

DRAFT JULY 26, 2017

CONFIDENTIAL: FOR SETTLEMENT NEGOTIATION PURPOSES ONLY

**PRE-REMEDIAL DESIGN INVESTIGATION AND BASELINE SAMPLING**

**STATEMENT OF WORK**

**PORTLAND HARBOR SUPERFUND SITE**

**Portland, Multnomah County, Oregon**

**EPA Region 10**

**XX 2017**

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## 1. INTRODUCTION

- 1.1 Purpose of the SOW.** This Statement of Work (SOW) sets forth the procedures and requirements for implementing the ~~pre-Remedial Design Baseline Sampling Work~~ remedial design investigation and baseline sampling (PDI) at the Portland Harbor Superfund Site (Site) to identify existing conditions at the Site, in accordance with the [insert date] Administrative Settlement Agreement and Order on Consent (ASAOC) for ~~pre-Remedial Design Baseline Sampling~~ PDI.
- 1.2 Structure of the SOW.** Section 2 (Community Involvement) sets forth EPA's and Respondents' responsibilities for community involvement. Section 3 (Pre-remedial Design) sets forth the process for developing the ~~pre-remedial design investigation (PDI), PDI,~~ which includes the submission of specified primary deliverables. Section 4 (Reporting) sets forth Respondents' reporting obligations. Section 5 (Deliverables) describes the content of the supporting deliverables and the general requirements regarding Respondents' submission of, and EPA's review of, approval of, comment on, and/or modification of, the deliverables. Section 6 (Schedules) sets forth the schedule for submitting the primary deliverables, ~~specifies the supporting deliverables that must accompany each primary deliverable, and sets forth the schedule of milestones regarding the completion of the Pre-remedial design baseline sampling~~ PDI. Section 7 (State, Tribal and Agency Partner Participation) addresses State, Tribal and Agency Partner participation, ~~and~~ Section 8 (References) provides a list of references, including web addresses.
- 1.3 Remedy.** The Scope of the Remedy selected by EPA for the Site is described in detail in Section 14 of the Record of Decision (ROD) for the Site, and includes using the remedial action levels (RALs) from Alternative F for all areas for all areas of the Site, including the future maintenance dredge (FMD) areas, outside of the navigation channel to determine where dredging or capping should occur. Within the navigation channel, the Remedy uses Alternative B RALs and all principal threat waste (PTW) is excavated or dredged issued by EPA on January 2017.
- 1.3.1.4 Scope of Work.** This SOW covers only the work described in the attached PDI Work Plan developed by the Respondents (Attachment A). The Pre-RD group is required only to fulfill the pre-RD data needs identified in below under this ASAOC. This agreement applies only to the work scope noted in Attachment A inclusive of a data report. Upon delivery of an approvable report to EPA all obligations of Respondents under this ASAOC shall cease.
- 1.4** ~~This SOW covers only the pre-design, baseline, and long-term sampling specified in the attached draft Sampling Plan for Pre-Remedial SMA Delineation, Baseline Sampling, and Long-Term Monitoring (Appendix A), which expands upon requirements specified in the ROD (Section 14.2.7).~~

1.5 Site Boundary. PDI activities will cover the in-water portions of the Site remedial boundary from RM 1.9 to 11.8.

1.5.1.6 Definitions. Terms used in this SOW that are defined in CERCLA, in regulations promulgated under CERCLA, or in the ASAOC, have the meanings assigned to them in CERCLA, in such regulations, or in the ASAOC, except that the term “Paragraph” or “¶” means a paragraph of the SOW, unless otherwise stated.

## 2. COMMUNITY INVOLVEMENT

### 2.1 Community Involvement Responsibilities

- (a) EPA has the lead responsibility for developing and implementing community involvement activities at the Site. During the remedial investigation/feasibility study (RI/FS) phase, EPA developed a Community Involvement Plan (CIP) for the Site. Pursuant to 40 C.F.R. § 300.435(c), EPA shall review the existing CIP and determine whether it should be revised to describe further public involvement activities that are not already addressed or provided for in the existing CIP.
- (b) If requested by EPA, Respondents shall support EPA’s community involvement activities. This may include providing online access to ~~initial submissions and updates of deliverables to:~~ (1) Community Advisory Groups; (2) Technical Assistance Grant recipients and their advisors; and (3) other entities ~~to provide them with a reasonable opportunity for review and comment.~~ EPA may describe ~~in its CIP Respondents’ responsibilities for community involvement activities identified by EPA.~~ All community involvement activities conducted by Respondents at EPA’s request are subject to EPA’s oversight. The Respondents reserve the right to conduct community outreach in addition to EPA initiated activities.
- (c) **Respondents’ CI Coordinator.** If requested by EPA, Respondents shall, within 15 days, designate and notify EPA of their Community Involvement Coordinator (Respondents’ CI Coordinator). Respondents may hire a contractor for this purpose. Respondents’ notice must include the name, title, and qualifications of the Respondents’ CI Coordinator. Respondents’ CI Coordinator is responsible for providing support regarding EPA’s community involvement activities, including coordinating with EPA’s CI Coordinator regarding responses to the public’s inquiries about the Site.

## 3. PRE-REMEDIAL DESIGN INVESTIGATION AND WORK PLAN

3.1 Purpose and Scope of Pre-Remedial Design (RD) Investigation (PDI). PDI sampling ~~to~~ will be performed to fulfill the following Data Use Objectives: (1) update and describe current levels of contamination for focused COCs; (2) refine SMA ~~the current~~ horizontal

~~and vertical extent of contamination for dredging and capping as well as determine existing and delineation of SMAs for supporting allocation; (3) develop current baseline levels of contamination and to establish sampling locations and parameters for synoptic dataset (surface sediment, fish tissue, and surface water) and evaluate trends; and (4) help support future long-term monitoring ICs.~~

(a) ~~The scope of work will be conducted per Section 14.2.7 of the ROD as well as Appendix Attachment A of this SOW. The PDI multi-media sampling activities include 9 tasks:~~

- ~~• PDI SMA Site-wide bathymetry~~
- ~~• Surface sediment sampling~~
- ~~• Fish tissue sampling~~
- ~~• Surface water sampling~~
- ~~• Sediment coring~~
- ~~• Fish tracking study~~
- ~~• Camera study~~
- ~~• Porewater upstream sampling for metals~~
- ~~• Reporting~~

(b) ~~PDI surface and subsurface sediment sampling will be performed to refine/inform delineation of the horizontal and vertical extent designated for removal and capping—active remediation (removal, capping, and ENR) and for the purposes of applying the ROD technology decision tree.~~

(c) ~~PDI scope of work also includes a site-wide bathymetry survey for the purposes of understanding current bathymetric conditions and applying the technology decision tree to distinct zones based upon depth. A camera survey and fish tracking study will also be conducted to better understand fish ranges, population, areas frequented by fisherman, etc., that could assist future development and implementation of institutional control efforts.~~

(b)(d) ~~Baseline sampling will identify existing/be performed to characterize current conditions at the Site and will include a statistically valid data set for surface sediment, river banks, surface water, and small mouth bass fish tissue samples (whole body). This analysis will include a statistically valid number of samples and use of the 95% upper confidence level (UCL) for both surface and subsurface sediment concentrations in and near where contamination was identified in the RI/FS to determine surface weighted area concentrations and for the purposes of applying the decision tree, as well as in proceeding with the design of active remediation throughout the Site on a site-wide and segment-wide scale to evaluate recovery trends.~~

- ~~(e)~~(e) Data will be collected consistent with EPA-approved RI/FS decision rules on data collection (e.g., treatment of a non-detect value) and Previously approved sampling plans will be evaluated on spatial and temporal scales appropriate for evaluating against ROD targets and metrics, including remedial action objectives (RAOs) used to the extent practicable, and amended as needed.
- (d) Baseline sampling will also be conducted in areas upstream and downstream of the Site as presented in Appendix Attachment A.
- (e) RAO 8 cleanup levels as set out in Section 9.1 and Table 17 in Appendix II of the ROD are focused on reducing the migration of contaminants of concern (COCs) in groundwater to sediment and surface water. Thus, the groundwater source control measures should be designed to prevent all surface water and groundwater COCs from discharging in exceedance of the cleanup levels, and carbon (C)10–C12 aliphatic hydrocarbons from discharging to the Willamette River at concentrations exceeding 2.6 µg/L. Pre-design characterization activities should, therefore, include characterization of C10–C12 aliphatic hydrocarbons using the best available detection limits possible.
- (f) Analytes for the PDI will include: grain size, TOC and focused COCs with Remedial Action Levels (PCBs, DDx, PAHs, and dioxins/furans).

**3.2 PDI Work Plan.** ~~The purpose of the PDI is to conduct additional investigation in support of the remedial design. Respondents shall submit a PDI Work Plan (PDIWP) for EPA approval is attached as Exhibit A to this SOW. Respondents will submit supporting plans as discussed in Section 5.7. The PDIWP will be used to implement the pre-remedial design investigation and baseline sampling activities specified in Appendix A of this SOW. As such, it must include and includes:~~

- (a) ~~An evaluation and~~ A brief summary of existing data collected since the RI;
- (b) ~~A Quality Assurance Project Plan (QAPP) that describes~~ A brief description of the media to be sampled, contaminants or parameters for which sampling will be conducted, location (areal extent and depths), and number of samples, and statistical rationale;
- (c) A description of the overall management strategy for performing the PDI;
- (d) A description of the responsibility and authority of all organizations and key personnel involved with the development of the PDI;
- ~~(e) Descriptions of any areas requiring clarification and/or anticipated problems (e.g., data gaps);~~
- ~~(f) Descriptions of any applicable permitting requirements and other regulatory requirements;~~

- ~~(g)~~ Description of plans for obtaining access in connection with the Work;
- ~~(h)~~(e) All supporting deliverables required to accompany the PDIWP as specified in the PDI Schedule set forth in ¶ 6.2 (“PDI Schedule”); and
- ~~(i)~~(f) A schedule for performance of the Work and submission of the PDI Evaluation Report discussed in paragraph 3.3. below.
- (g) Following approval of the Work Plan, the PDI QAPP (including the FSP) will be developed describing how the field work will be conducted, samples analyzed, and access obtained in connection with the Work.

**3.3 PDI Evaluation Report.** Following the PDI, Respondents shall submit a PDI Evaluation Report. This report must include:

- (a) Summary of the investigations performed;
- (b) Summary of investigation results and identification of existing conditions;
- (c) Summary of validated data (i.e., tables and graphics);
- (d) Data validation reports (Tier II) and laboratory data reports;
- ~~(e)~~ Results of statistical and modeling analyses; and
- ~~(f)~~(e) Photographs documenting the work ~~conducted~~.
- (f) Engineering evaluations including:
  - (1) Confirmation of active remedial footprint using new 2018 data through the ROD decision tree to support allocation;
  - (2) Evaluation of surface weighted average concentrations (SWACs) at site-wide and segment-wide scale to evaluate recovery trends compared to older data;
  - (3) Evaluation of current upstream background conditions;
  - (4) Analysis of natural recovery trends of SMB tissue and surface water compared to older data; and
  - (5) Evaluation of fish tracking results and fish home ranges.

**3.4 Meetings and Inspections.** Respondents shall meet ~~regularly~~ with EPA to discuss ~~pre-design and baseline sampling~~ PDI issues as necessary and, as directed or determined by EPA. Meetings and inspections will include:

- (a) **PDI Conference.** Respondents shall hold ~~one~~ PDI conference with EPA and others as directed or approved by EPA. Respondents shall prepare minutes of the conference and shall distribute the minutes to all Parties.

- (b) **Periodic Meetings.** During the PDI, Respondents shall meet regularly with EPA, ~~and others as directed or determined by EPA.~~ (assume one meeting every 1-2 months), to discuss status, access, and other issues. Respondents shall distribute an agenda and list of attendees to all Parties prior to each meeting. Respondents shall prepare minutes of the meetings and shall distribute the minutes to all Parties.
- (c) **Inspections**
- (1) EPA shall conduct periodic inspections of or have an on-site presence during the ~~Work~~PDI. At EPA's request, the Supervising Contractor or other designee shall accompany EPA during inspections.
  - (2) Respondents shall provide personal protective equipment needed for EPA personnel and any oversight officials to perform their oversight duties; EPA staff must have appropriate health and safety training, and must provide their own hard hats, boots, and safety vests).
  - (3) Upon notification by EPA of any deficiencies in the PDI, Respondents shall take all necessary steps to correct the deficiencies. If applicable, Respondents shall comply with any reasonable schedule provided by EPA in its notice of deficiency.

### 3.5 Emergency Response and Reporting

- (a) **Emergency Response and Reporting.** If any event occurs during performance of the ~~Work~~PDI that causes or threatens to cause a release of Waste Material on, at, or from the Site and that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment, Respondents shall: (1) immediately take all appropriate action to prevent, abate, or minimize such release or threat of release; (2) immediately notify the authorized EPA officer (as specified in ¶ 3.5(c)) orally; and (3) take such actions in consultation with the authorized EPA officer and in accordance with all applicable provisions of the Health and Safety Plan, the Emergency Response Plan, and any other deliverable approved by EPA under the SOW.
- (b) **Release Reporting.** Upon the occurrence of any event during performance of the ~~Work~~PDI that Respondents are required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), 42 U.S.C. § 11004, Respondents shall immediately notify the authorized EPA officer orally.
- (c) The "authorized EPA officer" for purposes of immediate oral notifications and consultations under ¶ 3.5(a) and ¶ 3.5(b) is the EPA Project Coordinator, the EPA Alternate Project Coordinator (if the EPA Project Coordinator is unavailable), or

the EPA Emergency Response Unit, Region 10 (if neither EPA Project Coordinator is available).

In the event of any action or occurrence during performance of the ~~Work~~PDI which causes or threatens to cause a release of Waste Material from the Portland Harbor Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action. Respondents shall take these actions in accordance with all applicable provisions of this Settlement Agreement, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondents shall also immediately notify the EPA Project Coordinator or, in the event of his/her unavailability, the Regional Duty Officer, Environmental Cleanup Office, Emergency Response Unit, EPA Region 10, (206) 553-1263, of the incident or conditions. In the event that Respondents fail to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondents shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XV (Payment of Response Costs).

- (d) In addition, in the event of any release of a hazardous substance from the Portland Harbor Site, Respondents shall immediately notify the EPA Project Coordinator and the National Response Center at (800) 424-8802. Respondents shall submit a written report to EPA within 7 days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11001, et seq.
- (e) The reporting requirements under ¶ 3.5 are in addition to the reporting required by CERCLA § 103 or EPCRA § 304.

#### 4. REPORTING

**4.1 Progress Reports.** Commencing with the month following the effective date of the ASAOC and until EPA approves the completion of the PDI, Respondents shall submit progress reports to EPA monthly, or as otherwise requested by EPA. The reports must cover all activities that took place during the prior reporting period, including:

- (a) The actions that have been taken toward achieving compliance with the ASAOC;
- (b) A summary of all results of sampling, ~~tests~~validated test results, and all other data received or generated by Respondents;
- (c) A description of all deliverables that Respondents submitted to EPA;

- (d) A description of all activities relating to PDI that are scheduled for the next six weeks;
- (e) An updated PDI Schedule, together with information regarding percentage of completion, delays encountered or anticipated that may affect the future schedule for implementation of the Work, and a description of efforts made to mitigate those delays or anticipated delays;
- (f) A description of any modifications to the work plans or other schedules that Respondents have proposed or that have been approved by EPA; and
- (g) A description of all activities undertaken in support of the CIP during the reporting period and those to be undertaken in the next six weeks.

**4.2 Notice of Progress Report Schedule Changes.** If the schedule for any activity described in the Progress Reports, including activities required to be described under ¶ 4.1(d), changes, Respondents shall notify EPA of such change at least 7 days before the scheduled date for performance of the activity.

## **5. DELIVERABLES**

**5.1 Applicability.** Respondents shall submit deliverables for EPA approval or for EPA comment as specified in ~~the~~this SOW. Paragraphs 5.2 (In Writing) through 5.4 (Technical Specifications) apply to all deliverables. Paragraph 5.5 (Certification) applies to any certification of deliverables. Paragraph 5.6 (Approval of Deliverables) applies to any deliverable that is required to be submitted for EPA approval.

**5.2 In Writing.** All deliverables under this SOW must be in writing unless otherwise specified.

**5.3 General Requirements for Deliverables.** All deliverables must be submitted by the deadlines in the Schedule ~~approved with~~of the PDI Work Plan, as applicable. Respondents shall submit all deliverables to EPA in electronic form.

### **5.4 Technical Specifications**

- (a) Sampling and monitoring data should be submitted in standard regional Electronic Data Deliverable (EDD) format (Appendix B). Other delivery methods may be allowed if electronic direct submission presents a significant burden or as technology changes. All data must be formatted such that they can be easily uploaded to the Site database.
- (b) Spatial data, including spatially-referenced data and geospatial data, should be submitted: (1) in the ESRI File Geodatabase format; and (2) as unprojected geographic coordinates in decimal degree format using North American Datum 1983 (NAD83) or World Geodetic System 1984 (WGS84) as the datum, consistent with the RI. If applicable, submissions should include the collection

method(s). Projected coordinates may optionally be included but must be documented: (four aspects include projection, zone, datum, and units). Spatial data should be accompanied by metadata, and such metadata should be compliant with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and its EPA profile, the EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor (EME), complies with these FGDC and EPA metadata requirements and is available at <https://edg.epa.gov/EME/>. Respondents are required to upload data collected to EPA's Water Quality Exchange (WQX) in a manner approved in advance by EPA.

- (c) Each file must include an attribute name for each site unit or sub-unit submitted. Consult <http://www.epa.gov/geospatial/policies.html> for any further available guidance on attribute identification and naming.
- (d) Spatial data submitted by Respondents does not, and is not intended to, define the boundaries of the Site.

**5.5 Certification.** All deliverables that require compliance with this ¶ 5.5 must be signed by the Respondents' Project Coordinator, or other responsible official of Respondents, and must contain the following statement:

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

## **5.6 Approval of Deliverables**

### **(a) Initial Submissions**

- (1) After review of any deliverable that is required to be submitted for EPA approval under the SOW, EPA shall: (i) approve, in whole or in part, the submission; (ii) approve the submission upon specified conditions; (iii) disapprove, in whole or in part, the submission; or (iv) any combination of the foregoing.
- (2) EPA also may modify the initial submission to cure deficiencies in the submission if: (i) EPA determines that disapproving the submission and awaiting a resubmission would cause substantial disruption to the Work; or (ii) previous submission(s) have been disapproved due to material defects and the deficiencies in the initial submission under consideration

indicate a bad faith lack of effort to submit an acceptable deliverable. All EPA changes to submitted work products will be noted with applicable page footnotes.

- (b) **Resubmissions.** Upon receipt of a notice of disapproval under ¶ 5.6(a) (Initial Submissions), or if required by a notice of approval upon specified conditions under ¶ 5.6(a), Respondents shall, within ~~15~~<sup>30</sup> days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the deliverable for approval. After review of the resubmitted deliverable, EPA may: (1) approve, in whole or in part, the resubmission; (2) approve the resubmission upon specified conditions; (3) modify the resubmission; (4) disapprove, in whole or in part, the resubmission, requiring Respondents to correct the deficiencies; or (5) any combination of the foregoing and/or refer the matter to a third party expert panel.
- (c) **Implementation.** Upon approval, approval upon conditions, or modification by EPA under ¶ 5.6(a) (Initial Submissions) or ¶ 5.6(b) (Resubmissions), of any deliverable, or any portion thereof: (1) such deliverable, or portion thereof, will be incorporated into and enforceable under the ASAOC; and (2) Respondents shall take any action required by such deliverable, or portion thereof. The implementation of any non-deficient portion of a deliverable submitted or resubmitted under ¶ 5.6(a) or ¶ 5.6(b) does not relieve Respondents of any liability for stipulated penalties under Section XVI (Stipulated Penalties) of the ASAOC.

**5.7 Supporting Deliverables to PDI Work Plan.** Respondents shall submit each of the following supporting deliverables for EPA approval, except as specifically provided. The deliverables must be submitted, for the first time, by the deadlines in the EPA-approved schedule, as applicable. Respondents shall develop the deliverables in accordance with all applicable regulations, guidance, and policies (see Section 8 (References)). Respondents shall update each of these supporting deliverables as necessary or appropriate during the Work, and/or as requested by EPA.

- (a) **Health and Safety Plan.** The Health and Safety Plan (HASP) describes all activities to be performed to protect on site personnel and area residents from physical, chemical, and all other hazards posed by the Work. Respondents shall develop the HASP in accordance with EPA's Emergency Responder Health and Safety and Occupational Safety and Health Administration (OSHA) requirements under 29 C.F.R. §§ 1910 and 1926. The HASP should cover PDI activities. EPA does not approve the HASP, but will review it to ensure that all necessary elements are included and that the plan provides for the protection of human health and the environment. The plan will include appropriate elements of an Emergency Response Plan to cover field activities in the event of an accident or emergency at the Site (e.g. power outages, slope failure, spill releases, etc.) and notification requirements. Work may not commence until EPA comments on the HASP have been resolved.

- ~~(b) **Emergency Response Plan.** The Emergency Response Plan (ERP) must describe procedures to be used in the event of an accident or emergency at the Site (for example, power outages, water impoundment failure, treatment plant failure, slope failure, etc.). The ERP must include:~~
- ~~(1) Name of the person or entity responsible for responding in the event of an emergency incident;~~
  - ~~(2) Plan and date(s) for meeting(s) with the local community, including local, State, and federal agencies involved in the cleanup, as well as local emergency squads and hospitals;~~
  - ~~(3) Spill Prevention, Control, and Countermeasures (SPCC) Plan (if applicable), consistent with the regulations under 40 C.F.R. Part 112, describing measures to prevent, and contingency plans for, spills and discharges;~~
  - ~~(4) Notification activities in accordance with ¶ 3.5(b) (Release Reporting) in the event of a release of hazardous substances requiring reporting under Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), 42 U.S.C. § 11004, and~~
  - ~~(5) A description of all necessary actions to ensure compliance with ¶ 8.3 (Emergencies and Releases) of the ASAOC in the event of an occurrence during the performance of the Work that causes or threatens a release of Waste Material from the Site that constitutes an emergency or may present an immediate threat to public health or welfare or the environment.~~

~~(c)(b) **Quality Assurance Project Plan.** The Quality Assurance Project Plan (QAPP) addresses all sample collection activities as well as sample analysis and data handling regarding the WorkPDI. It must be written so that a field sampling team unfamiliar with the project would be able to gather the samples and field information required. A separate Field Sampling Plan (FSP) is not required. Instead, this information is incorporated into the Quality Assurance Project Plan. The QAPP developed by Lower Willamette Group for the RI/FS will be used where methods are consistent, and the Pre-RD QAPP will include amendments where the methods are different.~~

The QAPP must include a detailed explanation of Respondents' quality assurance, quality control, and chain of custody procedures for all treatability, design, compliance, and monitoring samples. Respondents shall develop the QAPP in accordance with *EPA Requirements for Quality Assurance Project Plans, QA/R-5, EPA/240/B-01/003* (Mar. 2001, reissued May 2006); *Guidance for Quality Assurance Project Plans., QA/G-5, EPA/240/R 02/009* (Dec. 2002); and *Uniform*

*Federal Policy for Quality Assurance Project Plans*, Parts 1-3, EPA/505/B-04/900A through 900C (Mar. 2005). The QAPP also must include procedures:

- (1) To ensure that EPA and its authorized representative have reasonable access to laboratories used by Respondents in implementing the ASAOC (Respondents' Labs);
- (2) To ensure that Respondents' Labs analyze all samples submitted by EPA pursuant to the QAPP for quality assurance monitoring;
- (3) To ensure that Respondents' Labs perform all analyses using EPA-accepted methods (i.e., the methods documented in *USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis*, ILM05.4 (Dec. 2006); *USEPA Contract Laboratory Program Statement of Work for Organic Analysis*, SOM01.2 (amended Apr. 2007); and *USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration)*, ISM01.2 (Jan. 2010)) or other methods acceptable to EPA;
- (4) To ensure that Respondents' Labs participate in an EPA-accepted QA/QC program or other program QA/QC acceptable to EPA;
- (5) For Respondents to provide EPA with notice at least 287 days prior to any sample collection activity;
- (6) For Respondents to provide split samples and/or duplicate samples to EPA upon request;
- ~~(7) For EPA to take any additional samples that it deems necessary;~~
- ~~(8)(7) For EPA to provide to Respondents, upon request, split samples and/or duplicate samples in connection with EPA's oversight sampling; and~~
- ~~(9)(8) For Respondents to submit to EPA all sampling and tests results and other data in connection with the implementation of the ASAOC.~~

~~(d)(c) **Field Sampling Plan for Pre-Remedial SMA Delineation, Baseline Sampling, and Long-Term Monitoring Investigation Studies.** The field sampling plan (SP) (Appendix A) FSP, incorporated as a subsection of the QAPP, provides objectives and minimum sampling requirements. It includes guidelines for sediment, surface water, resident biota, and migratory fish tissue monitoring and is the beginning point for the respondents' development of a more complete sampling plan, or even multiple sampling plans. Preliminary RD characterization will focus on delineating horizontal and vertical extent of contamination associated with SMAs. Baselines small mouth bass fish tissue, and other tasks listed in Section 3.1. The sampling will provide up-to-date information on the~~

extent of contamination in affected media, identify existing conditions, and include a statistically valid data set ~~for that could be used to evaluate~~ ROD RAOs. ~~Long-term monitoring will compare conditions against baseline to assess RA performance.~~ The SPFSP must include:

- (1) Description of environmental media to be sampled and monitored;
- (2) Description of data collection parameters, including existing and proposed monitoring devices and locations, ~~schedule and frequency of monitoring,~~ analytical parameters to be monitored ~~assessed,~~ analytical methods employed, supporting rationale for the sample components and their relationship to ROD RAOs, metrics, and targets; ~~(fish tissue);~~
- (3) Description of how ~~performance~~ data will be analyzed, interpreted, and reported, and/or other Site-related requirements;
- ~~(4) Description of verification sampling procedures;~~
- ~~(5) Description of deliverables to be generated in connection with monitoring, including sampling schedules, laboratory records, monitoring reports, and monthly and annual reports to EPA and State agencies;~~
- ~~(6) Description of proposed additional monitoring and data collection actions (such as increases in frequency of monitoring, and/or installation of additional monitoring devices in the affected areas) if results from monitoring devices indicate changed conditions (such as higher than expected concentrations of the contaminants of concern or groundwater contaminant plume movement);~~

## 6. SCHEDULES

- 6.1 Applicability and Revisions.** All deliverables and tasks required under this SOW must be submitted or completed by the deadlines or within the time durations listed in the schedule set forth below and/or approved as part of the PDI Work Plan. Respondents may submit a proposed revised schedule for EPA approval. Upon EPA's approval, the revised schedule supersedes the schedule set forth below, and any previously-approved schedule.

**6.2 PDI Milestones**

Anticipated milestones for the PDI include:

- (a) All PDI planning documents approved by end of 2017;
- (b) Field work completed by end of 2018;
- (c) Data analysis and reporting by Q2 2019.

**6.2.3 PDI Schedule [to be revised based on the PDI WP which will be attached]**

	<b>Description of Deliverable, Task</b>	<b>Included Supporting Deliverable</b>	<b>¶ Ref.</b>	<b>Deadline</b>
1	PDIWP	HASP, ERP, QAPP, and SP	3.1 and 5.7	90 days after EPA's Authorization to Proceed regarding Supervising Contractor under ASAOC ¶ 8.1.3  All documents will be reviewed by EPA and the MOU partners ODEQ, as described in ¶ 7.1 of this SOW. Comments and required changes will be submitted to the Respondents.  Respondents will revise the documents accordingly within 30 days.
2	Monthly progress reports		4.1	Due by the 15 <sup>th</sup> day of the month following the reporting month.

**7. ~~STATE AND TRIBAL AND AGENCY PARTNER PARTICIPATION~~**

**7.1 Copies.** Respondents shall, at any time they send a deliverable to EPA, send a copy of such deliverable to the Oregon Department of Environmental Quality (ODEQ), the Tribal Governments (as defined in the ASAOC), the Oregon Department of Fish and Wildlife, National Oceanic and Atmospheric Administration, and U.S. Department of the Interior (collectively "MOU partners") at the addresses specified in Appendix C. EPA shall, at any time it sends a notice, authorization, approval, disapproval, or certification to Respondents, send a copy of such document to the MOU partners. All distribution copies will be electronic.

**7.2 Review and Comment.** ~~The MOU partners ODEQ will have a reasonable opportunity for review and comment, and all other MOU partners will be briefed, prior to:~~

Any EPA approval or disapproval under ¶ 5.6 (Approval of Deliverables) of any deliverables that are required to be submitted for EPA approval.

## 8. REFERENCES

**8.1** The following regulations and guidance documents, among others, apply to the Work. Any item for which a specific web address is not provided below is available on one of the two EPA web pages listed in ¶ 8.2:

- (a) A Compendium of Superfund Field Operations Methods, OSWER 9355.0-14, EPA/540/P-87/001a (Aug. 1987).
- (b) CERCLA Compliance with Other Laws Manual, Part I: Interim Final, OSWER 9234.1-01, EPA/540/G-89/006 (Aug. 1988).
- (c) CERCLA Compliance with Other Laws Manual, Part II, OSWER 9234.1-02, EPA/540/G-89/009 (Aug. 1989).
- (d) Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties, OSWER 9355.5-01, EPA/540/G-90/001 (Apr. 1990).
- (e) Guidance on Expediting Remedial Design and Remedial Actions, OSWER 9355.5-02, EPA/540/G-90/006 (Aug. 1990).
- (f) Guide to Management of Investigation-Derived Wastes, OSWER 9345.3-03FS (Jan. 1992).
- (g) Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, OSWER 9355.7-03 (Feb. 1992).
- (h) National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, 40 C.F.R. Part 300 (Oct. 1994).
- (i) EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis, QA/G-9, EPA/600/R-96/084 (July 2000).
- ~~(j) Comprehensive Five-year Review Guidance, OSWER 9355.7-03B-P, 540-R-01-007 (June 2001).~~
- ~~(+)(i)~~ Guidance for Quality Assurance Project Plans, QA/G-5, EPA/240/R-02/009 (Dec. 2002).

- ~~(k)~~(k) Quality Systems for Environmental Data and Technology Programs -- Requirements with Guidance for Use, ANSI/ASQ E4-2004 (2004).
- ~~(l)~~(l) Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3, EPA/505/B-04/900A through 900C (Mar. 2005).
- ~~(m)~~(m) Superfund Community Involvement Handbook, EPA/540/K-05/003 (Apr. 2005).
- ~~(n)~~(n) EPA Guidance on Systematic Planning Using the Data Quality Objectives Process, QA/G-4, EPA/240/B-06/001 (Feb. 2006).
- ~~(o)~~(o) EPA Requirements for Quality Assurance Project Plans, QA/R-5, EPA/240/B-01/003 (Mar. 2001, reissued May 2006).
- ~~(p)~~(p) EPA Requirements for Quality Management Plans, QA/R-2, EPA/240/B-01/002 (Mar. 2001, reissued May 2006).
- ~~(q)~~(q) USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, ILM05.4 (Dec. 2006).
- ~~(r)~~(r) USEPA Contract Laboratory Program Statement of Work for Organic Analysis, SOM01.2 (amended Apr. 2007).
- ~~(s)~~(s) EPA National Geospatial Data Policy, CIO Policy Transmittal 05-002 (Aug. 2008), available at <http://www.epa.gov/geospatial/policies.html> and [http://www.epa.gov/geospatial/docs/National\\_Geospatial\\_Data\\_Policy.pdf](http://www.epa.gov/geospatial/docs/National_Geospatial_Data_Policy.pdf).
- ~~(t)~~(t) USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration), ISM01.2 (Jan. 2010).
- ~~(u)~~(u) EPA's Emergency Responder Health and Safety Manual, OSWER 9285.3-12 (July 2005 and updates), <http://www.epaosc.org/HealthSafetyManual/manual-index.htm>

**8.2** A more complete list may be found on the following EPA Web pages:

Laws, Policy, and Guidance <http://www.epa.gov/superfund/policy/index.htm>

Test Methods Collections <http://www.epa.gov/fem/methcollectns.htm>

**8.3** Relevant Portland Harbor Superfund Site documents include:

(a) Record of Decision, Portland Harbor Superfund Site, Portland Oregon. Prepared by USEPA Region 10. January 2017.

(b) Final Remedial Investigation Report. Portland Harbor Superfund Site RI/FS. February 8, 2016.

- (c) Final Baseline Human Health Risk Assessment. Appendix F of the Final RI Report. Prepared by Kennedy Jenks Consultants for the LWG. March 28, 2013.
- (d) Final Baseline Baseline Ecological Risk Assessment. Appendix G of the Final RI Report. Prepared by Windward Environmental for the LWG. December 16, 2013.

8.38.4 For any regulation or guidance referenced in the ASAOC or SOW, the reference will be read to include any subsequent modification, amendment, or replacement of such regulation or guidance. Such modifications, amendments, or replacements apply to the Work only after Respondents receive notification from EPA of the modification, amendment, or replacement.

Appendix

Attachment A

Sampling Work Plan for Pre-Remedial SMA Delineation, RD Investigation and Baseline Sampling, and Long-Term Monitoring

**Appendix Attachment B**

**Electronic Data Deliverable Format**

[ PAGE \\* MERGEFORMAT ]

**Appendix C (of the AOC)**

**Addresses for MOU Partners for submission of Deliverables**

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