

REMEDIAL DESIGN/REMEDIAL ACTION
STATEMENT OF WORK
OPERABLE UNIT 01
NORTH PENN AREA 5 SUPERFUND SITE
Colmar and Hatfield, Montgomery and Bucks Counties, Pennsylvania
EPA Region 3

March 2023

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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 Work at North Penn Area 5 Operable Unit 1 (OU1). The objective is to protect public health or welfare or the environment at the Site through the design and implementation of the remedial action at the Site by Respondent, as required by the Record of Decision Amendment issued in July 2016 for OU1 of the Site (ROD Amendment).

1.2 Structure of the SOW

- Section 2 (Community Involvement) sets forth EPA's and Respondent's responsibilities for community involvement.
- Section 3 (Remedial Design) sets forth the process for developing the Remedial Design, which includes the submission of specified primary deliverables.
- Section 4 (Remedial Action) sets forth requirements regarding the completion of the RA, including primary deliverables related to completion of the Remedial Action.
- Section 5 (Contingency Remedy) sets forth Respondent's obligations regarding implementation of contingency remedies.
- Section 6 (Reporting) sets forth Respondent's reporting obligations.
- Section 7 (Deliverables) describes the content of the supporting deliverables and the general requirements regarding Respondent's submission of, and EPA's review of, approval of, comment on, and/or modification of, the deliverables.
- Section 8 (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 RA.
- Section 9 (Commonwealth Participation) addresses Commonwealth participation.
- Section 10 (References) provides a list of references, including URLs.

1.3 The Scope of the Remedy includes the actions described in Section 12.2 of the ROD Amendment, including:

- (a) Design and implementation of an optimized groundwater extraction and treatment system, using an iterative approach;
- (b) Extraction of contaminated groundwater to achieve aquifer restoration;
- (c) Treatment of contaminated groundwater followed by discharge to surface water or a local publicly owned treatment works;
- (d) Performance monitoring and groundwater extraction system testing;
- (e) Implementation of in-situ treatment(s) in the event certain contingencies occur;
and

- (f) Implementation of ICs to protect the integrity of the remedy and to prevent exposure to Site-related contamination until such time that cleanup levels are met.

This SOW, therefore, sets forth the activities Respondent must perform to implement the remedial design for the selected remedy.

- 1.4 The terms used in this SOW that are defined in CERCLA, in regulations promulgated under CERCLA, or in the Order, have the meanings assigned to them in CERCLA, in such regulations, or in the Order, except that the term “Paragraph” or “¶” means a paragraph of the SOW, and the term “Section” means a section of the SOW, unless otherwise stated.

2. COMMUNITY INVOLVEMENT

- 2.1 As requested by EPA, Respondent shall conduct community involvement activities under EPA’s oversight as provided for in, and in accordance with this Section. Such activities must include designation of a Community Involvement Coordinator (CI Coordinator).

2.2 Community Involvement Responsibilities

- (a) EPA has the lead responsibility for developing and implementing community involvement activities at the Site. Previously, EPA developed a Community Involvement Plan (CIP) for the Site. In accordance with 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 during the Work that are not already addressed or provided for in the existing CIP.
- (b) As requested by EPA, Respondent shall participate in community involvement activities, including participation in: (1) public meetings that may be held or sponsored by EPA to explain activities at or relating to the Site (with interpreters present for community members with limited English proficiency); and (2) other activities EPA decides are necessary to protect and address the concerns of EJ and disadvantaged communities, *e.g.*, “giving presentations,” “providing a live video feed of areas where work is being performed”. Respondent’s support of EPA’s community involvement activities may include providing online access to initial submissions and updates of deliverables to: (1) any Community Advisory Groups, (2) any Technical Assistance Grant (TAG) 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 Respondent’s responsibilities for community involvement activities. All community involvement activities conducted by Respondent at EPA’s request are subject to EPA’s oversight. Upon EPA’s request, Respondent shall establish, as early as feasible, a community information repository at or near the Site, as provided in the CIP, to house one copy of the administrative record.
- (c) **Information for the Community.** As requested by EPA, Respondent shall develop and provide to EPA information about the design and implementation of the remedy including: (1) any validated data from monitoring of impacts to

communities as provided in the Community Impact Mitigation Plan under ¶ 7.7(f); (2) results from unvalidated sampling as provided under ¶ 7.7(e)(7); (3) a copy of the Community Impacts Mitigation Plan required under ¶ 7.7(f); (4) schedules prepared under Section 8; (5) dates that Respondent completed each task listed in the schedules; and (6) digital photographs of the Work being performed, together with descriptions of the Work depicted in each photograph, the purpose of the Work, the equipment being used, and the location of the Work. The EPA Project Coordinator may use this information for communication to the public via EPA's website, social media, or local and mass media. The information provided to EPA should be suitable for sharing with the public and the education levels of the community as indicated in EJ Screen. Translations should be in the dominant language(s) of community members with limited English proficiency.

- (d) **Respondent's CI Coordinator.** As requested by EPA, Respondent shall, within 15 days, designate and notify EPA of Respondent's Community Involvement Coordinator (Respondent's CI Coordinator). Respondent may hire a contractor for this purpose. Respondent's notice must include the name, title, and qualifications of the Respondent's CI Coordinator. Respondent's CI Coordinator shall coordinate his/her activities with EPA's CI Coordinator, provide support regarding EPA's community involvement activities, and, as requested by EPA's CI Coordinator, provide draft responses to the public's inquiries including requests for information or data about the Site. The Respondent's CI Coordinator has the responsibility to ensure that when they communicate with the public, the Respondent protects any "Personally Identifiable Information" (PII) (e.g. sample results from residential properties) in accordance with "EPA Policy 2151.0: Privacy Policy."

3. REMEDIAL DESIGN

3.1 RD Work Plan. Respondent shall submit a Remedial Design (RD) Work Plan (RDWP) for EPA approval. The RDWP must include:

- (a) Plans and a schedule for implementing all RD activities identified in this SOW, in the RDWP, or required by EPA to be conducted to develop the RD;
- (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 proposed general approach to contracting, construction, operation, maintenance, and monitoring of the Remedial Action (RA) as necessary to implement the Work;
- (d) A description of the responsibility and authority of all organizations and key personnel involved with the development of the RD;
- (e) Descriptions of any areas requiring clarification and/or anticipated problems (e.g., data gaps);

- (f) Description of any proposed pre-design investigation;
- (g) Description of any proposed treatability study;
- (h) Descriptions of any applicable permitting requirements and other regulatory requirements;
- (i) Description of plans for obtaining access in connection with the Work, such as property acquisition, property leases, and/or easements; and
- (j) The following supporting deliverables described in ¶ 7.7 (Supporting Deliverables): Health and Safety Plan; and Emergency Response Plan. If the SOW includes ¶ 3.4 (Pre-Design Investigation), also include Field Sampling Plan and Quality Assurance Project Plan.
- (k) A description of a plan for procuring the RA contractor.

3.2 Institutional Controls Implementation and Assurance Plan (ICIAP). Respondent shall submit a proposed ICIAP for EPA approval. The ICIAP should describe plans to implement, maintain, monitor, and enforce the Institutional Controls (ICs) at the Site. The ICIAP shall include plans to commence implementing ICs as early as is feasible, including before EPA approval of the 100% design under ¶ 3.9. The ICIAP also should include procedures for effective and comprehensive review of implemented ICs, procedures for the solicitation of input from affected communities regarding the implementation of ICs, procedures to periodically review and determine if the ICs are having their intended effect, and if not, procedures for the development, approval and implementation of alternative, more effective ICs. Respondent shall develop the ICIAP in accordance with *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), 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). Respondent also shall consider including in the ICIAP the establishment of effective Long-Term Stewardship procedures including those described in EPA Memorandum: *Advanced Monitoring Technologies and Approaches to Support Long-Term Stewardship* (July 20, 2018). The ICIAP must include the following additional requirements:

- (a) Locations of recorded real property interests (e.g., easements, liens) and resource interests in the property that may affect ICs (e.g., surface, mineral, and water rights) including accurate mapping and geographic information system (GIS) coordinates of such interests; and
- (b) Legal descriptions and survey maps that are prepared according to current American Land Title Association (ALTA) Survey guidelines and certified by a licensed surveyor.

3.3 Respondent shall meet regularly with EPA to discuss design issues as necessary, as directed or determined by EPA.

3.4 Pre-Design Investigation. The purpose of the Pre-Design Investigation (PDI) is to address data gaps by conducting additional field investigations if another PDI is found to be necessary.

- (a) **PDI Work Plan.** If EPA requests, Respondent shall submit a PDI Work Plan (PDIWP) for EPA approval. The PDIWP must include:
 - (1) An evaluation and summary of existing data and description of data gaps;
 - (2) A sampling plan including media to be sampled, contaminants or parameters for which sampling will be conducted, location (areal extent and depths), and number of samples; and
 - (3) Cross references to quality assurance/quality control (QA/QC) requirements set forth in the Quality Assurance Project Plan (QAPP) as described in ¶ 7.7(d).
- (b) Following the PDI, Respondent shall submit a PDI Evaluation Report. This report must include:
 - (1) Summary of the investigations performed;
 - (2) Summary of investigation results;
 - (3) Summary of validated data (i.e., tables and graphics);
 - (4) Data validation reports and laboratory data reports;
 - (5) Narrative interpretation of data and results;
 - (6) Results of statistical and modeling analyses;
 - (7) Photographs documenting the work conducted; and
 - (8) Conclusions and recommendations for RD, including design parameters and criteria.
- (c) EPA may require Respondent to supplement the PDI Evaluation Report and/or to perform additional pre-design studies.

3.5 Treatability Study

- (a) A Treatability Study (TS) is not anticipated to be necessary to implement the Work, however, this language is included in the event it is later found to be necessary.
- (b) If the approved RDWP provides for one, Respondent shall submit a TS Work Plan (TSWP) for EPA approval. Respondent shall prepare the TSWP in accordance with EPA's *Guide for Conducting Treatability Studies under*

CERCLA, Final (Oct. 1992), as supplemented for RD by the *Remedial Design/Remedial Action Handbook*, EPA 540/R-95/059 (June 1995).

- (c) Following completion of the TS, Respondent shall submit a TS Evaluation Report for EPA comment.
- (d) EPA may require Respondent to supplement the TS Evaluation Report and/or to perform additional treatability studies.

3.6 Preliminary (30%) RD. Respondent shall submit a Preliminary (30%) RD for EPA's comment. The Preliminary RD must include:

- (a) A design criteria report, as described in the *Remedial Design/Remedial Action Handbook*, EPA 540/R-95/059 (June 1995);
- (b) Preliminary drawings and specifications;
- (c) Descriptions of permit requirements, if applicable;
- (d) Preliminary Operation and Maintenance (O&M) Plan and O&M Manual;
- (e) 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);
- (f) A description of monitoring and control measures to protect human health and the environment, such as air monitoring (including assessment of potential vapor intrusion pathways in buildings within 100 ft from a volatile concentration of regulatory concern as a potential impact area), and measures to reduce and manage traffic, noise, odors, and dust, during the Remedial Action in accordance with the *Community Involvement Handbook* pp. 53-66 (text box on p. 55) to minimize community impacts;
- (g) Any proposed revisions to the RA Schedule that is set forth in ¶ 8.3 (RA Schedule); and
- (h) Updates of all supporting deliverables required to accompany the RDWP and the following additional supporting deliverables described in ¶ 7.7 (Supporting Deliverables): Field Sampling Plan, if applicable; Quality Assurance Project Plan, if applicable; Site Wide Monitoring Plan; Community Impacts Mitigation Plan, Construction Quality Assurance/Quality Control Plan; Transportation and Off-Site Disposal Plan; O&M Plan; and O&M Manual.

3.7 Intermediate (60%) RD. A 60% RD is not anticipated to be necessary to implement the Work, however, this language is included in the event it is found to be necessary. If the approved RDWP provides for one, Respondent 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 (30%) RD. If the approved RDWP does not provide for an Intermediate RD, Respondent shall provide a response to EPA's comments to the 30% RD instead.

3.8 Pre-Final (95%) RD. Respondent 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 are: (1) certified by a registered professional engineer; (2) suitable for procurement; and (3) follow the Construction Specifications Institute's MasterFormat (see <https://www.csiresources.org/home>);
- (b) A survey and engineering drawings showing existing Site features, such as elements, property borders, easements, and Site conditions;
- (c) Pre-Final versions of the same elements and deliverables as are required for the Preliminary/Intermediate RD;
- (d) A specification for photographic documentation of the RA;
- (e) Any proposed revisions to the RA Schedule that is set forth in ¶ 8.3 (RA Schedule) and other deliverables/meetings/communications in this UAO; and
- (f) Updates of all supporting deliverables which accompanied the Preliminary (30%) RD.

3.9 Final (100%) RD. Respondent 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 RD deliverables.

4. REMEDIAL ACTION

4.1 RA Work Plan. Respondent shall submit a RA Work Plan (RAWP) for EPA approval that includes:

- (a) A proposed RA Construction Schedule in a format that shows a critical path (i.e. Gantt chart, or program evaluation review technique (PERT) chart);
- (b) An updated health and safety plan that covers activities during the RA; and
- (c) Plans for satisfying permitting requirements, including obtaining permits for off-site activity and for satisfying substantive requirements of permits for on-site activity.

4.2 Independent Quality Assurance Team. Respondent shall notify EPA of Respondent's designated Independent Quality Assurance Team (IQAT). The IQAT will be independent of and cannot include the Supervising Contractor. Respondent may hire a third party for this purpose. Respondent's notice must include the names, titles, contact information, and qualifications of the members of the IQAT. The IQAT will have the responsibility to determine whether Work is of expected quality and conforms to applicable plans and specifications. The IQAT will have the responsibilities as described in ¶ 2.1.3 of the *Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties*, EPA/540/G-90/001 (Apr. 1990).

4.3 Meetings and Inspections

- (a) **Preconstruction Conference.** Respondent shall hold a preconstruction conference with EPA and others as directed or approved by EPA and as described in the *Remedial Design/Remedial Action Handbook*, EPA 540/R-95/059 (June 1995). Respondent shall prepare minutes of the conference and shall distribute the minutes to all Parties.
- (b) **Periodic Meetings.** During the construction portion of the RA (RA Construction), Respondent shall communicate daily with EPA, and others as directed or determined by EPA, to discuss construction issues. In addition to daily communication, periodic meetings may be held at the request of EPA or the Respondent. Respondent shall distribute an agenda and list of attendees to all Parties prior to any meeting. Respondent shall prepare minutes of the meetings and shall distribute the minutes to all Parties.
- (c) **Inspections**
 - (1) EPA or its representative shall conduct periodic inspections of the Work. At EPA's request, the Supervising Contractor or other designee shall accompany EPA or its representative during inspections.
 - (2) Respondent shall provide personal protective equipment needed for EPA personnel and any oversight officials to perform their oversight duties.
 - (3) Upon notification by EPA of any deficiencies in the RA Construction, Respondent shall take all necessary steps to correct the deficiencies and/or bring the RA Construction into compliance with the approved Final RD, any approved design changes, and/or the approved RAWP. If applicable, Respondent shall comply with any schedule provided by EPA in its notice of deficiency.

4.4 Emergency Response and Reporting

- (a) **Emergency Response and Reporting.** If any event occurs during performance of the Work that causes or threatens to cause a release of Waste Material on, at, or from the Site and that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment,

Respondent shall: (1) immediately take all appropriate action to prevent, abate, or minimize such release or threat of release; (2) immediately notify the authorized EPA officer (as specified in ¶ 4.4(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 that Respondent is required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), 42 U.S.C. § 11004, Respondent shall immediately notify the authorized EPA officer orally.
- (c) The “authorized EPA officer” for purposes of immediate oral notifications and consultations under ¶ 4.4(a) and ¶ 4.4(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 3 (if neither EPA Project Coordinator is available) at (215) 814-5000.
- (d) For any event covered by ¶ 4.4(a) and ¶ 4.4(b), Respondent shall: (1) within 7 days after the onset of such event, submit a report to EPA describing the actions or events that occurred and the measures taken, and to be taken, in response thereto; and (2) within 30 days after the conclusion of such event, submit a report to EPA describing all actions taken in response to such event.
- (e) The reporting requirements under ¶ 4.4 are in addition to the reporting required by CERCLA § 103 or EPCRA § 304.

4.5 Off-Site Shipments

- (a) Respondent may ship hazardous substances, pollutants, and contaminants from the Site to an off-Site facility only if it complies with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent will be deemed to be in compliance with CERCLA § 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if Respondent obtains a prior determination from EPA that the proposed receiving facility for such shipment is acceptable under the criteria of 40 C.F.R. § 300.440(b).
- (b) Respondent may ship Waste Material from the Site to an out-of-state waste management facility only if, prior to any shipment, it provides notice to the appropriate state environmental official in the receiving facility’s state and to the EPA Project Coordinator. This notice requirement will not apply to any off-Site shipments when the total quantity of all such shipments does not exceed 10 cubic yards. The notice must include the following information, if available: (1) the name and location of the receiving facility; (2) the type and quantity of Waste Material to be shipped; (3) the schedule for the shipment; and (4) the method of transportation. Respondent also shall notify the state environmental official

referenced above and the EPA Project Coordinator of any major changes in the shipment plan, such as a decision to ship the Waste Material to a different out-of-state facility. Respondent shall provide the notice after the award of the contract for RA construction and before the Waste Material is shipped.

- (c) Respondent may ship Investigation Derived Waste (IDW) from the Site to an off-Site facility only if it complies with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), 40 C.F.R. § 300.440, EPA's *Guide to Management of Investigation Derived Waste*, OSWER 9345.3-03FS (Jan. 1992), and any IDW-specific requirements contained in the Record of Decision. Wastes shipped off-Site to a laboratory for characterization, and RCRA hazardous wastes that meet the requirements for an exemption from RCRA under 40 CFR § 261.4(e) shipped off-Site for treatability studies, are not subject to 40 C.F.R. § 300.440.

4.6 RA Construction Completion

- (a) For purposes of this ¶ 4.6, "RA Construction" comprises, for any RA that involves the construction and operation of a system to achieve Performance Standards (for example, groundwater or surface water restoration remedies), the construction of such system and the performance of all activities necessary for the system to function properly and as designed.
- (b) **Inspection of Constructed Remedy.** Respondent shall schedule an inspection to review the construction and operation of the system and to review whether the system is functioning properly and as designed. The inspection must be attended by Respondent and EPA and/or their representatives. A re-inspection must be conducted if requested by EPA.
- (c) **Shakedown Period.** There shall be a shakedown period of up to one year for EPA to review whether the remedy is functioning properly and performing as designed. Respondent shall provide such information as EPA requests for such review.
- (d) **RA Construction Completion Report.** Following the shakedown period, Respondent shall submit an "RA Construction Completion Report" requesting EPA's determination that RA Construction has been completed. The RA Construction Completion Report must: (1) include statements by a registered professional engineer and by Respondent's Project Coordinator that construction of the system is complete and that the system is functioning properly and as designed; (2) include a demonstration, and supporting documentation, that construction of the system is complete and that the system is functioning properly and as designed; (3) include as-built drawings signed and stamped by a registered professional engineer; (4) be prepared in accordance with Chapter 2 (Remedial Action Completion) of EPA's *Close Out Procedures for NPL Sites* guidance (May 2011), as supplemented by *Guidance for Management of Superfund*

Remedies in Post Construction, OLEM 9200.3-105 (Feb. 2017); and (5) be certified in accordance with ¶ 7.5 (Certification).

- (e) If EPA determines that RA Construction is not complete, EPA shall so notify Respondent. EPA's notice must include a description of, and schedule for, the activities that Respondent must perform to complete RA Construction. EPA's notice may include a schedule for completion of such activities or may require Respondent to submit a proposed schedule for EPA approval. Respondent shall perform all activities described in the EPA notice in accordance with the schedule.
- (f) If EPA determines, based on the initial or any subsequent RA Construction Completion Report, that RA Construction is complete, EPA shall so notify Respondent.

4.7 Notice of RA Completion

- (a) **RA Completion Inspection.** The RA is "Complete" for purposes of this ¶ 4.7 when it has been fully performed and the Performance Standards have been achieved. Respondent shall schedule an inspection for the purpose of obtaining EPA's Notice of RA Completion. The inspection must be attended by Respondent and EPA and/or their representatives.
- (b) **RA Completion Request/Monitoring Report.** Following the inspection, Respondent shall submit a RA Completion Request/Monitoring Report to EPA requesting EPA's Notice of RA Completion. The report must: (1) include certifications by a registered professional engineer and by Respondent's Project Coordinator that the RA is complete; (2) include as-built drawings signed and stamped by a registered professional engineer; (3) be prepared in accordance with Chapter 2 (Remedial Action Completion) of EPA's *Close Out Procedures for NPL Sites* guidance (May 2011), as supplemented by *Guidance for Management of Superfund Remedies in Post Construction*, OLEM 9200.3-105 (Feb. 2017); (4) contain monitoring data to demonstrate that Performance Standards have been achieved; and (5) be certified in accordance with ¶ 7.5 (Certification).
- (c) If EPA concludes that the RA is not Complete, EPA shall so notify Respondent. EPA's notice must include a description of any deficiencies. EPA's notice may include a schedule for addressing such deficiencies or may require Respondent to submit a schedule for EPA approval. Respondent shall perform all activities described in the notice in accordance with the schedule.
- (d) If EPA concludes, based on the initial or any subsequent RA Completion Request/Monitoring Report requesting Notice of RA Completion, that the RA is Complete, EPA shall so notify the Respondent. This notice will constitute the Notice of RA Completion for purposes of the Order. Issuance of the Notice of RA Completion will not affect Respondent's remaining obligations under the Order.

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

4.9 Notice of Work Completion

- (a) **Work Completion Inspection.** Respondent shall schedule an inspection for the purpose of obtaining EPA's Notice of Work Completion. The inspection must be attended by Respondent and EPA and/or their representatives.
- (b) **Work Completion Report.** Following the inspection, Respondent shall submit a report to EPA requesting EPA's Notice of Work Completion. The report must:
 - (1) include certifications by a registered professional engineer and by Respondent's Project Coordinator that the Work, including all O&M activities, is complete; and
 - (2) be certified in accordance with ¶ 7.5 (Certification).
- (c) If EPA concludes that the Work is not complete, EPA shall so notify Respondent. EPA's notice must include a description of the activities that Respondent must perform to complete the Work. EPA's notice may include a schedule and specifications for addressing the remaining Work or may require Respondents to submit a schedule and specifications for EPA approval. Respondents shall perform all activities described in the notice in accordance with the schedule.
- (d) If EPA concludes, based on the initial or any subsequent report requesting Notice of Work Completion, that the Work is complete, EPA shall so notify Respondent. Issuance of the Notice of Work Completion does not affect the following continuing obligations: (1) activities under the PRSP; (2) obligations under Sections XI (Property Requirements), XVII (Record Retention), and XVI (Access to Information) of the Order; (3) Institutional Controls obligations as provided in the ICIAP; and (4) any other relevant obligations.

5. CONTINGENCY REMEDY

5.1 Testing/Investigations. If testing and/or investigations are needed for EPA to make a determination whether the contingency remedy selected in the ROD Amendment needs to be implemented, Respondent shall submit a workplan for implementing such testing and/or investigations, shall implement such testing and/or investigations in accordance with EPA's approval and/or modification of such plan, and shall submit reports to EPA regarding the results of such testing and/or investigations.

5.2 Reports Regarding Performance of Selected Remedy. Since the ROD Amendment provides for implementation of a contingency remedy in the event of failure of the selected remedy to achieve desired performance levels, Respondent shall submit such

reports as EPA requests regarding the performance of the selected remedy and the justification for EPA to consider a contingency remedy.

- 5.3 Invocation of Contingency Remedy.** If EPA determines that the contingency remedy selected in the ROD Amendment needs to be implemented, EPA shall so notify Respondent, and shall include a copy of EPA's decision document invoking the contingency remedy.
- 5.4 Implementation of Contingency Remedy.** Respondent shall implement the contingency remedy in accordance with the EPA notification and consistent with the requirements of Section 3 and Section 4 of this SOW.
- 5.5 Other Modifications.** If EPA determines that implementation of the contingency remedy selected in the ROD Amendment will require modifications to any deliverable submitted under this SOW, Respondent shall modify those deliverables.

6. REPORTING

- 6.1 Progress Reports.** Commencing with the month following the Effective Date of the Order and until EPA approves the RA Construction Completion, Respondent shall submit progress reports to EPA on a monthly basis, 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 Order;
 - (b) A summary of all results of sampling, tests, and all other data received or generated by Respondent;
 - (c) A description of all deliverables that Respondent submitted to EPA;
 - (d) A description of all activities relating to RA Construction that are scheduled for the next six weeks;
 - (e) An updated RA Construction 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 Respondent have proposed or that have been approved by EPA; and
 - (g) A description of all activities undertaken in support of the Community Involvement Plan (CIP) during the reporting period and those to be undertaken in the next six weeks.
- 6.2 Notice of Progress Report Schedule Changes.** If the schedule changes for any activity described in the Progress Reports, including activities required to be described under

¶ 6.1(d), Respondent shall notify EPA of such change at least 7 days before performance of the activity.

7. DELIVERABLES

7.1 Applicability. Respondent shall submit 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 7.2 (In Writing) through 7.4 (Technical Specifications) apply to all deliverables. Paragraph 7.5 (Certification) applies to any deliverable that is required to be certified. Paragraph 7.6 (Approval of Deliverables) applies to any deliverable that is required to be submitted for EPA approval.

7.2 In Writing. All deliverables under this SOW must be in writing and shall be transmitted electronically, unless otherwise specified.

7.3 General Requirements for Deliverables

- (a) Except as otherwise provided in this Order, Respondent shall direct all deliverables required by this Order to the EPA Project Coordinator at

Sharon Fang, mailcode 3SD21
U.S. Environmental Protection Agency, Region 3
1600 JFK Blvd., Four Penn Center
Philadelphia, PA 19103
fang.sharon@epa.gov

- (b) All deliverables provided to the Commonwealth in accordance with ¶ 9 (Commonwealth Participation) shall be directed to

Bonnie McClennen
Pennsylvania Department of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401
bmclennen@pa.gov

- (c) All deliverables must be submitted by the deadlines in the RD Schedule or RA Schedule, as applicable. Respondent shall submit all deliverables in electronic form. Technical specifications for sampling and monitoring data and spatial data are addressed in ¶ 7.4. All other deliverables shall be submitted to EPA in the electronic form specified by the EPA Project Coordinator. If any deliverable includes maps, drawings, or other exhibits that are larger than 8.5" by 11", Respondent shall also provide EPA with two paper copies of such exhibits.

7.4 Technical Specifications

- (a) Sampling and monitoring data should be submitted in standard Regional Electronic Data Deliverable (EDD) format. The latest policy may be revised at any time and will be posted here <http://www.epa.gov/geospatial/geospatial-policies-and-standards>. Other delivery methods may be allowed if electronic direct submission presents a significant burden or as technology changes.
- (b) Spatial data, including spatially-referenced data and geospatial data, should be submitted: (1) in the ESRI File Geodatabase format or Regionally-preferred spatial file 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://www.epa.gov/geospatial/epa-metadata-editor>.
- (c) Each file must include an attribute name for each site unit or sub-unit submitted. Consult <http://www.epa.gov/geospatial/geospatial-policies-and-standards> for any further available guidance on attribute identification and naming.
- (d) Spatial data submitted by Respondent does not, and is not intended to, define the boundaries of the Site.

7.5 Certification. All deliverables that require compliance with this ¶ 7.5 must be signed by the Respondent's Project Coordinator, or other responsible official of Respondent, 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 have no personal knowledge that the information submitted is other than 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.

7.6 Approval of Deliverables

(a) **Initial Submissions**

- (1) After review of any deliverable that is required to be submitted for EPA approval under the Order or 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.

(b) **Resubmissions.** Upon receipt of a notice of disapproval under ¶ 7.6(a) (Initial Submissions), or if required by a notice of approval upon specified conditions under ¶ 7.6(a), Respondent shall, within 14 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 Respondent to correct the deficiencies; or (5) any combination of the foregoing.

(c) **Implementation.** Upon approval, approval upon conditions, or modification by EPA under ¶ 7.6(a) (Initial Submissions) or ¶ 7.6(b) (Resubmissions), of any deliverable, or any portion thereof: (1) such deliverable, or portion thereof, will be incorporated into and enforceable under the Order; and (2) Respondent shall take any action required by such deliverable, or portion thereof.

7.7 Supporting Deliverables. Respondent shall submit each of the following supporting deliverables for EPA approval, except as specifically provided. Respondent shall develop the deliverables in accordance with all applicable regulations, guidances, and policies (see Section 10 (References)). Respondent shall update each of these supporting deliverables as necessary or appropriate during the course of 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. Respondent 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 RD activities and should be, as appropriate, updated to cover activities during the RA and updated to cover activities after RA completion. 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) **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, Commonwealth, and federal agencies involved in the cleanup, as well as local emergency squads and hospitals;
 - (3) Spill Prevention, Control, and Countermeasure (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 ¶ 4.4(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 ¶ 4.4 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) **Field Sampling Plan.** The Field Sampling Plan (FSP) addresses all sample collection activities. The FSP must be written so that a field sampling team unfamiliar with the project would be able to gather the samples and field information required. Respondent shall develop the FSP in accordance with *Guidance for Conducting Remedial Investigations and Feasibility Studies*, EPA/540/G 89/004 (Oct. 1988).
- (d) **Quality Assurance Project Plan.** The Quality Assurance Project Plan (QAPP) augments the FSP and addresses sample analysis and data handling regarding the Work. The QAPP must include a detailed explanation of Respondent's quality assurance, quality control, and chain of custody procedures for all treatability, design, compliance, and monitoring samples. Respondent 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 Respondent in implementing the Work (Respondent's Labs);
 - (2) To ensure that Respondent's Labs analyze all samples submitted by EPA pursuant to the QAPP for quality assurance monitoring;
 - (3) To ensure that Respondent's 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 Respondent's Labs participate in an EPA-accepted QA/QC program or other program QA/QC acceptable to EPA;
 - (5) For Respondent to provide EPA with notice at least [28] days prior to any sample collection activity;
 - (6) For Respondent 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 Respondent, upon request, split samples and/or duplicate samples in connection with EPA's oversight sampling; and
 - (9) For Respondent to submit to EPA all sampling and tests results and other data in connection with the implementation of the Work.
- (e) **Site Wide Monitoring Plan.** The purpose of the Site Wide Monitoring Plan (SWMP) is to obtain baseline information regarding the extent of contamination in affected media at the Site; to obtain information, through short- and long- term monitoring, about the movement of and changes in contamination throughout the Site, before and during implementation of the RA; to obtain information regarding contamination levels to determine whether (Performance Standards) PS are achieved; and to obtain information to determine whether to perform additional actions, including further Site monitoring. The SWMP must include:
- (1) Description of the environmental media to be monitored;

- (2) Description of the data collection parameters, including existing and proposed monitoring devices and locations, schedule and frequency of monitoring, analytical parameters to be monitored, and analytical methods employed;
 - (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 that will be generated in connection with monitoring, including sampling schedules, laboratory records, monitoring reports, and monthly and annual reports to EPA and Commonwealth agencies; and
 - (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) in the event that results from monitoring devices indicate changed conditions (such as higher than expected concentrations of the contaminants of concern or groundwater contaminant plume movement).
 - (7) A plan to immediately provide to EPA any unvalidated sampling data from Community Areas as defined in ¶ 7.7(f) affected by the remedy that exceed removal management levels or three times remedial cleanup levels, whichever is lower; and
 - (8) A plan to expedite sampling and analysis in Community Areas as defined in ¶ 7.7(f) affected by the remedy (particularly in situations where EPA determines that unvalidated sampling data indicates substantial exceedances of cleanup standards), including procedures for expedited analysis, validation, and communication of sampling results to affected communities.
- (f) **Community Impact Mitigation Plan (CIMP).** The CIMP describes all activities to be performed: (1) to reduce and manage the impacts from remedy implementation (*e.g.*, air emissions, traffic, noise, odor, temporary or permanent relocation) to residential areas, schools, playgrounds, healthcare facilities, or recreational or impacted public areas (Community Areas) from and during remedy implementation, (2) to conduct monitoring in Community Areas of impacts from remedy implementation, (3) to expeditiously communicate validated remedy implementation monitoring data, (4) to make adjustments during remedy implementation in order to further reduce and manage impacts from remedy implementation to affected Community Areas, and (5) to expeditiously restore community resources damaged during remediation such as roads and culverts. The CIMP should contain information about impacts to Community Areas that is sufficient to assist EPA's Project Coordinator in performing the evaluations

recommended under the *Superfund Community Involvement Handbook*, OLEM 9230.0-51 (March 2020), pp. 53-56.

- (g) **Construction Quality Assurance/Quality Control Plan (CQA/QCP).** The purpose of the Construction Quality Assurance Plan (CQAP) is to describe planned and systemic activities that provide confidence that the RA construction will satisfy all plans, specifications, and related requirements, including quality objectives. The purpose of the Construction Quality Control Plan (CQCP) is to describe the activities to verify that RA construction has satisfied all plans, specifications, and related requirements, including quality objectives. The CQA/QCP must:
- (1) Identify, and describe the responsibilities of, the organizations and personnel implementing the CQA/QCP;
 - (2) Describe the PS required to be met to achieve Completion of the RA;
 - (3) Describe the activities to be performed: (i) to provide confidence that PS will be met; and (ii) to determine whether PS have been met;
 - (4) Describe verification activities, such as inspections, sampling, testing, monitoring, and production controls, under the CQA/QCP;
 - (5) Describe industry standards and technical specifications used in implementing the CQA/QCP;
 - (6) Describe procedures for tracking construction deficiencies from identification through corrective action;
 - (7) Describe procedures for documenting all CQA/QCP activities; and
 - (8) Describe procedures for retention of documents and for final storage of documents.
- (h) **Transportation and Off-Site Disposal Plan.** At EPA's request, a Transportation and Off-Site Disposal Plan (TODP) will be prepared. The TODP describes plans to ensure compliance with ¶ 4.5 (Off-Site Shipments). The TODP must include:
- (1) Proposed routes for off-Site shipment of Waste Material;
 - (2) Identification of communities affected by shipment of Waste Material; and
 - (3) Description of plans to minimize impacts on affected communities.
- (i) **O&M Plan.** The O&M Plan describes the requirements for inspecting, operating, and maintaining the RA. Respondent shall develop the O&M Plan in accordance with *Guidance for Management of Superfund Remedies in Post Construction*,

OLEM 9200.3-105 (Feb. 2017). The O&M Plan must include the following additional requirements:

- (1) Description of PS required to be met to implement the ROD Amendment;
 - (2) Description of activities to be performed: (i) to provide confidence that PS will be met; and (ii) to determine whether PS have been met;
 - (3) **O&M Reporting.** Description of records and reports that will be generated during O&M, such as daily operating logs, laboratory records, records of operating costs, reports regarding emergencies, personnel and maintenance records, monitoring reports, and monthly and annual reports to EPA and Commonwealth agencies;
 - (4) Description of corrective action in case of systems failure, including:
 - (i) alternative procedures to prevent the release or threatened release of Waste Material which may endanger public health and the environment or may cause a failure to achieve PS;
 - (ii) analysis of vulnerability and additional resource requirements should a failure occur;
 - (iii) notification and reporting requirements should O&M systems fail or be in danger of imminent failure; and
 - (iv) community notification requirements; and
 - (5) Description of corrective action to be implemented in the event that PS are not achieved; and a schedule for implementing these corrective actions.
- (j) **O&M Manual.** The O&M Manual serves as a guide to the purpose and function of the equipment and systems that make up the remedy. Respondent shall develop the O&M Manual in accordance with *Guidance for Management of Superfund Remedies in Post Construction*, OLEM 9200.3-105 (Feb. 2017).

8. SCHEDULES

- 8.1 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 RD and RA Schedules set forth below. Respondent may submit proposed revised RD Schedules or RA Schedules for EPA approval. Upon EPA's approval, the revised RD and/or RA Schedules supersede the RD and RA Schedules set forth below, and any previously-approved RD and/or RA Schedules.

8.2 RD Schedule

	Description of Deliverable, Task	¶ Ref.	Deadline
1	RDWP	3.1	30 days after EPA's Authorization to Proceed regarding Supervising Contractor under ¶19.c of the Order or 30 days from EPA's approval of the PRDI Report whichever occurs later
2	ICIAP	3.2	15 days after EPA's Authorization to Proceed regarding Supervising Contractor under ¶ 19.c of the Order
3	PDIWP, if required	3.4(a)	30 days after EPA approval of the Final RDWP
4	Preliminary (30%) RD	3.6, 3.4(a)	60 days after EPA approval of Final RDWP or PDIWP (if required)
5	Intermediate (60%) RD, if required	3.7	30 days after EPA comments on Preliminary RD
6	Pre-final (95%) RD	3.8	60 days after EPA comments on Preliminary or Intermediate (if required) RD
7	Final (100%) RD	3.9	30 days after EPA comments on Pre-final RD

8.3 RA Schedule

	Description of Deliverable / Task	¶ Ref.	Deadline
1	Commence to Implement ICIAP, if applicable	3.2	15 days after EPA Notice of Authorization to Proceed with ICIAP
2	Award RA contract		30 days after EPA Notice of Authorization to Proceed with RA
3	RAWP	4.1	60 days after EPA Notice of Authorization to Proceed with RA
4	Designate IQAT (in the RAWP)	4.2	60 days after EPA Notice of Authorization to Proceed with RA, can be submitted in the RAWP
5	Pre-Construction Conference	4.3(a)	28 days after Approval of RAWP and prior to the Start of Construction.
6	Start of Construction		30 days after Approval of RAWP or per approved RA schedule
7	Completion of Construction		Per the RAWP schedule or as otherwise modified and approved during RA
8	Pre-final Inspection	4.6(b)	15 days after completion of construction
9	Pre-final Inspection Report	4.6(d)	15 days after completion of Pre-final Inspection
10	Final Inspection		15 days after Completion of Work identified in Pre-final Inspection Report
11	RA Construction Completion Report	4.6(d)	30 days after Final Inspection
12	RA Completion Request/Monitoring Report	4.7(b)	Quarterly beginning 90 days after the submittal of the RA Construction Completion Report.
13	Work Completion Report	4.9(b)	30 days after the Work Completion Inspection
14	Periodic Review Support Plan	4.8	54 months after the Start of RA Construction and no more than five years after the date of the previous PRSP

9. COMMONWEALTH PARTICIPATION

- 9.1 Copies.** Respondent shall, at any time they send a deliverable to EPA, send an electronic copy of such deliverable to the Commonwealth. EPA shall, at any time it sends a notice, authorization, approval, disapproval, or certification to Respondent, send an electronic copy of such document to the Commonwealth.
- 9.2 Review and Comment.** The Commonwealth will have a reasonable opportunity for review and comment prior to:
- Any EPA approval or disapproval under ¶ 7.6 (Approval of Deliverables) of any deliverables that are required to be submitted for EPA approval; and

- (b) Any approval or disapproval of the Construction Phase under ¶ 4.6 (RA Construction Completion), any disapproval of, or Notice of RA Completion under ¶ 4.7 (Notice of RA Completion), and any disapproval of, or Notice of Work Completion under ¶ 4.9 (Notice of Work Completion).

10. REFERENCES

10.1 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 ¶ 10.2:

- (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) Guidance for Conducting Remedial Investigations and Feasibility Studies, OSWER 9355.3-01, EPA/540/G-89/004 (Oct. 1988).
- (d) CERCLA Compliance with Other Laws Manual, Part II, OSWER 9234.1-02, EPA/540/G-89/009 (Aug. 1989).
- (e) 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).
- (f) Guidance on Expediting Remedial Design and Remedial Actions, OSWER 9355.5-02, EPA/540/G-90/006 (Aug. 1990).
- (g) Guide to Management of Investigation-Derived Wastes, OSWER 9345.3-03FS (Jan. 1992).
- (h) Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, OSWER 9355.7-03 (Feb. 1992).
- (i) Guidance for Conducting Treatability Studies under CERCLA, OSWER 9380.3-10, EPA/540/R-92/071A (Nov. 1992).
- (j) National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, 40 C.F.R. Part 300 (Oct. 1994).
- (k) Guidance for Scoping the Remedial Design, OSWER 9355.0-43, EPA/540/R-95/025 (Mar. 1995).
- (l) Remedial Design/Remedial Action Handbook, OSWER 9355.0-04B, EPA/540/R-95/059 (June 1995).

- (m) EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis, QA/G-9, EPA/600/R-96/084 (July 2000).
- (n) Comprehensive Five-year Review Guidance, OSWER 9355.7-03B-P, 540-R-01-007 (June 2001).
- (o) Guidance for Quality Assurance Project Plans, QA/G-5, EPA/240/R-02/009 (Dec. 2002).
- (p) Institutional Controls: Third Party Beneficiary Rights in Proprietary Controls (Apr. 2004).
- (q) Quality management systems for environmental information and technology programs - Requirements with guidance for use, ASQ/ANSI E4:2014 (American Society for Quality, February 2014).
- (r) Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3, EPA/505/B-04/900A through 900C (Mar. 2005).
- (s) Superfund Community Involvement Handbook, OLEM 9230.0-51 (March 2020). More information on Superfund community involvement is available on the Agency's Superfund Community Involvement Tools and Resources web page at <https://www.epa.gov/superfund/superfund-community-involvement-tools-and-resources>.
- (t) EPA Guidance on Systematic Planning Using the Data Quality Objectives Process, QA/G-4, EPA/240/B-06/001 (Feb. 2006).
- (u) EPA Requirements for Quality Assurance Project Plans, QA/R-5, EPA/240/B-01/003 (Mar. 2001, reissued May 2006).
- (v) EPA Requirements for Quality Management Plans, QA/R-2, EPA/240/B-01/002 (Mar. 2001, reissued May 2006).
- (w) USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, ILM05.4 (Dec. 2006).
- (x) USEPA Contract Laboratory Program Statement of Work for Organic Analysis, SOM01.2 (amended Apr. 2007).
- (y) EPA National Geospatial Data Policy, CIO Policy Transmittal 05-002 (Aug. 2008), <http://www.epa.gov/geospatial/geospatial-policies-and-standards> and <http://www.epa.gov/geospatial/epa-national-geospatial-data-policy>.
- (z) Summary of Key Existing EPA CERCLA Policies for Groundwater Restoration, OSWER 9283.1-33 (June 2009).

- (aa) Principles for Greener Cleanups (Aug. 2009), <http://www.epa.gov/greenercleanups/epa-principles-greener-cleanups>.
- (bb) USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration), ISM01.2 (Jan. 2010).
- (cc) Close Out Procedures for National Priorities List Sites, OSWER 9320.2-22 (May 2011).
- (dd) Groundwater Road Map: Recommended Process for Restoring Contaminated Groundwater at Superfund Sites, OSWER 9283.1-34 (July 2011).
- (ee) Recommended Evaluation of Institutional Controls: Supplement to the “Comprehensive Five-Year Review Guidance,” OSWER 9355.7-18 (Sep. 2011).
- (ff) Construction Specifications Institute's MasterFormat available from the Construction Specifications Institute, <https://www.csiresources.org/home>.
- (gg) Updated Superfund Response and Settlement Approach for Sites Using the Superfund Alternative Approach, OSWER 9200.2-125 (Sep. 2012)
- (hh) 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).
- (ii) 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).
- (jj) EPA’s Emergency Responder Health and Safety Manual, OSWER 9285.3-12 (July 2005 and updates), <http://www.epaosc.org/HealthSafetyManual/manual-index.htm>
- (kk) Broader Application of Remedial Design and Remedial Action Pilot Project Lessons Learned, OSWER 9200.2-129 (Feb. 2013).
- (ll) Guidance for Evaluating Completion of Groundwater Restoration Remedial Actions, OSWER 9355.0-129 (Nov. 2013).
- (mm) Groundwater Remedy Completion Strategy: Moving Forward with the End in Mind, OSWER 9200.2-144 (May 2014).
- (nn) Guidance for Management of Superfund Remedies in Post Construction, OLEM 9200.3-105 (Feb. 2017), <https://www.epa.gov/superfund/superfund-post-construction-completion>.

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

Laws, Policy, and Guidance: <http://www.epa.gov/superfund/superfund-policy-guidance-and-laws>

Test Methods Collections: <http://www.epa.gov/measurements/collection-methods>

10.3 For any regulation or guidance referenced in the Order 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 Respondent receives notification from EPA of the modification, amendment, or replacement.