DRAFT
FOR NEGOTIATION PURPOSES ONLY
SUBJECT TO FURTHER GOVERNMENT REVIEW

REMEDIAL DESIGN

STATEMENT OF WORK

ONONDAGA LAKE SUPERFUND SITE

OPERABLE UNIT 25 – LOWER LEY CREEK SUBSITE

City of Syracuse/ Town of Salina, Onondaga County, State of New York

EPA Region 2

January 2015

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1. INTRODUCTION

1.1 **Purpose of the Statement of Work**. This Statement of Work ("SOW") sets forth the procedures and requirements for implementing the Work.

1.2 **Structure of the Statement of Work**. Section [REF _Ref381707995 \r \h * MERGEFORMAT] (Community Involvement) sets forth the Environmental Protection Agency's ("EPA's") and Respondents' responsibilities for community involvement. Section [REF _Ref367453630 \r \h * MERGEFORMAT] (Remedial Design) sets forth the process for developing the remedial design ("RD"), which includes the submission of specified primary deliverables. Section [REF _Ref322614303 \r \h * MERGEFORMAT] (Reporting) sets forth Respondents' reporting obligations. Section 5 (Deliverables) describes the content of the supporting deliverables and the general requirements regarding Respondents' submission of, and the EPA's review of, approval of, comment on, and/or modification of, the deliverables. Section 6 (Schedules) sets forth the schedule for submitting the primary deliverables and specifies the supporting deliverables that must accompany each primary deliverable. Section 7 (State and Onondaga Nation Participation) addresses State and Onondaga Nation participation and 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 Record of Decision ("ROD"), including

(a) Excavation of PCB-contaminated soils located along the upland areas adjacent to the Creek to meet the soil cleanup objectives ("SCOs");

(b) Excavation of PCB-contaminated sediment within the Creek exceeding the sediment criteria;

(c) Excavation of PCB-contaminated sediment from the adjacent wetlands to meet the sediment criteria;

(d) Transport of the excavated contaminated soils and sediments containing greater than 50 milligrams per kilogram ("mg/kg") of PCBs to a Toxic Substances Control Act ("TSCA")-compliant facility;

(e) Transport of those soils and sediments which are determined to be Resource Conservation and Recovery Act ("RCRA") characteristic hazardous waste (*i.e.,* fail Toxic Characteristic Leaching Procedure testing) and are non-TSCA waste (*i.e.,* less than 50 mg/kg PCBs) to an off-site RCRA-compliant facility;

(f) Transport of those soils and sediments that are not TSCA-regulated (less than 50 mg/kg of PCBs) and are not characteristic hazardous waste to an appropriate disposal facility. If a local (on-Site) disposal facility is not a feasible option, these soils and sediments will be transported to a non-local (off-Site) facility for disposal;

(g) Performance of wetland and habitat delineation to establish a baseline prior to the development of a restoration plan for affected areas;

(h) The excavated wetland areas will be backfilled with soil that meets unrestricted SCOs;

(i) Excavated soil areas will be restored with clean substrate and vegetation consistent with an approved habitat restoration plan developed as part of the design;

(j) Habitat restoration of Ley Creek will include the placement of at least one foot of substrate similar to the existing sediments over disturbed areas and restoration of vegetation;

(k) Institutional controls in the form of an environmental easement/restrictive covenant will be filed in the property records of Onondaga County that will, at a minimum, restrict the use of the properties within the Lower Ley Creek Subsite to commercial and industrial uses, restrict intrusive activities in areas where residual contamination remains unless the activities are in accordance with an EPA-approved Site Management Plan ("SMP");

(l) Development of an SMP that will provide for the proper management of all post-construction remedy components;

(m) Performance of a detailed hydrologic analysis to determine the effect of the remedy on stream flow, flooding and dynamics and to identify the appropriate materials and bathymetry for restoration and long-term sustainability;

(n) Performance of a Phase 1 Cultural Resources Survey to document the Subsite's historic resources; and

(o) Capping of contaminated soil and sediment areas which, during the RD, are determined to be areas that cannot be safely excavated to ensure protectiveness.

1.4 The terms used in this SOW that are defined in the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §9601 et seq. ("CERCLA"), in regulations promulgated under CERCLA, or in the AOC, have the meanings assigned to them in CERCLA, in such regulations, or in the AOC, except that the term "Paragraph" or "¶" means a paragraph of the SOW, unless otherwise stated.

2. COMMUNITY INVOLVEMENT

2.1 Community Involvement Responsibilities

(a) The EPA has the lead responsibility for developing and implementing community involvement activities at the Subsite. In January 1996, DEC developed a

Community Involvement Plan ("CIP") for the Onondaga Lake Superfund site. Pursuant to 40 C.F.R. § 300.435(c), the EPA shall review the existing CIP and determine whether it should be revised to describe further public involvement activities during the Work that are not already addressed or provided for in the existing CIP.

(b) If requested by the EPA, Respondents shall support the EPA's community involvement activities. This may include providing online access to initial submissions and updates of deliverables to Community Advisory Groups and other entities. The EPA may describe in its CIP Respondents' responsibilities for community involvement activities. All community involvement activities conducted by Respondents at the EPA's request are subject to EPA oversight.

(c) **Respondents' Community Involvement Coordinator**. If requested by the EPA, Respondents shall, within fifteen (15) days, designate and notify the EPA of Respondents' Community Involvement Coordinator ("Respondents' CI Coordinator"). Respondents may hire a contractor for this purpose. Respondents' notice to the EPA must include the name, title and qualifications of the Respondents' CI Coordinator. Respondents' CI Coordinator is responsible for providing support regarding the EPA's community involvement activities, including coordinating with the EPA's CI Coordinator regarding responses to the public's inquiries about the Subsite.

3. PRE-DESIGN AND REMEDIAL DESIGN

3.1 Pre-Design Investigation. The purpose of the Pre-Design Investigation ("PDI") is to address any data gaps by conducting additional field investigations.

(a) **Pre-Design Investigation Work Plan**. Respondents shall submit a PDI Work Plan ("PDIWP") within thirty (30) days of the effective date of the AOC. The PDIWP must include:

(1) An evaluation and summary of existing data and description of data gaps;

(2) A sampling plan including media to be sampled, contaminants or parameters for which sampling will be conducted, location (areal extent and depths), and number of samples; and

(3) Cross references to quality assurance/quality control ("QA/QC") requirements set forth in the Quality Assurance Project Plan ("QAPP") as described in ¶ 5.7(d).

(b) The EPA shall review and comment on the PDIWP. The EPA shall either approve the PDIWP or identify deficiencies in the PDIWP. Upon notification by the EPA of any deficiencies in the PDIWP, Respondents shall take all necessary steps to

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correct the deficiencies. If applicable, Respondents shall comply with any schedule provided by the EPA in its notice of deficiency.

(c) Following the PDI, Respondents shall submit a PDI Evaluation Report. This report must include:

(1) Summary of the investigations performed;

(2) Summary of investigation results;

(3) Summary of validated data (*i.e.,* tables and graphics);

(4) Data validation reports and laboratory data reports;

(5) Narrative interpretation of data and results;

(6) Results of statistical and modeling analyses;

(7) Revised volume estimates for the soil and sediment excavations;

(8) Photographs documenting the work conducted; and

(9) Conclusions and recommendations for RD, including design parameters and criteria.

(d) The EPA may require Respondents to supplement the PDI Evaluation Report and/or to perform additional pre-design studies.

3.2 Pre-Design Investigation Field Work

(a) The EPA shall conduct periodic inspections during the PDI. At the EPA's request, the Supervising Contractor or other designee shall accompany the EPA during inspections.

(b) Respondents shall provide personal protective equipment needed for EPA personnel and any oversight officials to perform their oversight duties.

3.3 Remedial Design Work Plan. Respondents shall submit a RD Work Plan ("RDWP") for the EPA approval within ninety (90) days of the effective date of the AOC. The RDWP must include:

(a) Plans for implementing all RD activities identified in this SOW, in the RDWP, or required by the EPA to be conducted to develop the RD;

(b) A description of the overall management strategy for performing the RD, including a proposal for phasing of design and construction, if applicable;

(c) A description of the proposed general approach to contracting, construction, operation and maintenance ("O&M") of the remedial action("RA") as necessary to implement the Work;

(d) A description of the responsibility and authority of all organizations and key personnel involved with the development of the RD;

(e) Descriptions of any areas requiring clarification and/or anticipated problems (*e.g.,* data gaps) and the administrative and physical requirements of same;

(f) If a local disposal option is determined to be viable, plans for implementing the design related to consolidating the waste material at this location and closing the landfill (should the local disposal options be determined not to be viable, these materials will be sent to an appropriate nonlocal facility for disposal);

(g) Description of the hydrologic study;

(h) Descriptions of any applicable permitting requirements and other regulatory requirements for the RA and local disposal, if chosen;

(i) Description of plans for obtaining access in connection with the Work, such as property acquisition, property leases, and/or easements; and

(j) All supporting deliverables required to accompany the RDWP as specified in the RD Schedule set forth in ¶ [REF _Ref330379332 \w \h * MERGEFORMAT] (RD Schedule).

3.4 **Local Disposal Assessment and Agreement.** The purpose of the assessment is to evaluate and select a local disposal option (*i.e.,* consolidation under the cap of the Town of Salina Landfill within the area controlled by the leachate collection system or in a newly constructed cell with a liner and leachate collection system on the yet-to-be capped Cooper Crouse-Hinds North Landfill).

(a) Respondents shall submit a Local Disposal Assessment Report to the EPA for approval within sixty (60) days of the effective date of the AOC.

(b) Concurrent with the submission of the Local Disposal Assessment Report, Respondents shall submit an executed agreement with the owner(s) of the chosen local disposal facility(ies) which states that the to-be excavated waste will be accepted and that necessary O&M will be performed.

3.5 Respondents shall meet regularly with the EPA to discuss design issues, as necessary, as directed or determined by the EPA.

(a) **Emergency Response and Reporting**. If any event occurs during performance of the PDI field work that causes or threatens to cause a release of Waste Material on, at, or from the Subsite 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 the EPA officer (as specified in ¶ 3.6(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 as described in ¶ [REF _Ref397432144 \r \h * MERGEFORMAT] and any other deliverable approved by the EPA under the SOW.

(b) **Release Reporting**. Upon the occurrence of any event during performance of the 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 ¶ 3.6(a) and ¶ 3.6(b) is the EPA Project Coordinator, the EPA Alternate Project Coordinator (if the EPA Project Coordinator is unavailable), or the EPA Emergency Response Unit, Region 2 (if neither the EPA Project Coordinator is available).

(d) For any event covered by ¶ 3.6(a) and ¶ 3.6(b), Respondents shall: (1) within fourteen (14) days after the onset of such event, submit a report to the EPA describing the actions or events that occurred and the measures taken, and to be taken, in response thereto; and (2) within thirty (30) days after the conclusion of such event, submit a report to the EPA describing all actions taken in response to such event.

(e) The reporting requirements under ¶ 3.6 are in addition to the reporting required by CERCLA § 103 or EPCRA § 304.

3.6 Off-Site Shipments

(a) Respondents may ship hazardous substances, pollutants, and contaminants from the Subsite 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. 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 the EPA that the proposed receiving facility for such shipment is acceptable under the criteria of 40 C.F.R. § 300.440(b). Respondents may ship investigation derived waste ("IDW") from the Subsite to an off-Subsite facility only if they comply with the EPA's *Guide to Management of Investigation Derived Waste*, OSWER 9345.3-03FS (Jan. 1992).

(b) Respondents may ship Waste Material from the Subsite 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-Subsite 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 RA construction and before the Waste Material is shipped.

3.7 **Preliminary (30%) Remedial Design**. Respondents shall submit a Preliminary (30%) RD for the EPA's comment. The Preliminary RD must include:

(a) A design criteria report, as described in the *Remedial Design/Remedial Action Handbook*, EPA 540/R-95/059 (June 1995);

(b) Preliminary drawings and specifications including those which may be required by the local disposal facility, if chosen, in order to prepare the site for the receipt and capping of the excavated materials;

(c) Descriptions of permit requirements, if applicable;

(d) Preliminary O&M Plan and O&M Manual;

(e) A description of how the RA may be implemented in a manner that minimizes environmental impacts in accordance with the EPA's *Principles for Greener Cleanups* (Aug. 2009);

(f) A description of monitoring and control measures to protect human health and the environment, such as air monitoring and dust suppression, during the RA;

(g) All supporting deliverables required to accompany the Preliminary RD as specified in the RD Schedule.

3.8 **Pre-Final (95%) Remedial Design**. Respondents shall submit the Pre-Final (95%) RD for the EPA's comment. The Pre-Final RD must be a continuation and expansion of the previous design submittal and must address the EPA's comments regarding the Preliminary RD. The Pre-Final RD will serve as the approved Final (100%) RD if the EPA approves the Pre-Final RD without comments. The Pre-final RD must include:

(a) A complete set of construction drawings and specifications that are: (1) certified by a registered professional engineer; (2) suitable for procurement; and (3) follow the Construction Specifications Institute's MasterFormat 2012;

(b) A survey and engineering drawings showing existing Subsite features, such as elements, property borders, easements, and Subsite conditions;

(c) Pre-Final versions of the same elements and deliverables as are required for the Preliminary RD;

(d) A specification for photographic documentation of the RA; and

(e) Supporting deliverables as specified in the RD Schedule.

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

4. REPORTING

4.1 **Progress Reports**. Commencing with the month following lodging of the AOC and until the EPA approves the RD Completion, Respondents shall submit progress reports to the EPA on a monthly basis, or as otherwise requested by the EPA. The reports must cover all activities that took place during the prior reporting period, including:

(a) The actions that have been taken toward achieving compliance with the AOC;

(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 the EPA;

(d) A description of any modifications to the work plans or other schedules that Respondents have proposed or that have been approved by the EPA; and

(e) A description of all activities undertaken in support of the CIP during the reporting period and those to be undertaken in the next 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 ¶ [REF _Ref322611383 \r \h * MERGEFORMAT], changes, Respondents shall notify the EPA of such change at least seven (7) days before performance of the activity.

5. DELIVERABLES

5.1 **Applicability**. Respondents shall submit deliverables for the EPA's approval or for the EPA's comment as specified in the SOW. If neither is specified, the deliverable does not require the 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 the EPA approval.

5.2 **In Writing**. As provided in [¶ **104**] of the AOC, all deliverables under this SOW must be in writing unless otherwise specified.

5.3 All deliverables must be submitted by the deadlines in the RD Schedule, as applicable. Respondents shall submit all deliverables to the EPA in electronic form. If any deliverable includes maps, drawings, or other exhibits that are larger than 8.5" by 11", Respondents shall also provide the EPA with paper copies of such exhibits.

5.4 **Technical Specifications**

(a) Sampling and monitoring data should be submitted in standard regional Electronic Data Deliverable ("EDD") format. 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, EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor ("EME"), complies with these FGDC and the EPA metadata requirements and is available at https://edg.epa.gov/EME/.

(c) Each file must include an attribute name for each Subsite unit or sub-unit submitted. Consult [HYPERLINK "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 Subsite.

5.5 **Certification**. The final design must be stamped by a New York State Professional Engineer and signed by 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.

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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 the EPA approval under the AOC or the SOW, the 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) the EPA also may modify the initial submission to cure deficiencies in the submission if: (i) the EPA determines that disapproving the submission and awaiting a resubmission would cause substantial disruption to the Work; or (ii) previous submission(s) have been disapproved due to material defects and the deficiencies in the initial submission under consideration indicate a bad faith lack of effort to submit an acceptable deliverable.

(b) **Resubmissions**. Upon receipt of a notice of disapproval under ¶ [REF _Ref322533256 \w \h * MERGEFORMAT] ("Initial Submissions"), or if required by a notice of approval upon specified conditions under ¶ [REF _Ref322533256 \w \h * MERGEFORMAT], Respondents shall, within 21 days or such longer time as specified by the EPA in such notice, correct the deficiencies and resubmit the deliverable for approval. After review of the resubmitted deliverable, the 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 the EPA under ¶ [REF _Ref322533256 \w \h * MERGEFORMAT] (Initial Submissions) or ¶ [REF _Ref322533499 \w \h * MERGEFORMAT] (Resubmissions), of any deliverable, or any portion thereof: (1) such deliverable, or portion thereof, will be incorporated into and enforceable under the AOC; 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 ¶ [REF _Ref322533256 \w \h * MERGEFORMAT] or ¶ [REF _Ref322533499 \w \h * MERGEFORMAT] does not relieve Respondents of any liability for stipulated penalties under Section [**XV**] (Stipulated Penalties) of the AOC.

5.7 Supporting Deliverables. Respondents shall submit each of the following supporting deliverables for EPA approval, except as specifically provided. The deliverables must be submitted, for the first time, by the deadlines in the RD Schedule, or any other the EPA-

approved schedule, as applicable. Respondents shall develop the deliverables in accordance with all applicable regulations, guidance, and policies (see Section [REF _Ref367104374 \w \h * MERGEFORMAT] (References)). Respondents shall update each of these supporting deliverables as necessary or appropriate during the course of the Work, and/or as requested by the EPA.

(a) **Health and Safety Plan**. The Health and Safety Plan ("HASP") describes all activities to be performed to protect onsite personnel and area residents from physical, chemical, and all other hazards posed by the Work. Respondents shall develop the HASP in accordance with the EPA's Emergency Responder Health and Safety and Occupational Safety and Health Administration requirements under 29 C.F.R. §§ 1910 and 1926. The HASP should cover RD activities. The EPA does not approve the HASP, but will review it to ensure that all necessary elements are included and that the plan provides for the protection of human health and the environment.

(b) **Emergency Response Plan**. The Emergency Response Plan ("ERP") must describe procedures to be used in the event of an accident or emergency at the Subsite (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 ("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 ¶ 3.6(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 Paragraph [**11**] (Emergencies and Releases) of the AOC in the event of an occurrence during the performance of the Work that causes or threatens a release of Waste Material from the Subsite that constitutes an emergency or may present an immediate threat to public health or welfare or the environment.

(c) **Field Sampling Plan**. The Field Sampling Plan ("FSP") 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. Respondents shall develop the FSP in accordance with *Guidance for Conducting Remedial Investigations and Feasibility Studies*, EPA/540/G 89/004 (Oct. 1988).

(d) **Quality Assurance Project Plan**. The QAPP addresses sample analysis and data handling regarding the Work. The QAPP must include a detailed explanation of Respondents' quality assurance, quality control, and chain of custody procedures for all treatability, design, compliance, and monitoring samples. Respondents shall develop the QAPP in accordance with *EPA Requirements for Quality Assurance Project Plans*, QA/R-5, EPA/240/B-01/003 (Mar. 2001, reissued May 2006); *Guidance for Quality Assurance Project Plans*., QA/G-5, EPA/240/R 02/009 (Dec. 2002); and *Uniform Federal Policy for Quality Assurance Project Plans*, Parts 1-3, EPA/505/B-04/900A though 900C (Mar. 2005). The QAPP also must include procedures:

(1) To ensure that the EPA and the State and their authorized representatives have reasonable access to laboratories used by Respondents in implementing the AOC (Respondents' Labs);

(2) To ensure that Respondents' Labs analyze all samples submitted by the EPA pursuant to the QAPP for quality assurance monitoring;

(3) To ensure that Respondents' Labs perform all analyses using the 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 the EPA;

(4) To ensure that Respondents' Labs participate in an EPA-accepted QA/QC program or other program QA/QC acceptable to the EPA;

(5) For Respondents to provide the EPA and the State with notice at least 28 days prior to any sample collection activity;

(6) For Respondents to provide split samples and/or duplicate samples to the EPA and the State upon request;

(7) For the EPA and the State to take any additional samples that they deem necessary;

(8) For the EPA and the State to provide to Respondents, upon request, split samples and/or duplicate samples in connection with the EPA's and the State's oversight sampling; and

(9) For Respondents to submit to the EPA and the State all sampling and tests results and other data in connection with the implementation of the AOC.

(e) **Site-Wide Monitoring Plan**. The purpose of the Site-Wide Monitoring Plan ("SWMP") is to obtain baseline information regarding the extent of contamination in affected media at the Subsite; to obtain information, through short- and long-term monitoring, about the movement of and changes in contamination throughout the Subsite, before and during implementation of the RA; to obtain information regarding contamination levels to determine whether PS are achieved; and to obtain information to determine whether to perform additional actions, including further Subsite monitoring. The SWMP must include:

(1) Description of the environmental media to be monitored;

(2) Description of the data collection parameters, including existing and proposed monitoring devices and locations, schedule and frequency of monitoring, analytical parameters to be monitored, and analytical methods employed;

(3) Description of how performance data will be analyzed, interpreted, and reported, and/or other site-related requirements;

(4) Description of verification sampling procedures;

(5) Description of deliverables that will be generated in connection with monitoring, including sampling schedules, laboratory records, monitoring reports, and monthly and annual reports to the EPA and State agencies; and

(6) Description of proposed additional monitoring and data collection actions (such as increases in frequency of monitoring, and/or installation of additional monitoring devices in the affected areas) in the event that results from monitoring devices indicate changed conditions (such as higher than expected concentrations of the contaminants of concern or groundwater contaminant plume movement).

(f) **Transportation and Off-Subsite Disposal Plan**. The Transportation and Off-Subsite Disposal Plan ("TODP") describes plans to ensure compliance with ¶ 3.7 (Off-Subsite 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.

(g) **O&M Plan**. The O&M Plan describes the requirements for inspecting, operating, and maintaining the RA. Respondents shall develop the O&M Plan in accordance with *Operation and Maintenance in the Superfund Program*, OSWER 9200.1 37FS, the EPA/540/F-01/004 (May 2001). The O&M Plan must include the following additional requirements:

(1) Description of PS required to be met to implement the ROD;

(2) Description of activities to be performed: (i) to provide confidence that the PS will be met; and (ii) to determine whether PS have been met;

(3) **O&M Reporting**. Description of records and reports that will be generated during O&M, such as daily operating logs, laboratory records, records of operating costs, reports regarding emergencies, personnel and maintenance records, monitoring reports, and monthly and annual reports to the 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 PS; (ii) analysis of vulnerability and additional resource requirements should a failure occur; (iii) notification and reporting requirements should O&M systems fail or be in danger of imminent failure; and (iv) community notification requirements; and

(5) Description of corrective action to be implemented in the event that PS are not achieved; and a schedule for implementing these corrective actions.

(h) **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. Respondents 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).

(i) **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 Subsite. Respondents 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:

(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; and

(2) Legal descriptions and survey maps that are prepared according to current American Land Title Association ("ALTA").

(j) **Periodic Review Support Plan**. The Periodic Review Support Plan addresses the studies and investigations that Respondents shall conduct to support the 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"). Respondents 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.

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 RD Schedule set forth below. Respondents may submit proposed revised RD Schedules for the EPA approval. Upon the EPA's approval, the revised RD Schedule supersede the RD Schedule set forth below, and any previously-approved RD Schedule.

6.2 RD Schedule

	Description of Deliverable, Task	**Included Supporting Deliverable**	**¶ Ref.**	**Deadline**
1	[TAP] N/A			
2	[Designate TAP Coordinator] N/A			
3	RDWP	SWMP, TSWP	[REF _Ref330378658 \r \h * MERGEFORMAT]3	90 days after the EPA's Authorization to Proceed regarding Supervising Contractor under AOC ¶ [**7.c**]
4	PDIWP	HASP, QAPP, ERP, FSP	[REF _Ref322699064 \r \h * MERGEFORMAT]	30 days after the EPA's Authorization to Proceed regarding Supervising Contractor under AOC ¶ [**7.c**]
5	Local Disposal Assessment and Agreement	Signed Agreement	3.4	60 days after the effective date of the AOC.
6	Preliminary (30%) RD	CQA/QCP, TODP, O&M Plan, O&M Manual, ICIAP	[REF _Ref323894717 \r \h * MERGEFORMAT]8,	90 days after the EPA approval of Final RDWP
7	Pre-final (90/95%) RD	Same as above	[REF _Ref323894739 \r \h * MERGEFORMAT]9	30 days after the EPA comments on [Preliminary or Intermediate] RD
8	Final (100%) RD	Same as above	[REF _Ref323894752 \r \h * MERGEFORMAT]10	30 days after the EPA comments on Pre-final RD

7. STATE AND ONONDAGA NATION PARTICIPATION

7.1 **Copies**. Respondents shall, at any time they send a deliverable to the EPA, send a copy of such deliverable to the State and the Onondaga Nation. The EPA shall, at any time it sends a notice, authorization, approval, disapproval, or certification to Respondents, send a copy of such document to the State and the Onondaga Nation.

7.2 **Review and Comment**. The State and Onondaga Nation will have a reasonable opportunity for review and comment prior to any EPA approval or disapproval under ¶ [REF _Ref322533252 \r \h * MERGEFORMAT] (Approval of Deliverables) of any deliverables that are required to be submitted for EPA approval.

8. REFERENCES

8.1 The following regulations and guidance documents, among others, apply to the Work. Any item for which a specific URL is not provided below is available on one of the two the 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) Guidance for Scoping the Remedial Design, OSWER 9355.0-43, EPA/540/R-95/025 (Mar. 1995).

(l) Remedial Design/Remedial Action Handbook, OSWER 9355.0-04B, EPA/540/R-95/059 (June 1995).

(m) EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis, QA/G-9, EPA/600/R-96/084 (July 2000).

(n) Operation and Maintenance in the Superfund Program, OSWER 9200.1-37FS, EPA/540/F-01/004 (May 2001).

(o) Comprehensive Five-year Review Guidance, OSWER 9355.7-03B-P, 540-R-01-007 (June 2001).

(p) Guidance for Quality Assurance Project Plans, QA/G-5, EPA/240/R-02/009 (Dec. 2002).

(q) Institutional Controls: Third Party Beneficiary Rights in Proprietary Controls (Apr. 2004).

(r) Quality Systems for Environmental Data and Technology Programs -- Requirements with Guidance for Use, ANSI/ASQ E4-2004 (2004).

(s) Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3, EPA/505/B-04/900A though 900C (Mar. 2005).

(t) Superfund Community Involvement Handbook, EPA/540/K-05/003 (Apr. 2005).

(u) EPA Guidance on Systematic Planning Using the Data Quality Objectives Process, QA/G-4, EPA/240/B-06/001 (Feb. 2006).

(v) EPA Requirements for Quality Assurance Project Plans, QA/R-5, EPA/240/B-01/003 (Mar. 2001, reissued May 2006).

(w) EPA Requirements for Quality Management Plans, QA/R-2, EPA/240/B-01/002 (Mar. 2001, reissued May 2006).

(x) USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, ILM05.4 (Dec. 2006).

(y) USEPA Contract Laboratory Program Statement of Work for Organic Analysis, SOM01.2 (amended Apr. 2007).

(z) EPA National Geospatial Data Policy, CIO Policy Transmittal 05-002 (Aug. 2008), available at [HYPERLINK "http://www.epa.gov/geospatial/policies.html"] and [HYPERLINK "http://www.epa.gov/geospatial/docs/National_Geospatial_Data_Policy.pdf"].

(aa) Summary of Key Existing EPA CERCLA Policies for Groundwater Restoration, OSWER 9283.1-33 (June 2009).

(bb) Principles for Greener Cleanups (Aug. 2009), available at [HYPERLINK "http://www.epa.gov/oswer/greenercleanups/"].

(cc) USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration), ISM01.2 (Jan. 2010).

(dd) Close Out Procedures for National Priorities List Sites, OSWER 9320.2-22 (May 2011).

(ee) Groundwater Road Map: Recommended Process for Restoring Contaminated Groundwater at Superfund Sites, OSWER 9283.1-34 (July 2011).

(ff) Recommended Evaluation of Institutional Controls: Supplement to the "Comprehensive Five-Year Review Guidance," OSWER 9355.7-18 ("Sep. 2011").

(gg) Construction Specifications Institute's MasterFormat 2012, available from the Construction Specifications Institute, [HYPERLINK "http://www.csinet.org/masterformat"].

(hh) Updated Superfund Response and Settlement Approach for Sites Using the Superfund Alternative Approach , OSWER 9200.2-125 (Sep. 2012)

(ii) 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).

(jj) 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).

(kk) [HYPERLINK "http://www.epaosc.org/_HealthSafetyManual/manual-index.htm"], [HYPERLINK "http://www.epaosc.org/_HealthSafetyManual/emergency-responder-manual-directive-final.pdf"] (July 2005 and updates), [HYPERLINK "http://www.epaosc.org/_HealthSafetyManual/manual-index.htm"]

(ll) Broader Application of Remedial Design and Remedial Action Pilot Project Lessons Learned, OSWER 9200.2-129 ("Feb. 2013").

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

Laws, Policy, and Guidance [HYPERLINK "http://www.epa.gov/superfund/policy/index.htm"]

Test Methods Collections [HYPERLINK "http://www.epa.gov/fem/methcollectns.htm"]

8.3 For any regulation or guidance referenced in the AOC 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 Respondents receive notification from the EPA of the modification, amendment, or replacement.