

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 10

IN THE MATTER OF:)	
)	U.S. EPA Region 10
)	CERCLA Docket No. 10-2013-0087
River Mile 11E Project Area within the)	
Portland Harbor Superfund Site)	
Portland, Multnomah County, Oregon)	
)	
)	
Cargill, Inc., CBS Corporation, City of)	
Portland, DIL Trust, Glacier Northwest, Inc.,)	
and PacifiCorp)	
)	
Respondents.)	
)	Proceeding Under Sections 104,
)	107 and 122 of the Comprehensive
)	Environmental Response, Compensation
)	and Liability Act, 42 U.S.C. §§ 9604,
)	9607 and 9622
)	
)	
)	

ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON
CONSENT FOR SUPPLEMENTAL RI/FS WORK AND REMEDIAL DESIGN
AMENDMENT NO. 1

Introduction

Cargill, Inc., CBS Corporation, the City of Portland, DIL Trust, Glacier Northwest, Inc., and PacifiCorp (Respondents) entered into an *Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation/Feasibility Study (RI/FS) Work*, U.S. EPA, Region 10, CERCLA Docket No. 10-2013-0087, with the United States Environmental Protection Agency (EPA) (the ASAOC) in April 2013. Respondents are in the process of completing activities pursuant to the ASAOC and under EPA oversight in support of preliminary design activities for the River Mile 11 East (RM11E) Project Area within the boundaries of the Portland Harbor Superfund Site in Portland, Oregon (Site). Work performed by Respondents under the ASAOC is intended to supplement RI/FS work for the Site that was conducted separately by other parties pursuant to the *Administrative Settlement Agreement on Consent for*

Remedial Investigation and Feasibility Study, CERCLA Docket No. 10-2001-0240, and to facilitate the selection and design of a final remedy for the RM11E Project Area.

This Amendment No. 1 to the ASAOC (First Amendment) is for the purpose of including performance of remedial design under this Settlement Agreement. To effectuate the Respondents' agreement to expand the scope of work performed under this Settlement Agreement, the following terms and conditions of the Settlement Agreement are amended as provided below. All other terms and conditions of the Settlement Agreement remain in full force and effect, including defined terms used in this First Amendment and their definitions. Any inconsistencies between the text of the original Settlement Agreement and this Amendment are unintentional and should be interpreted in such a manner to effectuate the parties' intent to perform all activities described in the Statement of Work, as supplemented herein, with EPA's oversight in coordination with the DEQ, the Trustees and Tribal Governments, and to reimburse the governments' response costs associated with such oversight consistent with the terms of the April 15, 2013 Settlement Agreement.

Paragraph 23 of the ASAOC expressly contemplated possible revisions to the Statement of Work under the ASAOC to include remedial design work for the RM11E Project Area that would be conducted after issuance of the Record of Decision for the Portland Harbor Superfund Site (ROD), but before the entry of a consent decree, to avoid delays in the performance of remedial design. EPA issued the ROD on January 3, 2017. Therefore, to avoid such delays, EPA and Respondents have now agreed to enter into this First Amendment to the existing ASAOC and to adopt the attached Remedial Design Statement of Work to design the final remedy at the RM11E Project Area.

EPA and Respondents agree to amend the ASAOC as follows:

1. This First Amendment, and the Remedial Design Statement of Work, which is attached as Appendix A-1 to this First Amendment, provide for the performance of post-ROD remedial design at the RM11E Project Area and are incorporated into and enforceable under the terms of the ASAOC as amended by this First Amendment.
2. References to Section 106, 42 U.S.C. §9606(a) shall be deleted from the caption and from Paragraphs 2 and 66 consistent with EPA's Model ASAOC for Remedial Design.
3. The definitions of "Settlement Agreement" and "Statement of Work," in Paragraph 12. p. and q. of Section III (Definitions) of the ASAOC, shall be amended and replaced with the following:

"Settlement Agreement" shall mean the April 15, 2013 Administrative Settlement Agreement and Order on Consent, this Amendment No. 1, the original and modified Statement of Work, and all other appendices (listed in Section XXIX).

"Statement of Work" or "SOW" shall mean the statement of work for implementation of the response action as set forth in Appendix A to the original ASAOC, and the Remedial

Design Statement of Work attached to this First Amendment as Appendix A-1, and any modifications made thereto in accordance with the ASAOC.

4. The following definitions shall be added to Section III (Definitions), as Paragraph 12 v. and w. of the ASAOC:

- v. “Record of Decision” or “ROD” shall mean the EPA Record of Decision relating to the Site, signed on January 3, 2017, by the Administrator of EPA, and all attachments thereto. A copy of the ROD can be found at <https://www3.epa.gov/region10/pdf/ph/sitewide/record-of-decision-jan2017.pdf>.

- w. “Remedial Design” or “RD” shall mean those activities to be undertaken by Respondents to develop the final plans and specifications for remedial action as stated in the SOW.

5. The factual findings in Section IV (Findings of Fact) originally designated as Paragraph 13, subparagraphs h. and k. are replaced and amended with the following, and are now designated as subparagraphs h. through m.

- h. The final baseline ecological risk assessment (“BERA”) estimated risks to aquatic and aquatic-dependent species exposed to hazardous substances associated with the in-river portion of the Portland Harbor Site.

- i. The BHHRA and BERA concluded that contamination within the Portland Harbor Site poses unacceptable risks to human health and the environment from numerous contaminants of potential concern in surface water, groundwater, sediment, and fish tissue. The final selected remedy identified 64 contaminants of concern (“COCs”) that contribute the most significant amount of risk to the human and ecological receptors. See ROD, Appendix II, Tables 1-5.

- j. A subset of the COCs, called focused COCs, was developed in order to simplify analysis and evaluation of remedial alternatives for the Site. The focused COCs include PCBs, PAHs, dioxins and furans, and DDx.

- k. The Selected Remedy in the ROD requires active remediation (dredging, capping and enhanced natural recovery) at areas exceeding the RALs for focused COCs (PCBs, PAHs, DDT, and dioxin/furans) and contaminated riverbanks adjacent to those areas. The Selected Remedy allows approximately 1,774 acres of sediment to recover naturally. The Selected Remedy is estimated to take 13 years to construct.

- l. The ROD states that the actual technologies assigned to a specific area of the river will be dependent on a number of area-specific characteristics and environmental conditions to ensure that the final constructed remedy is appropriate for actual site-specific conditions. The ROD also identifies post-ROD / remedial design sampling activities that will support and refine the Site’s conceptual site model (CSM) and be used for remedial design and construction as part of remedial action.

m. The River Mile 11E Project Area is within the Portland Harbor Superfund Site, which was listed on the National Priorities List (NPL) on December 1, 2000. 65 Fed. Reg. 75179-01 (December 1, 2000), and requires response action as described in the ROD.

6. Paragraph 14.f of Section V (Conclusions of Law) of the ASAOC shall be amended and replaced by the following:

The response and RD actions required by this Settlement Agreement are necessary to protect the public health, welfare, or the environment and, if carried out in compliance with the terms of this Settlement Agreement, will be considered consistent with the NCP, as provided in Section 300.700(c)(3)(ii) of the NCP.

7. Paragraph 21 of Section VIII (Work to Be Performed) of the ASAOC shall be amended and replaced by the following:

Respondents shall perform, at a minimum, all actions necessary to implement the Statement of Work (SOW), which is attached as Appendix A to the ASAOC, and all actions necessary to implement the Remedial Design Statement of Work attached as Appendix A-1 to this First Amendment (“Remedial Design Work”), and comply with the accompanying schedules.

8. Paragraph 23 of Section VIII (Work to Be Performed) of the ASAOC shall be amended and replaced by the following:

The response action goals for the ASAOC are the further characterization, studies, and analysis, in support of preliminary design for the River Mile 11E Project Area, which are supplementary to the RI/FS for the Portland Harbor Superfund Site being conducted pursuant to the *Administrative Settlement Agreement on Consent for Remedial Investigation and Feasibility Study* (Docket No. CERCLA-10-2001-0240), and design of the remedial action at the River Mile 11E Project Area. Conducting this ASAOC work will facilitate construction of the remedial action for the River Mile 11E Project Area.

EPA and Respondents have agreed to amend the ASAOC with this First Amendment to, among other things, adopt the accompanying Remedial Design Statement of Work. The response action goals for this First Amendment are to design the site-specific remedy that will be implemented within the RM11E Project Area in accordance with Section 14 of the ROD. All decisions regarding remedial design at the RM11E Project Area, including delineation of sediment management areas, implementation of any sampling necessary for design, and application of the ROD’s technology matrix, will be conducted under this RM11E ASAOC. The Remedial Design Work under this First Amendment will be incorporated into the post-ROD site file for the Site and will serve as the basis for remedial action within the RM11E Project Area. It is anticipated that final remedial action for the RM11E Project Area will be implemented under a separate consent decree following completion of all actions required under the ASAOC and this First Amendment.

9. Paragraph 24 of Section VIII (Work to Be Performed) of the ASAOC shall be amended and replaced by the following:

After review of any plan, report, or other item that is required to be submitted for approval pursuant to this Settlement Agreement and Appendix A to the ASAOC (SOW for Supplementary RI/FS Work), in a written notice to Respondents, EPA may: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondents modify the submission; or (e) any combination of the above. If EPA requires revisions, Respondents shall submit a revised document within 30 days of receipt of EPA's notification of the required revisions. However, EPA shall not modify a submission itself without first providing Respondents at least one notice of deficiency and an opportunity to cure within 30 days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects. In the event that EPA modifies the submission to cure the deficiencies pursuant to this Section, EPA retains the right to seek stipulated penalties, as provided in Section XVIII. (Stipulated Penalties).

After submission of any deliverable required to be submitted for approval pursuant to this Settlement Agreement and Appendix A-1 to this First Amendment (Remedial Design Statement of Work), EPA and the Respondents will follow the procedures described in Section 5.5 (a) through (c) of Appendix A-1.

10. Paragraph 58.(b). of Section XVIII. (Stipulated Penalties) shall be amended as follows:

The final and all submitted drafts of the following Compliance Milestones:

- i. The Basis of Design Report
- ii. 30% Design Report
- iii. 60% Design Report
- iv. 100% Final Design Report

11. Subparagraph 74.c. of Section XXI. (Covenant Not To Sue By Respondents) is amended and replaced by the following:

This Settlement Agreement shall not have any effect on claims or causes of action that Respondents have or may have pursuant to Sections 107(a) or 113(f) of CERCLA, 42 U.S.C. §§ 9607(a) or 9613(f), against the United States through or on behalf of various federal agencies, based upon a claim that the United States is a potentially responsible party pursuant to Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), relating to the Work, and EPA Future Response Costs, and DEQ and Tribal Response Costs paid under Section XV. of this Settlement Agreement. However, the United States acknowledges the reservation of Section 107 claims without any concession that, even if such a claim exists, it is cognizable under Section 107.

12. Paragraph 86 of Section XXVI (Financial Assurance) is amended and replaced by the following (Paragraphs 86.a through 86.f shall remain unchanged):

Within 60 days of the Effective Date, and on the anniversary of the Effective Date every year thereafter until 90 days after approval of the Final Basis of Design Report is received from EPA, Respondents shall establish and maintain financial security for the benefit of EPA in the initial amount of \$1.5 million (\$1,500,000) in one or more of the following forms, in order to secure the full and final completion of Work by Respondents. Within 90 days of approval of the Final Basis of Design Report by EPA, and on the anniversary of the Effective Date every year thereafter until Notice of Completion of the Work in accordance with Section XXVIII below is received from EPA, Respondents shall establish and maintain financial security for the benefit of EPA in an amount to be approved in writing by EPA based on Respondents' estimated cost to complete the Remedial Design Work remaining at that time as EPA may approve in writing. The financial security under this Settlement Agreement shall be established in one or more of the following forms for the full amount required:

13. Paragraph 91 of Section XXVII. (Modifications) is amended and replaced by the following:

EPA may determine that in addition to tasks defined in the SOW, as supplemented by this First Amendment, or approved work plan or Basis of Design Report, other additional work within the River Mile 11E Project Area may be necessary to accomplish the goals of the response action as described in Paragraph 23. EPA may request Respondents in writing to perform these response actions and Respondents will notify EPA within 14 days of receipt of EPA's request whether they are willing to perform the additional work. Respondents may invoke dispute resolution in accordance with Section XVI regarding EPA's request to Respondents to perform additional work. Subject to EPA resolution of any dispute, Respondents shall implement the additional tasks which EPA determines are necessary. Any other requirements of this Settlement Agreement may be modified in writing by mutual agreement of the parties.


14. Except as specifically provided in this First Amendment, all provisions of the ASAOC are unchanged and remain in full force and effect.

15. This First Amendment shall be effective upon signature of this First Amendment by the Office of Environmental Cleanup Remedial Program Manager, U.S. EPA Region 10.

It is so Ordered and Agreed this 11th day of January, 2018.

By: Cami Grandinetti
Cami Grandinetti
Remedial Program Manager
Office of Environmental Cleanup
U.S. EPA, Region 10

Agreed this 3 day of January, 2018.
For Respondent Cargill, Inc.

By: 

David P Baudler
Printed Name
V.P. Cargill Ag Supply Chain NA.
Title

Agreed this _____ day of _____, 2018.
For Respondent CBS Corporation

By: _____

Printed Name

Title

Agreed this _____ day of _____, 2018.
For Respondent City of Portland

By: _____

Printed Name

Title

Agreed this _____ day of _____, 2018.
For Respondent DIL Trust

By: _____

Printed Name

Title

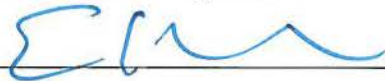
Agreed this _____ day of _____, 2018.
For Respondent Cargill, Inc.

By: _____

Printed Name

Title

Agreed this 11th day of January, 2018.
For Respondent CBS Corporation

By: 

Eric J. Sobczak
Printed Name
Executive Vice President & Associate General Counsel
Title

Agreed this _____ day of _____, 2018.
For Respondent City of Portland

By: _____

Printed Name

Title

Agreed this _____ day of _____, 2018.
For Respondent DIL Trust

By: _____

Printed Name

Title

Agreed this _____ day of _____, 2017.
For Respondent Cargill, Inc.

By: _____

Printed Name

Title


Agreed this _____ day of _____, 2017.
For Respondent CBS Corporation

By: _____

Printed Name

Title

Agreed this 3 day of January, ~~2017~~ 2018
For Respondent City of Portland

By: 
MICHAEL JORDAN
Printed Name
DIRECTOR, BES
Title

Agreed this _____ day of _____, 2017.
For Respondent DIL Trust

By: _____

Printed Name

Title

Agreed this _____ day of _____, 2018.
For Respondent Cargill, Inc.

By: _____

Printed Name

Title

Agreed this _____ day of _____, 2018.
For Respondent CBS Corporation

By: _____

Printed Name

Title


Agreed this _____ day of _____, 2018.
For Respondent City of Portland

By: _____

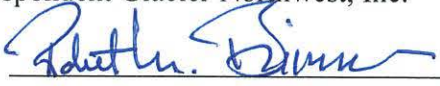
Printed Name

Title

Agreed this 19th day of December, 2018.
For Respondent DIL Trust

By: 
Kirk Wilkinson
Printed Name
Counsel
Title

Agreed this 2nd day of JANUARY, 2018.
For Respondent Glacier Northwest, Inc.

By: 

ROBERT M BINAM
Printed Name
Vice President / General Counsel
Title

Agreed this _____ day of _____, 2018.
For Respondent PacifiCorp

By: _____

Printed Name

Title

Agreed this _____ day of _____, 2018.
For Respondent Glacier Northwest, Inc.

By: _____

Printed Name

Title

Agreed this 19th day of December, 2018.
For Respondent PacifiCorp

By: *Sarah K. Link*
Sarah K. Link
Printed Name
V.P. & General Counsel
Title

REMEDIAL DESIGN STATEMENT OF WORK

PORTLAND HARBOR SUPERFUND SITE

RM11E Project Area

Portland, Multnomah County, Oregon

EPA Region 10

December 2017

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1. INTRODUCTION

- 1.1 Purpose of the Statement of Work (SOW).** The EPA issued a Record of Decision for the Site on January 3, 2017 (the ROD) that selected remedial actions for the in-river portion of the Site from approximately RMs 1.9 to 11.8. The ROD provides information about how design data will influence Remedial Design (RD), remedial construction, and future maintenance of remediated areas. The ROD states that the actual technologies assigned to a specific area of the river will be dependent on a number of area-specific characteristics and environmental conditions to ensure that the final constructed remedy is appropriate for actual site-specific conditions. The ROD also identifies post-ROD / RD sampling activities that will support and refine the Site's conceptual site model (CSM) and be used for RD and construction as part of remedial action. This SOW sets forth the procedures and requirements for implementing the RD Work at the River Mile 11E Project Area (RM11E Project Area) as defined in the Administrative Settlement and Administrative Order on Consent (ASAOC) for River Mile 11E.
- 1.2 Structure of the SOW.** Section 2 (Community Involvement) sets forth EPA's and the Respondents' responsibilities for community involvement. Section 3 (Remedial Design) sets forth the process for developing the RD, 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 RD. Section 7 (State/Tribal Participation) addresses State and Tribal participation, and Section 8 (References) provides a list of references, including URLs.
- 1.3** The scope of the remedy to be designed through the RD Work under this SOW includes the actions described in Section 14 of the Portland Harbor ROD, which generally includes but is not limited to:
- (a) Using the remedial action levels (RALs) from Alternative F for all areas of the RM11E Project Area, including the future maintenance dredge areas, outside of the navigation channel to determine where Remedial Action (RA), including dredging or capping, should occur.
 - (b) Within the navigation channel, the remedy uses Alternative B RALs, and all principal threat waste (PTW) is excavated or dredged two to three feet below the authorized dredge depth as an overdredge allowance/buffer zone. In addition, in-situ treatment of PTW may be considered if appropriate.
 - (c) If RALs are not achieved or if PTW is found below the feasible depth of dredging or excavation, as determined by EPA, dredging to accommodate a cap and two to three-foot overdredge allowance will occur or consideration of in-situ treatment, if appropriate.

- (d) If RALs are not achieved or if PTW remains after dredging occurs in areas outside the navigation channel, a cap will be constructed per approved designs to support river uses in those locations.
- (e) Flexibility regarding construction methods required to remediate under and behind piers, in-water structures, and other site factors will be maintained throughout RD.
- (f) Dredged materials that require disposal will be disposed off-site.
- (g) A decision tree in the ROD provides information about how design data will influence design and construction and future maintenance dredging areas (Figure 28 in Appendix I of the ROD). As stated in Section 10.1.2 of the ROD, determining the appropriate remedy to assign to a specific area is dependent on a number of area-specific characteristics and environmental conditions. The ROD also provides for flexibility in selection and design of remedial technologies based on information collected during remedial design. Consequently, modifications to the remedial technologies applied may be necessary during RD to ensure that the final constructed remedy is appropriate for site conditions.
- (h) RALs for the selected remedy are shown in Table 21 in Appendix II of the ROD and cleanup levels and fish tissue targets are included in Table 17 in Appendix II of the ROD.
- (i) Compliance with state and federal applicable and relevant and appropriate requirements (ARARs).

1.4 The 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.

1.5 Relationship to other work at the Portland Harbor Superfund Site. All decisions regarding remedial design at the RM11E Project Area, including delineation of sediment management areas, implementation of any sampling necessary for design, and application of the ROD’s technology matrix, will be conducted under the RM 11E ASAOC (as amended) and this SOW.

2. COMMUNITY INVOLVEMENT

2.1 Community Involvement (CI) Responsibilities

- (a) EPA has the lead responsibility for developing and implementing CI activities at the Site. Previously [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 specific to the RD Work or the RM11E Project Area during the Work

that are not already addressed or provided for in the existing CIP, including, if applicable, any Technical Assistance Grant, any use of the Technical Assistance Services for Communities contract, and/or any Technical Assistance Plan.

- (b) If requested by EPA, Respondents shall support EPA's CI activities related to the RD Work or the RM11E Project Area. 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 to remain informed of RM11E activities. EPA may describe in its CIP Respondents' responsibilities for community involvement activities. All community involvement activities conducted by Respondents at EPA's request are subject to EPA's oversight.
- (c) Respondents will explore the possibility of participating in EPA's Superfund Job Training Initiative Program (SuperJTI) as it may relate to the RD Work or RM11E Project Area. This program provides job training to communities affected by Superfund sites.
- (d) **Respondents' CI Coordinator.** If requested by EPA, Respondents shall, within 30 days, designate and notify EPA of Respondents' 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 RD Work or the RM11E Project Area.

3. REMEDIAL DESIGN

- 3.1 Basis of Design Report (BODR) Work Plan.** Respondents shall submit a Draft BODR Work Plan for EPA comment, and a Final BODR Work Plan for EPA approval. This document will be the first deliverable under this SOW and will describe the objectives, overall approach, schedule, milestone check in points and specific elements of the BODR.
- 3.2 Basis of Design Report.** Respondents shall submit a Draft BODR for EPA comment, and a Final BODR for EPA approval. The BODR will:
 - (a) Summarize existing site conditions, implementability, site factors, and refinement of the conceptual site model (CSM) pertaining to the RM11E Project Area;
 - (b) Summarize design criteria applicable to the RM11E Project Area as described in the *Remedial Design/Remedial Action Handbook*, EPA 540/R-95/059 (June 1995);

- (c) Identify implementable remedial technologies and then screen those technologies for the RM11E Project Area requiring remediation;
- (d) Evaluate promising remedial technologies based on effectiveness, implementability, consistency with the ROD, and cost for the RM11E Project Area;
- (e) Identify a preferred remedial approach for the RM11E Project Area;
- (f) Identify long-term monitoring and maintenance considerations for the RM11E Project Area;
- (g) Identify design studies for RD, if any, such as subsurface and surface sediment sampling that may be needed to address proposed remedial technology means and methods, and gather other information necessary for RD for the RM11E Project Area;
- (h) Describe a sequencing plan as well as an overall schedule to complete the design studies, RD and RA for the RM11E Project Area.
- (i) Discuss modifications (if any) for the Project Area based on site conditions and the applicable RALs.

3.3 RD Work Plan (RDWP). Respondents shall submit a Draft RDWP for EPA comment, and a Final RDWP for EPA approval. The RDWP must include:

- (a) Plans for implementing all RD activities identified in this SOW, in the BODR, in the RDWP, or required by EPA to be conducted to develop the RD for the RM11E Project Area;
- (b) A description of the overall management strategy for performing the RD, including a proposal for phasing of design and construction, if applicable;
- (c) A description of the responsibility and authority of all organizations and key personnel involved with the development of the RD;
- (d) Descriptions of design studies to address any areas requiring clarification and/or anticipated problems, if any (e.g., data gaps);
- (e) Descriptions of any applicable permitting requirements and other regulatory requirements, if any;
- (f) Description of plans for obtaining access in connection with the Work under this SOW, and for performing RA as may be designed through this SOW, such as potential access fees, property acquisition, property leases, and/or easements;
- (g) All supporting deliverables required to accompany the RDWP as specified in the Schedule set forth in ¶ 6.2 (Schedule).

- 3.4 Meetings.** Respondents shall meet regularly with EPA to discuss design issues as necessary, as directed or determined by EPA.
- 3.5 Preliminary (30%) RD.** Respondents shall submit a Preliminary (30%) RD for the RM11E Project Area for EPA's comment. The Preliminary RD must include:
- (a) Preliminary drawings and specifications;
 - (b) Descriptions of permit requirements, if applicable;
 - (c) A description of how the RA will be implemented in a manner that minimizes environmental impacts in accordance with EPA's *Principles for Greener Cleanups* (Aug. 2009);
 - (d) Any proposed revisions to the RD Schedule that is set forth in ¶ 6.2 (Schedule) and in the RDWP; and
 - (e) All supporting deliverables required to accompany the Preliminary RD as specified in the RD Schedule and in the RDWP.
- 3.6 Intermediate (60%) RD.** Respondents shall submit the Intermediate (60%) RD for EPA's comment. The Intermediate RD must: (a) be a continuation and expansion of the Preliminary RD; (b) address EPA's comments regarding the Preliminary RD; and (c) include the same elements as are required for the Preliminary RD. The 60% RD Report will also include:
- (a) Preliminary RA Operation and Maintenance (O&M) Plan and O&M Manual;
 - (b) A description of RA monitoring and control measures to protect human health and the environment, such as air monitoring and dust suppression, during the RA.
 - (c) **Emergency Response Plan (ERP).** An ERP will be prepared to describe communication protocols and procedures to be used in the event of an accident or emergency at the RM11E Project Area during RA.
- 3.7 Pre-Final (95%) RD.** Respondents shall submit the Pre-final (95%) RD for EPA's comment. The Pre-final RD must be a continuation and expansion of the previous design submittal and must address EPA's comments regarding the Intermediate RD. The Pre-final RD will serve as the approved Final (100%) RD if EPA approves the Pre-final RD without comments. The Pre-final RD must include:
- (a) A complete set of construction drawings and specifications that: (1) are prepared to be certified by a registered professional engineer for the Final RD; (2) are

suitable for procurement; and (3) follow the Construction Specifications Institute's MasterFormat 2012;

- (b) Survey and engineering drawings showing existing RM11E Project Area features, such as elements, property borders, easements, and RM11E Project Area conditions;
- (c) Pre-Final versions of the same elements and deliverables as are required for the Intermediate RD;
- (d) A specification for photographic documentation of the RA; and
- (e) Supporting deliverables as specified in the RD Schedule and in the RDWP.

3.8 Final (100%) RD. Respondents shall submit the Final (100%) RD for EPA approval. The Final RD must address EPA's comments on the Pre-final RD and must include final versions of all Pre-final deliverables.

4. REPORTING

4.1 Progress Reports. Commencing with the quarter following lodging of the ASAOC and until EPA approves the Final RD, Respondents shall submit quarterly progress reports to EPA, 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 validated sampling, tests, and all other data received or generated by Respondents pursuant to this ASAOC;
- (c) A description of all deliverables that Respondents submitted to EPA;
- (d) A description of any modifications to the work plans or other schedules that Respondents have proposed or that have been approved by EPA; and
- (e) A description of all activities undertaken in support of the CIP during the reporting period and those to be undertaken in the next quarter.

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 seven days before performance of the activity.

5. DELIVERABLES

5.1 Applicability. Respondents shall submit all deliverables for EPA approval or for EPA comment as specified in the SOW. If neither is specified, the deliverable does not require EPA's approval or comment. Paragraphs 5.2 (In Writing) through 5.4 (Technical Specifications) apply to all deliverables. Paragraph

5.5 (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 All deliverables must be submitted by the deadlines in the RD Schedule and RDWP. Respondents shall submit all deliverables to EPA in electronic form. If any deliverable includes maps, drawings, or other exhibits that are larger than 11” by 17”, Respondents shall also provide EPA with paper copies of such exhibits.

5.4 Reporting Specifications

- (a) Sampling and monitoring data should be submitted in the Electronic Data Deliverable (EDD) format specified by Region 10. Other delivery methods may be allowed if electronic direct submission presents a significant burden or as technology changes. Reports shall be submitted in a format approved by EPA, such as in pdf format with all metadata inserted, 508 tagging done to the extent practicable, in one file per deliverable (vs many), and include bookmarks to the extent practicable to enhance readability.
- (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. If applicable, submissions should include the collection method(s). Projected coordinates may optionally be included but must be documented. Spatial data should be accompanied by metadata, and such metadata should be compliant with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and its EPA profile, the EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor (EME), complies with these FGDC and EPA metadata requirements and is available at <https://edg.epa.gov/EME/>.
- (c) Each file must include an attribute name for each RM11E Project Area unit or sub-unit submitted. Consult <http://www.epa.gov/geospatial/policies.html> for any further available guidance on attribute identification and naming.

5.5 Approval of Deliverables

(a) Initial Submissions

- (1) After review of any deliverable that is required to be submitted for EPA approval under the ASAOC or the SOW, EPA shall within the time periods specified in Section 6.1 and the RDWP schedule: (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; (iv) provide notice that EPA will cure deficiencies under ¶ 5.6(a)(2); or (v) any combination of the foregoing.

- (2) After providing notice to Respondents, 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.
- (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 45 days or such longer time as specified by EPA in such notice, correct the deficiencies or address the conditions 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.
- (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 XVIII.(Stipulated Penalties) of the ASAOC.
- 5.6 Supporting Deliverables.** Multiple supporting deliverables (Health and Safety Plan [HASP], Quality Assurance Project Plan [QAPP]) are already in place for the RM11E Project Area. The Respondents shall submit draft updates of these supporting deliverables for EPA comment, and final updates for EPA approval as needed for RD activities. Draft and final copies of new deliverables must be submitted, for the first time, by the deadlines in the RD Schedule and RDWP, or any other 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 existing HASP describes all activities to be performed to protect on site personnel and area residents from physical, chemical, and all other hazards posed by sampling programs. Respondents shall update the HASP as needed prior to other RD activities in accordance with EPA’s Emergency Responder Health and Safety and Occupational Safety and Health Administration requirements under 29 C.F.R. §§ 1910 and 1926. 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.

- (b) **Quality Assurance Project Plan.** The existing QAPP addresses sample collection activities as well as sample analysis and data handling. This document will be updated as necessary prior to other RD activities 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 is not required for the RD/RA Work. Instead, this information is incorporated into the QAPP.

The QAPP for each major sampling activity (for all treatability, design, compliance, and monitoring samples) must include a detailed explanation of Respondents' quality assurance, quality control, and chain of custody procedures. 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 28 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) For EPA to provide to Respondents, upon request, split samples and/or duplicate samples in connection with EPA's oversight sampling;

- (9) For Respondents to submit to EPA all sampling and tests results and other data in connection with the implementation of the ASAOC; and,
- (10) To ensure compliance with all federal and state ARARs.
- (c) **Institutional Controls Implementation and Assurance Plan.** Institutional controls (ICs) at the Site will be implemented to: (1) protect human health and the environment by limiting exposure to contamination left in place and (2) protect the long-term integrity of the engineered components of the Selected Remedy. Respondents will develop an Institutional Control Implementation and Assurance Plan (ICIAP) for the RM11E Project Area during RD which will, at a minimum, identify the specific and necessary Site-wide ICs and the RM11E-specific ICs that will be implemented; plans to implement, maintain, and enforce the ICs; and the parties responsible for implementing and monitoring each IC necessary at the RM11E Project Area. The ICIAP shall be developed in accordance with *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites*, OSWER 9355.0-89, and EPA/540/R-09/001 (Dec. 2012) and *Institutional Controls: A Guide to Preparing Institutional Controls Implementation and Assurance Plans at Contaminated Sites*, OSWER 9200.0-77, EPA/540/R-09/02 (Dec. 2012) or as amended or superseded. Among others, three types of ICs have been proposed for the Site that may be used at the RM11E Project Area are described further below:
- (1) **Fish Advisories and Educational Outreach:** A fish advisory is currently in effect for the Lower Willamette River. Once data indicate tissue concentrations have improved, the advisory will be updated by OHA in consultation with EPA to allow an increased consumption rate. The advisory may be periodically updated by EPA until Remedial Action Objectives are reached. The outreach program to communicate with the public regarding risks from consumption of contaminated fish may include: informational meetings, presentations, and workshops targeting affected community groups; development and distribution of informational materials such as brochures or maps; advisory notifications communicated through a variety of culturally appropriate outlets; installation and maintenance of advisory signs at known fishing locations; and coordination with sport or recreational fishing clubs and licensing locations.
- (2) **Waterway Use Restrictions or Regulated Navigation Areas (RNAs):** Where caps will be utilized to contain contamination in navigable areas of the river, waterway use restrictions may be implemented to ensure the integrity of the cap is maintained in perpetuity. These restrictions may consider limitations on boat anchoring and keel dragging, the use of spuds to stabilize vessels, structure and utility maintenance and repair, and future maintenance dredging in areas containing caps. Notifications such as signs and buoys regulated by the Oregon Marine Board may be used to

notify vessels of any restrictions in the area. Periodic inspections of RNA notifications will be needed to ensure they are functional and effective and will be evaluated in five-year reviews.

- (3) **Land Use/Access Restrictions:** Land use or access restrictions may be necessary in nearshore areas and river banks to maintain the integrity of caps from current or future activities, such as construction and maintenance of structures. Where needed, coordination with Oregon's Department of State Lands and adjacent landowners will be conducted to implement land use or access restrictions. Monitoring, including inspections, will be conducted to ensure that any necessary restrictions are functioning as intended.
- (d) **Waste Designation Memo.** The waste designation memo that will characterize any RCRA wastes (evaluated as part of the RD) and the data needs to arrange for their offsite disposal in the appropriate facility.
- (e) **Biological Assessment (BA).** The Respondents shall include a draft BA or a supplement to EPA's programmatic site-wide BA for the preferred alternative as needed to help facilitate National Oceanic and Atmospheric Administration (NOAA) consultation on substantive requirements for the project, as well as a Clean Water Act (CWA) draft 404 memorandum, to include time for Agency reviews and necessary revision before public review. The BA shall identify the presence of threatened, endangered, and proposed or candidate species, or their habitat, within the vicinity of the RM11E Project Area and shall comply with the substantive requirements of the Endangered Species Act. The draft BA shall characterize baseline conditions of existing habitat; address potential project impacts that the remedy may have on these species, their habitat, and their food stocks; and describe best management practices and conservation measures designed to avoid or minimize any negative impacts.
- (f) **Clean Water Act Analysis.** Respondents shall submit a draft memorandum that provides sufficient information to demonstrate compliance of the proposed RA at the RM11E Project Area with the substantive requirements of Section 404(b) (1) of the CWA. The memorandum shall document the information gathered regarding practicability and cost, long- and short-term impacts from all proposed alternatives, minimization of adverse effects, compliance with the ROD, and an analysis of the need for any mitigation.

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. Respondents may submit proposed revised schedule, including, as appropriate, elimination or consolidation of deliverables, for EPA approval. Upon EPA's approval, the revised schedules (and, as appropriate, list of deliverables) supersede the schedule set forth below, and any previously-approved schedule. Unless otherwise specified in the schedule, EPA shall provide review in accordance with ¶ 5.6 within 60 days of receipt of the

deliverable.

6.2 Schedule

	Description of Deliverable, Task	Included Supporting Deliverable	¶ Ref.	Deadline
1a	Draft BODR Workplan		3.1	<u>60 days after EPA's Signature of the ASAOC amendment</u>
1b	Final BODR Workplan			30 days after EPA's comments on the Draft BODR Work Plan
2a	Draft BODR		3.2	270 days after EPA's approval of the Final BODR Workplan
2b	Final BODR			45 days after EPA's comments on the Draft BODR
3a	Draft RDWP	HASP and QAPP updates, addenda (as necessary).	3.3	120 days after EPA's approval of the Final BODR
3b	Final RDWP			30 days after EPA's comments on the Draft RDWP
4	Reports for Design Studies			As set forth in the approved Final RDWP
5	Waste Designation Memo		5.6(d)	As set forth in the approved Final RDWP
6	Biological Assessment		5.6(e)	As set forth in the approved Final RDWP
7	Clean Water Act		5.6(f)	As set forth in the approved Final RDWP
8	Preliminary (30%) RD		3.5	As set forth in the approved Final RDWP
9	Intermediate (60%) RD	ERP, O&M Plan, ICIAP	3.6	As set forth in the approved Final RDWP
10	Pre-final (90/95%) RD	Same as above	3.7	As set forth in the approved Final RDWP
11	Final (100%) RD	Same as above	3.8	As set forth in the approved Final RDWP

6.3 ROD Modifications. Within 30 days of finalization of any ROD amendment, Explanation of Significant Differences or any other EPA action that modifies the remedy for the Site, EPA and Respondents will assess the impacts of those modifications on the RDWP and schedule and revise the RD Work as needed and as practical to conform to those modifications.

7. STATE AND TRIBAL 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 and Tribal

Governments identified in the ASAOC. EPA shall be responsible for coordinating comments with the State and Tribes to meet the review schedule. Written comments on the deliverables provided to EPA from the Tribes or States shall be provided to the Respondents when EPA provides comments to Respondents. Respondents shall copy other agency memorandum of understanding partners (Oregon Department of Fish and Wildlife, NOAA, and U.S. Department of the Interior). EPA shall, at any time it sends a notice, authorization, approval, disapproval, or certification to Respondents, send a copy of such document to the State and Tribes and the agency partners.

7.2 Review and Comment. The State and Tribes will have a reasonable opportunity for review and comment prior to:

- (a) 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 URL 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 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) Guidance for Scoping the Remedial Design, OSWER 9355.0-43, EPA/540/R-95/025 (Mar. 1995).

- (j) Remedial Design/Remedial Action Handbook, OSWER 9355.0-04B, EPA/540/R-95/059 (June 1995).
- (k) EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis, QA/G-9, EPA/600/R-96/084 (July 2000).
- (l) Operation and Maintenance in the Superfund Program, OSWER 9200.1-37FS, EPA/540/F-01/004 (May 2001).
- (m) Guidance for Quality Assurance Project Plans, QA/G-5, EPA/240/R-02/009 (Dec. 2002).
- (n) Institutional Controls: Third Party Beneficiary Rights in Proprietary Controls (Apr. 2004).
- (o) Quality Systems for Environmental Data and Technology Programs -- Requirements with Guidance for Use, ANSI/ASQ E4-2004 (2004).
- (p) Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3, EPA/505/B-04/900A through 900C (Mar. 2005).
- (q) Superfund Community Involvement Handbook, EPA/540/K-05/003 (Apr. 2005).
- (r) EPA Guidance on Systematic Planning Using the Data Quality Objectives Process, QA/G-4, EPA/240/B-06/001 (Feb. 2006).
- (s) EPA Requirements for Quality Assurance Project Plans, QA/R-5, EPA/240/B-01/003 (Mar. 2001, reissued May 2006).
- (t) EPA Requirements for Quality Management Plans, QA/R-2, EPA/240/B-01/002 (Mar. 2001, reissued May 2006).
- (u) USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, ILM05.4 (Dec. 2006).
- (v) USEPA Contract Laboratory Program Statement of Work for Organic Analysis, SOM01.2 (amended Apr. 2007).
- (w) 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.
- (x) Principles for Greener Cleanups (Aug. 2009), available at <http://www.epa.gov/oswer/greenercleanups/>.
- (y) USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration), ISM01.2 (Jan. 2010).
- (z) Recommended Evaluation of Institutional Controls: Supplement to the "Comprehensive Five-Year Review Guidance," OSWER 9355.7-18 (Sep. 2011).

- (aa) Construction Specifications Institute's MasterFormat 2012, available from the Construction Specifications Institute, www.csinet.org/masterformat.
- (bb) Updated Superfund Response and Settlement Approach for Sites Using the Superfund Alternative Approach, OSWER 9200.2-125 (Sep. 2012)
- (cc) Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites, OSWER 9355.0-89, EPA/540/R-09/001 (Dec. 2012).
- (dd) Institutional Controls: A Guide to Preparing Institutional Controls Implementation and Assurance Plans at Contaminated Sites, OSWER 9200.0-77, EPA/540/R- 09/02 (Dec. 2012).
- (ee) EPA's Emergency Responder Health and Safety Manual, OSWER 9285.3-12 (July 2005 and updates), [http://www.epaosc.org/ HealthSafetyManual/manual-index.htm](http://www.epaosc.org/HealthSafetyManual/manual-index.htm)
- (ff) Broader Application of Remedial Design and Remedial Action Pilot Project Lessons Learned, OSWER 9200.2-129 (Feb. 2013).

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 For any regulation or guidance referenced in the ASAO or SOW, the reference will be read to include any subsequent modification, amendment, or replacement of such regulation or guidance.