

APPENDIX A

TO

Z2&3 ASAOC

Z2&3 ASAOC SOW

**ZONES 2 AND 3 OF OU1 OF
USS LEAD SUPERFUND SITE
EAST CHICAGO, INDIANA**

**ADMINISTRATIVE SETTLEMENT AGREEMENT AND
ORDER ON CONSENT**

**STATEMENT OF WORK FOR
REMOVAL ACTIONS IN
ZONES 2 AND 3 OF
OPERABLE UNIT 1 OF THE
U.S. SMELTER AND LEAD REFINERY, INC. SUPERFUND SITE
CITY OF EAST CHICAGO, LAKE COUNTY, INDIANA**

EPA REGION 5

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1. INTRODUCTION

1.1 Background and Scope of the Z2&3 ASAOC SOW

(a) Background.

- (1) This Statement of Work forms a part of the Administrative Settlement Agreement and Order on Consent (Z2&3 ASAOC) for the implementation of removal actions in what are known as Zones 2 and 3 of Operable Unit 1 of the U.S. Smelter and Lead Refinery, Inc. Superfund Site (Site) in East Chicago, Indiana. The abbreviated name of this document shall be the “Z2&3 ASAOC SOW.”
- (2) Operable Unit 1. EPA has divided the Site into two operable units: Operable Unit 1 (OU1) and Operable Unit 2 (OU2). OU1 consists generally of a residential neighborhood in East Chicago, Indiana, commonly known as the Calumet neighborhood. OU1 has been further divided into three zones: Zone 1 (Z1), Zone 2 (Z2), and Zone 3 (Z3). The definition and boundaries of OU1 and Zones 1, 2, and 3 are set forth in Section III (Definitions) of the Z2&3 ASAOC.
- (3) Operable Unit 2. OU2 consists a 79-acre parcel of land that formerly housed the lead refining and smelting operations of U.S. Smelter and Lead Refinery Inc. (USS Lead Facility), as well as the groundwater associated with both OU1 and OU2. The definition of OU2 is set forth in Section III (Definitions) of the Z2&3 ASAOC.

- (b) Scope. This Z2&3 SOW applies to Z2 Exterior Removal Actions, Z2&3 Interior Removal Actions and to Z2&3 Data Management Work, as those terms are defined in the Z2&3 ASAOC.

(c) Z2 Exterior Removal Actions.

- (1) Authorization and Applicability. In a document styled “Action Memorandum–4th Amendment” (hereafter “Fourth Amendment”), EPA authorized certain removal actions in the yards of properties in Zone 2 of OU1 of the Site that had greater than 1200 ppm lead and/or greater than 68 ppm arsenic contamination in the top 6 inches of soil. In a document styled “Action Memorandum–5th Amendment” (hereafter “Fifth

Amendment”), EPA further authorized soil removal actions in Zone 2 at properties where: (i) a member of a sensitive population (that is, a pregnant woman and/or a child under 7 years of age) lives within a residence located on the property where the top six inches of soil has lead in excess of 400 ppm; and/or (ii) one or more children under 7 years of age has/have a blood lead level equal to or greater than 10 micrograms/deciliter (based on 2016 testing or later) and live(s) within a residence located on the property where the top twenty-four inches of soil has lead in excess of 400 ppm. The properties for which Z2 Exterior Removal Actions are authorized are called the “Z2 Priority Properties.”

(2) Z2 Exterior Removal Actions: Clean-up Standards.

- (i) General. With respect to Zone 2 Exterior Removal Actions, the Fourth and Fifth Amendments call for, *inter alia*, the excavation, down to a maximum depth of twenty-four inches below ground surface (bgs), of soils contaminated with lead greater than 400 ppm and/or arsenic greater than 26 ppm.
- (ii) Contamination below 24 Inches bgs. The Fourth and Fifth Amendments do not require the excavation of soils exceeding the these levels at depths greater than twenty-four inches bgs. Under the Fourth and Fifth Amendments, a visual barrier is supposed to be installed over soils exceeding the RALs that exist below twenty-four inches bgs and Institutional Controls (*e.g.*, deed restrictions) are supposed to be put in place. However, consistent with Paragraph 29.a of the Z2&3 ASAOC, Respondents have consented to EPA’s use of discretion for the excavation of all soils exceeding the RALs at depths up to 36 inches bgs (in order to avoid the costs and resources necessary to implement Institutional Controls). To excavate soils at depths greater than 36 inches bgs, EPA must secure the consent of the Respondents.

(3) Z2 Exterior Removal Actions: Responsibilities.

- (i) EPA. EPA shall be responsible for all Z2 Exterior Removal Actions except for Z2 TST&D Work. EPA’s responsibilities include but are not limited to excavating contaminated soil; backfilling excavated areas; restoring yards; securing access for the purpose of excavation and restoration; and implementing, as necessary, Post-Removal Site Control.
- (ii) Respondents. Respondents shall perform the Temporary Storage, Transportation and Disposal Work in Zone 2 (Z2 TST&D Work). The Z2 TST&D Work includes but is not limited to: (i) accepting from EPA, at the Chemours Property, Waste Material that EPA excavates and removes from the yards of the Zone 2 Priority

Properties; (ii) implementing dust suppression on and maintenance of the roads used within the Chemours Property for trucks transporting Waste Material; (iii) temporarily storing and managing the Waste Material on the Chemours Property; and (iv) transporting the Waste Material off the Chemours Property to an appropriate, EPA-permitted, licensed disposal facility.

(d) Z2&3 Interior Removal Actions.

(1) Authorization and Applicability. In the Fourth and Fifth Amendments, EPA authorized certain removal actions in the interior of residences in Zones 2 and 3. These actions include sampling indoor dust for lead and arsenic, screening indoor paint for lead, and cleaning the interior of homes where the lead equals or exceeds 316 ppm and/or the arsenic equals or exceeds 26 ppm.

(2) Z2&3 Interior Removal Actions: Responsibilities. EPA will be responsible for implementing all Z2&3 Interior Removal Actions as specifically set forth in the Z2&3 ASAO.

(e) Z2&3 Data Management Work. EPA will be responsible for implementing all Z2&3 Data Management Work.

(f) Respondents will implement their activities consistent with the Z2&3 ASAO; this Z2&3 ASAO SOW; the applicable parts of the Action Memos 4A, 5A, and 6A; all plans approved by EPA pursuant to the Z2&3 ASAO and this Z2&3 ASAO SOW; the *National Contingency Plan*; the *Superfund Lead-Contaminated Residential Sites Handbook*, August 2003 (“*Lead Handbook*”); and the documents and guidances identified in Section 9 of this Z2&3 ASAO SOW. Nothing in this Paragraph shall preclude EPA from providing additional guidance under the Resource Conservation and Recovery Act (RCRA) with respect to the Chemours Property, which is subject to a RCRA Section 3008(h) Corrective Action Administrative Order on Consent, EPA Docket No. 5-RCRA-’97-007. Nothing in this Z2&3 ASAO SOW limits the authority of the RCRA Corrective Action Project Manager to require sampling or work consistent with the RCRA Section 3008(h) Corrective Action Order at the Chemours Property.

1.2 Definitions and Terms. The terms used in this Z2&3 ASAO SOW that are defined in CERCLA, in regulations promulgated under CERCLA, or in the Z2&3 ASAO shall have the meanings assigned to them in CERCLA, in such regulations, or in the Z2&3 ASAO, except that the term “Paragraph” or “¶” means a paragraph of this Z2&3 ASAO SOW, and the term “Section” means a section of this Z2&3 ASAO SOW, unless otherwise stated.

1.3 Structure of the Z2&3 ASAOC SOW

- Section 2 (Community Involvement) sets forth EPA's and Respondents' responsibilities for community involvement.
- Section 3 sets forth activities related to EPA's development of design documents and excavation and restoration actions for Z2 Priority Properties.
- Section 4 sets forth requirements related to Respondents' implementation of Temporary Storage, Transportation and Disposal Work associated with the Waste Material that EPA generates at the Z2 Priority Properties.
- Section 5 (Reporting) sets forth Respondents' reporting obligations.
- Section 6 (Deliverables) describes the content of the supporting deliverables and the general requirements regarding Respondents' submission of, and EPA's review of, approval of, comment on, and/or modification of the deliverables.
- Section 7 (Schedules) sets forth the schedule for submitting deliverables and sets forth the schedule of milestones for the completion of Z2&3 ASAOC Work.
- Section 8 (State Participation) addresses providing documents to the State.
- Section 9 (References) provides a list of references, including URLs.

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, EPA developed a Community Involvement Plan (CIP) for the Site. Pursuant to 40 C.F.R. § 300.435(c), EPA shall review the existing CIP and determine whether it should be revised to describe further public involvement activities during the Z2&3 ASAOC Work that are not already addressed or provided for in the existing CIP.
- (b) If requested by EPA, Respondents shall participate in community involvement activities, including participation in (1) the preparation of information regarding the Z2 TST&D 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. Respondents' support of EPA's community involvement activities may include providing online access to initial submissions and updates of deliverables to any Community Advisory Groups or other entity to provide them with a reasonable opportunity for review and comment. EPA may describe in its CIP Respondents' responsibilities for community involvement activities. All community involvement activities conducted by Respondents at EPA's request are subject to EPA's oversight.
- (c) **Respondents' CI Coordinator.** If requested by EPA, Respondents shall, within 15 days, designate and notify EPA of Respondents' Community Involvement Coordinator (Respondents' CI Coordinator). Respondents may hire a contractor for this purpose. Respondents' notice must include the name, title, and

qualifications of the Respondents' CI Coordinator. Respondents' CI Coordinator is responsible for providing support regarding EPA's community involvement activities, including coordinating with EPA's CI Coordinator regarding responses to the public's inquiries about the Site.

3. EPA'S Z2 EXCAVATION AND RESTORATION ACTIVITIES

- 3.1 Z2 Soil Excavation and Restoration Planning.** EPA already has developed all of the plans necessary for the excavation of contaminated soil from the yards of the Z2 Priority Properties and for the restoration of those yards.
- 3.2 Z2 Soil Excavation and Restoration Work.** For the yards of each Z2 Priority Property, EPA will excavate contaminated soils. EPA will be responsible for transporting the excavated soil and any other Waste Material to the Chemours Property. EPA will replace excavated soil with clean soil, including 6 inches of top soil to maintain the original grade. EPA will restore each yard as close as practicable to its pre-removal condition. Once the yards are sodded or seeded, EPA will be responsible for the sod or seed (including watering, fertilizing and cutting, as necessary) for 30 days. After the initial 30 day period, property owners will be responsible for the maintenance of their own yards.

4. RESPONDENTS' Z2 TEMPORARY STORAGE, TRANSPORTATION AND DISPOSAL WORK

4.1 Z2 Temporary Storage, Transportation and Disposal Work: General

- (a) The Chemours Property, located at 5210 Kennedy Ave, East Chicago, Indiana, shall be used as a temporary staging facility for purposes of stockpiling or staging Waste Materials (including contaminated soil) and containers containing Waste Materials provided that Respondents comply with all applicable RCRA regulations regarding the storage of such materials at the Chemours Property.
- (b) EPA is responsible for transporting all Waste Material (including contaminated soil) from the Z2 Priority Properties to the Chemours Property, but Respondents are responsible for implementing dust suppression on and maintenance of the roads used within the Chemours Property for trucks transporting Waste Material; properly managing the temporary storage of the Waste Material (including contaminated soil) at the Chemours Property. In addition, Respondents are responsible for properly transporting the Waste Material off of the Chemours Property and for disposing of it at either an EPA-permitted, licensed, off-Site Subtitle D-compliant landfill or an EPA-permitted, licensed, off-Site, Subtitle-C compliant landfill, depending upon the characterization of the Waste Material. At its option, Respondents first may transport containers holding contaminated soil to an EPA-permitted, licensed, off-site treatment facility before transporting the treated soil to an appropriate EPA-permitted, licensed, off-Site disposal facility.
- (c) When staging or stockpiling contaminated soil at the Chemours Property, arranging for the treatment of, holding at a transfer station, or in any way managing excavated soil, Respondents shall take all necessary measures to

prevent the soil from being redistributed to any area other than the container it is in or the location at the Chemours Property where the soil is being temporarily stored. Such efforts shall be described in the Z2&3 ASAOC Temporary Storage, Transportation, and Disposal Plan required immediately below.

4.2 Z2 Temporary Storage, Transportation and Disposal Plan

- (a) Respondents shall submit a Z2 Temporary Storage, Transportation and Disposal Plan (Z2 TST&D Plan) for EPA approval that will describe how Respondents will perform their Z2 Temporary Storage, Transportation and Disposal Work. This Z2 TST&D Plan shall include information relating to: (i) project organization (including but not limited to the Respondents' Z2 TST&D Supervising Contractor and Respondents' Z2 T&D contractor); (ii) site setup at the Chemours Property, including the locations of the waste staging area and laydown yard; (iii) waste management control measures necessary for safety and protection of human health and the environment at the Chemours Property, including but not limited to erosion control, stormwater pollution prevention, dust suppression (both on the roads used by the truck traffic and near the Waste Materials), and air monitoring; (iv) maintenance of the roads used by trucks hauling Waste Materials; (v) health and safety requirements; (vi) documentation requirements; and (vii) disposal facilities.
- (b) A TST&D Plan prepared by Defendants to the 2014 Consent Decree (that covers Z1&3 of OU1) already exists (Z1&3 TST&D Plan) and has been approved by EPA. Respondents may utilize the Z1&3 TST&D Plan as the core document for their preparation and submission of the Z2 TST&D Plan due hereunder, but shall submit an Addendum to the Z1&3 TST&D Plan to include any additional requirements set forth in this Z2&3 ASAOC SOW and any that may be required by EPA.

4.3 Sub-Plans of Respondents' Z2 TST&D Plan

- (a) Respondents' Z2 TST&D Plan shall include a Health and Safety Plan (HASP) that shall be consistent with the requirements of Paragraph 6.7(a) of this Z2&3 ASAOC SOW.
- (b) Respondents' Z2 TST&D Plan shall include an Emergency Response Plan that shall be consistent with the requirements of Paragraph 6.7(b) of this Z2&3 ASAOC SOW.
- (c) A HASP and an Emergency Response Plan (named an "Incident Management Plan") already exists as part of the Z1&3 TST&D Plan and has been approved by EPA. Respondents may utilize those plans as the core plans due hereunder, but shall submit Addenda as necessary to include any additional requirements that EPA may require pursuant to this Z2&3 ASAOC SOW.

4.4 Meetings and Inspections. EPA or its representative may conduct periodic inspections of the operations at the Chemours Property. At EPA's request, Respondents' TST&D

Supervising Contractor or other designee shall accompany EPA or its representative during inspections. Upon notification by EPA of any deficiencies in the storage or staging of Waste Materials, including contaminated soils, at the Chemours Property, Respondents shall take all necessary steps to correct the deficiencies.

4.5 Emergency Response and Reporting

- (a) Emergency Response and Reporting. If any event occurs during performance of the Z2 Temporary Storage, Transportation and Disposal Work that causes or threatens to cause a release of Waste Material on, at, or from the Chemours Property and that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment, Respondents shall: (1) immediately take all appropriate action to prevent, abate, or minimize such release or threat of release; (2) immediately notify the authorized EPA officer (as specified in ¶ 4.5(c)) orally; and (3) take such actions in consultation with the authorized EPA officer and in accordance with all applicable provisions of the Health and Safety Plan, the Emergency Response Plan, and any other deliverable approved by EPA under this Z2&3 ASAO SOW.
- (b) Release Reporting. Upon the occurrence of any event during performance of the Z2 Temporary Storage, Transportation and Disposal Work that Respondents are required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), 42 U.S.C. § 11004, Respondents shall immediately notify the authorized EPA officer orally.
- (c) The “authorized EPA officer” for purposes of immediate oral notifications and consultations under ¶ 4.5(a) and ¶ 4.5(b) is one of the three EPA OSCs or the Emergency Response Section, Region 5, U.S. Environmental Protection Agency (if no OSC is available).
- (d) For any event covered by ¶ 4.5(a) and ¶ 4.5(b), Respondents 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 ¶ 4.5 are in addition to the reporting required by CERCLA § 103 or EPCRA § 304.

4.6 Off-Site Shipments

- (a) Respondents may ship hazardous substances, pollutants, and contaminants to an off-Site facility only if such facility complies with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondents will be deemed to be in compliance with CERCLA § 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if Respondents 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) Respondents may ship Waste Material to an out-of-state waste management facility only if, prior to any shipment, Respondents 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 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. Respondents 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. Respondents shall provide the notice after the award of the contract for Z2 T&D services and before the Waste Material is shipped.
- (c) Respondents may ship Investigation Derived Waste (IDW) to an off-Site facility only if such facility 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). 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.
- (d) For purposes of waste manifesting, Respondents shall be considered the generator of the Waste Material. Respondents shall prepare and sign the appropriate and necessary paperwork for shipping Waste Material, including waste manifests. Respondents shall coordinate with transportation and disposal subcontractors to have profiles and acceptance approvals in place prior to transporting and disposing of Waste Materials, including excavated soil.

4.7 Notice of Completion of Z2 TST&D Work

- (a) The Z2 TST&D Work is "Complete" for purposes of this Paragraph 4.7 when all Waste Materials, included contaminated soil, from the Z2 Priority Properties has been disposed of at an appropriate disposal facility; when no such Waste Material remains at the Chemours Property; and when EPA concludes that the area(s) of the Chemours Property that were used to temporarily store and manage the Waste Materials from the Z2 Priority Properties has been returned to pre-Waste Material storage condition.
- (b) Z2 TST&D Work Inspection. Respondents shall schedule an inspection of the Chemours Property to review whether Respondents have completed all activities relating to the Z2 TST&D Work. The inspection must be attended by Respondents and EPA and/or their representatives.

- (c) Z2 TST&D Work Completion Report. After completing the inspection of the Chemours Property, Respondents shall submit a report of the Z2 TST&D Work Completion (Z2 TST&D Work Completion Report). The Z2 TST&D Work Completion Report must include, but is not limited to, a description of whether any Waste Material was treated prior to disposal and an identification of the volume and characterization of Waste Material that was disposed of at each location where it was disposed of. It must include (1) a certification by Respondents' Project Coordinator that the Z2 TST&D Work is complete; and (2) be certified in accordance with ¶ 6.5 (Certification).
- (d) EPA Notice of Deficiencies. If EPA concludes that the Z2 TST&D Work is not Complete, EPA shall so notify Respondents. EPA's notice must include a description of any deficiencies. EPA's notice may include a schedule for addressing such deficiencies or may require Respondents to submit a schedule for addressing such deficiencies for EPA approval. Respondents shall perform all activities described in the notice in accordance with the schedule.
- (e) If EPA concludes, based upon the initial or any subsequent Z2 TST&D Work Completion Report that the Z2 TST&D Work is Complete, EPA shall so notify the Respondents. This notification will constitute the Notification of Completion of Z2 TST&D Work.

4.8 Notice of Z2&3 ASAOC Work Completion

- (a) The Z2&3 ASAOC Work is "Complete" for purposes of this Paragraph 4.8 when all of the activities and obligations that Respondents are required to perform under the A2&3 ASAOC are complete except for continuing obligations under Section X (Access to Information), Section XI (Retention of Records), and Paragraph 59 (Periodic Billing or Withdrawal from the Z2&3 ASAOC Special Account for any Z2&3 ASAOC Response Costs Not Previously Billed). Activities, if any, required under Section IX (Property Requirements) of the Z2&3 ASAOC must be complete and payment from the USS Lead Z2&3 ASAOC Special Account for these activities must be made in order for the Z2&3 Work to be considered "Complete."
- (b) Z2&3 ASAOC Work Completion Meeting. Respondents shall schedule meeting for the purpose of obtaining EPA's Notice of Completion of Z2&3 ASAOC Work. The inspection must be attended by Respondents and EPA and/or their representatives.
- (c) Z2&3 ASAOC Work Completion Report. Following the meeting, Respondents shall submit a report to EPA requesting EPA's Notice of Completion of Z2&3 ASAOC Work. The report must: (1) include a certification by Respondents' Project Coordinator that the Z2&3 ASAOC Work is complete; and (2) be certified in accordance with ¶ 6.5 (Certification).

- (d) If EPA concludes that the Z2&3 ASAOC Work is not complete, EPA shall so notify Respondents. EPA's notice must include a description of the activities that Respondents must perform to complete the Z2&3 ASAOC Work. EPA's notice must include specifications and a schedule for such activities or must require Respondents to submit specifications and a schedule for such activities for EPA approval. Respondents shall perform all activities described in the notice or in the EPA-approved specifications and schedule.
- (e) If EPA concludes, based on the initial or any subsequent report requesting Notice of Completion of Z2&3 ASAOC Work, that the Z2&3 ASAOC Work is complete, EPA shall so notify Respondents in writing. Issuance of the Notice of Completion of Z2&3 ASAOC Work does not affect the following continuing obligations: (1) obligations under Sections X (Access to Information), and XI (Retention of Records) of the Z2&3 ASAOC; and (2) payments under Paragraph 48 (Periodic Billing or Withdrawal from the Z2&3 ASAOC Special Account for any Z2&3 ASAOC Response Costs Not Previously Billed) of the Z2&3 ASAOC.

5. REPORTING

5.1 Progress Reports. Commencing with the month following the Effective Date of the Z2&3 ASAOC and continuing until EPA approves the Z2&3 ASAOC Work Completion, Respondents 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 pursuant to the Z2&3 ASAOC, including:

- (a) The actions that have been taken toward achieving compliance with the Z2&3 ASAOC;
- (b) A summary of all results of sampling, tests, and all other data received or generated by Respondents;
- (c) A description of all deliverables that Respondents submitted to EPA;
- (d) A description of all activities relating to Z2 TST&D Work that is scheduled for the next six weeks;
- (e) A description of any modifications to the work plans or other schedules that Respondents have proposed or that have been approved by EPA.

5.2 Notice of Progress Report Schedule Changes. If the schedule for any activity described in the Progress Reports, including activities required to be described under ¶ 5.1(d), changes, Respondents shall notify EPA of such change at least 7 days before performance of the activity.

6. DELIVERABLES

- 6.1 Applicability.** Respondents shall submit deliverables for EPA approval or for EPA comment as specified in this Z2&3 ASAOC SOW. If neither is specified, the deliverable does not require EPA's approval or comment. Paragraphs 6.2 (In Writing) through 6.4 (Technical Specifications) apply to all deliverables. Paragraph 6.5 (Certification) applies to any deliverable that is required to be certified. Paragraph 6.6 (Approval of Deliverables) applies to any deliverable that is required to be submitted for EPA approval.
- 6.2 In Writing.** All deliverables under this Z2&3 ASAOC SOW must be in writing unless otherwise specified.
- 6.3 General Requirements for Deliverables.** Except as otherwise provided in this Z2 ASAOC SOW, Respondents shall direct all submissions required by this Z2 ASAOC SOW to Jacob Hassan (hassan.jacob@epa.gov; 312 886-6864), Daniel Haag (haag.daniel@epa.gov; 312 886-6906), and Kristina Behnke (behnke.kristina@epa.gov; 312 353-1057), U.S. EPA Region 5, 77 West Jackson Blvd., Mail Code SE-5J, Chicago, Illinois, 60604. All deliverables must be submitted by the deadlines in the Z2&3 ASAOC Work Completion Schedule in Paragraph 7.2. Respondents shall submit all deliverables to EPA 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 EPA Project Coordinators. If any deliverable includes maps, diagrams, or other exhibits that are larger than 8.5" by 11", Respondents shall also provide EPA with paper copies of such exhibits.
- 6.4 Technical Specifications**
- (a) Sampling and monitoring data should be submitted in standard regional Electronic Data Deliverable (EDD) format. The Respondents shall consult with one or more of the OSCs prior to transmitting sampling and monitoring data in order to be advised of the EDD format that the data should be transmitted in. 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 unprojected geographic coordinates in decimal degree format using North American Datum 1983 (NAD83) or World Geodetic System 1984 (WGS84) as the datum. If applicable, submissions should include the collection method(s). Projected coordinates may optionally be included but must be documented. Spatial data should be accompanied by metadata, and such metadata should be compliant with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and its EPA profile, the EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor (EME), complies with these FGDC and EPA metadata requirements and is available at <https://edg.epa.gov/EME/>.

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

6.5 Certification. All deliverables that require compliance with this ¶ 6.5 must be signed by the Respondents' Project Coordinator, or other responsible official of Respondents, and must contain the following statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I 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.

6.6 Approval of Deliverables

(a) Initial Submissions

- (1) After review of any deliverable that is required to be submitted for EPA approval under the Z2&3 ASAO or the Z2&3 ASAO 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 Z2&3 ASAO 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 ¶ 6.6(a) (Initial Submissions), or if required by a notice of approval upon specified conditions under ¶ 6.6(a), Respondents 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 Respondents to correct the deficiencies; or (5) any combination of the foregoing.

- (c) Implementation. Upon approval, approval upon conditions, or modification by EPA under ¶ 6.6(a) (Initial Submissions) or ¶ 6.6(b) (Resubmissions), of any deliverable, or any portion thereof: (1) such deliverable, or portion thereof, will be incorporated into and enforceable under the Z2&3 ASAOC; and (2) Respondents shall take any action required by such deliverable, or portion thereof. The implementation of any non-deficient portion of a deliverable submitted or resubmitted under ¶ 6.6(a) or ¶ 6.6(b) does not relieve Respondents of any liability for stipulated penalties under Section XVII (Stipulated Penalties) of the Z2&3 ASAOC.

6.7 Supporting Deliverables. Respondents shall submit each of the following deliverables for EPA approval as part of the Z2 TST&D Plan. Respondents shall develop the deliverables in accordance with all applicable regulations, guidances, and policies (see Section 8 (References)). Respondents shall update each of these supporting deliverables as necessary or appropriate during the course of the Z2 TST&D 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 Z2 TST&D Work. Respondents shall develop the HASP in accordance with EPA's Emergency Responder Health and Safety and Occupational Safety and Health Administration (OSHA) requirements under 29 C.F.R. §§ 1910 and 1926.
- (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, slope failure, *etc.*). The ERP must include:
 - (1) Name of the person or entity responsible for responding in the event of an emergency incident;
 - (2) Plan and date(s) for meeting(s) with the local community, including local, State, and federal agencies involved in the cleanup, as well as local emergency squads and hospitals;
 - (3) Spill Prevention, Control, and Countermeasures (SPCC) Plan (if applicable), consistent with the regulations under 40 C.F.R. Part 112, describing measures to prevent, and contingency plans for, spills and discharges;
 - (4) Notification activities in accordance with ¶ 4.5(b) (Release Reporting) in the event of a release of hazardous substances requiring reporting under Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), 42 U.S.C. § 11004; and

- (5) A description of all necessary actions to ensure compliance with Paragraph 41 (Emergency Response and Notification of Releases) of the Z2&3 ASAO and Paragraph 4.5 in the event of an occurrence during the performance of the Z2&3 ASAO 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.

7. SCHEDULES

7.1 Applicability and Revisions. All deliverables and tasks required under this Z2&3 ASAO SOW must be submitted or completed by the deadlines or within the time durations listed in the Z2&3 ASAO Work Completion Schedule set forth below. Respondents may submit a proposed revised Z2&3 ASAO Work Completion Schedule for EPA approval. Upon EPA’s approval, the revised Z2&3 ASAO Work Completion Schedule shall supersede the Schedule set forth below and any previously-approved Z2&3 ASAO Work Completion Schedule.

7.2 Z2&3 ASAO Work Completion Schedule

	Description of Deliverable/Task	¶ Ref.	Deadline (dates are “no later than” dates) (“days” are calendar days)
1	Z2 TST&D Plan, including HASP and EMP	4.2	15 days after the Effective Date of the Z2&3 ASAO
2	Revised Z2 TST&D Plan, including HASP and EMP		7 days after receipt of comments
3	Start of Z2 TST&D Work		Upon notification by EPA of the commencement of EPA’s soil excavation work in Zone 2 pursuant to the ASAO
4	Z2 TST&D Work Inspection	4.7(b)	As scheduled by EPA and Respondents
5	Z2 TST&D Work Completion Report	4.7(d)	60 days after Pre-final Inspection (Item 4)
6	Revised Z2 TST&D Work Completion Report	4.7(d)	30 days after receipt of comments
7	Z2&3 ASAO Work Completion Meeting	4.8(b)	As scheduled by Respondents when they believe the Z2&3 ASAO Work is Complete
8	Z2&3 ASAO Work Completion Report	4.8(c)	60 days after the Z2&3 ASAO Work Completion Meeting (Item 7)
9	Revised Z2&3 ASAO Work Completion Report	4.8(d)	30 days after receipt of comments

8. STATE PARTICIPATION

8.1 Respondents 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 Respondents, send a copy of such document to the State.

9. REFERENCES

9.1 The following regulations and guidance documents, among others, apply to the Z2&3 ASAO Work. Any item for which a specific URL is not provided below is available on one of the two EPA Web pages listed in ¶ 9.2:

- (a) Administrative Settlement Agreement and Order on Consent for Certain Removal Actions in Zones 2 and 3 of Operable Unit 1 of the USS Lead Site.
- (b) A Compendium of Superfund Field Operations Methods, OSWER 9355.0-14, EPA/540/P-87/001a (Aug. 1987).
- (c) CERCLA Compliance with Other Laws Manual, Part I: Interim Final, OSWER 9234.1-01, EPA/540/G-89/006 (Aug. 1988).
- (d) CERCLA Compliance with Other Laws Manual, Part II, OSWER 9234.1-02, EPA/540/G-89/009 (Aug. 1989).
- (e) Guide to Management of Investigation-Derived Wastes, OSWER 9345.3-03FS (Jan. 1992).
- (f) Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, OSWER 9355.7-03 (Feb. 1992).
- (g) Guidance for Conducting Treatability Studies under CERCLA, OSWER 9380.3-10, EPA/540/R-92/071A (Nov. 1992).
- (h) National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, 40 C.F.R. Part 300 (Oct. 1994).
- (i) EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis, QA/G-9, EPA/600/R-96/084 (July 2000).
- (j) Operation and Maintenance in the Superfund Program, OSWER 9200.1-37FS, EPA/540/F-01/004 (May 2001).
- (k) Comprehensive Five-year Review Guidance, OSWER 9355.7-03B-P, EPA 540-R-01-007 (June 2001).
- (l) Quality Management Systems for Environmental Information and Technology Programs -- Requirements with guidance for use, ASQ/ANSI E4:2014 (American Society for Quality, February 2014).
- (m) Superfund Community Involvement Handbook, EPA/540/K-05/003 (Apr. 2005).
- (n) EPA Guidance on Systematic Planning Using the Data Quality Objectives Process, QA/G-4, EPA/240/B-06/001 (Feb. 2006).

- (o) 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.
- (p) Principles for Greener Cleanups (Aug. 2009), available at <http://www.epa.gov/oswer/greenercleanups/>.
- (q) USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration), ISM01.2 (Jan. 2010).
- (r) Updated Superfund Response and Settlement Approach for Sites Using the Superfund Alternative Approach , OSWER 9200.2-125 (Sep. 2012)
- (s) EPA's Emergency Responder Health and Safety Manual, OSWER 9285.3-12 (July 2005 and updates), <http://www.epaossc.org/HealthSafetyManual/manual-index.htm>.

9.2 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>

9.3 For any regulation or guidance referenced in the Z2&3 ASAOC or the Z2&3 ASAOC SOW, the reference will be read to include any subsequent modification, amendment, or replacement of such regulation or guidance. Such modifications, amendments, or replacements apply to the Work only after Respondents receive notification from EPA of the modification, amendment, or replacement.