

**APPENDIX "A"**

TO

CONSENT DECREE

*United States of America vs. American Chemet Corporation*  
*Civil Action No. \_\_\_\_\_*

Statement of Work for the Remedial Design and Remedial Action  
At the American Chemet Properties

**STATEMENT OF WORK  
FOR THE REMEDIAL DESIGN AND REMEDIAL ACTION  
AT THE AMERICAN CHEMET PROPERTIES,  
WITHIN THE EAST HELENA SUPERFUND SITE  
East Helena, Lewis & Clark County, Montana  
EPA Region 8**

**1. INTRODUCTION**

- 1.1 American Chemet shall design, implement, operate and maintain the remedy in accordance with the East Helena Superfund Site, Operable Unit No. 2, Residential Soils and Undeveloped Lands Record of Decision (OU2 ROD), this Statement of Work (SOW), including the RA and RD Schedules, the Performance Standards, and all deliverables created under this SOW and approved by EPA.
- 1.2 The Performance Standards include all Applicable or Relevant and Appropriate Requirements (ARARs), cleanup goals, cleanup levels, cleanup standards, specifications and all measures for the performance of treatment processes, engineering controls and other controls set forth in the ROD, the SOW and any deliverable created and approved under the CD and the SOW.

**2. DEFINITIONS**

Unless otherwise expressly provided in the SOW, the terms used in the SOW that are defined in CERCLA, in regulations promulgated under CERCLA, or in the CD, have the meanings assigned to them in CERCLA, in such regulations, or in the CD. Whenever terms listed below are used in the SOW or in any attachment hereto, the following definitions apply:

“CD” means the Consent Decree to which this SOW is an Appendix.

“Operation and Maintenance” or “O&M” means all activities required to operate, maintain, and monitor the effectiveness of the Remedial Action as required under the O&M Plan.

“Paragraph” or “¶” means a paragraph of the SOW, unless otherwise stated.

“Performance Standards” means the cleanup standards and other measures of achievement of the goals of the RA, as set forth in the ROD.

“RA” means the Remedial Action for Operable Unit No. 2 of the Site.

“RA Schedule” means the schedule set forth in ¶ 7.3, or any proposed revised RA Schedule submitted under this SOW and approved by EPA.

“RD” means the Remedial Design for the RA.

“RD Schedule” means the schedule set forth in ¶ 7.2, or any proposed revised RD Schedule submitted under this SOW and approved by EPA.

“Work” means all activities and obligations American Chemet is required to perform under the CD.

### **3. PRE-DESIGN INVESTIGATION**

- 3.1 The purpose of the Pre-Design Investigation (PDI) is to address data gaps by conducting additional field investigations.
- 3.2 PDI Work Plan. American Chemet shall submit a PDI Work Plan (PDIWP) for EPA approval. The PDIWP must include:
  - 3.2.1 Description of previous soil sampling and data gaps;
  - 3.2.2 Proposed media, contaminants or parameters for which sampling will be conducted;
  - 3.2.3 Proposed areal extent and depths of sampling;
  - 3.2.4 Description of QA/QC procedures in accordance with the QAPP; and
  - 3.2.5 Description of well abandonment, operation, and schedules as detailed in Paragraph 14.c. and 14.d of the Consent Decree.
- 3.3 Following the PDI, American Chemet shall submit a PDI Evaluation Report. This report must include:
  - 3.3.1 Summary of the investigations performed;
  - 3.3.2 Summary of investigation results;
  - 3.3.3 Summary of validated data (i.e., tables and graphics);
  - 3.3.4 Data validation reports and laboratory data reports;
  - 3.3.5 Narrative interpretation of data and results;
  - 3.3.6 Results of statistical and modeling analyses;
  - 3.3.7 Copies of field notes and log books;
  - 3.3.8 Photographs documenting the work conducted; and
  - 3.3.9 Conclusions and recommendations for Remedial Design (RD), including design parameters and criteria.

### **4. REMEDIAL DESIGN**

- 4.1 Remedial Design Work Plan (RDWP) – American Chemet shall submit a RDWP for EPA approval. The RDWP must include:
  - 4.1.1 Plans for implementing all RD activities identified in this SOW, in the RDWP, or required by EPA to be conducted in order to develop the RD;
  - 4.1.2 A description of the overall management strategy for performing the RD, and the proposed general approach to contracting, construction, operation, maintenance, and monitoring of the RA as necessary to implement the Work;

- 4.1.3 A proposal for phasing of design and construction, if applicable;
  - 4.1.4 A description of the responsibility and authority of all organizations and key personnel involved with the development of the RD;
  - 4.1.5 Descriptions of any areas requiring clarification and/or anticipated problems (e.g., data gaps);
  - 4.1.6 A preliminary outline of drawings and specifications;
  - 4.1.7 A description of permitting, substantive permitting requirements, and other regulatory requirements;
  - 4.1.8 A description of plans for, and a schedule for, coordination with, and access from, entities affected by, or that may affect the Work (e.g., property owners, state agencies, local agencies, etc.), such as permitting, property acquisition, property leases, and/or easements required for implementation of the RD and RA;
  - 4.1.9 An outline of proposed Institutional Controls Implementation and Assurance Plan (ICIAP);
  - 4.1.10 Supporting deliverables as specified in the RD Schedule.
- 4.2 Preliminary (30%) RD - American Chemet shall submit a Preliminary (30%) RD for EPA's comment. The Preliminary RD must include:
- 4.2.1 A design criteria report, as described in the *Remedial Design/Remedial Action Handbook*, EPA 540/R-95/059 (June 1995);
  - 4.2.2 Preliminary drawings and specifications;
  - 4.2.3 A description of American Chemet's proposed RA contracting strategy;
  - 4.2.4 Descriptions of permit requirements;
  - 4.2.5 Preliminary O&M Plan and O&M Manual;
  - 4.2.6 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);
  - 4.2.7 Preliminary RA Schedule; and
  - 4.2.8 Supporting deliverables as specified in the RD Schedule.
- 4.3 Pre-Final RD – American Chemet shall submit the Pre-final (90%/95%) RD for EPA's comment. The Pre-final Design must be a continuation and expansion of the previous submittal and must address EPA's comments regarding the Preliminary (30%) RD. The Pre-final RD will serve as the approved Final RD if EPA approves the Pre-final RD without comments. The Pre-final RD must include:
- 4.3.1 A complete set of construction drawings and specifications that are: (i) certified by a Professional Engineer registered in the State; (ii) suitable for bid advertisement; and (iii) follow the Construction Specifications Institute's MasterFormat 2012;
  - 4.3.2 A survey and engineering drawings showing existing Site elements, Site conditions, property borders, and easements;
  - 4.3.3 Pre-Final (90%/95%) versions of the same elements and deliverables as are required for the Preliminary (30%) RD;
  - 4.3.4 A specification for photographic documentation of the RA;
  - 4.3.5 Description of American Chemet's method for selecting the construction contractor(s); and

4.3.6 Supporting deliverables as specified in the RD Schedule.

4.4 Final RD

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

## 5. REMEDIAL ACTION

5.1 RA Work Plan

5.1.1 American Chemet shall submit a RA Work Plan (RAWP) for EPA approval that includes:

- 5.1.1.1 The identity of, contact information for, and description of the roles of the members of American Chemet's RA project team, including the Project Coordinator and Supervising Contractor;
- 5.1.1.2 A proposed RA Construction Schedule [desired format - Gantt chart];
- 5.1.1.3 Description of plans for satisfying permitting requirements, including obtaining permits for off-Site activity and for satisfying substantive requirements of permits for on-Site activity;
- 5.1.1.4 Summary of spill control plan or other plans to eliminate or reduce incidence of emissions during construction, and to minimize the impacts of such potential releases to adjacent environments (e.g., wetlands, surface waters, groundwater); and
- 5.1.1.5 Supporting deliverables as specified in the RD Schedule.

5.2 Independent Quality Assurance Team

5.2.1 American Chemet shall notify EPA of their designated Independent Quality Assurance Team (IQAT). The IQAT will be independent of the Supervising Contractor. American Chemet may hire a third party for this purpose. American Chemet's notice must include the names, titles, contact information and qualifications of the members of the IQAT. Once designated, the IQAT will have the responsibility to determine whether Work is of expected quality and conforms to applicable plans and specifications.

5.3 Meetings, Inspections and Reports

5.3.1 Preconstruction Meeting. American Chemet shall hold a preconstruction meeting with EPA and others as directed or approved by EPA. The following elements must be addressed at the meeting: methods for documenting and reporting data; methods for distributing and storing documents and reports; methods for assuring health and safety of on-site personnel and area residents; and methods for assuring construction quality. American Chemet shall prepare, and send to all Parties,

minutes of the preconstruction meeting.

- 5.3.2 Periodic Meetings. During the construction portion of the RA (RA Construction), American Chemet shall meet regularly with EPA, and others as directed or determined by EPA, to discuss construction issues. American Chemet shall distribute an agenda and list of attendees to all Parties prior to each meeting. American Chemet shall prepare minutes of the meetings and shall distribute the minutes to all Parties.
- 5.3.3 Inspections
- 5.3.3.1 EPA shall conduct periodic inspections of the Work. At EPA's request, the Supervising Contractor or other designee shall accompany EPA during inspections.
- 5.3.3.2 Upon notification by EPA of any deficiencies in the RA Construction, American Chemet 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, American Chemet shall comply with any schedule provided by EPA in its notice of deficiency.
- 5.3.4 Progress Reports. Commencing with the month following lodging of the CD and until EPA approves the RA Construction, American Chemet shall submit progress reports to EPA on a monthly basis, or as otherwise requested by EPA. The reports must be submitted in electronic form. The reports must cover all activities that took place during the prior reporting period, including:
- 5.3.4.1 The actions that have been taken toward achieving compliance with the CD;
- 5.3.4.2 A summary of all results of sampling and tests and all other data received or generated by American Chemet;
- 5.3.4.3 A description of all plans, reports, and other deliverables that were submitted;
- 5.3.4.4 A description of all activities relating to the RA Construction that are scheduled for the next six weeks;
- 5.3.4.5 Updated RA Construction Schedule; together with information regarding percentage of completion, unresolved 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;
- 5.3.4.6 A description of any modifications to the work plans or other schedules that American Chemet have proposed or that have been approved by EPA.
- 5.3.5 Notice of Progress Report Schedule Changes. If the schedule for any activity described in the Progress Reports, including activities required to be described under ¶ 5.3.4.4, changes, American Chemet shall notify EPA of such change at least seven days before performance of the activity.
- 5.3.6 Emergency Reporting.

- 5.3.6.1 Upon the occurrence of any event during performance of the Work that American Chemet 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, American Chemet shall, within 24 hours of the onset of such event, orally notify the EPA Project Coordinator or the Emergency Response Section, Region 8, U.S. EPA. These reporting requirements are in addition to the reporting required by CERCLA Section 103 or EPCRA Section 304.
- 5.3.6.2 Within 20 days after the onset of such an event, American Chemet shall furnish to EPA a written report, signed by American Chemet's Project Coordinator, setting forth the events that occurred and the measures taken, and to be taken, in response thereto. Within 30 days after the conclusion of such an event, American Chemet shall submit a report setting forth all actions taken in response thereto.

#### 5.4 Off-Site Shipments

- 5.4.1 American Chemet 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. American Chemet will be deemed to be in compliance with CERCLA Section 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if American Chemet 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). American Chemet may ship Investigation Derived Waste (IDW) from the Site to an off-Site facility only if American Chemet complies with EPA's *Guide to Management of Investigation Derived Waste*, OSWER 9345.3-03FS (Jan. 1992).
- 5.4.2 American Chemet 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 Project Coordinator. This notice requirement will not apply to any off-Site shipments when the total quantity of all such shipments will not exceed ten 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. American Chemet 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. American Chemet shall provide the notice after the award of the contract for Remedial Action construction and before the Waste Material is shipped.

#### 5.5 RA Construction Completion

- 5.5.1 RA Completion Inspection. The RA is "Complete" for purposes of this ¶ 5.5 when it has been fully performed and the Performance Standards have been achieved. American Chemet shall schedule an inspection for the purpose of obtaining EPA's

Certification of Completion of the RA. The inspection must be attended by American Chemet and EPA and their representatives.

- 5.5.2 RA Report. Following the inspection, American Chemet shall submit a RA Report to EPA requesting EPA's Certification of Completion of the RA. The report must: (1) include certifications by a registered professional engineer and by American Chemet's Project Coordinator that the RA is complete; (2) include as-built drawings signed and stamped by a professional engineer; (3) be prepared in accordance with EPA's *Close Out Procedures for NPL Sites* guidance (May 2011); (4) contain monitoring data to demonstrate that performance standards have been achieved; and (5) be certified in accordance with ¶ 6.2.3.
  - 5.5.3 If EPA concludes that the RA is not Complete, EPA shall so notify American Chemet. EPA's notice must include a description of the activities that American Chemet must perform in order to Complete the RA. EPA's notice must include specifications and a schedule for such activities or must require American Chemet to submit specifications and a schedule for EPA approval. American Chemet shall perform all activities described in the notice or in the EPA-approved specifications and schedule.
  - 5.5.4 If EPA concludes, based on the initial or any subsequent report requesting Certification of Completion of the RA, that the RA is Complete, EPA shall so certify to American Chemet. This certification will constitute the Certification of Completion of the RA for purposes of the CD. Certification of Completion of the RA will not affect American Chemet's remaining obligations under the CD.
- 5.6 Certification of Completion of the Work
- 5.6.1 Work Completion Inspection. American Chemet shall schedule an inspection for the purpose of obtaining EPA's Certification of Completion of the Work. The inspection must be attended by American Chemet, EPA and their representatives.
  - 5.6.2 Work Completion Report. Following the inspection, American Chemet shall submit a report to EPA requesting EPA's Certification of Completion of the Work. The report must: (a) include certifications by a registered professional engineer and by American Chemet's Project Coordinator that the Work, including all O&M activities, is complete; and (b) be certified in accordance with ¶ 6.2.3. If the RA Report submitted under ¶ 5.5.2 includes all elements required under this ¶ 5.6.2, then the RA Report suffices to satisfy all requirements under this ¶ 5.6.2.
  - 5.6.3 If EPA concludes that the Work is not complete, EPA shall so notify American Chemet. EPA's notice must include a description of the activities that American Chemet must perform in order to complete the Work. EPA's notice must include specifications and a schedule for such activities or must require American Chemet to submit specifications and a schedule for EPA approval. American Chemet shall perform all activities described in the notice or in the EPA-approved specifications

and schedule.

- 5.6.4 If EPA concludes, based on the initial or any subsequent report requesting Certification of Completion of the Work, that the Work is complete, EPA shall so certify in writing to American Chemet.

## 6. DELIVERABLES

### 6.1 Applicability

- 6.1.1 Paragraphs 6.2 and 6.3 apply to any deliverable that is required to be submitted for EPA approval. Paragraph 6.2 applies to any deliverable that is required to be submitted for EPA comment.

### 6.2 General Requirements

- 6.2.1 All communications specified in this SOW, including approvals, consents, deliverables, modifications, notices, notifications, objections, proposals, and/or requests, must be in writing unless otherwise specified.
- 6.2.2 All deliverables must be submitted by the deadlines in the RD Schedule or RA Schedule, as applicable. All deliverables must be delivered to EPA in the form provided in the RD Schedule or RA Schedule, as applicable.
- 6.2.3 Required Certification for Deliverables. All plans, reports, or other deliverables that require compliance with this Paragraph must be signed by the American Chemet's Project Coordinator, or other responsible official of a American Chemet, and must contain the following statement:

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

- 6.2.4 Technical Specifications for Deliverables. Sampling and monitoring data contained in any deliverables must be submitted in Electronic format.

### 6.3 Approval of Plans, Reports or Other Deliverables

#### 6.3.1 Initial Submissions

- 6.3.1.1 After review of any plan, report, or other 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.

6.3.1.2 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 plan, report, or deliverable.

6.3.2 Resubmissions. Upon receipt of a notice of disapproval under ¶ 6.3.1 (Initial Submissions) or if required by a notice of approval upon specified conditions under ¶ 6.3.1, American Chemet shall, within 15 days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. After review of the resubmitted plan, report, or other deliverable, EPA may: (a) approve, in whole or in part, the resubmission; (b) approve the resubmission upon specified conditions; (c) modify the resubmission; (d) disapprove, in whole or in part, the resubmission, requiring American Chemet to correct the deficiencies; or (e) any combination of the foregoing.

6.3.3 Implementation. Upon approval, approval upon conditions, or modification by EPA under ¶ 6.3.1 (Initial Submissions) or ¶ 6.3.2 (Resubmissions), of any plan, report, or other deliverable, or any portion thereof: (a) such plan, report, or other deliverable, or portion thereof, will be incorporated into and enforceable under the CD; and (b) American Chemet shall take any action required by such plan, report, or other deliverable, or portion thereof. The implementation of any non-deficient portion of a plan, report, or other deliverable submitted or resubmitted under ¶¶ 6.3.1 or 6.3.2 will not relieve American Chemet of any liability for stipulated penalties under the CD.

#### 6.4 Supporting Deliverables

6.4.1 American Chemet shall submit each of the following supporting deliverables to EPA. The deliverables must be submitted, for the first time, by the deadlines in the RD Schedule, or any other EPA-approved schedule, as applicable. American Chemet shall develop the deliverables in accordance with all applicable regulations, guidances and policies. American Chemet shall update each of these supporting deliverables as necessary or appropriate during the course of the Work, and/or as requested by EPA.

#### 6.4.2 Construction Quality Assurance/Quality Control Plan

6.4.2.1 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:

- 6.4.2.1.1 Identify, and describe the responsibilities of, the organizations and personnel implementing the QA/QC;
  - 6.4.2.1.2 Describe verification activities, such as inspections, sampling, testing, monitoring, and production controls, under the QA/QC;
  - 6.4.2.1.3 Describe industry standards and technical specifications used in implementing the QA/QC;
  - 6.4.2.1.4 Describe procedures for tracking construction deficiencies from identification through corrective action;
  - 6.4.2.1.5 Describe procedures for documenting all QA/QC activities; and
  - 6.4.2.1.6 Describe procedures for retention of documents and for final storage of documents.
- 6.4.3 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:
- 6.4.3.1 Name of the person or entity responsible for responding in the event of an emergency incident;
  - 6.4.3.2 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;
  - 6.4.3.3 Spill Prevention, Control, and Countermeasures (SPCC) Plan (if applicable), as specified in 40 C.F.R. Part 109, describing measures to prevent, and contingency plans for, potential spills and discharges from materials handling and transportation;
  - 6.4.3.4 Notification activities in accordance with ¶ 5.3.6 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
- 6.4.4 Field Sampling Plan. The Field Sampling Plan (FSP) supplements the QAPP and 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. American Chemet shall develop the FSP in accordance with *Guidance for Conducting Remedial Investigations and Feasibility Studies*, EPA/540/G-89/004 (Oct. 1988).
- 6.4.5 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. American Chemet shall develop the HASP in accordance with EPA's Emergency Responder Health and Safety and OSHA requirements under 29 C.F.R. §§ 1910 and 1926. The HASP also must address

monitoring and control measures to protect the community during the Work.

- 6.4.6 Institutional Controls Implementation and Assurance Plan. The Institutional Controls Implementation and Assurance Plan (ICIAP) describes plans to implement, maintain and enforce the Institutional Controls (ICs) at the Site. American Chemet 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). The ICIAP must include the following additional requirements:
- 6.4.6.1 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;
  - 6.4.6.2 A contingency plan if any ICs cannot be implemented, are ineffective or are not sufficient to prevent exposure;
  - 6.4.6.3 All legal descriptions and survey maps must be prepared according to current American Land Title Association (ALTA) Survey guidelines and certified by a licensed surveyor; and
  - 6.4.6.4 All GIS coordinates must be formatted into an Environmental Systems Research Institute, Inc. (ESRI) polygon shape file and the Universal Transverse Mercator (UTM) zone must be identified. The shape file must be projected into the UTM, North American Datum (NAD) 83 projection system. Each shape file must include an attribute name for each polygon submitted (e.g., "site boundary," "residential use prohibited," "landfill cap," and "groundwater use prohibited").
- 6.4.7 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. American Chemet shall develop the O&M Manual in accordance with *Operation and Maintenance in the Superfund Program*, OSWER 9200.1 37FS, EPA/540/F-01/004 (May 2001).
- 6.4.8 O&M Plan. The O&M Plan describes the long-term operation and maintenance of the RA. American Chemet shall develop the O&M Plan in accordance with *Operation and Maintenance in the Superfund Program*, OSWER 9200.1 37FS, EPA/540/F-01/004 (May 2001). The O&M Plan must include the following additional requirements:
- 6.4.8.1 Description of instrumentation and monitoring;
  - 6.4.8.2 Sample checklists and periodic reports;
  - 6.4.8.3 Description of routine monitoring and laboratory testing;
  - 6.4.8.4 Description of verification sampling procedures, if Performance Standards are exceeded during routine monitoring;

- 6.4.8.5 Description of alternative operations and maintenance in case of systems failure, including: (1) alternative procedures to prevent the release or threatened release of Waste Material which may endanger public health and the environment or exceed Performance Standards; (2) analysis of vulnerability and additional resource requirements should a failure occur; and, (3) notification and reporting requirements should O&M systems fail or be in danger of imminent failure;
- 6.4.8.6 Description of corrective action to be implemented in the event that performance standards are exceeded; and a schedule for implementing these corrective actions;
- 6.4.8.7 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.
- 6.4.9 Performance Standards Verification Plan. The Performance Standards Verification Plan (PSVP) describes activities to verify that all Performance Standards are satisfied and includes a schedule for performing these activities. The PSVP must include the following elements:
  - 6.4.9.1 A description of each of the Performance Standards required by the ROD;
  - 6.4.9.2 A description of plans to provide confidence that each Performance Standard will be met; and
  - 6.4.9.3 A description of activities to be performed to determine whether Performance Standards have been met.
- 6.4.10 Periodic Review Support Plan. The Periodic Review Support Plan addresses the studies and investigations that American Chemet shall conduct to support EPA's reviews of whether the Remedial Action is protective of human health and the environment in accordance with Section 121(c) of CERCLA, 42 U.S.C. § 9621(c). American Chemet 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.
- 6.4.11 Quality Assurance Project Plan.
  - 6.4.11.1 The Quality Assurance Project Plan (QAPP) addresses sample analysis and data handling regarding the Work.
  - 6.4.11.2 The QAPP must include a detailed explanation of American Chemet's quality assurance, quality control, and chain of custody procedures for all design, compliance, and monitoring samples.
  - 6.4.11.3 American Chemet shall develop the QAPP in accordance with *EPA Requirements for Quality Assurance Project Plans*, QA/R-5, EPA/240/B-01/003 (March 2001, reissued May 2006), *Guidance for Quality Assurance Project Plans*, QA/G-5, EPA/240/R 02/009 (Dec. 2002), the *Uniform Federal Policy for Quality Assurance Project Plans*, Parts 1-3, EPA/505/B-04/900A through 900C (March 2005), and the

*Soil Sampling Program Quality Assurance Project Plan for the Remedial Design East Helena Superfund Site, Residential Soils and Undeveloped Lands (OU2).*

- 6.4.11.4 The QAPP also must include procedures:
- 6.4.11.4.1 To ensure that EPA [and the State] and its [their] authorized representative have reasonable access to laboratories used by American Chemet in implementing the Consent Decree;
  - 6.4.11.4.2 To ensure that American Chemet'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 April 2007), and USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration), ISM01.2 (January 2010)) or other methods acceptable to EPA;
  - 6.4.11.4.3 To ensure that American Chemet's Labs participate in an EPA-accepted QA/QC program or other program QA/QC acceptable to EPA;
  - 6.4.11.4.4 For American Chemet to provide EPA with notice at least 10 days prior to any sample collection activity;
  - 6.4.11.4.5 For American Chemet to provide split samples and/or duplicate samples to EPA [and the State] upon request;
  - 6.4.11.4.6 For EPA to take any additional samples that it deems necessary;
  - 6.4.11.4.7 For EPA to provide to American Chemet, upon request, split samples and/or duplicate samples in connection with EPA's oversight sampling; and
  - 6.4.11.4.8 For American Chemet to submit to EPA all sampling and tests results and other data in connection with the implementation of the Consent Decree.
- 6.4.12 Site Wide Monitoring Plan. The purpose of the Site Wide Monitoring Plan (SWMP) is to evaluate the location and movement of contamination throughout the Site to obtain baseline information regarding the extent of contamination in affected media, and/or to take contingent action if necessary. The SWMP must include:
- 6.4.12.1 Description of the environmental media to be monitored;
  - 6.4.12.2 Description of the data collection parameters, including existing and proposed monitoring devices and locations, frequency of monitoring, and analytical parameters to be monitored;
  - 6.4.12.3 Description of how performance data will be analyzed, interpreted, and reported, and/or other Site-related requirements; and
  - 6.4.12.4 Description of proposed contingency actions in the event that results from monitoring devices indicate higher than expected concentrations of the contaminants of concern, such as increases in frequency of monitoring, and/or installation of additional monitoring devices in the affected areas.
- 6.4.13 Transportation and Off-Site Disposal Plan. The Transportation and Off-Site Disposal Plan (TODP) describes plans to ensure compliance with ¶ 5.4 (Off-Site Shipments). The TODP must include:

- 6.4.13.1 Proposed routes for off-site shipment of waste material;
- 6.4.13.2 Identification of communities affected by shipment of waste material; and
- 6.4.13.3 Description of plans to minimize impacts on affected communities.

6.4.14 Field Sampling Plan. The Field Sampling Plan (FSP) supplements the QAPP and 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. American Chemet shall develop the FSP in accordance with *Guidance for Conducting Remedial Investigations and Feasibility Studies*, EPA/540/G-89/004 (Oct. 1988).

6.4.15 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. American Chemet shall develop the HASP in accordance with EPA's Emergency Responder Health and Safety and OSHA requirements under 29 C.F.R. §§ 1910 and 1926. The HASP also must address monitoring and control measures to protect the community during the Work.

## 7. SCHEDULES

7.1 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. American Chemet 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.

7.2 RD Schedule

	Description of Deliverable, Task	¶ Ref.	Deadline
1	PDIWP	3.2	30 days after EPA's Authorization to Proceed regarding Supervising Contractor under ¶ 12.d of Order
2	RDWP	<b>Error! Reference source not found.</b>	30 days after submittal of the PDI Evaluation Report.
3	Preliminary (30%) RD	4.2	60 days after EPA approval of Final RDWP
4	Pre-final (90/95%) RD	<b>Error! Reference source not found.</b>	30 days after EPA comments on Preliminary RD
5	Final (100%) RD	4.4	30 days after EPA comments on Pre-final RD

7.3 RA Schedule

	Description of Deliverable / Task	¶ Ref.	Deadline
1	RAWP	Error! Reference source not found.	30 days after EPA Notice of Authorization to Proceed with RA
3	Designate IQAT	Error! Reference source not found.	
4	Pre-Construction Conference	5.3.1	15 days after Approval of RAWP
5	Start of Construction		30 days after Approval of RAWP
6	Completion of Construction		
7	Pre-final Inspection	5.5.1	15 days after completion of construction
8	Final Inspection	5.6.1	15 days after Completion of Work identified in Pre-final Inspection Report
9	RA Report	5.5.2	30 days after Final Inspection
10	Work Completion Report	5.6.2	30 after Work Completion Inspection
13	Periodic Review Support Plan	Error! Reference source not found.	Five years after Start of RA Construction