

**REMEDIAL ACTION**

**STATEMENT OF WORK**

**OPERABLE UNIT 8**

**AMERICAN CYANAMID SUPERFUND SITE**

**Bridgewater Township, Somerset County, State of New Jersey**

**EPA Region 2**

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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 regarding OU8.

**1.2 Structure of the SOW**

- Section 2 (Community Involvement) sets forth EPA's and Settling Defendant's (SD's) responsibilities for community involvement.
- Section 3 (Remedial Action) sets forth requirements regarding the completion of the Remedial Action (RA), including main deliverables related to completion of the RA.
- Section 4 (Reporting) sets forth SD's reporting obligations.
- Section 5 (Deliverables) describes the content of the supporting deliverables and the general requirements regarding SD's 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 main deliverables, specifies the supporting deliverables that must accompany each main deliverable, and sets forth the schedule of milestones regarding the completion of the RA.
- Section 7 (State Participation) addresses State of New Jersey participation.
- Section 8 (References) provides a list of references, including URLs.

**1.3** The Scope of the Remedy includes the actions described in the Selected Remedy section of the OU8 ROD, which includes the following major components:

- a) Excavation and dewatering of the Principal Threat Waste (PTW) (impoundment material) from Impoundments 1 and 2;
- b) Emission and odor control measures to protect workers and the surrounding community;
- c) Off-site shipment of the PTW for treatment/destruction;
- d) Collection of aqueous phase liquid for either treatment and discharge on-site or for offsite disposal;
- e) Treatment of any soil and/or clay in the impoundments impacted by the PTW with concentrations above remediation goals via in-situ stabilization and solidification (ISS);
- f) Backfilling the excavated areas with existing berm materials from the impoundments not requiring treatment;
- g) Installing a protective cover over the entire OU8 footprint; and,
- h) Implementing institutional controls, monitoring, and periodic reviews to ensure that the remedy remains protective of public health and the environment.

The footprint of OU8 is contained entirely within the footprint of OU4, which addresses sitewide soil and groundwater. OU8 includes all soil and clay material and PTW in Impoundments 1 and 2, to the outside toe of the berm surrounding them; it does not include groundwater. As such, there is no RAO specifically for groundwater since groundwater will be managed entirely as part of, and consistent with, the remedy selected in the 2012 ROD for OU4. The OU8 remedy will prevent or minimize future migration of COCs from the OU8 impoundments, including to groundwater, but if migration does occur, it will be addressed through the OU4 treatment processes. The OU4 remedy includes the use of hydraulic barrier walls and extraction wells to capture contaminant mass and maintain an inward gradient around the site, and these controls extend beyond the limits of OU8.

- 1.4 The terms used in this SOW that are defined in CERCLA, in regulations promulgated under CERCLA, or in the Consent Decree (CD), have the meanings assigned to them in CERCLA, in such regulations, or in the CD, except that the term “Paragraph” or “¶” means a paragraph of the SOW.

## 2. COMMUNITY INVOLVEMENT

### 2.1 Community Involvement Responsibilities

- (a) EPA has the lead responsibility for developing and implementing community involvement activities at the Site. Previously a Community Involvement Plan (CIP) was developed 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 during the Work that are not already addressed or provided for in the existing CIP. Should the CIP require revision, SD may propose an updated CIP for EPA consideration.
- (b) If requested by EPA, SD shall participate in community involvement activities, including participation in (1) the preparation of information regarding the Work for dissemination to the public, with consideration given to including mass media and/or internet notification, and (2) public meetings that may be held or sponsored by EPA to explain activities at or relating to the Site. EPA may describe in its CIP SD’s responsibilities for community involvement activities. All community involvement activities conducted by SD at EPA’s request are subject to EPA’s oversight. Upon EPA’s request, SD shall establish a community information repository at or near the Site to house one copy of the administrative record.
- (c) **SD’s CI Coordinator.** If requested by EPA, SD shall, within 30 days, designate and notify EPA of SD’s Community Involvement Coordinator (CI Coordinator). SD may hire a contractor for this purpose. SD’s notice must include the name, title, and qualifications of the SD’s CI Coordinator. SD’s CI Coordinator is responsible for providing support regarding EPA’s community involvement

activities, including updating the CIP and coordinating with EPA's CI Coordinator regarding responses to the public's inquiries about the Site.

### 3. REMEDIAL ACTION

**3.1 RA Work Plan.** SD shall submit a RA Work Plan (RAWP) for EPA approval that includes:

- (a) A proposed RA Construction Schedule in Gantt chart format;
- (b) Plans for satisfying permitting requirements, including obtaining permits for off-site activity and for satisfying substantive requirements of permits for on-site activity; and
- (c) The Supporting Deliverables listed in ¶ 5.7.

**3.2 Remedial Action Phasing, Coordination, and Implementation.** The Remedial Action for OU8 shall be addressed in two remedial components: (1) the acid tar Removal, Dewatering, and Off-Site Treatment; and (2) Earthen Berm and Soil ISS Treatment and Subsequent Capping. These remedial components will be addressed simultaneously, on parallel tracks; however, the parties recognize that the schedule of one remedial component may impact the schedule of the other, and the parties will schedule these components pursuant to an EPA-approved plan or as otherwise approved by EPA. The remedial components and subcomponents may be separated further and may later be recombined in subsequent phases of the Work, as approved by EPA.

The Remedial Action deliverables include: a Remedial Action Work Plan ("RAWP"), an Operation and Maintenance ("O&M") Plan, a Remedial Action Report, a Notice of Completion, and a Certification of Completion Report. If EPA agrees, such deliverables or their subcomponents may be submitted separately for the following: acid tar Removal, Dewatering; Off-Site Treatment; ISS Treatment of Soil and Clay with concentrations exceeding remediation goals; and Subsequent Capping. If EPA agrees, separated subcomponents may later be recombined in subsequent phases of the Work. For example, a separate RAWP may be prepared and submitted to EPA for review and approval for specific subcomponents which may later be combined with other subcomponents for operations and maintenance and/or construction and completion reporting.

### 3.3 Meetings and Inspections

- (a) **Pre-construction Conference.** SD shall hold a pre-construction 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). SD 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), SD shall meet monthly with EPA, and others as directed or determined by EPA, to discuss construction issues, unless another frequency is approved by EPA. SD shall distribute an agenda and list of attendees to all Parties prior to each meeting. SD shall prepare minutes of the meetings and shall distribute the minutes to all Parties.
- (c) **Inspections**
  - (1) EPA or its representative will conduct periodic inspections of the Work pursuant to this SOW. At EPA's request, the Supervising Contractor or other designee shall accompany EPA or its representative during inspections.
  - (2) SD shall provide personal protective equipment needed for EPA personnel and any oversight officials to perform their oversight duties. SD will not provide personal protective equipment to EPA that, prior to its use, requires a medical examination/surveillance, pulmonary test, respirator fit-testing, or other medical clearance.
  - (3) Upon notification by EPA of any deficiencies in the RA Construction, SD shall take all necessary steps to correct the deficiencies and/or bring the RA Construction into compliance with the approved Final Remedial Design ("RD"), any approved design changes, and/or the approved RAWP. If applicable, SD shall comply with any schedule provided by EPA in its notice of deficiency.

### 3.4 Emergency Response and Reporting

- (a) **Emergency Response and Reporting.** If any event occurs during performance of the Work pursuant to this SOW 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, SD shall: (1) immediately take all appropriate action to prevent, abate, or minimize such release or threat of release; (2) immediately notify the authorized EPA officer (as specified in ¶ 3.4(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 SD 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, SD shall immediately notify the authorized EPA officer orally.

- (c) The “authorized EPA officer” for purposes of immediate oral notifications and consultations under ¶ 3.4(a) and ¶ 3.4(b) is the EPA Remedial Project Manager, the EPA Alternate Remedial Project Manager (if the EPA Remedial Project Manager is unavailable), or the EPA Emergency Spill Reporting Hotline at (800) 424-8802 (if neither EPA Remedial Project Manager is available).
- (d) For any event covered by ¶ 3.4(a) and ¶ 3.4(b), SD shall: (1) within 14 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 ¶ 3.4 are in addition to the reporting required by CERCLA § 103 or EPCRA § 304.

### 3.5 Off-Site Shipments

- (a) SD may ship hazardous substances, pollutants, and contaminants from the Site to an off-Site facility only if they comply with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. SD will be deemed to be in compliance with CERCLA § 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if SD obtain 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) SD may ship Waste Material from the Site to an out-of-state waste management facility only if, prior to any shipment, they provide notice to the appropriate state environmental official in the receiving facility’s state and to the EPA Remedial Project Manager. 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. SD also shall notify the state environmental official referenced above and the EPA Remedial Project Manager of any major changes in the shipment plan, such as a decision to ship the Waste Material to a different out-of-state facility. SD shall provide the notice after the award of the contract for RA construction and before the Waste Material is shipped.
- (c) SD may ship Investigation Derived Waste (IDW) from the Site to an off-Site facility only if they comply 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 ROD. 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.

### 3.6 RA Construction Completion

- (a) For purposes of this ¶ 3.6, “RA Construction” comprises, for any RA that involves the construction and operation of a system to achieve Remedial Action Objectives (“RAOs”), 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.** SD shall schedule an inspection to review the construction and to review whether the remedy is functioning properly and as designed. The inspection must be attended by SD and EPA and/or their representatives. A re-inspection must be conducted if requested by EPA.
- (c) **Evaluation Period.** There shall be an evaluation period of up to one year for EPA to review whether the protective cover component of the remedy is functioning properly and performing as designed. SD shall provide such information as EPA requests for such review.
- (d) **RA Report.** Following the evaluation period, SD shall submit an “RA Report” requesting EPA’s determination that RA Construction has been completed. The RA Report must: (1) include statements by a registered professional engineer and by SD Project Coordinator that construction of the system is complete and that the system is functioning properly and as designed; (2) include as-built drawings signed and stamped by a registered professional engineer; (3) include a demonstration, and supporting documentation, that construction of the system is complete and that the system is functioning properly and as designed; (4) contain monitoring data to demonstrate that RAOs have been achieved; (5) 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 (6) be certified in accordance with ¶ 5.5 (Certification).
- (e) If EPA determines that the requirements set forth in the above subparagraph (RA Report) are not complete, EPA shall so notify SD. EPA’s notice must include a description of, and schedule for, the activities that SD must perform to complete such requirements. EPA’s notice may include a schedule for completion of such activities or may require SD to submit a proposed schedule for EPA approval. SD 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 Report, that the requirements set forth in ¶ 3.6(d) are completed in a satisfactory manner, EPA shall so notify SD.

### 3.7 Certification of RA Completion

- (a) After the submission of the final RA Report and receipt of EPA's notification that the RA Construction is complete, SD may request EPA's Certification of RA Completion.
- (b) If EPA concludes that the RA is not complete, EPA shall so notify SD. EPA's notice must include a description of any deficiencies. EPA's notice may include a schedule for addressing such deficiencies or may require SD to submit a schedule for EPA approval. SD shall perform all activities described in the notice in accordance with the schedule.
- (c) If EPA concludes, based on the initial or any subsequent RA Report requesting Certification of RA Completion, that the RA is Complete, EPA shall so certify to SD. This certification will constitute the Certification of RA Completion for purposes of the CD, including Section XV of the CD (Covenants by Plaintiff). Certification of RA Completion will not affect SD remaining obligations under the CD.

**3.8 Periodic Review Support Plan ("PRSP").** SD shall submit the PRSP for EPA approval. The PRSP addresses the studies and investigations that SD 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"). SD 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 guidance.

### 3.9 Certification of Work Completion

- (a) **Work Completion Inspection.** SD shall schedule an inspection for obtaining EPA's Certification of Work Completion. The inspection must be attended by SD and EPA and/or their representatives.
- (b) **Work Completion Report.** Following the inspection, SD shall submit a report to EPA requesting EPA's Certification of Work Completion. This Work Completion Report shall be submitted after the one-year Evaluation Period. The Work Completion Report must: (1) include certifications by a registered professional engineer and by SD's Project Coordinator that the Work, including all Operation and Maintenance ("O&M") activities over which the SD has control, is complete; and (2) be certified in accordance with ¶ 5.5 (Certification). If the annual inspection report required under the O&M Plan submitted under ¶ 5.7(f) includes all elements required under this ¶ 3.9(b), then the annual inspection report suffices to satisfy all requirements under this ¶ 3.9(b).
- (c) If EPA concludes that the Work is not complete, EPA shall so notify SD. EPA's notice must include a description of the activities that SD must perform to

complete the Work. EPA's notice must include specifications and a schedule for such activities or must require SD to submit specifications and a schedule for EPA approval. SD shall perform all activities described in the notice or in the EPA-approved specifications and schedule.

- (d) If EPA concludes, based on the initial or any subsequent report requesting Certification of Work Completion, that the Work is complete, EPA shall so certify in writing to SD. Issuance of the Certification of Work Completion does not affect the following continuing obligations: (1) activities under the Periodic Review Support Plan; (2) obligations under Sections VIII (Property Requirements), XVIII (Access to Information), and XIX (Retention of Records) of the CD; (3) Institutional Controls obligations as provided in the Institutional Controls Implementation and Assurance Plan ("ICIAP"); and (4) reimbursement of EPA's Future Response Costs under Section X (Payments for Response Costs) of the CD.

#### 4. REPORTING

**4.1 Progress Reports.** Commencing with the month following entry of the CD and until EPA approves the RA Construction Completion, SD shall submit progress reports to EPA monthly, or as otherwise requested by EPA. SD may propose to combine the monthly status reporting for activities required under the OU8 RD AOC with the monthly status reporting for OU8 RA CD activities. The RA Progress 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 CD;
- (b) A summary of all results of sampling, tests, and all other data received or generated by SD related to the Work pursuant to this SOW;
- (c) A description of all deliverables that SD 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 SD have proposed or that have been approved by EPA; and
- (g) A description of all activities undertaken in support of the CIP during the reporting period and those to be undertaken in the next six weeks.

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

## **5. DELIVERABLES**

- 5.1 Applicability.** SD 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 5.2 (In Writing) through 5.4 (Technical Specifications) apply to all deliverables. Paragraph 5.5 (Certification) applies to any deliverable that is required to be certified. Paragraph 5.6 (Approval of Deliverables) applies to any deliverable that is required to be submitted for EPA approval.
- 5.2 In Writing.** As provided in ¶ 92 of the CD, all deliverables under this SOW must be in writing unless otherwise specified.
- 5.3 General Requirements for Deliverables.** All deliverables must be submitted by the deadlines in the RA Schedule, as applicable. SD shall submit all deliverables to EPA in electronic form. Technical specifications for sampling and monitoring data and spatial data are addressed in ¶ 5.4. All other deliverables shall be submitted to EPA in the electronic form specified by the EPA Remedial Project Manager. If any deliverable includes maps, drawings, or other exhibits that are larger than 8.5" by 11," SD shall also provide EPA with paper copies of such exhibits upon request by EPA.
- 5.4 Technical Specifications**
- (a) Sampling and monitoring data should be submitted in standard regional Electronic Data Deliverable (EDD) format which can be found at <https://www.epa.gov/superfund/region-2-superfund-electronic-data-submission>. 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 and (2) as un-projected 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 site unit or sub-unit submitted. Consult <http://www.epa.gov/geospatial/policies.html> for any further available guidance on attribute identification and naming.
- (d) Spatial data submitted by SD does not, and is not intended to, define the boundaries of the Site.

**5.5 Certification.** All deliverables that require compliance with this ¶ 5.5, specifically the Remedial Action Report and Work Completion Report, must be signed by the SD's Project Coordinator, or other responsible official of SD, and must contain the statement below. Electronic signatures are acceptable.

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.

## **5.6 Approval of Deliverables**

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

- (1) After review of any deliverable that is required to be submitted for EPA approval under the CD 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 previous 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), SD shall, within 30 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 SD 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 CD; and (2) SD 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 SD of any liability for stipulated penalties under Section XIV (Stipulated Penalties) of the CD.

**5.7 Supporting Deliverables.** SD shall submit each of the following supporting deliverables for EPA approval, except as specifically provided. SD shall develop the deliverables in accordance with all applicable regulations, guidance, and policies (see Section 9 of this SOW (References)). SD shall update each of these supporting deliverables as necessary or appropriate during the Work, and/or as requested by EPA. A number of the “Supporting Deliverables” were previously submitted and approved by EPA for the OU8 Remedial Design. SD may (and will, if requested by EPA) update or modify such plans, as appropriate, and then resubmit such plans for approval pursuant to this SOW for use in the RA.

- (a) **Health and Safety Plan (“HASP”).** The 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. SD 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 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 (“ERP”).** The ERP must describe procedures to be used in the event of an accident or emergency at the Site (for example, power outages, water impoundment failure, treatment plant failure, slope failure, etc.). The ERP must include:
- (1) Name of the person or entity responsible for responding in the event of an emergency incident;
  - (2) Plan and date(s) for meeting(s) with the local community, including local, State, and federal agencies involved in the cleanup, as well as local emergency squads and hospitals;

- (3) Spill Prevention, Control, and Countermeasures Plan (if applicable), consistent with the regulations under 40 C.F.R. Part 112, describing measures to prevent, and contingency plans for, spills and discharges;
  - (4) Notification activities in accordance with ¶ 3.4(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 EPCRA, 42 U.S.C. § 11004; and
  - (5) A description of all necessary actions to ensure compliance with ¶ 11 (Emergencies and Releases) of the CD 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 (“FSP”).** The 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. SD 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 (“QAPP”).** The QAPP augments the FSP and addresses sample analysis and data handling regarding the Work. The QAPP must include a detailed explanation of SD quality assurance, quality control, and chain of custody procedures for all treatability, design, compliance, and monitoring samples. SD 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 SD in implementing the CD (SD Labs);
  - (2) To ensure that SD’s Labs analyze all samples submitted by EPA pursuant to the QAPP for quality assurance monitoring;
  - (3) To ensure that SD’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 SD's Labs participate in an EPA-accepted QA/QC program or other program QA/QC acceptable to EPA;
  - (5) For SD to provide EPA with notice at least 21 days prior to any sample collection activity;
  - (6) For SD 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 SD, upon request, split samples and/or duplicate samples regarding EPA's oversight sampling; and
  - (9) For SD to submit to EPA all sampling and tests results and other data regarding the implementation of the CD.
- (e) **Construction Quality Assurance/Quality Control Plan (CQA/QCP).** The purpose of the Construction Quality Assurance provisions 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 provisions 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 RAOs required to be met to achieve Completion of the RA;
  - (3) Describe the activities to be performed: (i) to provide confidence that RAOs will be achieved; and (ii) to determine whether RAOs have been achieved;
  - (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.
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- (f) **O&M Plan.** The O&M Plan describes the requirements for inspecting, operating, and maintaining the RA. SD 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 RAOs required to be met to implement the ROD;
    - (2) Description of activities to be performed: (i) to provide confidence that RAOs will be met; and (ii) to determine whether RAOs 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 State 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 RAOs;
      - (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 if RAOs are not achieved; and a schedule for implementing these corrective actions.
  - (g) **Transportation and Off-Site Disposal Plan (“TODP”).** The TODP describes plans to ensure compliance with ¶ 3.5 (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.
  - (h) **Institutional Controls Implementation and Assurance Plan.** The ICIAP as described in the SOW for OU4 CD will be updated as necessary to include controls for OU8. SD shall develop and update 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).

- (i) **Periodic Review Support Plan (“PRSP”).** The PRSP addresses the studies and investigations that the SD 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”). The SD 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 guidance.
- (j) **Community Air Monitoring Plan (“CAMP”).** The purpose of the CAMP is to protect members of the general public so they are not exposed to unsafe levels of airborne fugitive emissions from the Site remedial activities that would result in adverse health effects. In order to achieve this goal, the CAMP should include a Site perimeter air monitoring program that will provide a real-time early warning system of alert and action level exceedance notifications and the associated implementation of corrective measures.
- (k) **Project Management Plan (“PMP”).** The purpose of the PMP is to develop a strategy to complete the RA successfully, including, but not limited to:
  - (1) A description of the overall management strategy for performing the RA, including a proposal for phasing of construction, if applicable;
  - (2) A description of the responsibility and authority of, and communication strategy among, all organizations and key personnel involved with the development of the RA, including but not limited to the Respondent’s Project Coordinator and EPA’s Remedial Project Manager; and
  - (3) Baseline schedule for completion of the Work, including a preliminary list of all work plans, tasks and deliverables to be prepared.

## 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 RA Schedules set forth below. SD may submit proposed revised RA Schedules for EPA approval. Upon EPA’s approval, the revised RA Schedules supersede the RA Schedules set forth below, and any previously-approved RA Schedules.

### 6.2 RA Schedule

	<b>Description of Deliverable / Task</b>	<b>¶ Ref.</b>	<b>Deadline</b>
1	Award RA contract for Acid Tar Removal, Dewatering, and Off-Site Treatment		45 days after EPA approves Final (100%) RD for this RA component
2	Award RA contract for Earthen Berm and Soil ISS Treatment and Subsequent Capping		45 days after EPA approves Final (100%) RD for this RA component
3	RAWP for Acid Tar Removal, Dewatering, and Off-Site Treatment	3.1	90 days after EPA approves Final (100%) RD for this RA component
4	RAWP for Earthen Berm and Soil ISS Treatment and Subsequent Capping	3.1	90 days after EPA approves Final (100%) RD for this RA component
5	Update ICIAP	5.7(h)	30 days after Approval of the RAWP PTW Removal, Dewatering, and Off-Site Treatment
6	Pre-construction Conference for Acid Tar Removal, Dewatering, and Off-Site Treatment	3.3(a)	14 days after EPA Approval of RAWP for this RA component

	<b>Description of Deliverable / Task</b>	<b>¶ Ref.</b>	<b>Deadline</b>
7	Pre-construction Conference for Earthen Berm and Soil ISS Treatment and Subsequent Capping	3.3(a)	14 days after EPA Approval of RAWP for this RA component
8	Start of Construction for Acid Tar Removal, Dewatering, and Off-Site Treatment		30 days after Approval of RAWP, for this RA component, or as otherwise set forth in the approved RAWP
9	Start of Construction for Earthen Berm and Soil ISS Treatment and Subsequent Capping		30 days after Approval of RAWP, for this RA component, or as otherwise set forth in the approved RAWP
10	Completion of Construction for Acid Tar Removal, Dewatering, and Off-Site Treatment	3.6(a)	To Be Determined
11	Completion of Construction for Earthen Berm and Soil ISS Treatment and Subsequent Capping	3.6(a)	To be Determined
12	Inspection of Constructed Remedy for Acid Tar Removal, Dewatering, and Off-Site Treatment	3.6(b)	30 days after completion of construction for this RA component
13	Inspection of Constructed Remedy for Earthen Berm and Soil ISS Treatment and Subsequent Capping	3.6(b)	30 days after completion of construction for this RA component
14	RA Report	3.6(d)	30 days after EPA determination that the evaluation period is complete and remedy is functional and performing as designed
15	O&M Monitoring Plan	5.7(f)	30 days after EPA determination that the Evaluation Period is complete and remedy is functional and performing as designed.
16	Annual O&M Monitoring Report	5.7(f)(3)	30 days after RA report is approved
17	Periodic Review Support Plan	3.8 and 5.7(i)	Initial PRSP, 30 days after Approval of RA Report. Subsequent PRSPs, 45 days after EPA issuance of Five-Year Review Report
18	Work Completion Inspection	3.9(b)	30 days after EPA determination that the RAOs have been achieved.
19	Work Completion Report	3.9(b)	30 days after EPA's determination that the Work Completion Inspection verifies that the Work is complete

**6.3 Special Circumstances Related to Force Majeure:** A flood event that causes an exceedance of an elevation of 28 feet (NGVD 1929) at USGS Station 01403060 (Raritan River at Bound Brook) during the Remedial Action and/or O&M, shall fall within the

scope of Paragraph 43 of the Consent Decree, defining force majeure, provided that one or more of the following conditions are met: (a) part or all of the Site is flooded, (b) routes of ingress/egress to and from the Site are flooded, or (c) the imminent threat of potential flooding caused, for safety reasons, evacuation of personnel, supplies, and equipment from the Site thereby disrupting Work.

## 7. STATE PARTICIPATION

- 7.1 Copies.** SD shall, at any time they send a deliverable to EPA, send a copy of such deliverable to the State. EPA shall, at any time it sends a notice, authorization, approval, disapproval, or certification to SD, send a copy of such document to the State. Materials provided to the State shall be sent to: Project Manager, American Cyanamid Superfund Site, New Jersey Department of Environmental Protection, Bureau of Case Management, Mail Code 401-05F, P.O. Box 420, Trenton, NJ 08625-0420.
- 7.2 Review and Comment.** The State 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; and
  - (b) Any approval or disapproval of the Construction Phase under ¶ 3.6 (RA Construction Completion), any disapproval of, or Certification of RA Completion under ¶ 3.7 (Certification of RA Completion), and any disapproval of, or Certification of Work Completion under ¶ 3.9 (Certification of Work Completion).

## 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) 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) Remedial Design/Remedial Action Handbook, OSWER 9355.0-04B, EPA/540/R-95/059 (June 1995).
- (l) EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis, QA/G-9, EPA/600/R-96/084 (July 2000).
- (m) Operation and Maintenance in the Superfund Program, OSWER 9200.1-37FS, EPA/540/F-01/004 (May 2001).
- (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, SEMS 100000070 (January 2016), <https://www.epa.gov/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), available at <http://www.epa.gov/geospatial/policies.html> and [http://www.epa.gov/geospatial/docs/National\\_Geospatial\\_Data\\_Policy.pdf](http://www.epa.gov/geospatial/docs/National_Geospatial_Data_Policy.pdf).
- (z) Summary of Key Existing EPA CERCLA Policies for Groundwater Restoration, OSWER 9283.1-33 (June 2009).
- (aa) Principles for Greener Cleanups (Aug. 2009), available at <http://www.epa.gov/oswer/greenercleanups/>.
- (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 Master Format 2018, available at <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), <https://www.epaossc.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) EPA's Region 2 Clean and Green Policy (Mar. 2012), [http://www.epa.gov/region02/superfund/green\\_remediation/gr\\_policy\\_signed.pdf](http://www.epa.gov/region02/superfund/green_remediation/gr_policy_signed.pdf)
- (nn) Groundwater Remedy Completion Strategy: Moving Forward with the End in Mind, OSWER 9200.2-144 (May 2014).
- (oo) Guidance for Management of Superfund Remedies in Post Construction, OLEM 9200.3-105 (Feb. 2017), <https://www.epa.gov/superfund/superfund-post-construction-completion>.

**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 CD 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 SD receives notification from EPA of the modification, amendment, or replacement.