anticipated profit on unperformed services or other work; and
3. Any payment due the CONTRACTOR at the time of termination may be adjusted to cover any additional costs to the DEPARTMENT because of the CONTRACTOR'S default.

D. If termination for default is effected by the CONTRACTOR, or if termination for convenience is effected by the DEPARTMENT, the equitable adjustment shall include a reasonable profit for services or other work performed. The equitable adjustment for any termination shall provide for payment to the CONTRACTOR for services rendered and expenses incurred prior to the termination, in addition to

termination settlement costs reasonably incurred by the CONTRACTOR relating to commitments which had become firm prior to the termination.

- E. Upon receipt of a termination action under paragraphs A. or B. above, the CONTRACTOR shall:
1. Promptly discontinue all affected work (unless the notice directs otherwise); and
  2. Deliver or otherwise make available to the DEPARTMENT all data, drawings, specification, reports, estimates, summaries and such other information and materials as may have been accumulated by the CONTRACTOR in performing this CONTRACT, whether completed or in process.
- F. Upon termination under paragraphs A. or B. above, the DEPARTMENT may take over the work and may award another party a contract to complete the work under this CONTRACT.
- G. If, after termination for default of the CONTRACTOR to fulfill contractual obligations, it is determined that the CONTRACTOR had not failed to fulfill contractual obligations, the termination shall be deemed to have been for the convenience of the DEPARTMENT. In such event, adjustment of the CONTRACT compensation shall be made as provided above in paragraph D.
- H. In the event of legal action, the prevailing party shall be reimbursed for any and all expenses that are incurred as a result of the default including, but not limited to, legal fees, and losses incurred due to default.

V. ADDITIONAL PROVISIONS

Additional provisions, if any, are incorporated by reference on the cover sheet of this contract.

VI. INDEMNIFICATION

- A. Independent Contractor shall indemnify, defend, and save harmless the Client, its officers, agents, employees, and volunteers from and against any and all liability, claims, damages, losses, expenses, actions, settlements, attorneys' fees, and suits whatsoever caused by, arising out of, or in connection with Independent Contractor's acts or omissions under this Agreement or Independent Contractor's failure to comply with any state or federal statute, law, regulation, or rule.
- B. Upon receipt of the Client's tender of indemnity and defense, Independent Contractor shall immediately take all reasonable actions necessary, including, but not limited to, providing a legal defense for the Client, to begin fulfilling its obligation to indemnify, defend, and save harmless the Client. Independent Contractor's indemnification and defense liabilities described herein shall apply regardless of any allegations that a claim or suit is attributable in whole or in part to any act or omission of the Client under this Agreement. However, if it is determined by a final judgment that the Client's

negligent act or omission is the sole proximate cause of a suit or claim, the Client shall not be entitled to indemnification from Independent Contractor with respect to such suit or claim, and the Client, in its discretion, may reimburse Independent Contractor for reasonable defense costs attributable to the defense provided by any Special Deputy Attorney General appointed pursuant to section VI.C.

C. Any legal defense provided by Independent Contractor to the Client under this section must be free of any conflicts of interest, even if retention of separate legal counsel for the Client is necessary. Any attorney appointed to represent the Client must first qualify as and be appointed by the Attorney General of the State of Idaho as a Special Deputy Attorney General pursuant to Idaho Code Sections 67-1401(13) and 67-1409(1).

## VII. ASSIGNMENT AND SUBCONTRACTING

A. This CONTRACT is to be binding on the heirs, successors and assigns of the parties hereto and is not to be assigned by either party without first obtaining the written consent of the other. No assignment of this CONTRACT shall be effective until the assignee assumes in writing the obligations of the assigning party, and delivers such written assumption to the other original party to this CONTRACT. Use of SUBCONTRACTORS by the CONTRACTOR, or subsidiary or affiliate firms of the CONTRACTOR, for technical or professional services shall not be considered an assignment of a portion of this CONTRACT.

B. The parties agree that no services required under this CONTRACT may be performed under SUBCONTRACT unless both parties agree in writing.

C. Approved subcontracts will contain all appropriate Federal and State requirements and such conditions and provisions as the DEPARTMENT may deem necessary.

D. The CONTRACTOR understands and agrees to assume sole responsibility for the satisfactory performance of all subcontractors and subcontracted services.

## VIII. ACCOUNTING, AUDITING, RECORDS RETENTION AND ACCESS TO RECORDS

A. The CONTRACTOR shall maintain books, records, documents and other evidence directly pertinent to performance of federally funded work under this CONTRACT in accordance with generally accepted accounting principles and practices consistently applied, and in accordance with 40 CFR 31.36(i)(10) and (11), in effect on the date this CONTRACT is signed by both parties. Records shall be retained for a period of ten years after final payment is made and all other pending matters are closed. If any litigation, claim, negotiation, audit or other action involving the records has been started before the expiration of the ten-year period, the records must be retained until completion of the actions and resolution of all issues which arise from it, or until the end of the regular ten-year period, whichever is later.

The CONTRACTOR shall also maintain financial information and data used in the preparation or support of the cost submission required under 40 CFR 31.22 (for negotiation of this CONTRACT), or negotiated change order, and a copy of the cost summary submitted to the DEPARTMENT. The CONTRACTOR will obtain written approval from the DEPARTMENT prior to disposal of any records. The federal awarding agency, the Comptroller General of the United States, the U.S. Department of Labor, the DEPARTMENT, any other agency of the State of Idaho or any of their authorized representatives, shall have access to all such books, records, documents and other evidence for purposes of inspection, audit and copying during normal business hours.

The CONTRACTOR will provide proper facilities for such access and inspection. This CONTRACT may be terminated upon any refusal of the CONTRACTOR to allow access to the records as described above.

B. Audits.

1. Audits conducted under this Section shall be in accordance with generally accepted auditing standards and established procedures and guidelines of any reviewing or audit agency(s).

2. The DEPARTMENT'S monitoring and audit efforts shall include activities aimed at: (1) assessment of agreement operation at a given point in time; (2) comparison of actual performance versus established performance standards; (3) identification of agreement accomplishments and/or deficiencies in operation and administration; and (4) evaluation of agreement results, benefits and impact upon project objectives. The DEPARTMENT shall have the right to evaluate both the management and financial systems of the CONTRACTOR to ascertain that there is compliance with all of the provisions contained in this contract. In determining the adequacy of these systems, the DEPARTMENT shall utilize internal staff or arrange for an independent certified public accounting firm: (a) survey the CONTRACTOR'S system to obtain information through discussion, inquiry and observation of what the system is stated to be; (b) appraise the adequacy of the system in terms of standards prescribed herein; (c) select a number of transactions and trace them through the records to ascertain whether the system is actually followed and is effective; and (d) interview CONTRACTOR'S staff members to determine management and organizational needs.

C. The CONTRACTOR agrees to disclose all information and reports resulting from access to records under paragraph A. and B. of this Section to any of the agencies referred to in paragraph A.

D. Access to records is not limited to the required retention periods. The authorized agencies designated in paragraph A of this Section shall have access to records at any reasonable time for as long as the records are maintained.

E. This section applies to all records pertaining to this CONTRACT, TASK ORDERS, CHANGE ORDERS and AMENDMENTS:

1. To the extent the records pertain directly to performance of this CONTRACT;

2. If there is any indication that fraud, gross abuse or corrupt practices may be involved; or
3. If the CONTRACT is terminated for default or for convenience.

F. The CONTRACTOR agrees to account for all expenditures under this CONTRACT in accordance with generally accepted accounting principles, a cash or accrual method of accounting in accordance with 40 CFR 31.41 and to comply with the cost principles contained in 40 CFR 31.22 to determine allowable costs.

G. It is understood and agreed that in case of the termination of the existence of the CONTRACTOR by bankruptcy or any other reason, that all records in the CONTRACTOR'S possession, program and fiscal, relating to this CONTRACT shall become the property of the DEPARTMENT.

#### H. PROPERTY MANAGEMENT

The CONTRACTOR must comply with the property management requirements set forth in 40 CFR 35.6335 through 40 CFR 35.6400, where applicable.

The CONTRACTOR will submit property inventory reports on an annual basis by January 1 of each year, when the property is no longer needed and within 90 days from the end of the contract period. The CONTRACTOR must comply with the requirements for inventory reports set forth in 40 CFR 35.6660, where applicable.

Inventory reports must include the following:

- a. Description of property;
- b. Manufacturer's serial number, model number or other identification number;
- c. Source, including the assistance identification number;
- d. Unit acquisition date and cost; and
- e. Location, use and condition (by site and activity) and the date this information was recorded.

#### IX. PROJECT ASSESSMENT AND CORRECTIVE ACTION

The CONTRACTOR will maintain an ongoing analysis of project performance as it relates to project goals and objectives. Whenever the CONTRACTOR determines that goals are not being met as specified in the CONTRACT, the CONTRACTOR will develop a corrective action plan to meet those goals. On a monthly basis, the CONTRACTOR will be required to submit a report of the corrective action taken or planned. Unless otherwise specified in the statement of work in an AMENDMENT or TASK ORDER, the report will be due no later than the 10th of the following month.

## X. CONFIDENTIALITY

A. Where applicable, such as in the event of litigation, the CONTRACTOR shall not provide, disclose or reveal data, field notes, log books, photographs, computer stored information, drawings, specifications, reports, estimates, summaries or any other information or records including originals, copies, drafts, abstracts or information in any form generated or otherwise obtained in the performance of its responsibilities under this CONTRACT to any party other than the DEPARTMENT except upon compulsion by subpoena or other legal process. The CONTRACTOR shall provide prompt notice of service to the DEPARTMENT. The CONTRACTOR is not responsible for any of the above which may previously have been placed in the public domain. The DEPARTMENT will inform the CONTRACTOR in writing by certified mail when this clause is being invoked and what specific materials are considered confidential.

B. All such materials shall be the property of the DEPARTMENT and shall be returned to the DEPARTMENT within eighty (80) days of expiration or termination of the CONTRACT or upon written demand of the DEPARTMENT.

C. The CONTRACTOR shall require all SUBCONTRACTORS to comply with Subsection X.A of this Contract by explicit reference or provision in each SUBCONTRACT.

## XI. APPROPRIATION BY LEGISLATURE REQUIRED

It is understood and agreed that the DEPARTMENT is a government entity, and this Contract shall in no way or manner be construed so as to bind or obligate the State of Idaho beyond the term of any particular appropriation of funds by the State Legislature as may exist from time to time. In the event the Legislature of the State of Idaho fails, neglects, or refuses to appropriate such funds as may be required and designated to continue payment for this Contract, this Contract shall be at such time automatically terminated and at an end. All future rights and liabilities of the parties hereto shall thereupon cease within thirty (30) days after the notice to the CONTRACTOR.

## XII. EFFECT OF TERMINATION OF FEDERAL FUNDING

In the event Federal matching funds are reduced from current prorated levels, or terminated, the financial participation of the State of Idaho may be reduced accordingly or terminated.

## XIII. BINDING EFFECT OF FEDERAL PURCHASE OF SERVICE REGULATIONS AND STATE PLANS

This agreement is subject to the provisions of any relevant Federal regulations and any relevant provisions of the State Plan in effect at the time this Contract is executed, or which thereafter became

effective. Such Federal regulations and State plans are on file in the Central Office of the Department Environmental Quality and are available for inspection by the CONTRACTOR.

XIV. OBLIGATIONS OF THE CONTRACTOR

A. AUTHORIZATION TO PROCEED

The CONTRACTOR will not begin work on any services until this CONTRACT, any AMENDMENT(S) or TASK ORDER(S) have been signed by the DEPARTMENT, the effective date has been filled in and that date has arrived and passed. The CONTRACTOR, SUBCONTRACTOR or their employees shall not render services to the DEPARTMENT under the terms of this CONTRACT until the CONTRACT has been fully signed by each party and the CONTRACT has become effective. Furthermore, the DEPARTMENT is in no way responsible for reimbursing the CONTRACTOR for services rendered prior to the signature of the DEPARTMENT and the arrival of the effective date of this CONTRACT. No employee or agent of the DEPARTMENT may authorize reimbursable services to the CONTRACTOR except the Director of the DEPARTMENT in writing.

For CONTRACTS utilizing TASK ORDERS, authorization to proceed on work as to scope, cost and time for completion shall be in the form previously described for TASK ORDERS. Each TASK ORDER shall have:

1. A preamble referencing the DEPARTMENT, the CONTRACTOR, PROJECT, TASK, TASK ORDER NUMBER and this CONTRACT.
2. A description of the services to be provided, including work products, and the estimated time schedule for completion.
3. Any special conditions not covered in this CONTRACT.
4. ATTACHMENTS and SIGNATURES sections.

B. The CONTRACTOR'S obligations under this Section are in addition to the CONTRACTOR'S other obligations under this CONTRACT.

XV. FEDERAL AND STATE AUDIT EXCEPTIONS

When Federal or State audits indicate that payments to the CONTRACTOR do not meet the applicable Federal or State rules and regulations, the CONTRACTOR shall refund and pay to the DEPARTMENT any payments made arising from the CONTRACTOR'S ineligible or improper receipt or use of Federal financial participation funds, and the DEPARTMENT must refund such payments to the applicable Federal funding agency.

XVI. AFFIRMATIVE ACTION/EQUAL EMPLOYMENT OPPORTUNITY

A. The CONTRACTOR hereby agrees to provide all services funded through or affected by this CONTRACT without discrimination on the basis of race, color, national origin, age or physical/mental impairment, and to comply with all relevant sections of:

1. Title VI of the Civil Rights Act of 1964, as amended;
2. Section 504 of the Rehabilitation Act of 1973, as amended; and
3. The Age Discrimination Act of 1975 as amended.
4. The Americans With Disabilities Act of 1990.

B. The CONTRACTOR agrees to provide equal employment opportunity and take affirmative action in employment on the basis of race, color, national origin, religion, sex, age, physical/mental impairment and all relevant sections of:

1. Executive Order 11246, as amended by Executive Order 11375;
2. The applicable provisions of the Department of Labor regulations (48 CFR, Part 22); as amended;
3. Section 503 of the Rehabilitation Act of 1973, and
4. Sections 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974.

C. The CONTRACTOR agrees to comply with the Civil Rights, equal employment opportunity Labor Law and other requirements under 40 CFR, Part 7.

D. The CONTRACTOR agrees to comply with the requirements for small, minority women's and labor surplus area businesses in 40 CFR 31.36(e) in its award of any SUBCONTRACT under this CONTRACT.

1. The CONTRACTOR agrees to assure that each of these business entities is given the opportunity to participate in subcontract awards under this contract. This policy applies to all SUBCONTRACTS for supplies, construction and services under this CONTRACT.

2. The CONTRACTOR shall file a quarterly report on a form to be provided by the DEPARTMENT, listing all small, minority and women's business enterprises that were subcontracted to during the preceding quarter. A form must be filed even if a small or disadvantaged business was not utilized.

E. The CONTRACTOR agrees to verify and ensure that all individuals in their employ are eligible under federal and state law to work in the United States.

## XVII. CONFLICT OF INTEREST

### A. Organizational Conflicts of Interest

1. The CONTRACTOR warrants that to the best of the CONTRACTOR'S knowledge and belief, there are no relevant facts or circumstances which could give rise to actual, apparent or potential organizational conflicts of interest or that the CONTRACTOR has disclosed all such relevant information.

2. The DEPARTMENT reserves the right to procure services from contractors other than the CONTRACTOR in the event the CONTRACTOR has an irresolvable conflict of interest which cannot be avoided. Such conflicts may include status as a potentially responsible party; present or proposed contractual arrangement with a potentially responsible party to be studied; present or proposed contractual agreements with a firm that manufactures or sells any substance or item to be studied, or present or proposed contractual agreements with a firm that manufactures or sells any substance or item in competition with a substance or item to be studied under this proposed contract.

3. Upon receipt of a work assignment, the CONTRACTOR shall identify any potential conflict of interest in its performance of services contemplated by the work assignment. If the DEPARTMENT determines that the CONTRACTOR has an irresolvable conflict which cannot be avoided, Section III and/or IV of this Contract will apply. The CONTRACTOR shall provide a Project Team which is qualified and free from potential conflict of interest to perform the services required by this CONTRACT, AMENDMENT(S) and/or task orders(s).

### B. Individual Conflicts of Interest

With regard to individual employees performing services under this CONTRACT, the CONTRACTOR shall:

1. Notify the DEPARTMENT of any actual, apparent or potential conflict of interest involving any individual employee proposed to perform services under this CONTRACT, AMENDMENT(S) and/or TASK ORDER(S). In the event of any conflict of interest, the individual employee may be disqualified by the DEPARTMENT from taking part in any services creating the conflict of interest.

2. Require each individual professional employee proposed to work on any TASK ORDER to sign a copy of the "Individual Employee Agreement".

## XVIII. CONTRACT DATA

The CONTRACTOR and the DEPARTMENT assure that the cost and pricing data submitted for evaluation with respect to negotiation of prices for negotiated CONTRACTS, lower tier SUBCONTRACTS and change

orders are based on correct, accurate and complete data supported by their books and records. If the DEPARTMENT or appropriate Federal agency determines upon agreement by the CONTRACTOR that any price (including profit) negotiated in connection with this CONTRACT, lower tier SUBCONTRACT or AMENDMENT(S) and/or TASK ORDER(S) thereunder was increased by any significant sum because the data provided are incomplete, inaccurate or not current at the time of submission, then such price, cost or profit shall be reduced accordingly and the CONTRACT shall be modified in writing.

#### XIV. EMPLOYMENT

The CONTRACTOR shall not accept employment from any party other than the DEPARTMENT, or Federal agencies, for work directly related to the Site (services) covered under this CONTRACT for a period of three (3) years from termination of the CONTRACT, or until any litigation related to the Site is completed, whichever is longer, unless it has received written release of this restriction from the DEPARTMENT.

#### XX. SEVERABILITY

If any term or provision of this CONTRACT is held by the courts to be illegal or in conflict with any Idaho law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the CONTRACT did not contain the particular term or provision held to be invalid.

#### XXI. NON-WAIVER OF BREACH

Failure of the CONTRACTOR or the DEPARTMENT to insist upon strict performance of any of the covenants and conditions of this CONTRACT, or to exercise any option herein conferred in any one or all instances, shall not be construed to be a waiver or relinquishment of any such covenant or condition but the same shall be and remain in full force and effect, unless such waiver is evidenced by the prior written consent of the CONTRACTOR or the DEPARTMENT.

#### XXII. LICENSES

For the duration of this CONTRACT, the CONTRACTOR will remain in effect and have in possession all applicable licenses required by federal and state statutes and county and city ordinances, including an Idaho business license, if so required.

#### XXIII. CLEAN AIR AND CLEAN WATER ACTS

The CONTRACTOR shall comply with all applicable standards, orders or requirements issued under Section 306 of the Clean Air Act (42 USC 1857(h)), Section 508 of the Clean Water Act (33 USC 1368),

Executive order 11738 and the Environmental Protection Agency Regulations (40 CFR, Part 15). All violations are to be reported to the appropriate federal or state agency.

XXIV. GOVERNED BY THE LAWS OF THE STATE OF IDAHO

This CONTRACT shall be governed by the laws of the State of Idaho and performed therein.

XXV. NOTICE OF CONTRACT EFFECTIVENESS

It is understood that this document is not effective until the appropriate CONTRACTING OFFICER has signed the document, the effective date has been filled in by the CONTRACTING OFFICER, and that date has arrived or passed. Neither the CONTRACTOR nor his organization will render services to the DEPARTMENT under the terms of this document until the document has been fully signed by each party and the Contract has become effective. Furthermore, the DEPARTMENT is in no way responsible for reimbursing the CONTRACTOR for services rendered prior to the appropriate signature by the CONTRACTING OFFICER of the DEPARTMENT and the arrival of the effective date of this Contract.

XXVI. CERTIFICATION REGARDING LOBBYING

The CONTRACTOR certifies that:

- A. None of the funds provided by this contract have been paid or will be paid by or on behalf of the CONTRACTOR to any person for influencing or attempting to influence an officer or employee of any governmental agency, a member, officer or employee of Congress or the State legislature in connection with the awarding, continuation, renewal, amendment, or modification of any contract, grant, loan, or cooperative agreement.
- B. If any funds, other than funds provided by this contract, have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any governmental agency, a member, officer or employee of Congress or the State legislature in connection with this contract, the CONTRACTOR shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions, and a copy of Standard Form LLL to the contracting agency.
- C. The CONTRACTOR shall require that the language of this certification be included in any subcontract, at all tiers, (including grants, subgrants, loans, and cooperative agreements) entered into as a result of this contract, and that all subrecipients shall certify and disclose accordingly.
- D. The CONTRACTOR understands that a false statement of this certification may be grounds for rejection or termination of this contract, and that their signature upon this contract is a material representation of fact upon which reliance was placed when this contract was made or entered into. In addition, under Section 1352, Title 31, U.S. Code, a false

statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such false statement.

#### XXVII. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

The CONTRACTOR certifies to the best of its knowledge and belief that it and its principals:

A. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

B. Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of Federal of State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

C. Are not presently indicted for or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph B of this certification; and

D. Have not within a three-year period preceding this contract had one or more public transactions (federal, state, or local) terminated for cause or default.

The CONTRACTOR understands that false statement on this certification may be grounds for termination of the contract. In addition, under 18 U.S.C. Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to five years, or both.

#### XXVIV. COMPLETE STATEMENT OF TERMS

This Contract, the Request for Proposal, the Request for Proposal Pre-Bid Questions, DEQ Response and Request for Proposal Addendum, the Contractor's bid proposal and related attachments constitutes the entire agreement between the parties hereto and shall supersede all previous proposals, oral or written, negotiations, representations, commitments, and all other communications between the parties. It may not be released, discharged, changed or modified or assigned in whole or in part, and no claim for additional services not specifically provided herein will be allowed by the DEPARTMENT, except to the extent provided by an instrument in writing signed by a duly authorized representative of the CONTRACTOR and the DEPARTMENT.

Any Riders, Appendices, Attachments, and all other information attached to this Contract serve to supplement the terms and conditions of this Agreement, and do not change or eliminate any provision of this Agreement.

IN WITNESS WHEREOF, the parties have executed this agreement.

CONTRACTOR:STATE OF IDAHO:

BY:

BY:

NAME:

NAME: Matt Orem \_\_\_\_\_

TITLE:

TITLE: Financial Officer\_\_

DATE:

DATE:

Contractor's Mailing Address:

Telephone #: \_\_\_\_\_

Fax #:

Email address: \_\_\_\_\_

**APPENDIX B**

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION,  
AND OTHER RESPONSIBILITY MATTERS**

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification; and
- d) Have not within a three-year period preceding this contract had one or more public transactions (federal, state, or local) terminated for cause or default.

I understand that false statement on this certification may be grounds for termination of the contract. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to five years, or both.

\_\_\_\_\_  
Typed Name & Title of Authorized Representative

Signature of Authorized Representative \_\_\_\_\_ Date

\_\_\_\_\_ I am unable to certify to the above statement. My explanation is attached.

\_\_\_\_\_

**APPENDIX C. Certification of Independent Price Determination**

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

A. The offeror certifies that:

1. The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to:

- i. Those prices,
- ii. The intention to submit an offer, and
- iii. The methods or factors used to calculate the prices offered.

2. The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

3. No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

B. Each signature on the offer is considered to be a certification by the signatory that the signatory:

1. Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

2.

i. Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above;

ii. As an authorized agent, does certify that the principals named below have not participated, and will not participate, in any action contrary to subparagraph (a)(1) through (a)(3) above; and

iii. As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

3. If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

Insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization:

Full name of person(s) responsible for pricing

Title

Date

---

Typed Name of Authorized Representative \_\_\_\_\_ Title \_\_\_\_\_

Signature of Authorized Representative \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_ I am unable to certify to the above statement. My explanation is attached.

---

APPENDIX D

PRICE PROPOSAL FORM – Complete Both Pages (Federal Funding Alternative and State Funding Alternative)  
 Bunker Hill Superfund Remedial Action Construction Services

Page 1 - **Federally Funded**

Task Order Pricing

Labor	Unit of Measure	Estimated Hours	Fully Burdened Hourly Rate	Extended Price
Project Manager	Hourly	32		
Health and Safety	Hourly	8		
Administrative Support	Hourly	8		
Superintendent	Hourly	80		
Small Equip Operator (Davis Bacon)	Hourly	80		
Large Equip Operator (Davis Bacon)	Hourly	80		
Laborer (Davis Bacon)	Hourly	160		
Truck Driver (Davis Bacon)	Hourly	40		

Equipment	Unit of Measure	Estimated Hours	Fully Burdened Hourly Rate	Extended Price
Cat 303 Mini Excavator (or equal)	Hourly	40		
Cat 320 Excavator (or equal)	Hourly	40		
950 Class Loader	Hourly	40		
Skid-steer Loader	Hourly	40		
4,000 Gallon Water Truck	Hourly	16		
End Dump - 12 cubic yards	Hourly	24		
Crew Truck	Hourly	80		

Total Price for Labor and Equipment for Federal Example Project	
---	--

Page 2 – **State Funded**

Task Order Pricing

Labor	Unit of Measure	Estimated Hours	Fully Burdened Hourly Rate	Extended Price
Project Manager	Hourly	16		
Health and Safety	Hourly	4		
Administrative Support	Hourly	4		
Superintendent/Project Manager	Hourly	24		
Small Equip Operator	Hourly	24		
Large Equip Operator	Hourly	16		
Laborer	Hourly	48		
Truck Driver	Hourly	16		

Equipment	Unit of Measure	Estimated Hours	Fully Burdened Hourly Rate	Extended Price
Cat 303 Mini Excavator (or equal)	Hourly	8		
Cat 320 Excavator (or equal)	Hourly	8		
950 Class Loader	Hourly	8		
Skid-steer Loader	Hourly	16		
4,000 Gallon Water Truck	Hourly	4		
End Dump - 12 cubic yards	Hourly	12		
Crew Truck	Hourly	24		

Total Price for Labor and Equipment For State Example Project

--

-Estimated hours and days in the Price Proposal Form are for proposal evaluation only. Actual hours for completion of each Task listed in Section 2 must be specified in Task Orders that will be developed after the contract is awarded.

APPENDIX E: Davis-Bacon Wage Rates - ID20200060

"General Decision Number: ID20200060 01/03/2020

Superseded General Decision Number: ID20190060

State: Idaho

Construction Type: Heavy

HEAVY CONSTRUCTION, Including water and sewer line construction and heavy construction projects on treatment plants and industrial (power plants, manufacturing plants, processing plants, etc.) sites

County: Shoshone County in Idaho.

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015.

If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number Publication Date

0 01/03/2020

\* CARP0001-045 06/01/2019

Rates Fringes

CARPENTER (Form Work Only).....\$ 35.47 16.88

-----  
ELEC0073-011 07/01/2019

Rates Fringes

ELECTRICIAN.....\$ 36.05 19.18

-----  
ENGI0370-035 06/01/2018

Rates Fringes

---

POWER EQUIPMENT OPERATOR:

Backhoe (45,000 gw &  
under), Cranes (25 tons &  
under), Drill (8 in bit  
and over

GROUP 5.....\$ 28.76 15.95

Backhoe (45,000-110,000  
gw), Crane (25-45 tons),  
Bulldozer (D-6 and over),  
Grader/Blade, Front-End  
Loader(4-8 yds), Paver,  
Scrapers (all)

GROUP 6.....\$ 29.04 15.95

Backhoe (over 110,000 gw),  
Cranes (45-85 tons), Heavy  
Duty Mechanic, Front End  
Loader (8-10 yds)

GROUP 7.....\$ 29.31 15.95

Bulldozer (up to D-6)

GROUP 3.....\$ 28.44 15.95

Cranes (85 tons & over),  
Front End Loader (10 yds &  
over)

GROUP 8.....\$ 30.41 15.95

Front End Loader (under 4  
yds)

GROUP 4.....\$ 28.60 15.95

Rollers (all)

GROUP 1.....\$ 27.51 15.95

ZONE PAY:

ZONE CENTERS: SPOKANE, PASCO, LEWISTON

ZONE 1: 0-45 Miles: Free

ZONE 2: 45 Miles & Over: \$2.00

BOOM PAY (ALL CRANES):

(A): 180'-250': \$.50 over scale

(B): over 250': \$.80 over scale

---

IRON0014-006 07/01/2018

Rates Fringes

IRONWORKER, REINFORCING AND

STRUCTURAL.....\$ 33.18 27.82

---

LABO0238-028 06/01/2017

Rates Fringes

LABORER (PIPELINE ONLY)

COMMON.....\$ 26.28 12.15

---

LABO0238-031 07/01/2019

Rates Fringes

LABORER

Asphalt Includes Raker,  
Shoveler, Spreader, and  
Distributor

Group 4.....\$ 28.48 13.00

Flagger

Group 1A.....\$ 25.84 13.00

Zone Differential (Add to Zone 1 rates): Zone 2 - \$2.00

BASE POINTS: Spokane

Zone 1: 0-45 radius miles from the main post office.

Zone 2: 45 radius miles and over from the main post office

-----  
PLAS0072-003 06/01/2018

BENEWAH, BONNER, BOUNDARY, CLEARWATER, IDAHO (NORTH OF THE 46TH  
PARALLEL), KOOTENAI, LATAH, LEWIS AND NEZ PERCE AND SHOSHONE  
COUNTIES

ZONE 1:

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...\$ 29.07 14.13

Zone Differential (Add to Zone 1 rate): Zone 2 - \$2.00

BASE POINTS: Spokane, Pasco, Lewiston, Wenatchee

Zone 1: 0-45 radius miles from the main post office

Zone 2: Over 45 radius miles from the main post office

-----  
PLUM0044-015 06/01/2018

Rates Fringes

PLUMBER

Zone 1.....\$ 39.46 18.24

-----  
TEAM0690-002 06/01/2019

Rates Fringes

TRUCK DRIVER (DUMP)

6 yds and under.....\$ 26.68 17.40

over 6 yds.....\$ 27.12 17.40

-----  
SUID2010-053 08/08/2012

Rates Fringes

CARPENTER, Excludes Form Work....\$ 29.92 5.20

LABORER: Common or General.....\$ 24.66 8.36

LABORER: Landscape.....\$ 22.13 11.13

LABORER: Pipelayer.....\$ 17.67 7.26

OPERATOR: Bobcat/Skid

Steer/Skid Loader.....\$ 20.97 0.00

OPERATOR: Concrete Batch

Plant.....\$ 24.94 11.96

---

OPERATOR: Forklift.....\$ 21.20 0.00  
TRUCK DRIVER: Lowboy Truck.....\$ 21.00 12.10  
TRUCK DRIVER: Water Truck.....\$ 24.48 11.67

-----  
WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.  
=====

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts). Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

-----  
The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number,

---

005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier. Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

---

#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
  - \* a survey underlying a wage determination
  - \* a Wage and Hour Division letter setting forth a position on a wage determination matter
  - \* a conformance (additional classification and rate) ruling
-

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====  
END OF GENERAL DECISION

"

---

**BUNKER HILL SUPERFUND SITE**  
**FINAL RESIDENTIAL YARDS**  
**REMEDIAL DESIGN REPORT**

**March 1994**

**Prepared For:**

**ASARCO INCORPORATED, HECLA MINING COMPANY, SUNSHINE MINING COMPANY**

# TABLE OF CONTENTS

LIST OF APPENDICES . . . . .	iv
1.0 INTRODUCTION . . . . .	1-1
1.1 OVERVIEW . . . . .	1-1
1.2 PERFORMANCE OBJECTIVES AND STANDARDS . . . . .	1-2
1.2.1 Performance Objectives . . . . .	1-3
1.2.2 Performance Standards and Design Considerations . . . . .	1-3
1.2.2.1 <u>Residential Soil Sampling</u> . . . . .	1-3
1.2.2.2 <u>Yard Soil Remediation</u> . . . . .	1-4
1.2.2.3 <u>Clean Replacement Material</u> . . . . .	1-7
1.2.2.4 <u>Community Wide Average</u> . . . . .	1-7
2.0 TECHNICAL ANALYSIS . . . . .	2-1
3.0 DESIGN . . . . .	3-1
3.1 SITE ASSESSMENT AND SELECTION . . . . .	3-1
3.2 COLLECTIVE AGREEMENT . . . . .	3-2
3.3 UTILITIES LOCATION . . . . .	3-3
3.4 SITE PLAN & PHOTO DOCUMENTATION . . . . .	3-4
4.0 CONSTRUCTION . . . . .	4-1
4.1 YARD PREPARATION . . . . .	4-1
4.1.1 Removal of Obstructions . . . . .	4-1
4.1.2 Dust Control . . . . .	4-2
4.1.3 Excavation Activities . . . . .	4-3
4.1.4 Heavy Equipment Operations . . . . .	4-4
4.1.5 Protection of Structures and Plants . . . . .	4-5
4.1.6 Visual Marker Application . . . . .	4-5
4.1.7 Temporary Work Stoppages . . . . .	4-5
4.1.8 Clean Access for Property Owner . . . . .	4-6
4.2 DECONTAMINATION PROCEDURES . . . . .	4-6
4.3 SOIL DISPOSAL . . . . .	4-7
4.3.1 Waste Transport . . . . .	4-7
4.3.1.1 <u>Documentation</u> . . . . .	4-8
4.3.2 Repository Operation . . . . .	4-8
4.3.2.1 <u>Dumping Procedures</u> . . . . .	4-8
4.3.2.2 <u>Grading Procedures</u> . . . . .	4-9
4.3.2.3 <u>Dust Control</u> . . . . .	4-9
4.3.2.4 <u>Decontamination</u> . . . . .	4-9
4.3.2.5 <u>Access Control</u> . . . . .	4-9
4.3.3 Seasonal Closure . . . . .	4-9
4.3.4 Documentation . . . . .	4-10
4.4 BACKFILL ACTIVITIES . . . . .	4-10
4.4.1 Rough Grade Procedures . . . . .	4-11
4.4.2 Compaction . . . . .	4-11
4.4.3 Barrier Thickness Verification . . . . .	4-11
4.5 SOD APPLICATION . . . . .	4-12
4.6 FOLLOW-UP ACTIVITIES . . . . .	4-12
4.6.1 Site Inspection . . . . .	4-13
4.6.2 Repair Work . . . . .	4-13

4.6.3	Lawn Maintenance . . . . .	4-13
4.6.4	Emergency Repairs . . . . .	4-14
5.0	OPERATIONS AND MAINTENANCE . . . . .	5-1
6.0	SUMMARY OF PERTINENT REMEDIAL DESIGN INVESTIGATIONS . . . . .	6-1
7.0	FUTURE DELIVERABLES (PLANS & REPORTS) . . . . .	7-1
7.1	GENERAL PROJECT MANAGEMENT . . . . .	7-1
7.1.1	Project Management Monthly Reports . . . . .	7-1
7.1.2	Technical Memoranda . . . . .	7-1
7.2	REMEDIAL DESIGN . . . . .	7-2
7.3	REMEDIAL ACTION . . . . .	7-2
7.3.1	Residential Areas Annual Remedial Action Work Plans . . . . .	7-2
7.3.1.1	<u>Sampling Data</u> . . . . .	7-4
7.3.1.2	<u>Individual Yard Site Plans</u> . . . . .	7-5
7.3.2	Health and Safety Plan . . . . .	7-5
7.3.3	Annual Construction Completion Report . . . . .	7-5
8.0	CERTIFICATION OF COMPLETION OF REMEDIAL ACTION . . . . .	8-1

LIST OF APPENDICES

Appendix

Title

A	Allocation Map
B	Sampling and Analysis Plan (SAP)
C	Receipt for Delivery of Garden Soil
D	"High Risk" Yard Remediation
<del>E</del>	<del>Bunker Hill Superfund Site, Warranty, Residential Areas Remediation Assessment and Certification</del>
<del>F</del>	<del>Bunker Hill Superfund Site, Residential Yard Remediation Homeowner Arbitration Agreement</del>

BUNKER HILL SUPERFUND SITE  
FINAL RESIDENTIAL YARDS  
REMEDIAL DESIGN REPORT

1.0 INTRODUCTION

The purpose of this Remedial Design Report (RDR) is to provide a process through which residential yards are identified for remediation, the appropriate remedial action is selected, and the residential yard is remediated. Residential yard soil removal and replacement is included under the remedial alternative for the Bunker Hill Superfund Site Populated Areas described in the IDHW & EPA August 1991 Record of Decision (ROD). This RDR presents performance objectives and standards, technical analysis, and design and construction specifications. In addition, this RDR addresses operation and maintenance and lists all future deliverables required for Residential Yards remedial actions.

1.1 OVERVIEW

During the summer of 1986, an EPA Removal Program excavated lead-bearing soils from parks, playgrounds, and public rights-of-way. During the summer of 1989, the removal effort was extended to residences in Kellogg, Smeltonville, Page, Wardner, and Ross Ranch. The residences were selected based on surface and subsurface lead levels at the residences of the portion of the population thought to be at greatest risk, households inhabited by children less than 6 years old or pregnant women. The 1990 residential removal continued where the 1989 removal ended and encompassed residences with children to 9 years old. The 1992 Bunker Hill Yard Remediation Program continued the 1991 remediation effort which addressed residences with children up to 12 years old and added the communities of Pinehurst and Elizabeth Park. Remediation efforts continued in 1993 and included residences with pregnant women and children up to and including 6 years old.

This RDR addresses residential soils within Area I of the 21 square mile Bunker Hill Superfund Site (Site) as defined by the Allocation Map in Attachment C of the Consent Decree. A copy of the Allocation Map is provided in Appendix A of this document. Specifically, this RDR provides:

- A sampling method for determining the need and/or level of remedial action required at any individual residential property within the Site.
- The criteria for selection of the specific remedial action.
- Procedures and specifications for soil replacement of residential yards selected for remediation.

The Area I boundaries between residential areas and the surrounding hillsides, as shown on the Allocation Map, are approximate. The boundary for Area I, where a residential yard abuts undeveloped hillsides, shall include only those contiguous hillside areas clearly used in conjunction with that residence. Residential yards and lots considered for remediation shall include those residential properties accessed by a maintained road on or before December 31, 1993. Platted but undeveloped residential lots that are not accessed by a maintained road on or before December 31, 1993 are excluded from Area I.

## 1.2 PERFORMANCE OBJECTIVES AND STANDARDS

IDHW and U.S. EPA have selected a remedy for residential soils at or above a threshold lead concentration of 1,000 ppm within the Site. This remedy addresses surficial soils only in currently established residential areas. This remedy does not focus on the complete removal of soil above the action level from residential yards, but focuses on creating a barrier between the soil above the action level and the residents. For the purposes of this RDR, soils above the action level are defined as soils with lead concentrations equal to or greater than 1,000 ppm.

### 1.2.1 Performance Objectives

The residential yard soil remediation objectives are to:

- 1) Reduce human contact with soil above the action level.
- 2) Reduce metals bearing fugitive dust.
- 3) Create average soil lead concentrations in the residential areas of the Site that are protective of human health.
- 4) Dispose of soils removed from residential yards in such a manner that human contact with such soils is prevented, and infiltration and airborne contaminant migration are controlled.

This remedial action is one of many actions designed to meet the overall Remedial Action Objective that 95 percent or more of the children tested in the blood lead survey have blood lead levels below 10 ug/dl and that less than 1 percent have blood leads greater than 15 ug/dl.

### 1.2.2 Performance Standards and Design Considerations

#### 1.2.2.1 Residential Soil Sampling

All residential properties shall be sampled at the 0- to 1-, 1- to 6-, 6- to 12- and 12- to 18-inch intervals for determination of the 1,000 ppm lead threshold concentration. Sampling will also include discrete areas not previously sampled for yards previously dropped from a removal action list because yard soils were below the 1,000 ppm lead threshold level. Sampling and analysis shall be conducted according to Appendix B of this RDR. Residential soil sample results will be provided to the respective owners on the plot plan or in a letter to each owner.

Soil samples were collected from a geographic distribution of residential properties in the Bauman Subdivision (as delineated on the Allocation Map in Appendix A). Analysis results from the

properties sampled were below the 1,000 ppm action level. Therefore, yards in the Bauman Subdivision will not require further sampling or remediation.

1.2.2.2 Yard Soil Remediation

Based on the results of the yard soil sampling, for those residential yards that equal or exceed the 1,000 ppm lead action level, the extent of remediation will be determined as follows:

If Interval Equals or Exceeds Action Level		If Interval Less than Action Level		Remediation Depth
0 - 1"	AND	1 - 6", 6 - 12"	THEN	6"
1 - 6"		0 - 1", 6 - 12"		6"
6 - 12"		0 - 1", 1 - 6"		12"
12 - 18"		0 - 1", 1 - 6", 6 - 12"		NO REMEDIATION
0 - 1", 1 - 6"		6 - 12"		6"
0 - 1", 6 - 12"		1 - 6"		12"
1 - 6", 6 - 12"		0 - 1"		12"
NONE		0 - 1", 1 - 6", 6 - 12"		NO REMEDIATION

All produce garden areas in any yard being remediated will receive 24 inches of clean replacement soil. The size of replaced garden area will be the same as the existing garden area unless the property owner agrees to something less. At yards where no garden area currently exists a new garden area up to 150 square feet will be established if requested. New or existing garden locations will be identified on the site plans, which will become part of the ICP tracking system records. The need for a visual barrier below clean soil in garden areas will typically be based upon the lead concentration of the 12- to 18-inch depth sample. In instances where excavation to 24 inches does not occur and a garden soil barrier is constructed by placement of clean soil over existing

soils with concentrations greater than 1,000 ppm lead, the need for a barrier will be determined by the underlying soil concentrations as characterized by the 1- to 6-, 6- to 12-, and 12- to 18-inch yard samples.

A maximum of 11 cubic yards of clean soil for produce gardens will be delivered, upon request, to residents whose yards do not require remediation. The soil will be made available on a Reasonably Segregable Area basis during the period from initiation of construction activities within that Reasonably Segregable Area until work in that area has been certified as complete. Property owners will be notified by letter regarding the garden soil availability. A sign-off form for residents requesting clean soil is presented in Appendix C.

If existing grades permit and the landowner approves, clean replacement soil can be used as cover material for yards requiring remediation. The thickness of the fill will result in a minimum 12 inch barrier of clean soil overlying soils exceeding the action level. This scenario may not require excavation. A visual marker as defined in Section 4.1.6 will be placed on existing soil prior to placing fill.

For each residential yard requiring remediation, the exact nature of the remediation will be determined on a case-by-case basis. However, for consistency, the following areas will generally be remediated within each yard:

- Sod areas
- Roadway shoulders (if curb and gutter are not present) to asphalt or pavement and to the lateral extension of property lines
- Landscaped areas
- Play areas
- Garden areas
- Unpaved driveways

- Garages with dirt floors
- Storage areas
- Contiguous hillside areas clearly used in conjunction with a residence.

Areas immediately associated with the residential properties (i.e., road shoulders and alleys) will not require top soil, but will require replacement with clean material in kind or a permanent cover.

For residential yards or discrete areas that require excavation to 12 inches, and the results of sampling in the 12- to 18-inch interval for the yard area sample exceed the action level, a visual marker (such as erosion control fabric or other suitable material) will be placed prior to backfilling with clean fill.

During the excavation process, all existing sod and soil coverings will be removed and disposed of along with the soil. Larger trees and shrubs will be left in place. After spreading, compaction, and grading, clean fill will be revegetated if appropriate. The lawn areas of remediated yards will generally be revegetated with sod. Other remediated areas not currently planted with lawns, such as vacant lots or improved contiguous hillside areas not currently serving as lawns, will be stabilized and seeded with native grasses to achieve a ground-cover level of 85 percent within three years. If preferred by a property owner, seeding with native grasses could be substituted for the sod. To the extent practicable, all yard landscaping will be returned to its original condition. Removed Contaminated Soils shall be disposed of at the Page Pond Repository or other EPA-approved area.

Unpaved roadways within residential areas will be remediated concurrently with the residential area in accordance with the specifications presented in the Final Rights-of-Way (ROW) RDR. Requirements for removal and replacement of soils on vacant

residential lots within Residential Areas will be the same as for occupied properties.

#### 1.2.2.3 Clean Replacement Material

Clean replacement material (including soil, gravel, etc.) is considered to contain less than 100 ppm lead, 100 ppm arsenic and 5 ppm cadmium based on the average of backfill sampling results. No replacement materials are to exceed 150 ppm lead. Sampling will be conducted in accordance with the Sampling and Analysis Plan (SAP) presented in Appendix B.

Replacement soil for yards, gardens, flower beds, and other landscaped yard areas will have properties that promote plant growth.

Remediated areas where EPA determines that revegetation is not necessary may receive clean gravel instead of soil.

#### 1.2.2.4 Community Wide Average

Remediation of residential areas shall occur as scheduled on an annual basis. Upon completion of a Reasonably Segregable Area the average residential soil lead concentration shall be calculated following the procedure described in Section 8.0. If the average is 350 ppm lead, or greater, additional yards shall be remediated until the average for the Reasonably Segregable Area is calculated to be below the 350 ppm criterion.

## 2.0 TECHNICAL ANALYSIS

Based on past removal actions and the 1991 and 1992 RODs, the remedial designs outlined in this RDR for residential soils provide protection of human health through installation of a sod and soil barrier between residents and soil above the action level. In addition, the designs address the concerns of exposure through direct contact with soil above the action level or tracking of soil above the action level into homes as a source of house dust. Thus, the designs have a demonstrated ability to meet the performance objectives and therefore additional technical analysis is not required.

### 3.0 DESIGN

A detailed remediation plan for each residential yard and vacant residential lot will be prepared on a case-by-case basis. The procedure for plan preparation is outlined below.

#### 3.1 SITE ASSESSMENT AND SELECTION

Residential properties selected for yard remediation will meet the following criteria:

1. Each property will be located within the Area I boundaries as shown on the Allocation Map (Appendix A). As previously stated, residential yards and lots considered for remediation shall include those residential properties accessed by a maintained road on or before December 31, 1993. Platted but undeveloped residential lots that are not accessed by a maintained road on or before December 31, 1993 are excluded from Area I.
2. With the exception of the "High Risk Program" defined in Appendix D, remediation will be performed on an area-by-area basis. The property must be within the areas scheduled for remediation during that construction season. The construction season is considered to be from June 15 to mid October, barring unusual weather.
3. The property owner (and tenant, if applicable), shall have signed an access agreement that allows representatives of EPA, IDHW, Panhandle Health District (PHD), and the Settling Defendants access for entry, sampling, removal of lead-bearing materials from property, and remediation. The agreement will also provide for access for cap maintenance and inspection activities through the following construction season. Access for EPA and IDHW for future audits to evaluate cap integrity will also be addressed in the access agreement.
4. Properties will be selected for remediation on the basis of yard soils equal to or exceeding the 1,000 ppm lead remediation action level as discussed in Section 1.2.2.2. Sampling will be conducted on a block-by-block basis as outlined in the SAP in Appendix B. If yard soil lead levels in the 0- to 1-, 1- to 6-, or 6- to 12-inch interval are between 900 and 1,000 ppm lead and the property owner requests a resample, then the EPA/IDHW will resample the yard in accordance with the SAP in

Appendix B. Results of the resample will be used to determine the necessity of remediation.

### 3.2 COLLECTIVE AGREEMENT

The collective agreements among the property owners, the Settling Defendants, IDHW and/or the EPA, including access agreements, will be completed prior to starting remediation activities. These agreements will include a statement of work for each yard. Site-specific features for each yard will be identified and collectively agreed upon by the above-mentioned parties and will include the following:

- Access to the yards by contractor work crews;
- Requests that residents and visitors limit travel through work areas and that children and pets are also kept out of work areas during remediation;
- Excavation limits;
- Trees and/or shrubs to remain;
- Cultural features to be removed by the owner or tenant(s);
- Cultural features to be removed by the contractor;
- Produce garden areas requiring deeper excavation depths, garden soil up to 24 inches, and any special soil characteristic concerns;
- Limits of non-paved driveways to be remediated;
- On-site access to water;
- Removal or relocation of utilities and subsurface obstacles in the way of the remediation efforts;
- Prudent care of the new lawns by the owner;
- A list of site or asset damage that exists prior to remediation work being conducted;
- Special items of concern collectively agreed upon by the Settling Defendants, EPA, and/or IDHW and the homeowners;
- Warranty (see Appendix E);

- Maintenance obligations of the property owner required by the ICP; and
- Estimated schedule for remediation.

Residential yards that have been selected and for which access agreements have been completed will be scheduled for remediation. Once collective agreements are completed, the remediation contractor representatives will schedule a group of homes located within the same vicinity, street and community, to be prepared for remediation. Scheduling groups of homes together for remediation is necessary to limit disruption of a community and fugitive dust from trucks traveling through the streets, and because of safety concerns associated with transportation.

### 3.3 UTILITIES LOCATION

The remediation contractor will arrange with the local utility companies to visit each scheduled residence and locate electrical, water, sewer, gas, cable, and phone lines. The resident will be notified of this site visit and asked to participate, if needed, to provide information on subsurface obstacles such as septic systems and abandoned lines. The utility company will be requested to mark these utilities on the ground with colored spray paint. The remediation contractor will scan each yard for visible obstacles, and may utilize an electro-magnetic detector if there is reason to suspect buried obstructions have not been marked (i.e., sprinkler systems). Locations of subsurface obstacles will be confirmed, if necessary, by the remediation contractor hand digging to trace the orientation of the obstacle and to mark it adequately with spray paint. The type and location of the obstacle will be placed on a site plan, which will be issued to all work crews prior to remediation startup.

### 3.4 SITE PLAN & PHOTO DOCUMENTATION

The remediation contractor will develop a site plan for each site that will record all site-specific items identified in the access agreements. The site plan will map out areas for remediation, known caution zones with subsurface obstacles, and all utility locations that were marked during prior Site assessment tasks.

The site plan will provide a scale drawing that will record each residence's planned and actual remediation, including the following:

- Total depth of soils, gravel, and sod excavated on each site;
- Ingress and egress areas;
- Conditions of the existing yard including drainage characteristics and problems, its structures and placement of cultural items;
- Location of fences, approximate location of property boundaries, and demarcation stakes;
- Special instructions for field work crews, such as produce garden areas where more than 12 inches of soil are to be removed;
- Soil sampling data;
- Limits of excavation;
- Trees, shrubs, plants and landscaping to remain or be removed;
- Results of field verification program for barrier thickness (see Appendix F); and
- Need for and placement location of visual barrier.

The site plan will be used as a record for site-specific conditions that warranted such actions and all remediation activities that were completed at each residence. The site plan will be signed by the property owner, and representatives of the Settling Defendants

and the EPA and/or IDHW both before work is commenced and at its completion signifying acceptance by all parties. Prior to final sign off by the parties, the site plan will be revised to show actual work performed. The site plan will provide a detailed record of the remedial action planning efforts as well as the completed remedial action.

Photo documentation, by still photographs and/or videotapes, will be used to document pre-remediation and post-remediation conditions of yards, streets, alleys, and side walks. In the event a dispute arises between the remediation contractor or the Settling Defendants and homeowners or local governments, the photo documentation will be used to substantiate any claims. The photo documentation will become a portion of the permanent records for each property.

The site plans and photo documentation will be provided to the ICP for use in the tracking system. In addition, a copy of the completed and approved site plan will be provided to the property owner.

## 4.0 CONSTRUCTION

With the exception of the "High Risk Program" defined in Appendix D, yards will be remediated on a block-by-block or area-by-area basis. Prior to each construction season, a work plan will be prepared outlining those areas to be remediated that season. During the first and second construction seasons, a minimum of 130 (first season) and 200 yards (second season), will be remediated. Following the conclusion of the second construction season, representatives from EPA, the State, and the Settling Defendants will meet to reassess the minimum number of yards to be remediated during each remaining construction season. If no consensus is reached, the minimum will remain at 200. This reassessment will take into account the impact of the remediation on the communities.

### 4.1 YARD PREPARATION

#### 4.1.1 Removal of Obstructions

The yard preparation will involve final notification to the homeowners of the intended action, date, and start time. This notification will be made at least two weeks prior to the start of yard remediation. The homeowners will be asked to discuss any concerns or special requests they may have in removing surface obstacles or in preparing their yard for remediation. The Remediation Contractor will request that the homeowners remove and store personal possessions and keepsakes requiring special care inside of their homes. Woodpiles, walkway stepping stones, and other miscellaneous landscape articles will be relocated on-site, if possible. Large obstructions such as fences and gates will be removed if necessary to allow for ingress of equipment and access for the work crews. Garages with earthen floors will also require pre-remediation cleanup.

Permanent fixtures, other building structures connected to the houses or separate from the houses, and footings near buildings will be marked, photographed and identified as to their condition.

Large possessions, such as RVs, boats, or vehicles, shall be relocated by the homeowner. If necessary, a storage area will be provided by the contractors. In special cases, where the homeowner is physically unable, the contractor will assist the homeowner with the transport of possessions. Shields for subsurface pipelines left in place or support members to retaining walls and siding will be installed prior to the start of excavation activities.

#### 4.1.2 Dust Control

Dust control will be achieved primarily through construction and engineering practices. In particular, visible emissions will be controlled to ensure that fugitive dust does not become a problem.

The remediation contractor will provide the equipment and labor to apply water to the yards during remediation activities. Water applications will be provided by the remediation contractor during the course of remediation and restoration operations on an as-needed basis as follows.

- Prior to excavation activities and the travel of equipment and work crew on-site on a daily basis;
- During soil removal operations by heavy equipment and with hand crews;
- At work intervals where wind and/or dry weather require such actions to prevent airborne emissions;
- Stockpiling and loading of soils into staging areas before off-site transportation;
- To wash down sidewalks, alleys, or streets impacted by soil handling and transportation activities (these areas may be swept if it can be accomplished without dust);
- To wash down as required paved areas at the entrance to back-fill and contaminated soil repositories;
- Before transportation off-site in dump trucks;
- Prior to backfilling and compacting soil covers during the restoration process; and

- Prior to leaving the premises at the end of each workday.

Water applications will be limited to short-term applications. Saturated soil conditions will be avoided whenever possible to prevent ponding and mud conditions. Misting application with fogging type nozzles will be used whenever possible to use less water while providing adequate water coverage on the entire work area. After washing down sidewalks, streets, alleys and other paved areas, accumulated soil materials will be picked up and properly disposed of. In addition, storage piles of contaminated soils will be removed at the earliest opportunity to minimize the time these piles are left in residential areas. If stored accumulations of excavated, contaminated soils cannot be removed by the end of daily work they will be covered with tarpaulins. Under no circumstances will soils be washed down storm drains.

#### 4.1.3 Excavation Activities

In preparation, excavation work crews will remove previously wetted soils by hand from lawns where heavy equipment has limited access. Soils will be raked from the fence areas left in place, underneath existing structures from around plants and trees being left, and in those confined areas where heavy excavation equipment will not be able to maneuver or reach adequately. Raking of soil in hand excavation areas will be limited to areas near buildings, sidewalks, impassable permanent obstacles such as shrubs and tree thickets, and in limited access areas. Tree roots will not be left exposed and when necessary soil around roots will be removed by hand after heavy equipment work is completed in adjoining areas, in order to protect existing landscaping. Care will also be taken to minimize the period of time excavated yards are left open; reasonable efforts will be made to backfill excavated yards within two days. Root structure for trees and shrubs will be protected during periods where yards are left open. After excavation, the field crew chief will inspect the excavated surface for obvious tailings deposits or visually identifiable hot spots. The tailings

will then be removed to a depth of 12 inches. Guidance for excavation activities will be presented in each Residential Areas Annual Remedial Action Work Plan. The work plans will provide specific procedures for excavation of soils in areas where trees and shrubs are present and will address interim care prior to soil replacement.

#### 4.1.4 Heavy Equipment Operations

Ingress areas for heavy equipment travel will be secured, with adequate materials placed on sidewalks or other heavy traffic areas to protect them from damage during excavation work.

First-stage cuts will be taken near the edges of buildings and structures. This method will allow soil and sod to be removed easily from lawn edges by hand and will expedite the careful removal of lawns close to buildings and large structures.

Equipment will make the second-stage excavation cuts, which will include large open areas of the existing lawns. Hand crews will pile sod and soils removed from hand removal operations into central locations for loading into dump trucks. The pre-defined egress areas will be nearest the street for loading soils into dump trucks. Operation of heavy equipment will be conducted in a manner that avoids tracking contaminated soils through clean excavated areas.

Outlying areas will have soils and gravel removed after the central areas are completed. Work crews will not utilize procedures which will result in damage to buildings and structures. Spotters will communicate the zones of heavy equipment operations at all times to hand crews. Hand signals and communication plans for equipment operators and work crews will be developed and used. Bobcats may work in unison with backhoes to remove soils in tight areas.

#### 4.1.5 Protection of Structures and Plants

Hand digging will be required for all areas susceptible to potential damage from heavy equipment operations. The remediation contractor will inspect large tree roots and structures during excavation operations and will take immediate appropriate steps if either are damaged.

Structures and buildings will be inspected for evidence of deformation or changes to existing conditions as documented in the site plan and in photographs from access agreements. The remediation contractor will contact the homeowners when conditions are discovered (through inspecting structures and plants) that warrant such notifications.

#### 4.1.6 Visual Marker Application

If the results of sampling conducted by the Settling Defendants in the 12- to 18-inch interval equal or exceeding 1,000 ppm of lead, geofabric or other suitable material will be provided as a visual marker at the surface of the total depth of excavation. No visual marker will be placed by the remediation contractor if the total depth of remediation is less than 12 inches or if the soil sample results of the 12 - 18 inch depth are less than 1,000 ppm lead.

#### 4.1.7 Temporary Work Stoppages

If conditions are encountered beyond the control of the remediation contractor that delay or prevent the performance of the yard remediation, the remediation contractor will stop work at the Site and immediately inform the Settling Defendants and the EPA and/or IDHW.

These conditions include but are not limited to the following:

- Uncovering of artesian wells or other subsurface flow phenomena;
- Building or structural impairments;
- Unknown utilities or subsurface features such as mine shafts or abandoned septic systems; and
- Other conditions unknown and beyond the control of the remediation contractor.

#### 4.1.8 Clean Access for Property Owner

During remediation activities clean access will be provided to the resident at all times. Clean access means the resident will not have to walk through contaminated soil prior to entering their home. Sidewalks will be thoroughly brushed and washed off with water after each work day to provide as clean an entry as possible to the residence. If there is no sidewalk to the residence, a clean pathway will be provided to the resident by laying down plywood, pallets, plastic, or using some other means to prevent exposure and tracking of contaminated soils.

#### 4.2 DECONTAMINATION PROCEDURES

After completion of excavation activities, heavy equipment and tools used in the remediation process will be decontaminated on Site. Decontamination will first involve a brush down of remediation equipment in the yard. Backhoe and bobcat tires, hoes, and buckets will be dry brushed. Use of water will be avoided whenever possible. The use of water will be required to adequately decontaminate equipment, if visible contamination is evident, prior to leaving the site for any reason. In these cases, the equipment will be washed while on the premises to minimize the migration of contaminated mud and water to the streets.

Workers will be required to decontaminate daily or whenever leaving a site where soil remediation is not completed and covered with a soil cap. A decontamination protocol will be included in the Health and Safety Plan and instituted by the remediation contractor's Site Manager. Streets, rights-of-way and access routes shall be cleaned of noticeable accumulations of soil, dust, or debris that are attributable to yard remediation activities.

#### 4.3 SOIL DISPOSAL

Soil exceeding the action level and debris excavated from the residences selected to be remediated will be transported to the Page Pond Repository or other EPA/IDHW approved locations. The Page Pond Repository was used as the disposal site for the 1990, 1991, 1992, and 1993 Yard Remediations.

For soil volumes generated by the homeowner totaling less than 1 cubic yard, transportation and disposal will be provided to the community households within Area I. This is intended to support residential remodeling and gardening activities that generate small quantities of surficial soil and yard debris. The Page Pond Repository will be available for the disposal, in accordance with the ICP, of quantities of soils greater than 1 cubic yard which exceed the 1,000 ppm action level. Additional soils from Area I and outside Area I may also be accepted at Page Pond if capacity allows. Upon certification of completion of the residential soil removal and replacement activities, the ICP will manage soils transportation and disposal. These programs are defined in detail in the Institutional Controls Program Regulatory & Design Criteria Component Document and in the Institutional Controls Program Document, Attachment D to the Consent Decree.

##### 4.3.1 Waste Transport

Soil exceeding the action level and debris excavated from the residences will be transported to the Page Pond Repository or other approved locations in street-legal trucks. Access to the

Repository will involve transport across public roads within the confines of the Superfund Site boundaries. This operation will be limited to daylight hours and will be done in a safe and controlled manner. Loads will be kept below the upper edges of the truck bed and will be covered prior to transport to minimize the dispersal of lead-bearing material through airborne emission or spillage. Truck liners will be used if free water is present in the excavated material or if soils are flowable. Spillage that occurs on city streets will be cleaned and removed as quickly as possible. Minor soil spillage outside of communities may be washed on to road shoulders with water if the road right-of-way has not been remediated.

#### 4.3.1.1 Documentation

Documentation of the waste transport will include daily activity reports on a truck-load-basis per residence remediated. Records of these activities will be kept in the Site logbook for inclusion in the Construction Completion Report.

#### 4.3.2 Repository Operation

The following subsections detail the operation of the Page Pond Repository. Additional information is provided in the Page Pond RDR.

##### 4.3.2.1 Dumping Procedures

Dump trucks will be used to transport the excavated materials from each yard being remediated to the designated repository. Once at the repository and just prior to dumping, the cover will be removed from the truck and the load will be dumped in a drive-away manner. After dumping, decontamination procedures outlined in Section 4.2 will be followed.

#### 4.3.2.2 Grading Procedures

Periodically, a bulldozer will be used at the repository to grade and compact the material in successive lifts to an even 4-foot maximum thickness. This dozer will be dedicated to the landfill or will be decontaminated before leaving the Site.

#### 4.3.2.3 Dust Control

Dust will be minimized by using water trucks to spray the area of the deposited lead-bearing material to prevent airborne emissions from leaving the repository area. Spraying will be done on an as-needed basis.

#### 4.3.2.4 Decontamination

All trucks and heavy equipment will be decontaminated before they leave the repository, as described in Section 4.2.

#### 4.3.2.5 Access Control

The Page Pond Repository is secured within a locked chain link fence. Signs will be provided stating this is private property and to KEEP OUT. The gate to the repositories will be opened at the beginning of each day of activity and will remain open until close of repository operations for the day. The Settling Defendants will be responsible for ensuring that the repository is locked at the end of each day during the duration of the residential area remediation program. The operators of the PPWTP will be responsible for maintaining a separate gate accessing their plant. Weekend access, if necessary, will be provided through coordination with the ICP.

#### 4.3.3 Seasonal Closure

Seasonal closure of the Page Pond Repository will occur at the completion of the annual construction activities. Once all of the

excavated material has been transported to the Page Pond Repository and no further excavation activities are to be conducted that construction season, a temporary grading of the material will be performed. Grading procedures will be followed to create a uniform stockpile of material. After the grading is completed, those portions of the Repository that have reached closure elevation will be revegetated. Other portions of the Repository will be seeded with an annual grass or other appropriate species to provide temporary vegetative cover for the expected duration prior to further placement of material. As required by the ICP and described in the Page Pond RDR, a designated area of the Page Pond Repository will be set aside to accept materials for disposal year round.

Seasonal closure methods for alternate disposal areas will be determined on a site-by-site basis as part of the approval process. Alternate repositories will not be available for disposal of soil above the action level generated by residential or commercial properties.

#### 4.3.4 Documentation

The waste disposal activities of the repositories will be described in each Annual Construction Completion Report.

#### 4.4 BACKFILL ACTIVITIES

Backfill activities at each site will involve the placement of clean topsoil and gravel in the area of the excavation. Each source of topsoil and gravel will be confirmed by laboratory analysis as described in the SAP (Appendix B). In the event that one (or more) of the samples fails the definition in Section 1.2.2.3, the source will be resampled and retested for confirmation. If any of the retest samples fail, the topsoil or gravel will be rejected as out of specification.

#### 4.4.1 Rough Grade Procedures

Rough grading is the first phase of the restoration of each yard. Clean topsoil will be trucked to the site and will be placed in the area to be sodded or sealed.

Where access allows, the dump trucks will drive onto the yard and deposit their load while driving slowly to spread the material across the yard. Where possible, trucks will avoid driving on contaminated soils. Where access is limited, the dump trucks will dump their load at a staging area on the yard from which the backhoe or bobcat can transport the material to areas of the yard. Some handwork performed by laborers using wheelbarrows and shovels will be necessary to rough grade the yards. The rough grading of the areas requiring gravel will be done using the same methods. The objective of the rough grading is to provide sufficient backfill material to each yard for compaction prior to the sod application for the soils or for usage of the gravel areas.

#### 4.4.2 Compaction

Compaction of the backfill material for the rough grading procedures will be accomplished using the buckets of either the backhoes or bobcats to back blade the material to the required thickness prior to the application of the sod. Gravel areas will be compacted, as appropriate, using suitable equipment to avoid future settlement and drainage problems in specific areas of a yard. Further compaction of backfill material may be required in areas where walkways and egress/ingress will occur.

#### 4.4.3 Barrier Thickness Verification

Barrier thickness will be verified by the Project Coordinator or designee, after the above compaction procedures, utilizing the procedure presented in Appendix E.

#### 4.5 SOD APPLICATION

The sod application includes the final grading of the topsoil and the necessary handwork using any one or more of the following items; small front end loaders, roller compactors, tamping compactors and hand tools prior to installation of the sod. The slope of the lawn will be considered in the final grading to ensure proper drainage away from the house or other structures on the property.

The sod will then be installed with tight seams and joints to meet with adjoining lawns, walks, fences, or borders. Exposed root areas will be covered with topsoil. Watering will be performed as required during this process.

#### 4.6 FOLLOW-UP ACTIVITIES

Follow-up activities will be conducted to ensure that the work performed at each yard satisfies the scope of the yard remediation. The homeowners will be asked for their sign-off, attesting that the work performed meets their satisfaction. Lawn care, in terms of initial fertilization and watering required to establish the replaced lawns, will be provided. Each property remediated will be evaluated after 1 year, as described by the warranty to determine if the sod or the landscape plants, which were subject to excavation stress, survived a growing cycle. Sod or plants which do not survive as a result of the materials used or the installation is guaranteed and will be replaced. Any plants that need to be replaced will be replaced with similar plants. Thereafter it will be the responsibility of the owner to provide proper care of the vegetation and barriers. The warranty provides for replacement of plants, shrubs, and trees during the first year after remediation and addresses drainage issues for a period of 2 years.

#### 4.6.1 Site Inspection

Once the remediation at each residence is completed, the Settling Defendants or their representative will inspect the site with the homeowners and EPA/IDHW representative. Photographs and/or videotapes will be taken within 30 days of completion and will be added to the project record. Should there be any dispute at any time between the homeowners and the remediation contractor or the Settling Defendants, every attempt will be made to resolve the dispute informally within the scope of work for that yard. If the homeowners and remediation contractor or Settling Defendants cannot reach an agreement, a final decision concerning the dispute will be made by a three-member Arbitration Panel consisting of one representative each from 1) EPA or the State of Idaho; 2) the Settling Defendants; and 3) a local government in the Silver Valley. An agreement to be used for this procedure is attached as Appendix F.

#### 4.6.2 Repair Work

Repairs will be made for any damage that occurs as a result of the remediation. The photographic documentation of the pre-existing and, where applicable, post-remediation condition of the residence will be used to determine if any damage has occurred as a result of the remediation. In the event there is a dispute regarding the cause of the damage, a final decision concerning the dispute will be made by the Arbitration Panel.

#### 4.6.3 Lawn Maintenance

The remediation contractor will maintain the remediated yards through the summer until October 15 of the year the remediation took place. This lawn maintenance will include the necessary watering and fertilizing. Lawns will not be mowed as a part of this activity, and no further landscaping will be done except as required to complete the scope of the yard remediation.

#### 4.6.4 Emergency Repairs

The Settling Defendants will provide the EPA, IDHW, or designated representative with a contact person who will be responsible for first response to emergencies on a 24-hour basis. Where an emergency exists that may create an immediate threat to public health or welfare or the environment, the Emergency Response section of the Consent Decree will apply. Where the EPA or IDHW Project Coordinator or designee makes a preliminary determination that substantial property damage is imminent or has occurred as a result of the remedial activities, the Settling Defendants will take action to stabilize or avert the damage within 24 hours of notification. The Settling Defendants will attempt to negotiate a permanent solution with the homeowner. If the homeowner and the Settling Defendants cannot agree on the permanent solution, the Arbitration Panel will make the final decision.

## 5.0 OPERATIONS AND MAINTENANCE

The ICP developed for the Bunker Hill Superfund Site is expected to accomplish the long-term operations and maintenance requirements for the remediation activities addressed by this RDR. The ICP will designate proper soil handling, pick-up, and disposal methods and will provide guidelines and requirements to ensure the long-term integrity of barriers installed as part of the residential areas remediation program.

## 6.0 SUMMARY OF PERTINENT REMEDIAL DESIGN INVESTIGATIONS

There are no additional remedial design investigations required for the residential yard remediation.

## 7.0 FUTURE DELIVERABLES (PLANS & REPORTS)

For the residential yard Component of Work at the Bunker Hill Superfund Site, the following described plans and reports will be submitted to the appropriate state and federal agencies as specified in the Consent Decree.

### 7.1 GENERAL PROJECT MANAGEMENT

#### 7.1.1 Project Management Monthly Reports

The project management monthly reports submitted will include a section on the residential yard component of work when applicable. The residential yard section will include a minimum of the following basic information:

- General description of the work (currently being conducted);
- Activities/tasks undertaken during the reporting period, and expected to be undertaken during the next reporting period;
- Deliverables and milestones completed during the reporting period, and expected to be completed during the next reporting period;
- Identification of issues and actions that have been or are being taken to resolve the issues; and
- Status of the yard remediation schedule and any proposed schedule changes.

#### 7.1.2 Technical Memoranda

The Technical Memoranda are the mechanism for requesting modification of plans, designs, and schedules. Technical Memoranda are not required for non-material field changes that have been approved by the agencies. In the event that the Settling Defendants determine that modification of an approved plan, design, or schedule is necessary, the Settling Defendants will submit a

written request for the modification to the Agency Project Coordinators which will include, but not be limited to, the following information:

- General description of and purpose for the modification;
- Justification, including any calculations, for the modification;
- Actions to be taken to implement the modification, including any actions related to subsidiary documents, milestone events, or activities affected by the modification; and
- Recommendations.

## 7.2 REMEDIAL DESIGN

No further submittals beyond this Final Residential Yards RDR will be required for the Residential Yard Element of Work.

## 7.3 REMEDIAL ACTION

A Residential Areas Annual Remedial Action Work Plan addressing all Residential Areas Elements of Work for a given geographic area shall be submitted by April 15 of each year, as described in Section V of the Statement of Work (SOW). Such work plans shall address the proposed remediation activities for Residential Yards, Water Well Closure, ROW, and Commercial Properties Elements of Work, to be completed within the boundaries of Area I during a construction season. An annual work plan may address all or a portion of one or more Reasonably Segregable Areas.

### 7.3.1 Residential Areas Annual Remedial Action Work Plans

Each year, the Settling Defendants will submit to the appropriate agencies a work plan outlining the proposed remediation activities to be completed during the construction season. The

work plan will include a section on residential yards. The work plan will be submitted each year by April 15. Barring unusual weather, the construction season will start on June 15 of each year. The Residential Areas Annual Remedial Action Work Plan will provide the following:

- An overall description of the work to be performed with cross-references to other documents, if any, containing more specific details.
- The technical approach for undertaking, monitoring, and completing the Element or Component of Work.
- A description of the deliverables and milestones.
- A construction schedule.
- Sampling and analysis requirements, including field verification programs.
- Construction O&M requirements.
- Plan for integrating, coordinating, and communicating with EPA, IDHW, and other government officials.
- Quality assurance measures.
- Additional health and safety measures.

At a minimum, the residential yard section of the work plan will include:

- The scope of proposed remediation; i.e., number of residential yards and vacant lots to be remediated;
- Yard sampling data;
- A map showing areas proposed for remediation during a construction season;
- A residential yard remediation schedule for the construction season;
- Any deviations or changes from work tasks or procedures outlined in the Residential Yard RDR;
- An initial list of high risk yards (See Appendix D).

The proposed contents for the Residential Area Annual Remedial Action Work Plans are described in greater detail in the SOW

#### 7.3.1.1 Sampling Data

Yards will be sampled according to the work schedule developed by the Settling Defendants and presented in the Residential Areas Annual Remedial Action Work Plan. The yard sampling program will work in conjunction with the yard remedial action work plans. With the exception of the first remediation year, where timing will not allow, the sampling program will be conducted so that the communities designated for remediation will be sampled in the year just prior to the remediation year. For example, the area designated for remediation in the 1996 work plan will be sampled in 1995. Sampling and analysis will be conducted in accordance with the Sampling and Analysis Plan attached as Appendix B.

"High-Risk" remediation candidate yards, as defined in Appendix D, will be added to the sampling program as the list of these yards is received from the PHD. Prior to each upcoming construction season, EPA, in consultation with the State, may, until April 1 of each year, add the yards of homes meeting the "high risk" criteria (as outlined in Appendix D) to the list of yards to be remediated provided in the Residential Areas Annual Remedial Action Work Plan. EPA, in consultation with the State, may then add an additional 30 yards until September 15th. To help facilitate efficient scheduling of remediation activities, the Settling Defendants will be notified as soon as a high risk yard has been identified. EPA and the State will make best efforts to identify all high risk yards prior to September 1st. Yards added as part of the "high risk" program shall count toward the attainment of the annual minimum number criteria specified in Section 4.0.

The analytical results of the sampling program will be provided to the PHD, EPA, and IDHW as soon as is practicable after

the results are received and validated by the Settling Defendants. The data will be provided in a format acceptable to the agencies.

#### 7.3.1.2 Individual Yard Site Plans

As outlined in Section 3.4 of this RDR, a scale site plan will be prepared for each residential yard and vacant lot where soil replacement is required. The scale site plan will be used as a permanent record to show site-specific conditions and remediation activities completed. The site plans will be incorporated into the Annual Construction Completion Reports and will be provided to PHD for use in the ICP tracking system. A copy of the final site plan, along with any other pertinent information, will also be provided to the property owner. The site plans will be signed by the Settling Defendants' Project Coordinator following the procedure outlined in Appendix E.

#### 7.3.2 Health and Safety Plan

A Health and Safety Plan specific to the residential areas components of work will be prepared and submitted for agency review prior to the commencement of residential yard remediation activities. The Health and Safety Plan will include a description of monitoring activities to be undertaken during remediation of residential areas.

#### 7.3.3 Annual Construction Completion Report

Construction activities completed during any construction season will be summarized in the Annual Construction Completion Reports. These reports will contain a complete listing and description of construction activities associated with the residential yard work that were completed during the previous construction season as well as other work prescribed in a Residential Areas Annual Remedial Action Work Plan. These reports will be submitted to EPA/IDHW within 60 days of completion of a construction season and will include the final site plans signed by

the Settling Defendants' Project Coordinator and initialed by the EPA/IDHW representative.

## 8.0 CERTIFICATION OF COMPLETION OF REMEDIAL ACTION

Certification of the completion of remedial action in a Reasonably Segregable Area is defined as the EPA and IDHW certifying that all yards and other Elements of Work (ROW, Commercial Properties, and Water Well Closure) within a Reasonably Segregable Area have been fully remediated in conformance with the Performance Standards set forth in the SOW and the applicable RDRs. Reasonably Segregable Areas within the Bunker Hill Site are identified in the SOW for the Consent Decree.

When Settling Defendants believe that the appropriate Performance Standards and conditions have been met for a Reasonably Segregable Area, they will submit a completion of Remedial Action Certification Report to EPA and IDHW for review. With respect to the Residential Yards Element of Work, the applicable Performance Standards and conditions are summarized as follows. The Performance Standards for the Element of Work are outlined in detail in Section 1.2.2 and the Statement of Work.

1. All yards have been sampled and analyzed for lead.
2. All yards equal to or greater than the 1,000 ppm lead concentration threshold have been remediated.
3. The post-remediation average yard lead concentration for the Reasonably Segregable Area is 350 ppm or less. The average will be calculated using the following data:
  - a) Average analytical results for lead concentrations from backfill utilized for all yards remediated during the appropriate construction season(s).
  - b) The analytical lead concentration from the 0 - 1 inch sampling interval from the non-remediated yards within a Reasonably Segregable Area; and
  - c) The average analytical lead concentrations from the 0 - 1 inch resampling of 10 percent the previously remediated yards (see #5 below). The average for the 10 percent resample will be used to represent all previously remediated yards within a Reasonably Segregable Area.

4. All yards in the Reasonably Segregable Area that were remediated under programs prior to those prescribed by this RDR will be visually inspected for potential damage to the previously installed barrier. Yards that have barriers compromised by property owner activity will be addressed on an individual basis. Specifically, the appropriate response by the Settling Defendants to mitigate the compromised barrier will be determined jointly by consultation of the Settling Defendants, PHD, and the EPA or IDHW Project Coordinator. The response chosen will be determined based on the actual activity causing the compromised barrier and the potential exposure risks posed by the compromised barrier.
5. At least 10 percent of the yards described in Item 4 within the Reasonably Segregable Portion of Work will be sampled to verify barrier integrity. Samples will be collected to the depth of the barrier. The sampler will make a visual determination of the cap integrity from the removed core sample. Representative samples will be taken from the 0- to 1-inch interval and submitted to the analytical laboratory for lead analysis. Sample collection for the remaining barrier thickness will be based on a visual determination of barrier thickness. Particular care must be exercised in this sampling effort so as to avoid contamination of the sample with non-removed soils from below the barrier. Yards that demonstrate barrier lead concentrations above the 100 ppm level will be visually inspected jointly by the Settling Defendants and EPA or IDHW Project Coordinator to attempt to determine the cause and extent of the recontamination. The Settling Defendants and EPA or IDHW Project Coordinator will determine any appropriate corrective action to be taken based on this inspection. The 0- to 1-inch analytical result from this sampling effort will be used to represent the 0- to 1-inch lead concentration for the previously remediated yards in the 350 ppm community-wide calculation as discussed in #3 above.

Reasonably Segregable Area certification will include all residential, commercial and rights-of-way properties and water well closures. All of the Elements of Work within a Reasonably Segregable Area will be subject to attainment of the pertinent Performance Standards identified in the SOW and the various RDRs, prior to certification. This combined certification of the Elements of Work within a Reasonably Segregable Area, will provide consistency in certification and assure that the intent prescribed in the ROD has been fulfilled. Furthermore, in most instances,

remediation of the three types of properties presented in the different RDRs will occur concurrently in a Reasonably Segregable Area.

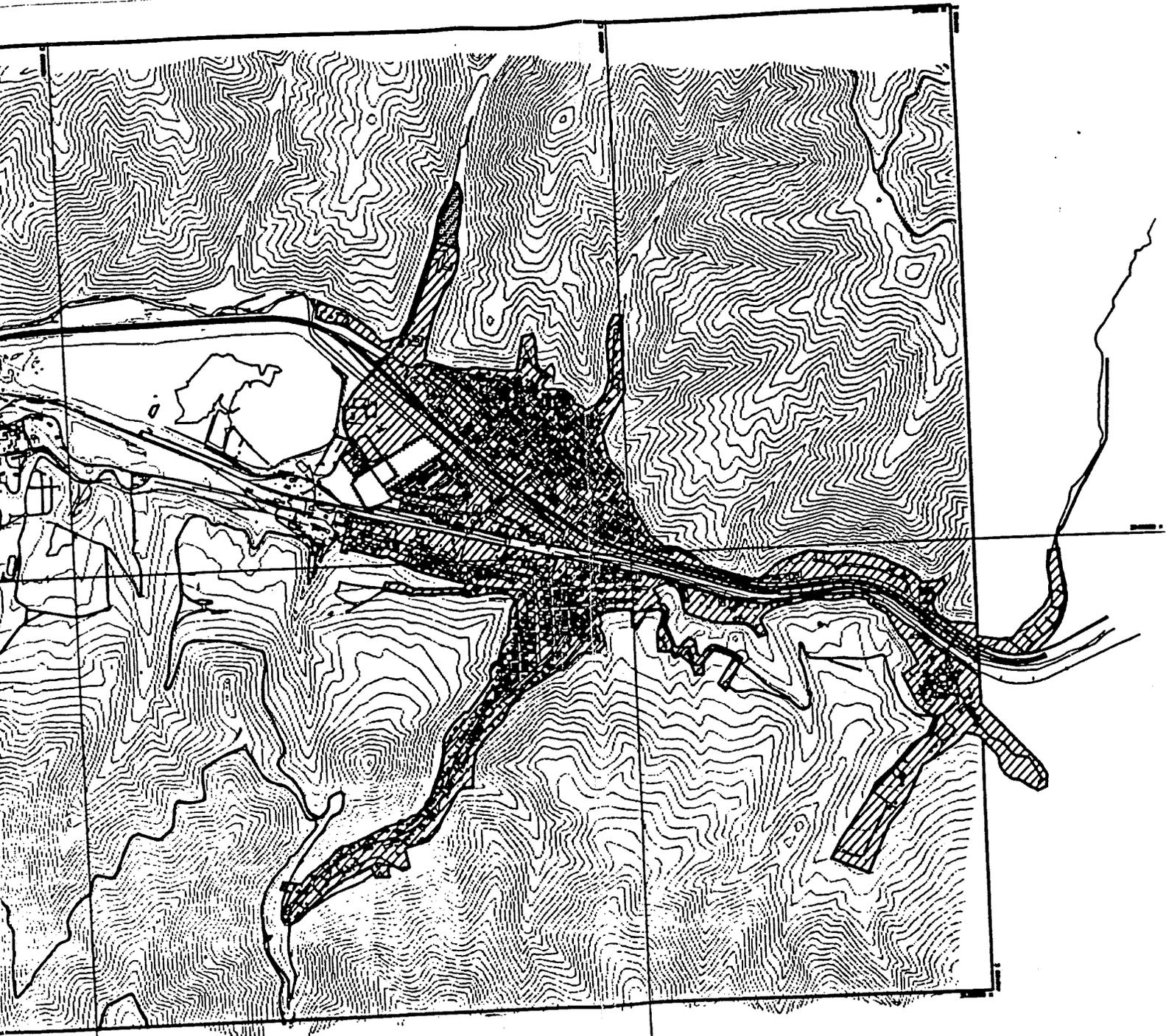
The following statement regarding barrier thickness in a Reasonably Segregable Area will be provided by an Idaho-registered Professional Engineer in the Completion of Remedial Action Certification Report.

*It is hereby certified that the thickness of the soil barrier layers constructed and the existence of a visual barrier in the designated residential yards, commercial properties, and rights-of-way within a Reasonably Segregable Area of the Site known as \_\_\_\_\_, represented by the inspection reports and sampling data included in the 'Residential Area Remediation Assessment and Certification' forms for the respective properties, is in full satisfaction of the Performance Standards for barrier thickness and placement of a visual barrier, as presented in the Bunker Hill Superfund Site Area I SOW and the Final Residential Yards, Commercial Properties and Rights-of-Way RDRs.*

APPENDIX A  
Allocation Map

APPENDIX A  
ALLOCATION MAP

Area I, which is being addressed by the Settling Defendants, is delineated on the attached Bunker Hill Superfund Site Allocation Map, as presented in the Consent Decree.



NOTE: THE AREA I BOUNDARIES BETWEEN RESIDENTIAL AREAS AND THE SURROUNDING HILLSIDES, AS SHOWN ON THIS MAP, ARE APPROXIMATE. THE BOUNDARY FOR AREA I, WHERE A RESIDENTIAL YARD ABUTS UNDEVELOPED HILLSIDES, SHALL INCLUDE ONLY THOSE CONTIGUOUS HILLSIDE AREAS CLEARLY USED IN CONJUNCTION WITH THAT RESIDENCE. RESIDENTIAL YARDS AND LOTS CONSIDERED FOR REMEDIATION SHALL INCLUDE THOSE RESIDENTIAL PROPERTIES ACCESSED BY A MAINTAINED ROAD ON OR BEFORE DECEMBER 31, 1983. PLATTED BUT UNDEVELOPED RESIDENTIAL LOTS THAT ARE NOT ACCESSED BY A MAINTAINED ROAD ON OR BEFORE DECEMBER 31, 1983 ARE EXCLUDED FROM AREA I.

**BUNKER HILL  
SUPERFUND SITE  
ALLOCATION MAP**  
DECEMBER 10, 1983

APPENDIX B

Sampling and Analysis Plan (SAP)

APPENDIX B  
SAMPLING AND ANALYSIS PLAN  
(SAP)

1.0 YARD SOIL SAMPLING AND ANALYSIS

This section of the Sampling and Analysis Plan (SAP) describes the technical approach and quality control (QC) procedures necessary to perform yard soil sampling and analysis. The purpose of this section of the SAP is to provide the procedures that will assure the precision, accuracy, and documentation of data generated during yard soil sampling activities. The intent of the sampling effort is to identify residential yards which exceed the EPA's remedial action level of 1000 ppm total lead.

1.1 SOIL SAMPLING METHOD

Yard soil samples will be collected in order to identify those residential yards which are above the EPA remedial action level. Like intervals from each core will be composited to represent a specific depth interval for the sampled yard. The total depth to be sampled will be as specified in subsection 1.1.2, however, the total depth may vary depending on site conditions. If refusal of sampling equipment is experienced, an alternate location for collecting the sample should be chosen.

Prior to sampling, a lot and house plan will be developed and the location of all sampling points will be plotted on the plan. At the time of sampling, the sampling crew will designate discrete areas, such as driveways, play areas, parking areas, etc, on the plan, and indicate where any special discrete area samples are collected per the guidance submitted as part of the Annual Residential Areas Annual Remedial Action Work Plan. In the field, the plan will be used to locate the sample points based on paced distances from known objects such as roads, house and lot corners, telephone poles, etc.

Samples of the discrete areas may or may not be collected at the same time as the main yard samples. If collected at the same time as the main yard samples the discrete area samples will not be analyzed for lead until after the analytical results of the yard samples are received and evaluated. The decision of when to sample the discrete areas will be made by the Settling Defendants as needed.

#### 1.1.1 Sampling Equipment and Information Collection

The sampling equipment will include the following items: soil sampling probe, shovel, pick, trowel, stainless steel bowls, knife, measuring tape, sample bags, 35mm camera, log book, pen, pencil, and marker.

Information that will be collected from each sampling point will include the location (i.e. house number) and depth.

All sampling equipment used for the extraction of soil will be decontaminated prior to removal off site. Decontamination equipment will include, pump sprayers, spray bottles, deionized water, phosphate free soap solution, scrub brushes, buckets, disposable gloves, etc.

#### 1.1.2 Soil Sampling Locations and Depths

A minimum of two subsamples will be collected in all areas including yards, gravel driveways, play areas, and other discrete areas. These may be composited for a single sample if consistent with the area requirements set forth below.

##### 1.1.2.1 Yards

Yard soil sample collection will consist of one core sample for every 500 square feet of yard area, excluding other discrete areas such as gravel driveways and distinct play areas, with a

minimum of two core samples per yard. The house and lot plan will be gridded so that the sample crew can determine the square footage of yard excluding discrete areas. The sample crew will then divide the yard into 500 square foot sampling areas on the plan. The sample will be collected as close as possible from the center of each 500 square foot sampling area and fraction thereof. The sampling crew will avoid, if possible, the collection of samples under or immediately adjacent to trees, shrubs, structures, driveways, or sidewalks.

Cores will be collected to a total depth of 18 inches. Cores will be divided into 0-1", 1-6", 6-12", and 12-18" samples. Each depth interval sample will be placed into a separate sampling bag and marked with the appropriate identification. The four common depth interval samples from all cores collected from the yard will be composited into one sample and analyzed for lead.

#### 1.1.2.2 Gravel Driveways

Gravel driveways are defined as beginning at the edge of the improved section of a residential lot and ending at the house or garage. Garage floors made of earthen materials will be considered part of the driveway. Distinctly separate driveways (i.e., non-contiguous) will be sampled and treated as separate driveways. Additional graveled road leading to a residence but not within the improved section of the lot is considered a right-of-way and will be remediated as such. Other discrete areas of the lot that are clearly identifiable as separate use areas, such as parking areas, will be considered separate areas and will be sampled as such.

A minimum of two samples will be taken from each gravel driveway. Two samples will be collected from driveways 50' in length or less. For driveways longer than 50', one additional sample will be collected for each additional 50' of driveway or fraction thereof. Sampling locations will be determined by dividing the total length of the driveway by the number of samples

to be collected plus 1. For example, for a driveway of 80 foot length, three samples are to be collected. Dividing 80 by 4 (i.e.,  $3 + 1$ ), gives 20. Therefore, samples will be collected at 20 foot intervals or at 20', 40', and 60' along the length of the driveway. Samples will be collected with a soil probe, hand auger, or spade. The specific sampling tool utilized will be left to the discretion of the field sampling crew based on the composition of the driveway material to be sampled.

Samples will be collected to a total depth of 12 inches. Samples will be divided in 0-1", 1-6", and 6-12" samples. Each depth interval sample will be placed into a separate sampling bag and marked with the appropriate identification. The three common depth interval samples from all cores collected from the driveway will be composited into one sample. The samples will be analyzed for lead if laboratory analysis is conducted.

#### 1.1.2.3 Play Areas

Play areas are defined as areas separate from and distinguishable from the rest of the yard and identified by visually different soil and/or physical separation from the yard along with evidence that the areas is used primarily for this purpose (such as an area bound by railroad ties, filled with sand or soil, and children's toys are evident). Note however, that a swing set located somewhere in the yard does not necessarily constitute a distinct play area.

Two samples will be collected and composited by interval from each identified play area. The samples will be collected randomly from the area. The play area samples may be collected with a soil probe, hand auger, or spade. The specific sampling tool utilized will be left to the discretion of the field sampling crew based on the composition of the area material to be sampled.

Samples will be collected to a total depth of 12 inches. Samples will be divided into 0-1", 1-6", and 6-12" samples. Each depth interval sample composite will be placed into a separate sampling bag marked with the appropriate identification. The sample will be analyzed for lead if laboratory analysis is conducted.

#### 1.1.2.4 Other Discrete Areas

Other discrete areas are defined as areas separate from the rest of the yard and clearly identified as having a different functional use from the rest of the yard and are not driveways or play areas. An example is an area used solely as a parking area.

A minimum of two samples will be collected from each identified other discrete area. These samples may be composited to form a single sample. Samples may be collected with a soil probe, hand auger, or spade. The specific sampling tool utilized will be left to the discretion of the field sampling crew based on the composition of the area materials to be sampled. The sample will be collected in the approximate center of the area.

Samples will be collected to a total depth of 12 inches. Samples will be divided into 0-1", 1-6", and 6-12" samples. Each depth interval sample will be placed into a separate sampling bag marked with the appropriate identification. The sample(s) will be analyzed for lead if laboratory analysis is conducted.

#### 1.1.3 Soil Collection and Handling Procedures

Soil extraction will typically be conducted using a sliding drop hammer with a 2" soil core diameter, capable of a vertical penetration into mineral soil of 18 inches. The drop hammer will be used to extract each of the three, 6 inch core intervals. The soil sample shall consist of mineral soil only. Samples may be collected with a soil probe, hand auger, or spade. The specific

sampling tool utilized will be left to the discretion of the field sampling crew based on the composition of the area materials to be sampled. Any surface vegetation, such as sod, will be removed prior to placing the sample in the sample bag.

Field personnel will wear disposable polyethylene gloves to avoid sample cross contamination during the collection of soil samples.

The following guidelines will be used for the extraction of yard soil samples:

1. If soil conditions prohibit sample collection for the 12" to 18" sub-sample (i.e. bedrock, river bottom gravel), this sample may be omitted.
2. Field sampling crews will avoid the collection of samples under or immediately adjacent to trees, shrubs and or structures. Samples will not be taken near the drip line of structures.
3. If impediments related to sample location occur in the field, a new sample point may be selected as close as possible to the original location.
4. Following the extraction of the 2" core sample, the sample hole will be back filled with clean fill material. The holes will be filled to a level which will match, as closely as possible, the existing yard level.

Following the collection of the first 6" interval of soil, the core will be extracted and the 0 to 1" of soil will be placed into a soil sampling bag and the remaining 1" to 6" of soil will be placed into its appropriate sampling bag. However the sod and underlying organic layer will be removed from the top of the 0 to 1" soil sample prior to placing it in the sample bag. The third interval (6" to 12") and the fourth (12" to 18") will be placed into their corresponding sample bags.

#### 1.1.4 EQUIPMENT DECONTAMINATION

The following information describes the general decontamination procedures for field equipment that comes in contact with lead-bearing soil. Sampling equipment will be decontaminated between sample collection points, if the equipment is not disposable, in order to avoid cross contamination between samples.

Field personnel will wear disposable gloves while decontaminating equipment at the project site. Personnel will be required to take every precaution to prevent contaminating themselves with the wash water and rinse water used in the decontamination process.

The following procedures will be followed to ensure that sampling equipment is thoroughly decontaminated:

1. A decontamination zone will be set-up approximately 15 feet from the sampling area. The field crew leader will designate this area.
2. Visually inspect sampling equipment for soil; a stiff brush will be used to remove any visible material.
3. Wash the field equipment with phosphate free soap and water, rinse with distilled water, and air dry or wipe with disposable paper towels.
4. Water used for decontamination will be disposed of on site. All disposable items such as, paper towels, disposable gloves and wash cloths, will be deposited into a garbage bag and disposed of in a solid waste landfill.

#### 1.2 SOIL SAMPLE CUSTODY

The data collected during the sampling program requires that the possession of samples be traceable from the time they were collected, through the laboratory analytical process.

### 1.2.1 Sample Documentation

In order to provide adequate information of the residential yard sampling event, the field sampling crew will maintain a field logbook and field documents. The field documents will contain sufficient details. Entries will be made in indelible ink, with all corrections consisting of initialed line-out deletions.

The documents to be completed for each sample generated during the residential yard sampling program are:

- The field logbook
- Site Plan (Plot Plan)
- Chain-of-Custody Transmittal form (See Figure B-1)
- Sample tag and/or label
- Sample master log

The sampling identification system for all residential yard samples includes:

- The year
- The type of matrix
- The house or yard number
- The depth interval expressed as A, B, C, or D. E denotes a duplicate sample of one of the four depth intervals.

Denotation of A, B, C, and D represent the 0 to 1", 1" to 6", 6" to 12", and 12" to 18" depth intervals.

Upon completion, a Chain-of-Custody transmittal form (Figure B-1) will be filled out and samples will be delivered to the laboratory.

### 1.2.2 Field Log Book

All pertinent field survey and sampling information will be recorded in a bound field logbook, during each day of the field sampling and at each sample site. All entries into the field logbook will be made in indelible ink. Each day's entries will be initialed and dated at the end of each day by the field sampling crew. All corrections shall consist of line-out deletions, which are initialed.

At minimum, entries in the field logbook shall include:

- Date and time at the start of work and description of weather conditions.
- Names of field sampling crew.
- Project name or number.
- Description of site conditions and any unusual circumstances.
- Location of sample site, including map reference.
- Equipment identification.
- Details of actual work effort, particularly any deviations from the aforementioned methods.
- Field observations.
- Time that field work was terminated for the day.
- Specific details for each sampling location will be recorded.
- Details of photo documentation, if any.
- Site description (i.e., physical address and assessor parcel number).

Strict chain-of custody procedures will be maintained with the field logbook. While being used in the field, field logbooks will remain with the field team at all times. Upon completion of the

field effort, field logbooks will be filed in an appropriately secure manner.

### 1.2.3 Sample Packaging and Shipping

Each sample container will be properly labeled in the field. Each sample will be hand delivered to the contract laboratory for analysis.

Coolers may be used only as a convenient shipping/storage container; the samples will not be cooled until they are received by the laboratory. An alternative sample storage container may also be used, as long as it allows adequate protection against breakage and loss of chain of custody.

### 1.3 QUALITY CONTROL (QC) SAMPLES

Quality Control (QC) samples will be used to check the precision and accuracy of analyses completed by the analytical laboratory. QC samples will not have any unique identifying codes that will enable the laboratory to bias them. The sampling team will strive to obtain uniformity in the sampling technique and preparation of QC samples to limit potential sampling errors. The QC sampling will be identified only in the field logbook and the in-house Sample Master Log form. Samples identified in the field logbook will include:

- Soil
- Duplicate
- Rinsate (Equipment) Blank

One of the following QC samples will be implemented into the sample train at a minimum of one for every 10 soil samples. The QC samples will be defined as follows:

1. The duplicate sample will be of the same media, of the same location and collected at the same time.

2. An rinsate (equipment) blank will be a distilled water rinse of decontaminated sampling equipment, placed into a sample bottle.
3. A blind field standard.
4. A laboratory split will be provided to the EPA/IDHW representative for possible external analysis at a CLP lab.

#### 1.4 ANALYTICAL PROTOCOLS

Soil samples and associated rinsate blanks will be received by the analytical laboratory in accordance with chain-of-custody procedures. These samples will be analyzed for lead using methods detailed in Test Methods for Evaluating Solid Waste. Revised Methods. SW-846. Third Ed. U.S. Environmental Protection Agency, Washington, D.C. Soil samples will be digested in accordance with SW-846 method 3050 after sample preparation as specified in Table B-1. Rinsate blanks will be digested in accordance with SW-846 method 3010. After digestion, all samples will be analyzed for lead by flame atomic absorption spectrophotometry in accordance with SW-846 method 7420.

The report of analytical results will include a cover letter from the laboratory identifying the sample group and any non-complaint quality control results together with the affected samples. Attached to the cover letter will be a summary of sample results and a summary of quality control results. The summary of quality control results will include instrument performance results such as standard recoveries and blanks results; matrix QC results such as spikes, duplicates and procedural blanks; and laboratory control standard recoveries.

Chain-of-custody records and internal laboratory operational and quality control documents will be kept in a site file at the laboratory for audit if desired.

## 1.5 DATA COLLECTION AND MANAGEMENT

All residential yard soils sampling data and analytical results will be stored on a Lotus™ 123 computer data base. The data will be available as either a Lotus file or in another format. This Lotus™ 123 spread sheet format will facilitate retrieval and analysis of soil yard data. The data will be provided to the agencies upon request, when available. Data validation procedures will correspond to Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses (USEPA, July 1, 1988) provided after Page B-19, at the end of this appendix.

## 2.0 BACKFILL SAMPLING AND ANALYSIS

This section of the Sampling and Analysis Plan (SAP) describes the details of the technical approach and quality control (QC) procedures necessary to perform backfill sampling and analysis activities associated with residential yard remediation. The purpose of this SAP is to ensure that clean fill material is used to replace the removed, lead-bearing soil.

### 2.1 BACKFILL SAMPLING METHOD AND FREQUENCY

Prior to fill replacement, samples of the clean fill material will be collected at a frequency of once for every two residential yards of material provided by a source of supply. This equates to roughly one sample per 200 cubic yards of material. A sample will also be collected at the beginning of use of clean fill from a new source or when materials from the existing source are visually different in appearance. One QA sample (duplicate) will be collected for each 10 backfill samples. Samples will be sent to a commercial laboratory and analyzed for lead, arsenic, and cadmium. This procedure will ensure that the fill material (which includes gravel, rock, sand, and soil) being used does not exceed maximum concentrations of 150 ppm for lead, 100 ppm for arsenic, and 5 ppm for cadmium. In addition, the arithmetic mean of all like samples

(soil, gravel, etc.), calculated by construction season, must not exceed 100 ppm for lead.

#### 2.1.1 Sampling Equipment and Information Collection

The sampling equipment will include the following items: stainless steel bowls, stainless steel spoons, shovels, clean sampling containers, log book, pen, pencil, and marker.

Information that will be collected from each sampling point will include the location of the sample. A suitable hand drawn map will be developed showing the approximate location of sample points.

All sampling equipment used for sampling will be decontaminated prior to reuse.

#### 2.1.2 Backfill Sampling Locations

Samples of the clean fill material will be collected from each source of fill material. As new stockpiles are prepared from different sources, additional samples will be collected.

#### 2.1.3 Sample Collection Procedure

A composite sample will be collected from each clean soil or gravel stockpile of clean fill and analyzed for lead, arsenic and cadmium prior to the material used as backfill. Five to eight discrete samples to be composited will be collected by the following procedure: A shallow hole approximately 4" - 12" deep will be dug using a decontaminated sample spade to expose fresh fill material. The material will then be removed using a stainless steel spoon and placed in a sample bag. Sample splits for QC purposes will be done at this time. Each sample will be given a sample designation to indicate the sample location and sample number.

The sample locations and designations as well as a location sketch map will be recorded in a field logbook.

#### 2.1.4 Decontamination Procedures

All sampling equipment used will be decontaminated after each sample batch has been collected. This will include stainless steel bowls, stainless steel spoons, shovels, and any other equipment that has come in contact with the samples. The following decontamination procedure will be used:

1. Remove gross contamination by brushing.
2. Wash and scrub with phosphate-free detergent.
3. Rinse with deionized water.
4. Air dry or wipe with clean paper towels.

#### 2.2 FILL SAMPLE CUSTODY

The data collected during the sampling program requires that the possession of samples be traceable from the time they were collected, through the laboratory analytical process.

##### 2.2.1 Sample Documentation

In order to provide adequate information of the fill sampling event, the field sampling crew will maintain a field logbook and field documents. The field documents will contain sufficient details. Entries will be made in indelible ink, with all corrections consisting of initialed line-out deletions.

The documents to be completed for each sample generated during the fill sampling program are:

- The field logbook
- Site description
- Chain-of-Custody Transmittal form (See Figure B-1)
- Sample tag and/or label
- Sample master log

Upon completion, a Chain-of-Custody transmittal form (Figure B-1) will be filled out and samples will be delivered to the laboratory.

#### 2.2.2 Field Log Book

All pertinent field survey and sampling information will be recorded in a bound field logbook, during each day of the field sampling and at each sample site. All entries into the field logbook will be made in indelible ink. Each day's entries will be initialed and dated at the end of each day by the field sampling crew. All corrections shall consist of line-out deletions, which are initialed.

At minimum, entries in the field logbook shall include:

- Date and time at the start of work and description of weather conditions.
- Names of field sampling crew.
- Project name or number.
- Description of site conditions and any unusual circumstances.
- Location of sample site, including map reference.
- Equipment identification.
- Details of actual work effort, particularly any deviations from the aforementioned methods.
- Field observations.
- Time that field work was terminated for the day.
- Specific details for each sampling location will be recorded.
- Details of photo documentation if any.

Strict chain-of custody procedures will be maintained with the field logbook. While being used in the field, field logbooks will

remain with the field team at all times. Upon completion of the field effort, field logbooks will be filed in an appropriately secure manner.

### 2.2.3 Sample Packaging and Shipping

Each sample container will be properly labeled in the field. Each sample will be hand delivered to the contract laboratory for analysis.

Coolers may be used only as a convenient shipping/storage container; the samples will not be cooled until they are received by the laboratory. An alternative sample storage container may also be used, as long as it allows adequate protection against breakage and loss of chain of custody.

### 2.3 QUALITY CONTROL (QC) SAMPLES

Quality Control (QC) samples will be used to check the precision and accuracy of analyses completed by the analytical laboratory. QC samples will not have any unique identifying codes that will enable the laboratory to bias them. The sampling team will strive to obtain uniformity in the sampling technique and preparation of QC samples to limit potential sampling errors. The QC sampling will be identified only in the field logbook and the in-house Sample Master Log form. Samples identified in the field logbook will include:

- Soil
- Duplicate
- Rinsate (Equipment) Blank

In addition to the composite sample collected for each soil source, a duplicate sample will be analyzed for QA/QC data. This sample will be a split sample prepared by taking one composite sample from each source and dividing it to obtain two samples. The duplicate

will be taken once per each ten backfill samples. Rinsate blanks will be collected and analyzed for QA/QC data. This sample is obtained by using a distilled water rinse of decontaminated sampling equipment placed into a sample bottle. The QC samples will be defined as follows:

1. The duplicate sample will be of the same media, of the same location and collected at the same time.
2. An rinsate (equipment) blank will be a distilled water rinse of decontaminated sampling equipment, placed into a sample bottle.

#### 2.4 ANALYTICAL PROTOCOLS

Soil samples and associated rinsate blanks will be received by the analytical laboratory in accordance with chain-of-custody procedures. These samples will be analyzed for arsenic, cadmium, and lead using methods detailing in Test Methods for Evaluating Solid Waste. Revised Methods. SW-846. Third Ed. U.S. Environmental Protection Agency, Washington, D.C. Soil samples will be digested in accordance with SW-846 method 3050 after sample preparation as specified in Table B-1. Rinsate blanks will be digested in accordance with SW-846 method 3010. After digestion, all samples will be analyzed for arsenic, cadmium, and lead by atomic absorption spectrophotometry in accordance with SW-846 method 7000 or by inductively coupled plasma atomic emission spectroscopy in accordance with SW-846 method 6010.

The report of analytical results will include a cover letter from the laboratory identifying the sample group and any non-complaint quality control results together with the affected samples. Attached to the cover letter will be a summary of sample results and a summary of quality control results. The summary of quality control results will include instrument performance results such as standard recoveries and blanks results; matrix Q.C. results

such as spikes, duplicates and procedural blanks; and laboratory control standard recoveries.

Chain-of-custody records and internal laboratory operational and quality control documents will be kept in a site file at the laboratory for audit if desired.

## 2.5 DATA COLLECTION AND MANAGEMENT

All clean fill sampling data and analytical results will be stored on a Lotus™ 123 computer data base. The data will be available as either a Lotus file or in another format. This Lotus™ 123 spread sheet format will facilitate retrieval and analysis of the data. The data will be provided to the agencies , when available.

## 3.0 HEALTH AND SAFETY

All field personnel will have, at a minimum, completed the OSHA approved 40-hour Health and Safety training course. Field personnel will be monitored by the assigned site health and safety officer. All personnel will be attired in appropriate modified level D work clothing. Based on air monitoring results and on visible airborne dust, the site health and safety officer may require workers to suspend sampling activities, until conditions are suitable for working. Field personnel will have read the site-specific Health and Safety Plan prior to conducting sampling.



## Table B-1 Sample Preparation

### Sample Preparation

Soil and fill material are heterogeneous bodies of matter. The composite are also too large to be handled in the analytical laboratory. Preparation procedures must therefore homogenize the sample and extract a representative, repeatable sample prior to chemical analysis.

The following procedure will be followed for all soil and fill samples:

1. The as-received bulk sample will be placed into a dry and clean stainless steel pan and dried at 60°C. Water content will not be determined.
2. The dried material will be disaggregated by screening through a U.S. Standard No. 10 sieve. Large clods will be broken by hand. The technician will wear a clean set of polyethylene disposable gloves during this process. Material that will not pass through the No. 10 sieve will be discarded.
3. The material will be split with a riffler splitter to form two sub samples weighing approximately one kilogram each, if possible. The excess material, if any, will be discarded.
4. One of the samples obtained during this step will be labeled and archived.
5. The other sample will be screened through a U.S. Standard No. 80 sieve. The material passing through the sieve will form the analytical sub sample. The material retained by the sieve will be discarded.

The analytical sub samples will then be sent to the analytical chemist for digestion and analysis.

WOODS

**LABORATORY DATA VALIDATION  
FUNCTIONAL GUIDELINES FOR EVALUATING INORGANICS ANALYSES**

Prepared for the

**HAZARDOUS SITE EVALUATION DIVISION  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

**RECEIVED  
OCT 12 1993  
SUPERFUND REMEDIAL BRANCH**

Compiled by

**Ruth Bleyler  
Sample Management Office  
Viar & Company**

**DRAFT**

Prepared by

**The USEPA Data Review Work Group  
Jeanne Hankins - EPA Region III - Chairperson  
Frank Messina, Laura Scalise - EPA Region II  
Gary Bennett - EPA Region IV  
Ida Levin - EPA Region V  
Mahmoud El-Feky - EPA Region VI  
Larry Marchin - EPA Region VII**

July 1, 1988

7

## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION .....	1
PRELIMINARY REVIEW .....	2
INORGANICS PROCEDURE.....	2
I. Holding Times.....	3
II. Calibration.....	4
III. Blanks .....	6
IV. ICP Interference Check Sample (ICS).....	7
V. Laboratory Control Sample (LCS) .....	9
VI. Duplicate Sample Analysis.....	10
VII. Matrix Spike Sample Analysis .....	11
VIII. Furnace Atomic Absorption QC.....	12
IX. ICP Serial Dilution .....	13
X. Sample Result Verification .....	14
XI. Field Duplicates .....	14
XII. Overall Assessment of Data for a Case.....	15
GLOSSARY A: Data Qualifier Definitions .....	16
GLOSSARY B: Additional Terms .....	17

## INTRODUCTION

This document is designed to offer guidance in laboratory data evaluation and validation. In some aspects, it is equivalent to a Standard Operating Procedure (SOP). In other, more subjective areas, only general guidance is offered due to the complexities and uniqueness of data relative to specific samples. These Guidelines have been updated to include all requirements in the 7/87 Statement of Work (SOW) for Inorganics, Amendment 1 and December 1987 Revisions.

Those areas where specific SOPs are possible are primarily areas in which definitive performance requirements are established. These requirements are concerned with specifications that are not sample dependent; they specify performance requirements on matters that should be fully under a laboratory's control. These specific areas include blanks, calibration standards, calibration verification standards, laboratory control standards, and interference check standards. In particular, mistakes such as calculation and transcription errors must be rectified by resubmission of corrected data sheets.

This document is intended for technical review. Some areas of overlap between technical review and Contract Compliance Screening (CCS) exist; however, determining contract compliance is not intended to be a goal of these guidelines. It is assumed that the CCS is available and can be utilized to assist in the data review procedure.

At times, there may be an urgent need to use data which do not meet all contract requirements and technical criteria. Use of these data does not constitute either a new requirement standard or full acceptance of the data. Any decision to utilize data for which performance criteria have not been met is strictly to facilitate the progress of projects requiring the availability of the data. A contract laboratory submitting data which are out of specification may be required to rerun or resubmit data even if the previously submitted data have been utilized due to urgent program needs; data which do not meet specified requirements are never fully acceptable. The only exception to this requirement is in the area of requirements for individual sample analysis; if the nature of the sample itself limits the attainment of specifications, appropriate allowances must be made. The overriding concern of the Agency is to obtain data which are technically valid and legally defensible.

All data reviews must have, as a cover sheet, the Inorganic Regional Data Assessment (IRDA) form. (A copy is attached at the end of this document.) If mandatory actions are required, they should be specifically noted on this form. In addition, this form is to be used to summarize overall deficiencies requiring attention, as well as general laboratory performance and any discernible trends in the quality of the data. (This form is not a replacement for the data review.) Sufficient supplementary documentation must accompany the form to clearly identify the problems associated with a Case. The form and any attachments must be submitted to the Contract Laboratory Program Quality Assurance Coordinator (CLP QAC), the Regional Deputy Project Officer (DPO), and the Environmental Monitoring Systems Laboratory in Las Vegas (EMSL/LV).

It is the responsibility of the data reviewer to notify the Regional DPO concerning problems and shortcomings with regard to laboratory data. If there is an urgent requirement, the DPO may be contacted by telephone to expedite corrective action. It is recommended that all items for DPO action be presented at one time. In any case, the Inorganic Regional Data Assessment form must be completed and submitted.

## PRELIMINARY REVIEW

In order to use this document effectively, the reviewer should have a general overview of the Case at hand. The exact number of samples, their assigned numbers, their matrix, and the number of laboratories involved in their analysis are essential information. Background information on the site is helpful but often this information is very difficult to locate. The site project officer is the best source for answers or further direction.

CCS is a source of a large quantity of summarized information. It can be used to alert the reviewer of problems in the Case or what may be sample-specific problems. This information may be utilized in data validation. If CCS is unavailable, those criteria affecting data validity must be addressed by the data reviewer.

Cases routinely have unique samples which require special attention by the reviewer. Field blanks, field duplicates, and performance audit samples need to be identified. The sampling records should provide:

1. Project Officer for site
  2. Complete list of samples with notations on
    - a) sample matrix
    - b) blanks\*
    - c) field duplicates\*
    - d) field spikes\*
    - e) QC audit sample\*
    - f) shipping dates
    - g) labs involved
- \* If applicable

The chain-of-custody record includes sample descriptions and date of sampling. Although sampling date is not addressed by contract requirements, the reviewer must take into account lag time between sampling and shipping while assessing sample holding times.

## INORGANICS PROCEDURE

The requirements to be checked in validation are listed below. ("CCS" indicates that the contractual requirements for these items will also be checked by CCS; CCS requirements are not always the same as the data review criteria.)

- I. Holding Times (CCS - Lab holding times only)

- II. Calibration
  - o Initial (CCS)
  - o Initial and Continuing Calibration Verification (CCS)
- III. Blanks (CCS)
- IV. ICP Interference Check Sample (CCS)
- V. Laboratory Control Sample (CCS)
- VI. Duplicate Sample (CCS)
- VII. Matrix Spike Sample (CCS)
- VIII. Furnace Atomic Absorption QC (CCS)
- IX. ICP Serial Dilution (CCS)
- X. Sample Result Verification (CCS - 10%)
- XI. Field Duplicates
- XII. Overall Assessment of Data for a Case

### I. HOLDING TIMES

#### A. Objective

The objective is to ascertain the validity of results based on the holding time of the sample from time of collection to time of analysis.

Note: The holding time is based on the date of collection, rather than verified time of sample receipt, and date of digestion/distillation. It is a technical evaluation rather than a contractual requirement.

#### B. Criteria

Technical requirements for sample holding times have only been established for water matrices. The following holding time and preservation requirements were established under 40 CFR 136 (Clean Water Act) and are found in Volume 49, Number 209 of the Federal Register, page 43260, issued on October 26, 1984.

METALS:	6 months; preserved to pH < 2
MERCURY:	28 days; preserved to pH < 2
CYANIDE:	14 days; preserved to pH > 12

C. Evaluation Procedure

Actual holding times are established by comparing the sampling date on the EPA Sample Traffic Report with the dates of analysis found in the laboratory raw data (digestion logs and instrument run logs). Examine the digestion and/or distillation logs to determine if samples were preserved at the proper pH.

Analyte Holding Time (Days) = Analysis Date - Sampling Date

D. Action

1. If 40 CFR 136 criteria for holding times and preservation are not met, qualify all results > Instrument Detection Limit (IDL) as estimated (J) and results < IDL as estimated (UJ).
2. If holding times are exceeded, the reviewer must use professional judgment to determine the reliability of the data and the effects of additional storage on the sample results. The expected bias would be low and the reviewer may determine that results < IDL are unusable (R).
3. Due to limited information concerning holding times for soil samples, it is left to the discretion of the data reviewer whether to apply water holding time criteria to soil samples. If the data are qualified when water holding time criteria are applied to soil samples, it must be clearly documented in the review.

## II. CALIBRATION

A. Objective

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of the analysis run, and continuing calibration verification documents that the initial calibration is still valid.

B. Criteria

1. Initial Calibration

Instruments must be calibrated daily and each time the instrument is set up.

a. ICP Analysis

A blank and at least one standard must be used in establishing the analytical curve.

b. Atomic Absorption Analysis (AA)

- 1) A blank and at least three standards, one of which must be at the Contract Required Detection Limit (CRDL), must be used in establishing the analytical curve.

- 2) The correlation coefficient must be  $\geq 0.995$ .

Note: The correlation coefficient of 0.995 is a technical criterion and not contractual.

c. Mercury Analysis

- 1) A blank and at least four standards must be used in establishing the analytical curve.
- 2) The correlation coefficient must be  $\geq 0.995$ .

d. Cyanide Analysis

- 1) A blank and at least three standards must be used in establishing the analytical curve.
- 2) A midrange standard must be distilled.
- 3) A correlation coefficient  $\geq 0.995$  is required for photometric determination.

2. Initial and Continuing Calibration Verification (ICV and CCV)

- a. Analysis results must fall within the control limits of 90 -110 percent Recovery (%R) of the true value for all analytes except mercury and cyanide.
- b. Analysis results for mercury must fall within the control limits of 80-120%R.
- c. Analysis results for cyanide must fall within the control limits of 85-115%R.

C. Evaluation Procedure

1. Verify that the instrument was calibrated daily and each time the instrument was set up using the correct number of standards and blank.
2. Verify that the correlation coefficient is  $\geq 0.995$
3. Check the distillation log and verify that the midrange CN standard was distilled.
4. Recalculate one or more of the ICV and CCV %R per type of analysis (ICP, GFAA, etc.) using the following equation and verify that the recalculated value agrees with the laboratory reported values on Form IIA. Due to possible rounding discrepancies, allow results to fall within 1% of the contract windows (e.g., 89-111%).

$$\%R = \frac{\text{Found}}{\text{True}} \times 100$$

Where,

Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution

True = concentration (in ug/L) of each analyte in the ICV or CCV source

D. Action

1. If the minimum number of standards as defined in section B were not used for initial calibration, or if the instrument was not calibrated daily and each time the instrument was set up, qualify the data as unusable (R).
2. If the correlation coefficient is  $<0.995$ , qualify results  $>$  IDL as estimated (J), and results  $<$  IDL as estimated (UJ).

Note: For critical samples, further evaluation of the calibration curve may be warranted to determine if qualification is necessary.

3. If the midrange CN standard was not distilled, qualify all associated results as estimated (J).
4. If the ICV or CCV %R falls outside the acceptance windows, use professional judgment to qualify all associated data. If possible, indicate the bias in the review. The following guidelines are recommended:
  - a. If the ICV or CCV %R falls outside the acceptance windows but within the ranges of 75-89% or 111-125% (CN, 70-84% or 116-130%; Hg, 65-79% or 121-135%), qualify results  $>$  IDL as estimated (J).
  - b. If the ICV or CCV %R is within the range of 111-125% (CN, 116-130%; Hg, 121-135%), results  $<$  IDL are acceptable.
  - c. If the ICV or CCV %R is 75-89% (CN, 70-84%; Hg, 65-79%), qualify results  $<$  IDL as estimated (UJ).
  - d. If the ICV or CCV %R is  $<75\%$ , (CN,  $<70\%$ ; Hg,  $<65\%$ ), qualify all positive results as unusable (R).
  - e. If the ICV or CCV %R is  $>125\%$ , (CN  $>130\%$ ; Hg  $>135\%$ ), qualify results  $>$  IDL as unusable (R); results  $<$  IDL are acceptable.

### III. BLANKS

A. Objective

The assessment of blank analysis results is to determine the existence and magnitude of contamination problems. The criteria for evaluation of blanks applies to any blank associated with the samples. If problems with any blank exist, all data associated with the Case must be carefully evaluated to determine whether or not there is an inherent variability in the data for the Case, or if the problem is an isolated occurrence not affecting other data.

B. Criteria

No contaminants should be in the blank(s).

C. Evaluation Procedures

Review the results reported on the Blank Summary (Form III) as well as the raw data (ICP printouts, strip charts, printer tapes, bench sheets, etc.) for all blanks and verify that the results were accurately reported.

D. Action

Action in the case of unsuitable blank results depends on the circumstances and origin of the blank. Sample results > IDL but <5 times the amount in any blank should be qualified as (U).

Any blank with a negative result whose absolute value is > IDL must be carefully evaluated to determine its effect on the sample data.

Note: The blank analyses may not involve the same weights, volumes, or dilution factors as the associated samples. In particular, soil sample results reported on Form I will not be on the same basis (units, dilution) as the calibration blank data reported on Form III. The reviewer may find it easier to work from the raw data when applying 5X criteria to soil sample data/calibration blank data.

In instances where more than one blank is associated with a given sample, qualification should be based upon a comparison with the associated blank having the highest concentration of a contaminant. The results must not be corrected by subtracting any blank value.

IV. ICP INTERFERENCE CHECK SAMPLE (ICS)

A. Objective

The ICP Interference Check Sample verifies the contract laboratory's interelement and background correction factors.

B. Criteria

1. An ICS must be run at the beginning and end of each sample analysis run (or a minimum of twice per 8 hour working shift, whichever is more frequent).
2. Results for the ICS solution AB analysis must fall within the control limits of  $\pm 20\%$  of the true value.

C. Evaluation Procedure

1. Recalculate from the raw data (ICP printout) one or more of the recoveries using the following equation (%R) and verify that the recalculated value agrees with the laboratory reported values on Form IV.

$$\text{ICS \%R} = \frac{\text{Found Solution AB}}{\text{True Solution AB}} \times 100$$

Where,

Found Solution AB = concentration (in ug/L) of each analyte measured in the analysis of solution AB

True Solution AB = concentration (in ug/L) of each analyte in solution AB

2. Check ICS raw data for results with an absolute value > IDL for those analytes which are not present in the ICS solution.

D. Action

1. For samples with concentrations of Al, Ca, Fe, and Mg which are comparable to or greater than their respective levels in the Interference Check Sample:
  - a. If the ICS recovery for an element is >120% and the sample results are < IDL, this data is acceptable for use.
  - b. If the ICS recovery for an element is >120% and the sample results are > IDL, qualify the affected data as estimated (J).
  - c. If the ICS recovery for an element falls between 50 and 79% and the sample results are > IDL, qualify the affected data as estimated (J).
  - d. If sample results are < IDL, and the ICS recovery for that analyte falls within the range of 50-79%, the possibility of false negatives may exist. Qualify the data for these samples as estimated (UJ).
  - e. If ICS recovery results for an element fall <50%, qualify the affected data as unusable (R).

Note: If possible, indicate the bias for the estimated results in the review.

2. If results > IDL are observed for elements which are not present in the EPA provided ICS solution, the possibility of false positives exists. An evaluation of the associated sample data for the affected elements should be made. For samples with comparable or higher levels of interferences and with analyte concentrations that approximate those levels found in the ICS (false positives), qualify sample results > IDL as estimated (J).
3. If negative results are observed for elements that are not present in the EPA ICS solutions, and their absolute value is > IDL, the possibility of false negatives in the samples may exist. If the absolute value of the negative results is > IDL, an evaluation of the associated sample data should be made. For samples with comparable or higher levels of interferences, qualify results for the affected analytes < IDL as estimated (UJ).
4. In general, the sample data can be accepted if the concentrations of Al, Ca, Fe and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. If these elements are present at concentrations greater than the level in the ICS, or other elements are present in the sample at >10 mg/L, the reviewer should investigate the possibility of other interference effects by using Table 2 given on page D-22 of the 7/87 SOW. These analyte concentration equivalents presented in the Table should be

considered only as estimated values, since the exact value of any analytical system is instrument specific. Therefore, estimate the concentration produced by an interfering element. If the estimate is >2X CRDL and also greater than 10% of the reported concentration of the affected element, qualify the affected results as estimated (J).

## V. LABORATORY CONTROL SAMPLE (LCS)

### A. Objective

The laboratory control sample serves as a monitor of the overall performance of all steps in the analysis, including the sample preparation.

### B. Criteria

1. All aqueous LCS results must fall within the control limits of 80-120%R, except Sb and Ag which have no control limits.
2. All solid LCS results must fall within the control limits established by the EPA. This information is available from EMSL/LV.

### C. Evaluation Procedure

1. Review Form VII and verify that results fall within the control limits.
2. Check the raw data (ICP printout, strip charts, bench sheets) to verify the reported recoveries on Form VII. Recalculate one or more of the recoveries (%R) using the following equation:

$$\text{LCS \%R} = \frac{\text{LCS Found}}{\text{LCS True}} \times 100$$

Where,

LCS Found = concentration (in ug/L for aqueous; mg/kg for solid) of each analyte measured in the analysis of LCS solution

LCS True = concentration (in ug/L for aqueous; mg/kg for solid) of each analyte in the LCS source

### D. Action

#### 1. Aqueous LCS

- a. If the LCS recovery for any analyte falls within the range of 50 - 79% or >120%, qualify results > IDL as estimated (J).
- b. If results are < IDL and the LCS recovery is greater than 120%, the data are acceptable.
- c. If results are < IDL and the LCS recovery falls within the range of 50-79%, qualify the data for the affected analytes as estimated (UJ).

- d. If LCS recovery results are <50%, qualify the data for these samples as unusable (R).
2. Solid LCS
- a. If the solid LCS recovery for any analyte falls outside the EPA control limits, qualify all sample results > IDL as estimated (J).
  - b. If the LCS results are higher than the control limits and the sample results are < IDL, the data are acceptable.
  - c. If the LCS results are lower than the control limits, qualify all sample results < IDL as estimated (UJ).

## VI. DUPLICATE SAMPLE ANALYSIS

### A. Objective

Duplicate analyses are indicators of laboratory precision based on each sample matrix.

### B. Criteria

- 1. Samples identified as field blanks cannot be used for duplicate sample analysis.
- 2. A control limit of  $\pm 20\%$  (35% for soil) for the Relative Percent Difference (RPD) shall be used for sample values >5X CRDL.
- 3. A control limit of  $\pm$ CRDL ( $\pm 2X$  CRDL for soil) shall be used for sample values <5X CRDL, including the case when only one of the duplicate sample values is <5X CRDL.

### C. Evaluation Procedure

- 1. Review Form VI and verify that results fall within the control limits.
- 2. Check the raw data and recalculate one or more RPD using the following equation to verify that results have been correctly reported on Form VI.

$$RPD = \frac{|S-D|}{(S+D)/2} \times 100$$

Where,

S = First Sample Value (original)  
 D = Second Sample Value (duplicate)

- 3. Verify that the field blank was not used for duplicate analysis.

### D. Action

- 1. If duplicate analysis results for a particular analyte fall outside the appropriate control windows, qualify the results for that analyte in all associated samples of the same matrix as estimated (J).

2. If the field blank was used for duplicate analysis, all other QC data must be carefully checked and professional judgment exercised when evaluating the data.

Note: This information must be included on the IRDA form.

## VII. MATRIX SPIKE SAMPLE ANALYSIS

### A. Objective

The matrix spike sample analysis provides information about the effect of each sample matrix on the digestion and measurement methodology.

### B. Criteria

1. Samples identified as field blanks cannot be used for spiked sample analysis.
2. Spike recovery (%R) must be within the limits of 75-125%. However, spike recovery limits do not apply when sample concentration exceeds the spike concentration by a factor of 4 or more.

### C. Evaluation Procedure

1. Review Form V and verify that results fall within the specified limits.
2. Check raw data and recalculate one or more %R using the following equation to verify that results were correctly reported on Form V.

$$\%R = \frac{(SSR-SR)}{SA} \times 100$$

Where,

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added

3. Verify that the field blank was not used for spike analysis.

### D. Action

1. If the spike recovery is >125% and the reported sample results are < IDL, the data is acceptable for use.
2. If the spike recovery is >125% or <75% and the sample results are > IDL, qualify the data for these samples as estimated (J).
3. If the spike recovery falls within the range of 30-74% and the sample results are < IDL, qualify the data for these samples as estimated (UJ).
4. If spike recovery results fall <30% and the sample results are < IDL, qualify the data for these samples as unusable (R).

5. If the field blank was used for matrix spike analysis, all other QC data must be carefully checked and professional judgment exercised when evaluating the data.

Note: This information must be included on the IRDA form.

Note: If the matrix spike recovery does not meet criteria (except in Ag), a post digestion spike is required for all methods except furnace, but this data is not used to qualify sample results. However, this information must be included in the IRDA report.

### VIII. FURNACE ATOMIC ABSORPTION QC

#### A. Objective

Duplicate injections and furnace post digestion spikes establish the precision and accuracy of the individual analytical determinations.

#### B. Criteria

1. For sample concentrations > CRDL, duplicate injections must agree within  $\pm 20\%$  Relative Standard Deviation (RSD), (or Coefficient of Variation (CV)), otherwise the sample must be rerun once (at least two additional injections).
2. Spike recovery must be  $\geq 85\%$  and  $\leq 115\%$ .
3. The Furnace Atomic Absorption Scheme must be followed as described in the 7/87 SOW, p. E-15.

#### C. Evaluation Procedure

1. Check raw data to verify that duplicate injections agree within  $\pm 20\%$  RSD (or CV) for sample concentrations > CRDL.
2. Review Furnace AA raw data to verify that the Furnace Atomic Absorption Scheme has been followed.

#### D. Action

1. If duplicate injections are outside the  $\pm 20\%$  RSD (or CV) limits and the sample has not been rerun once as required, qualify the data as estimated (J).
2. If the rerun sample results do not agree within  $\pm 20\%$  RSD (or CV), qualify the data as estimated (J).
3. If the post digestion spike recovery is <40%, qualify results > IDL as estimated (J).
4. If the post digestion spike recovery is  $\geq 10\%$ , but <40%, qualify results < IDL as estimated (UJ).
5. If the post digestion spike recovery is <10%, qualify results < IDL as unusable (R).

6. If sample absorbance is <50% of the post digestion spike absorbance then:
  - a. If the furnace post digestion spike recovery is not within 85-115%, qualify the sample results > IDL as estimated (J).
  - b. If the furnace post digestion spike recovery is not within 85-115%, qualify the sample results < IDL as estimated (UJ).
7. If Method of Standard Additions (MSA) is required but has not been done, qualify the data as estimated (J).
8. If any of the samples run by MSA have not been spiked at the appropriate levels, qualify the data as estimated (J).
- 9.. If the MSA correlation coefficient is <0.995, qualify the data as estimated (J).

### IX. ICP SERIAL DILUTION

#### A. Objective

The serial dilution determines whether significant physical or chemical interferences exist due to sample matrix.

#### B. Criteria

If the analyte concentration is sufficiently high (concentration in the original sample is minimally a factor of 50 above the IDL), an analysis of a 5-fold dilution must agree within 10% Difference (%D) of the original results.

#### C. Evaluation Procedures

1. Check the raw data and recalculate the %D using the following equation to verify that the dilution analysis results agree with results reported on Form IX.

$$\%D = \frac{|I-S|}{I} \times 100$$

Where,

I = Initial Sample Result

S = Serial Dilution Result (Instrument Reading x 5)

2. Check the raw data for evidence of negative interference, i.e., results of the diluted sample are significantly higher than the original sample.

#### D. Action

1. When criteria are not met, qualify the associated data as estimated (J).
2. If evidence of negative interference is found, use professional judgment to qualify the data.

## X. SAMPLE RESULT VERIFICATION

### A. Objective

The objective is to ensure that the reported quantitation results are accurate.

### B. Criteria

Analyte quantitation must be calculated according to the appropriate SOW.

### C. Evaluation Procedures

The raw data should be examined to verify the correct calculation of sample results reported by the laboratory. Digestion and distillation logs, instrument printouts, strip charts, etc. should be compared to the reported sample results.

1. Examine the raw data for any anomalies (i.e., baseline shifts, negative absorbances, omissions, legibility, etc.).
2. Verify that there are no transcription or reduction errors (e.g., dilutions, percent solids, sample weights) on one or more samples.
3. Verify that results fall within the linear range of the ICP (Form XIII) and within the calibrated range for the non-ICP parameters.
4. Verify that sample results are  $>5X$  ICP IDL, if ICP analysis results are used for As, Tl, Se, or Pb.

Note: When the laboratory provides both ICP and furnace results for an analyte in a sample and the concentration is  $>$  ICP IDL, the results can assist in identifying quantitation problems.

### D. Action

If there are any discrepancies found, the laboratory may be contacted by the designated representative to obtain additional information that could resolve any differences. If a discrepancy remains unresolved, the reviewer may determine qualification of the data is warranted.

## XI. FIELD DUPLICATES

### A. Objective

Field duplicate samples may be taken and analyzed as an indication of overall precision. These analyses measure both field and lab precision; therefore, the results may have more variability than lab duplicates which measure only lab performance. It is also expected that soil duplicate results will have a greater variance than water matrices due to difficulties associated with collecting identical field samples.

### B. Criteria

There are no review criteria for field duplicate analyses comparability.

C. Evaluation Procedures

Samples which are field duplicates should be identified using EPA Sample Traffic Reports or sample field sheets. The reviewer should compare the results reported for each sample and calculate the Relative Percent Difference (RPD), if appropriate.

D. Action

Any evaluation of the field duplicates should be provided with the reviewer's comments.

XII. OVERALL ASSESSMENT OF DATA FOR A CASE

It is appropriate for the data reviewer to make professional judgments and express concerns and comments on the validity of the overall data for a Case. This is particularly appropriate when there are several QC criteria out of specification. The additive nature of QC factors out of specification is difficult to assess in an objective manner, but the reviewer has a responsibility to inform the user concerning data quality and data limitations in order to assist that user in avoiding inappropriate use of the data, while not precluding any consideration of the data at all. If qualifiers other than those used in this document are necessary to describe or qualify the data, it is necessary to thoroughly document/explain the additional qualifiers used. The data reviewer would be greatly assisted in this endeavor if the data quality objectives were provided. The cover form and supplementary documentation must be included with the review.

## GLOSSARY A

### Data Qualifier Definitions

For the purposes of this document the following code letters and associated definitions are provided.

- U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
- J - The associated value is an estimated quantity.
- R - The data are unusable. (Note: Analyte may or may not be present.)
- UJ - The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

## GLOSSARY B

### Additional Terms

Associated Samples	Any sample related to a particular QC analysis. For example: <ul style="list-style-type: none"><li>- For ICV, all samples run under the same calibration curve.</li><li>- For duplicate RPD, all SDG samples digested/distilled of the same matrix.</li></ul>
AA	Atomic Absorption
Calibration Curve	A plot of absorbance versus concentration of standards
Case	A finite, usually predetermined number of samples collected in a given time period for a particular site. A Case consists of one or more Sample Delivery Groups.
CCB	Continuing Calibration Blank - a deionized water sample run every ten samples designed to detect any carryover contamination.
CCS	Contract Compliance Screening - process in which SMO inspects analytical data for contractual compliance and provides EMSL/LV, laboratories, and the Regions with their findings.
CCV	Continuing Calibration Verification - a standard run every ten samples designed to test instrument performance.
CLP	Contract Laboratory Program
CRDL	Contract Required Detection Limit
CV	Coefficient of Variation
DPO	Deputy Project Officer
EMSL/LV	Environmental Monitoring System Laboratory/ Las Vegas (P.O. Box 15027, Las Vegas, Nevada 89114)
Field Blank	Field blanks are intended to identify contaminants that may have been introduced in the field. Examples are trip blanks, travel blanks, rinsate blanks, and decontamination blanks.

Field Duplicate	A duplicate sample generated in the field, not in the laboratory.
Holding Time	The time from sample collection to laboratory analysis.
ICB	Initial Calibration Blank - first blank standard run to confirm the calibration curve.
ICP	Inductively Coupled Plasma
ICS	Interference Check Sample
ICV	Initial Calibration Verification - first standard run to confirm the calibration curve.
Initial Calibration	The establishment of a calibration curve with the appropriate number of standards and concentration range. The calibration curve plots absorbance or emission versus concentration of standards.
IRDA	Inorganic Regional Data Assessment
LCS	Laboratory Control Sample - supplied by EPA
MS	Matrix Spike - introduction of a known concentration of analyte into a sample to provide information about the effect of the sample matrix on the digestion and measurement methodology.
MSA	Method of Standard Addition
Post digestion Spike	The addition of a known amount of standard after digestion. (Also identified as analytical spike, or spike, for furnace analyses.)
QAC	Quality Assurance Coordinator
RPD	Relative Percent Difference
RSCC	Regional Sample Control Center
RSD	Relative Standard Deviation
Serial Dilution	A sample run at a specific dilution to determine whether any significant chemical or physical interferences exist due to sample matrix effects. (ICP only)

SDG

Sample Delivery Group - defined by one of the following, whichever occurs first:

- case of field samples
- each twenty field samples in a Case
- each 14-day calendar period during which field samples in a Case are received, beginning with receipt of the first sample in the SDG.

SMO

Sample Management Office

SOP

Standard Operating Procedure

SOW

Statement of Work

INORGANIC REGIONAL DATA ASSESSMENT

CASE NO. \_\_\_\_\_ SITE \_\_\_\_\_  
 LABORATORY \_\_\_\_\_ NO. OF SAMPLES/  
 MATRIX \_\_\_\_\_  
 SDG# \_\_\_\_\_ REVIEWER (IF NOT ESD) \_\_\_\_\_  
 SOW# \_\_\_\_\_ REVIEWER'S NAME \_\_\_\_\_  
 DPO: ACTION \_\_\_\_\_ FYI \_\_\_\_\_ COMPLETION DATE \_\_\_\_\_

DATA ASSESSMENT SUMMARY

	ICP	AA	Hg	CYANIDE
1. HOLDING TIMES	_____	_____	_____	_____
2. CALIBRATIONS	_____	_____	_____	_____
3. BLANKS	_____	_____	_____	_____
4. ICS	_____	_____	_____	_____
5. LCS	_____	_____	_____	_____
6. DUPLICATE ANALYSIS	_____	_____	_____	_____
7. MATRIX SPIKE	_____	_____	_____	_____
8. MSA	_____	_____	_____	_____
9. SERIAL DILUTION	_____	_____	_____	_____
10. SAMPLE VERIFICATION	_____	_____	_____	_____
11. OTHER QC	_____	_____	_____	_____
12. OVERALL ASSESSMENT	_____	_____	_____	_____

O = Data had no problems/or qualified due to minor problems.  
 M = Data qualified due to major problems.  
 Z = Data unacceptable.  
 X = Problems, but do not affect data.

ACTION ITEMS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AREAS OF CONCERN: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

NOTABLE PERFORMANCE: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

APPENDIX C

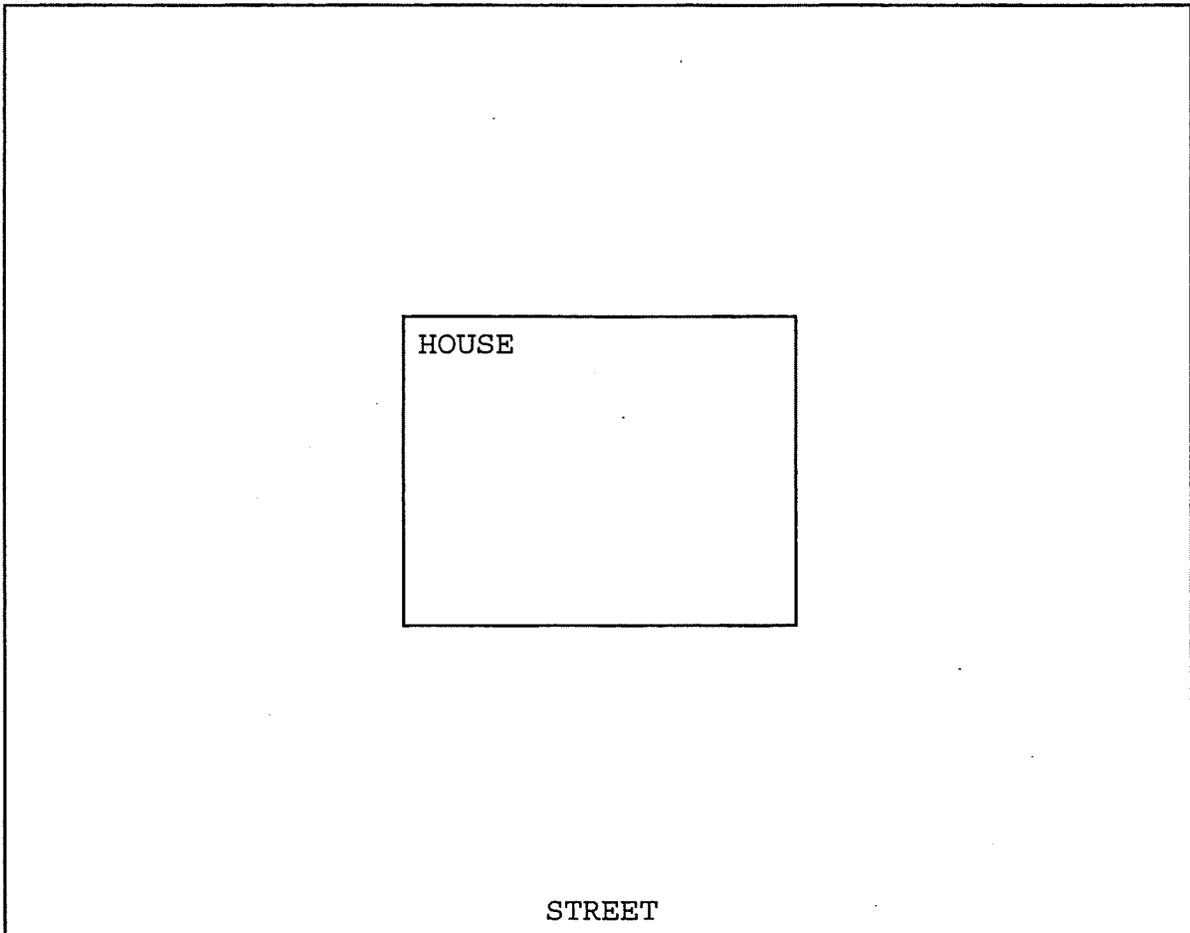
Receipt for Delivery of Garden Soil

RECEIPT FOR DELIVERY OF GARDEN SOIL

I am the owner of the residence located at \_\_\_\_\_, Idaho. At my request ASARCO Incorporated, Hecla Mining Company, and Sunshine Mining Company have delivered to me a maximum of eleven (11) cubic yards of clean soil that I will use to make a produce garden. I understand that the companies will not deliver any more garden soil to this address, and it is my responsibility to put the soil into my garden. I will use the space below to draw a rough sketch of where I have located the garden, and will mail this form to the Panhandle Health District, \_\_\_\_\_, Idaho.

\_\_\_\_\_  
Owner Date

\_\_\_\_\_  
Tenant (if applicable) Date



APPENDIX D

"High Risk" Yard Remediation

## APPENDIX D

### 1.0 DEFINITION OF "HIGH-RISK" YARD REMEDIATION CANDIDATE

High-risk yard remediation candidates are defined as:

1. Homes where children six years of age and under are in residence.
2. Homes with pregnant women in residence.
3. Licensed Day Care Centers.
4. Homes where the most recent blood lead survey indicates that children in residence have a blood lead level equal to or greater than 10  $\mu\text{g}/\text{dl}$  and the PHD has determined that the yard soil exposure is a significant exposure pathway.

### 2.0 ADDING "HIGH-RISK" YARDS TO THE SETTLING DEFENDANT WORKPLAN

EPA, in consultation with the State and PHD, will provide a "high-risk" yard remediation candidate list to the Settling Defendants by April 1 of each year. Candidates will be selected from information obtained by the PHD by community survey and the most recent blood lead survey.

EPA, in consultation with the State and PHD, may add up to an additional 30 "high-risk" yard remediation candidates to the remediation program for that construction season by September 15 of the year. To facilitate efficient scheduling of remediation activities, the Settling Defendants will immediately be notified as soon as high-risk yard has been identified. EPA and the State will make best efforts to identify all high-risk yards prior to September 1 of the year. Yards added as part of the "high-risk" program shall count toward the attainment of the annual minimum. Any yard remediation candidates identified after the September 15 deadline will be included in the candidate list for the next year's yard remediation project.