



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

Mail Code: SR-6J

December 6, 2021

**SPECIAL NOTICE LETTER
URGENT LEGAL MATTER
PROMPT REPLY NECESSARY
CERTIFIED MAIL: RETURN RECEIPT REQUESTED**

ABB, Inc.
Attn: c/o Mr. Keith Knauerhase
Regional General Counsel, AMC
Corporate Research Center
5 Waterside Crossing
Windsor, CT 06095

Melody B. Christopher
Environmental Project Manager
Corporate Research Center
5 Waterside Crossing
Windsor, CT 06095

Sent via electronic delivery: keith.r.knauerhase@us.abb.com; melody.b.christopher@us.abb.com

Re: Special Notice Letter for the Waite Park Wells Site, Operable Unit 1 in Stearns County, Minnesota

Dear Sir and Madam:

Based on Waite Park Wells Site ("the Site") data going back to the mid-1980's, EPA has determined that ABB Inc. may be responsible under Section 107(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund"), 42 U.S.C. § 9607(a), for the cleanup of the Site, including all costs incurred by EPA in responding to releases at the Site. EPA is now contacting ABB Inc. in an attempt to resolve your responsibility at the Site (located in Waite Park, Minnesota).

Background

EPA has reviewed Site records and identified ABB Inc. as one of two potentially responsible parties (PRPs) whose predecessors contributed hazardous substances to the Site. Under the federal Superfund law, ABB Inc. and the other PRP at the Site are responsible for the costs of cleaning up the Site. After reviewing the current remedy in the 2020 Five Year Review (FYR), EPA has determined that additional investigation is warranted and potentially a modification to the current cleanup approach (formally known as a remedial action) for the Site, which is described in the 1989 Record of Decision (ROD) issued by Minnesota Pollution Control Agency (MPCA).

Special Notice and Negotiation Moratorium

EPA has determined that use of the special notice procedures set forth in Section 122(e) of CERCLA, 42 U.S.C. § 9622(e), may facilitate a settlement between ABB Inc., the other PRP, and EPA for performance of a Supplemental Remedial Investigation and Feasibility Study (SRI/FS) at the Site. A Supplemental Remedial Investigation (SRI) supplements past remedial investigation work to identify site characteristics and defines the nature and extent of soil, air, surface water, and groundwater contamination at the site and the risks posed by the site. A Feasibility Study (FS) evaluates different cleanup options for the site.

Under Section 122(e), this letter triggers a 60-day moratorium on certain EPA response activities at the site. During this 60-day period, ABB Inc. and the other PRP are invited to participate in formal negotiations with EPA in an effort to reach a settlement to conduct or finance the SRI/FS. The 60-day negotiation period ends on February 4, 2022. The 60-day negotiation moratorium will be extended for an additional 30 days if PRPs provide EPA with a “good faith offer” to conduct or finance the SRI/FS. Under this 90-day negotiation moratorium, negotiations will conclude on March 7, 2022. If settlement is reached between EPA and the PRPs within the 90-day negotiation moratorium, the settlement will be embodied in an administrative settlement agreement and order on consent for SRI/FS (ASAOC or “Administrative Order”).]

Good Faith Offer

A proposed Administrative Settlement Agreement and Order on Consent and Statement of Work is enclosed to assist you in developing a “good faith offer.”¹ As indicated, the 60-day negotiation moratorium triggered by this letter is extended for 30 days if the PRPs submit a “good faith offer” to EPA. A “good faith offer” to conduct or finance the SRI/FS is a written proposal that demonstrates the qualifications and willingness of the PRPs to conduct or finance the SRI/FS, and includes the following elements:

- A statement of willingness by the PRPs to conduct or finance an SRI/FS that is consistent with EPA’s Statement of Work and draft Administrative Settlement Agreement and Order on Consent and provides a sufficient basis for further negotiations;

¹ This draft administrative order on consent is not currently binding on EPA and is subject to revision and approval by EPA. It is based on the model RI/FS ASAOC, which is available at https://cfpub.epa.gov/compliance/models/view.cfm?model_ID=792.

- A paragraph-by-paragraph response to EPA's Statement of Work and draft Administrative Settlement Agreement and Order on Consent;
- A detailed description of the work plan identifying how the PRPs plan to proceed with the work;
- A demonstration of the PRPs' technical capability to carry out the SRI/FS, including the identification of the firm(s) that may actually conduct the work or a description of the process they will use to select the firm(s);
- A demonstration of the PRPs' capability to finance the SRI/FS;
- A statement of willingness by the PRPs to reimburse EPA for costs incurred in overseeing the PRPs' conduct of the SRI/FS; and
- The name, address, and phone number of the party or steering committee who will represent the PRPs in negotiations.

PRP Steering Committee

To assist PRPs in negotiating with EPA concerning this matter, EPA is notifying ABB Inc. of the other PRP to whom EPA is sending this Notice:

Cooper Industries, LLC
Counsel - Katy M. Franz
tel: +1 440 523-4785 mobile: +1 440 292-7048
KatyMFranz@eaton.com

EPA recommends that all PRPs meet to select a steering committee responsible for representing the group's interests. EPA recognizes that the allocation of responsibility among PRPs may be difficult. If PRPs are unable to reach consensus among themselves, we encourage the use of the services of a neutral third party to help allocate responsibility. Third parties are available to facilitate negotiations. At the PRPs' request, EPA will provide a list of experienced third-party mediators, or help arrange for a mediator.

Reimbursement of Past Costs Deferred

As you know, EPA has already taken certain response actions and incurred certain costs in response to conditions at the Site. These response actions include: site assessment, community involvement, site inspections, Five Year Review document preparation, and enforcement activities. However, if a settlement can be reached under the terms of the enclosed ASAOC, EPA will defer seeking recovery of such past costs, including interest, until the Remedial Design/Remedial Action phase of remedial action activities at the Site.

Administrative Record

In accordance with Section 113 of CERCLA, 42 U.S.C. § 9613, EPA has established an Administrative Record containing the documents that serve as the basis for EPA's selection of

the appropriate response action for the Site. This Administrative Record will be located at the Superfund Records Center, EPA Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 886-0900 and <https://www.epa.gov/superfund/waite-park-wells> and will be available to the public for inspection and comment. The Administrative Record will also be available for inspection and comment at the Site information repository located at the Great River Regional Library (253 N. 5th Ave, Box 307, Waite Park, MN 56387). You may wish to review the Administrative Record to assist you in responding to this letter, but your review should not delay such response beyond the 60-day period provided by CERCLA.

PRP Response and EPA Contact Person

You are encouraged to contact EPA by December 22, 2021 to indicate your willingness to participate in future negotiations concerning this Site. You may respond individually or through a steering committee if such a committee has been formed. If EPA does not receive a timely response, EPA will assume that you do not wish to negotiate a resolution of your liabilities in connection with the Site, and that you have declined any involvement in performing the response activities.

Your response to this Special Notice Letter, including written proposals to perform the SRI/FS for the Site, should be sent to:

Kathleen Meier, Remedial Project Manager
U.S. Environmental Protection Agency
77 West Jackson Boulevard, SR-6J
Chicago, IL 60604
(312) 886-9861

The factual and legal discussions in this letter are intended solely to provide notice and information, and such discussions are not to be construed as a final EPA position on any matter set forth herein. Due to the seriousness of the environmental and legal problems posed by the conditions at the Site, EPA urges that you give immediate attention and prompt response to this letter.

In addition, EPA has notified the Federal Natural Resource Trustee² of its intention to perform or enter into negotiations for the performance of response actions at the Site.

Resources and Information for Small Businesses

As you may be aware, on January 11, 2002, the President signed into law the “Small Business Liability Relief and Brownfields Revitalization Act” (SBLRBRA). This Act contains several exemptions and defenses to CERCLA liability, which we suggest that all parties evaluate. You may download a copy of the law at <https://www.epa.gov/brownfields/brownfields-laws-and-regulations> and review EPA guidance regarding these exemptions at <http://cfpub.epa.gov/compliance/resources/policies/cleanup/superfund/>.

² The Natural Resource Trustees are government agencies that have been given the authority to assess the injury to natural resources caused by the release of hazardous substances and to seek the restoration, replacement, or acquisition of equivalent natural resources. The Federal Natural Resource Trustees include the Departments of Agriculture, Commerce, Defense, Energy, and Interior. In addition, states and tribes are Natural Resource Trustees.

In addition, if you are a “service station dealer” who accepts used oil for recycling, you may qualify for an exemption from liability under Section 114(c) of CERCLA, 42 U.S.C. § 9614(c). EPA guidance regarding this exemption can be found on the Agency’s website at <http://www.epa.gov/enforcement/guidance-superfunds-service-station-dealers-exemption>. If you believe you may qualify for the exemption, please contact the RPM, Kathleen Meier, to request an application/information request specifically designed for service station dealers.

EPA has created a number of helpful resources for small businesses. EPA has established the National Compliance Assistance Clearinghouse as well as Compliance Assistance Centers which offer various forms of resources to small businesses. You may inquire about these resources at <http://www.epa.gov/compliance/compliance-assistance-centers>. In addition, information on contacting EPA’s Small Business Ombudsman is available at <http://www.epa.gov/resources-small-businesses/forms/contact-us-about-resources-small-businesses>. Finally, EPA has developed a fact sheet about the Small Business Regulatory Enforcement Fairness Act (SBREFA) and information on resources for small businesses, which is enclosed with this letter and available on the Agency’s website at <http://www.epa.gov/compliance/small-business-resources-information-sheet>.

If you have any questions regarding the technical aspects of this letter, please contact Kathleen Meier, Remedial Project Manager, (312) 886-9861, meier.kathleen@epa.gov. You may direct legal questions to Tom Williams, Associate Regional Counsel at 312-886-0814 or williams.tom@epa.gov.

My staff and I look forward to working with you during the coming months.

Sincerely,

12/3/2021

X



Joan Tanaka, Chief
Remedial Response Branch #1
Signed by: JOAN TANAKA

Enclosures:

1. Draft Administrative Order on Consent for SRI/FS
2. Draft Scope of Work

cc (by email): Kathleen Meier, Region 5 Superfund and Emergency Management Division
Karen Kirchner, Region 5 Superfund and Emergency Management Division
Ariana Conner, Region 5 Superfund and Emergency Management Division
Region 5 Superfund Records Center
Tom Williams, Region 5 Office of Regional Counsel
Jennifer Jevnisek, Minnesota Pollution Control Agency
John Nelson, U.S. Department of the Interior
Jeff Tracy, Geosyntec

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:)
)
)
Waite Park Wells Site)
Operable Unit 1)
St. Cloud, Minnesota)
)
ABB, Inc. and)
Eaton Corporation,)
)
Respondents,)
)
)
Proceeding Under Sections 104, 107)
and 122 of the Comprehensive)
Environmental Response, Compensation,)
and Liability Act, 42 U.S.C. §§ 9604,)
9607 and 9622.)

U.S. EPA Docket No. _____

**ADMINISTRATIVE SETTLEMENT
AGREEMENT AND ORDER ON
CONSENT FOR SUPPLEMENTAL
REMEDIAL INVESTIGATION /
FEASIBILITY STUDY**

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent (“Settlement”) is entered into voluntarily by the United States Environmental Protection Agency (EPA) and ABB Inc., and Eaton Corporation (“Respondents”). This Settlement provides for the performance of a supplemental remedial investigation and feasibility study (SRI/FS) for Operable Unit One (“OU 1”), consisting of the former Electric Machinery Company property by Respondents and the payment of certain response costs incurred by the United States at or in connection with the Waite Park Wells Site (the “Site”) generally located in St. Cloud, Minnesota, and any nearby areas where hazardous substances, pollutants or contaminants from the property or from former operations at the property have or may have come to be located, at or in connection with the Waite Park Wells Site located generally at 711 North Anderson Avenue in the City of St. Cloud and adjacent area in the City of Waite Park, Stearns County, Minnesota (“Site”).

2. This Settlement is issued under the authority vested in the President of the United States by Sections 104, 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9607 and 9622 (CERCLA). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2923 (Jan. 29, 1987), and further delegated to Regional Administrators by EPA Delegation Nos. 14-14C (Administrative Actions Through Consent Orders, Jan. 18, 2017) and 14-14D (Cost Recovery Non-Judicial Agreements and Administrative Consent Orders, Jan. 18, 2017). These authorities were further redelegated by the Regional Administrator of EPA Region 5 to the Superfund Division (now, Superfund and Emergency Management Division) Director by EPA Region 5 Regional Delegations 14-14-C and 14-14-D (May 2, 1996). EPA and Respondents recognize that this Settlement has been negotiated in good faith and that the actions undertaken by Respondents in accordance with this Settlement do not constitute an admission of any liability. Respondents do not admit, and retain the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement, the validity of the findings of facts, conclusions of law, and determinations in Section IV (Findings of Fact) and V (Conclusions of Law and Determinations) of this Settlement. Respondents agree to comply with and be bound by the terms of this Settlement and further agree that they will not contest the basis or validity of this Settlement or its terms.

II. PARTIES BOUND

3. This Settlement is binding upon EPA and upon Respondents and their successors and assigns. Any change in ownership or corporate status of a Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondent’s responsibilities under this Settlement.

4. Respondents are jointly and severally liable for carrying out all activities required by this Settlement. In the event of the insolvency or other failure of any one or more Respondents to implement the requirements of this Settlement, the remaining Respondents shall complete all such requirements.

5. Each undersigned representative of Respondents certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement and to execute and legally bind Respondents to this Settlement.

6. Respondents shall provide a copy of this Settlement to each contractor hired to perform the Work required by this Settlement and to each person representing any Respondents with respect to the Site or the Work, and shall condition all contracts entered into under this Settlement upon performance of the Work in conformity with the terms of this Settlement. Respondents or their contractors shall provide written notice of the Settlement to all subcontractors hired to perform any portion of the Work required by this Settlement. Respondents shall nonetheless be responsible for ensuring that their contractors and subcontractors perform the Work in accordance with the terms of this Settlement.

III. DEFINITIONS

7. Unless otherwise expressly provided in this Settlement, terms used in this Settlement that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Settlement or its attached appendices, the following definitions shall apply:

“Affected Property” shall mean all real property at the Site and any other real property where EPA determines, at any time, that access, land, water, or other resource use restrictions are needed to implement the SRI/FS, including, but not limited to, the property located at 711 North Anderson Avenue, St. Cloud, Minnesota.

“CERCLA” shall mean the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§9601-9675.

“Day” or “day” shall mean a calendar day. In computing any period of time under this Settlement, where the last day would fall on a Saturday, Sunday, or federal or State holiday, the period shall run until the close of business of the next working day.

“Effective Date” shall mean the effective date of this Settlement as provided in Section XXXII.

“Engineering Controls” shall mean constructed containment barriers or systems that control one or more of the following: downward migration, infiltration, or seepage of surface runoff or rain; or natural leaching migration of contaminants through the subsurface over time. Examples include caps, engineered bottom barriers, immobilization processes, and vertical barriers.

“EPA” shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.

“EPA Hazardous Substance Superfund” shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. §9507.

“Future Response Costs” shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing deliverables submitted pursuant to this Settlement, in overseeing implementation of the Work, or otherwise implementing, overseeing, or enforcing this Settlement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Section XI (Property Requirements) (including, but not limited to, cost of attorney time and any monies paid to secure or enforce access or land, water, or other resource use restrictions, and the amount of just compensation), Section XV (Emergency Response and Notification of Releases), Paragraph 118 (Work Takeover), Paragraph 141 (Access to Financial Assurance), community involvement including, but not limited to, the costs of any technical assistance grant under Section 117(e) of CERCLA, 42 U.S.C. § 9617(e), Section XVII (Dispute Resolution), and all litigation costs. Future Response Costs shall also include Agency for Toxic Substances and Disease Registry (ATSDR) costs regarding the Site.

“Institutional Controls” or “ICs” shall mean Proprietary Controls and state or local laws, regulations, ordinances, zoning restrictions, or other governmental controls or notices that: (a) limit land, water, or other resource use to minimize the potential for human exposure to Waste Material at or in connection with the Site; (b) limit land, water, or other resource use to implement, ensure non-interference with, or ensure the protectiveness of the response action pursuant to this Settlement; and/or (c) provide information intended to modify or guide human behavior at or in connection with the Site.

“Interest” shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year. Rates are available online at <https://www.epa.gov/superfund/superfund-interest-rates>.

“MPCA” shall mean the Minnesota Pollution Control Agency and any successor departments or agencies of the State of Minnesota.

“National Contingency Plan” or “NCP” shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

“Non-Settling Owner” shall mean any person, other than a Respondent, that owns or controls any Affected Property, including Grede Holdings LLC and Grede Industries, Inc.. The clause “Non-Settling Owner’s Affected Property” means Affected Property owned or controlled by Non-Settling Owner.

“Paragraph” shall mean a portion of this Settlement identified by an Arabic numeral or an upper or lower case letter.

“Parties” shall mean EPA and Respondents.

“Proprietary Controls” shall mean easements or covenants running with the land that (a) limit land, water, or other resource use and/or provide access rights and (b) are created pursuant to common law or statutory law by an instrument that is recorded in the appropriate land records office.

“RCRA” shall mean the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992 (also known as the Resource Conservation and Recovery Act).

“Respondents” shall mean ABB Inc., and Eaton Corporation.

“Section” shall mean a portion of this Settlement identified by a Roman numeral.

“Settlement” shall mean this Administrative Settlement Agreement and Order on Consent and all appendices attached hereto (listed in Section XXX (Integration/Appendices)) and all documents incorporated by reference into this document including without limitation EPA-approved submissions. EPA-approved submissions (other than progress reports) are incorporated into and become a part of the Settlement Agreement upon EPA’s approval. In the event of conflict between this Settlement and any appendix, this Settlement shall control.

“Site” shall mean the Waite Park Wells Superfund Site, encompassing approximately 200 acres, located at and near 711 North Anderson Avenue, St. Cloud, Minnesota. “State” shall mean the State of Minnesota.

“Statement of Work” or “SOW” shall mean the document describing the activities Respondents must perform to develop the SRI/FS for Operable Unit 1 for the Site, as set forth in Appendix B to this Settlement. The Statement of Work is incorporated into this Settlement and is an enforceable part of this Settlement, as are any modifications made thereto in accordance with this Settlement.

“Transfer” shall mean to sell, assign, convey, lease, mortgage, or grant a security interest in, or where used as a noun, a sale, assignment, conveyance, or other disposition of any interest by operation of law or otherwise.

“United States” shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.

“Waste Material” shall mean (a) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (c) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (d) any “hazardous substance” under Minn. Stat. § 115B.02. subd. 8 (2019); (e) any “hazardous waste” under Minn. Stat. § 115B.02. subd. 9 (2019) and (f) any “pollutant or contaminant” under Minn. Stat. § 115B.02. subd. 13 (2019).

“Waite Park Wells Special Account” shall mean the special account within the EPA Hazardous Substance Superfund, established for the Site by EPA pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3).

“Work” shall mean all activities and obligations Respondents are required to perform under this Settlement, except those required by Section XIII (Record Retention).

IV. FINDINGS OF FACT

8. The Waite Park Wells Site is located in an industrial area in the Cities of St. Cloud and Waite Park, Stearns County, Minnesota, and is approximately 1500 feet east of the Sauk River.

9. The Site includes two industrial areas and a plume of groundwater contamination associated with those two areas.

10. Of the two areas, EPA has designated one as OU 1. Electric Machinery Company and, subsequently, Boveri Turbomachinery formerly owned and operated an electronic generator manufacturing plant (“the manufacturing plant”) in this area.

11. OU 1 comprises approximately 45 acres and is situated at and adjacent to 711 North Anderson Avenue in the southwestern corner of the City of St. Cloud, Minnesota, in the SE ¼ of Section 8, Township 124N, Range 28W.

12. The second area, designated as OU 2, is a former Burlington Northern Railroad car shop, located south of the area designated as OU 1.

13. The Site was listed on the National Priorities List (“NPL”) pursuant to CERCLA Section 105, 42 U.S.C. § 9605, on June 10, 1986, 51 Fed Reg. 21054.

14. The area around the Site is underlain by up to 135 feet of unconsolidated glacial and alluvial sediment which rest on relatively impermeable granite bedrock.

15. The sediment beneath the OU 1 area consists of a shallow sand overlying discontinuous fine-grained and deep sand deposits.

16. Two aquifers are present beneath most of the area. The uppermost (shallow) aquifer is composed of fine- to coarse-grained sand and gravel. The sand and gravel ranges from less than 10 feet to over 30 feet thick. The sand and gravel is thickest in two areas: 1) east of the manufacturing plant’s former “thermoplastics” wing and north of the manufacturing plant building on the eastern side of the OU 1 area; and 2) in the far western portion of the OU 1 area.

17. Groundwater in the shallow aquifer is unconfined. The thickness of the saturated portion of the shallow aquifer thins where the water table is below the bottom of the shallow sand in the southeastern and southwestern portions of the OU 1 area and through the central portion of the area. The greatest saturated thickness is in the area south of the manufacturing plant’s west wing where, in September 1988, it was determined to be approximately 18 feet thick.

18. The lower (deep) aquifer consists of a fine- to medium-grained sand with variable amounts of gravel. The deep aquifer is thickest beneath the manufacturing plant, where it is approximately 40 feet thick. The deep aquifer is much thinner under the rest of the area, and is only 10 to 15 feet thick in the north portion of the OU 1 area, in the west portion of the OU 1 area, and in the south and southeast portions of the area.

19. The shallow and deep aquifers are separated by a silty sand and clay confining unit. The confining unit is typically 10 to 15 feet thick beneath the east and west portions of the OU 1 area, but is 25 to 40 feet thick beneath the central portion of the area. The confining unit is absent in at least one discrete location where there is a "window" in the confining unit and the shallow and deep aquifers are in direct contact. No other windows in the confining unit have been identified at the OU 1 area, but they may be present in areas that have not been investigated to date.

20. Electric Machinery Company, Inc. ("Electric Machinery") was a business corporation doing business in the State of Minnesota, before dissolving as a corporation in 1987. Electric Machinery was a wholly-owned subsidiary of Studebaker-Worthington, Inc.

21. Electric Machinery owned and operated the manufacturing plant in the area now comprising OU1 Site from the period 1969 to approximately 1973.

22. In 1973, ownership of the manufacturing plant was transferred to Turbodyne, a division of Turbodyne Corporation ("Turbodyne"), which was another wholly-owned subsidiary of Studebaker-Worthington. Turbodyne continued to operate the manufacturing plant.

23. Brown Boveri Turbomachinery ("Brown Boveri") was a business corporation doing business in the State of Minnesota. Brown Boveri was a wholly-owned subsidiary of Brown Boveri and Co., Ltd.

24. In late 1977, Brown Boveri purchased the manufacturing plant from Turbodyne.

25. Brown Boveri continued to operate the manufacturing plant until from January 1978 to December 1983.

26. In 1979, McGraw-Edison acquired Studebaker Worthington, Inc., including its subsidiaries Electric Machinery and Turbodyne.

27. In November 1984, Dresser Industries acquired Electric Machinery's and Turbodyne's assets from McGraw-Edison.

28. In 1985, Cooper Industries, Inc. ("Cooper") acquired McGraw-Edison.

29. Respondent Eaton Corporation ("Eaton") is a domestic business corporation with a place of business 1000 Eaton Boulevard, Cleveland, Ohio 44122. Eaton acquired Cooper in 2012.

30. On December 21, 1987, Brown Boveri merged with and into BBC Brown Boveri, Inc.
31. On June 2, 1988, BBC Brown Boveri, Inc. changed its name to ABB Power Distribution, Inc.
32. On December 16, 1991 ABB Power Distribution, Inc. changed its name to ABB Power T&D Company, Inc.
33. On June 22, 2001 ABB Power T&D Company, Inc. changed its name to ASEA Brown Boveri Inc.
34. On June 27, 2001 ASEA Brown Boveri Inc. changed its name to ABB, Inc.
35. Respondent ABB, Inc. is a domestic business corporation with a place of business at 305 Gregson Drive, Cary, North Carolina 27511
36. During the period Electric Machinery operated the manufacturing plant, hazardous substances were released to the environment.
37. During the period Brown-Boveri operated the manufacturing plant, hazardous substances were released to the environment.
38. Grede Foundries, Inc. acquired the manufacturing plant and continues to operate it to the present.
39. Waite Park municipal wells numbers 1 and 3 served the City of Waite Park until December 1984, when organic contamination was detected in groundwater.
40. A plume of organic compound contamination in groundwater was found to extend east-southeast from the manufacturing plant at OU 1 to the municipal wells, which are situated in the northeast corner of the OU 2 area.
41. In January 1985, the State of Minnesota issued a health advisory to Waite Park residents to discontinue using municipal water for drinking and cooking, and a water connection with St. Cloud, Minnesota was completed in February 1985 to provide Waite Park residents with an alternate water supply.
42. In 1985 and 1986, the MPCA issued three Requests for Response Action (RFRAs) to parties it determined were responsible for contamination at OU1 and OU 2, citing these areas as sources of contamination found in the City's wells.
43. Between 1986 and 1988, the parties whom MPCA had determined to be responsible funded construction of an air stripper to remove contaminants from the City water supply.
44. In February 1988, the City returned wells 1 and 3 to service and assumed responsibility for operation and maintenance (O&M) of the treatment system. Since that time,

the City has abandoned several older wells, added additional wells, and constructed a new higher capacity treatment system.

45. Remedial Investigations did not identify significant soil contamination at the Site in the OU 1 area, but groundwater contamination was identified in the shallow aquifer and, to a lesser extent, in the deep aquifer.

46. Contaminants of concern at the OU 1 area are tetrachloroethylene (“PCE”), trichloroethylene (“TCE”), 1,1,1 trichloroethane (“1,1,1-TCA”), cis-, trans-, 1,2-dichloroethene (“cis-, trans-DCE”) and 1,1-dichloroethane (“1,1-DCA”).

47. The volatile organic compounds in groundwater at OU 1 may migrate, or have migrated, to the Sauk River.

48. The contaminants of concern identified above may have the following health effects:

a. Tetrachloroethylene: effects resulting from acute (short term) high-level inhalation exposure of humans to tetrachloroethylene include irritation of the upper respiratory tract and eyes, kidney dysfunction, and neurological effects such as reversible mood and behavioral changes, impairment of coordination, dizziness, headache, sleepiness, and unconsciousness. The primary effects from chronic (long term) inhalation exposure are neurological, including impaired cognitive and motor neurobehavioral performance. exposure may also cause adverse effects in the kidney, liver, immune system and hematologic system, and on development and reproduction. Studies of people exposed in the workplace have found associations with several types of cancer including bladder cancer, non-Hodgkin lymphoma, multiple myeloma. EPA has classified tetrachloroethylene as likely to be carcinogenic to humans.

b. Trichloroethylene: acute (short-term) and chronic (long-term) inhalation exposure to trichloroethylene can affect the human central nervous system (CNS), with symptoms such as dizziness, headaches, confusion, euphoria, facial numbness, and weakness. Liver, kidney, immunological, endocrine, and developmental effects have also been reported in humans. A recent analysis of available epidemiological studies reports trichloroethylene exposure to be associated with several types of cancers in humans, especially kidney, liver, cervix, and lymphatic system. Animal studies have reported increases in lung, liver, kidney, and testicular tumors and lymphoma. EPA is currently reassessing the cancer classification of trichloroethylene. *Source:* <https://www.epa.gov/sites/production/files/2016-09/documents/trichloroethylene.pdf>

c. 1,1,1-Trichloroethane: Effects reported in humans due to acute (short-term) inhalation exposure to 1,1,1-Trichloroethane (methyl chloroform) include hypotension, mild hepatic effects, and central nervous system (CNS) depression. Cardiac arrhythmia and respiratory arrest may result from the depression of the CNS. Symptoms of acute inhalation exposure include dizziness, nausea, vomiting, diarrhea, loss of consciousness, and decreased blood pressure in humans. After chronic (long-term) inhalation exposure to methyl chloroform, some liver damage was observed in mice and

ventricular arrhythmias in humans. *Source:*

<https://www.epa.gov/sites/production/files/2016-09/documents/methyl-chloroform.pdf>

d. 1,1-Dichloroethane: Ethylidene dichloride is primarily used as an intermediate in chemical synthesis. Acute (short-term) inhalation exposure to high levels of ethylidene dichloride in humans results in central nervous system (CNS) depression and a cardiostimulating effect resulting in cardiac arrhythmias. Studies in animals have reported effects on the kidney. No information is available on the chronic (long-term), reproductive, developmental, or carcinogenic effects of ethylidene dichloride in humans. An oral animal study reported a significantly positive dose-related trend in hemangiosarcomas, mammary tumors, liver tumors, and endometrial stromal polyps. EPA has classified ethylidene dichloride as a Group C, possible human carcinogen. Source: <https://www.epa.gov/sites/production/files/2016-09/documents/ethylidene-dichloride.pdf>

e. 1,2-Dichloroethene (cis-, trans-, 1,2-dichloroethene): 1,2-Dichloroethene, also called 1,2-dichloroethylene or 1,2-DCE, is a highly flammable, colorless liquid with a sharp, harsh odor. It is used to produce solvents and in chemical mixtures. There are two forms of 1,2-DCE; one is called cis-1,2-DEC and the other is called trans-1,2-DCE. Sometimes both forms are present as a mixture. Breathing high levels of 1,2-dichloroethene can make you feel nauseous, drowsy, and tired; breathing very high levels can kill you. Lower doses of cis-1,2-dichloroethene caused effects on the blood, such as decreased numbers of red blood cells, and also effects on the liver. The long-term (365 days or longer) human health effects after exposure to low concentrations of 1,2-dichloroethene aren't known. The EPA has determined that cis-1,2-dichloroethene is not classifiable as to its human carcinogenicity. No EPA cancer classification is available for trans-1,2 dichloroethene. Source: <https://www.atsdr.cdc.gov/toxfaqs/tfacts87.pdf> and <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-trans-12-dichloroethylene>

49. On January 5, 1989, MPCA signed a Record of Decision that selected a remedy for the OU 1 area. The selected remedy included: groundwater pumping and on-site treatment of the contaminant plumes in both the shallow and deep aquifers using packed towers aeration (air stripping); discharge of treated ground water from the packed tower aeration system to the Sauk River under an NPDES permit; and surface water monitoring and long-term ground water monitoring. EPA concurred in this ROD on September 28, 1989.

50. For the OU 1 remedy to be protective in the long term, the following actions are necessary:

a. Conduct an RI to define the extent and magnitude of contaminated groundwater in the shallow and deep aquifers north of the Site, demonstrate its capture;

b. Conduct an RI to investigate the extent and magnitude of additional source areas and evaluate whether source control actions are necessary to achieve groundwater cleanup goals, and take action as needed;

- c. Conduct a FS to assess potential alternative groundwater remedies for evaluation in a remedy selection document, and take action as needed;
- d. Complete a vapor intrusion investigation under an approved Work Plan and QAPP to assess intrusion risk in off-site buildings that may overlie contaminated groundwater plume, and take action as needed;
- e. Develop and record an EC for parcel 82.47033.0013;
- f. Develop and implement an Institutional Controls Work Plan for OU1 that ensures that effective ICs are in place and includes long-term stewardship of ICs; and
- g. Review the OU 1 area for the presence of improperly abandoned wells and take action as needed.

51. As documented in a letter dated July 14, 2017 from EPA to MPCA, EPA and MPCA agreed that EPA would assume lead agency responsibility for OU 1 of the Site.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

52. Based on the Findings of Fact set forth above, and the administrative record, EPA has determined that:

- a. The Waite Park Wells Site is a “facility” as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).
- b. The contamination found at the Site, as identified in the Findings of Fact above, includes “hazardous substances” as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).
- c. Each Respondent is a “person” as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).
- d. Each Respondent is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).
 - (1) Respondents ABB and Eaton’s predecessors were the owners of the “owners” and/or “operators” of the facility at the time of disposal of hazardous substances at the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2).
 - (2) Respondents ABB and Eaton’s predecessors arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment of hazardous substances at the facility, within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).

e. The conditions described in Paragraphs 8 through 51 of the Findings of Fact above constitute an actual and/or threatened “release” of a hazardous substance from the facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

f. The actions required by this Settlement are necessary to protect the public health, welfare, or the environment, are in the public interest, 42 U.S.C. § 9622(a), are consistent with CERCLA and the NCP, 42 U.S.C. §§ 9604(a)(1), 9622(a), and will expedite effective remedial action and minimize litigation, 42 U.S.C. § 9622(a).

g. EPA has determined that Respondents are qualified to conduct the SRI/FS within the meaning of Section 104(a) of CERCLA, 42 U.S.C. § 9604(a), and will carry out the Work properly and promptly, in accordance with Sections 104(a) and 122(a) of CERCLA, 42 U.S.C. §§ 9604(a) and 9622(a), if Respondents comply with the terms of this Settlement.

VI. SETTLEMENT AGREEMENT AND ORDER

53. Based upon the Findings of Fact, Conclusions of Law and Determinations set forth above, and the administrative record, it is hereby Ordered and Agreed that Respondents shall comply with all provisions of this Settlement, including, but not limited to, all appendices to this Settlement and all documents incorporated by reference into this Settlement.

VII. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS

54. **Selection of Contractors, Personnel.** All Work performed under this Settlement shall be under the direction and supervision of qualified personnel. Within 30 days after the Effective Date, and before the Work outlined below begins, Respondents shall notify EPA in writing of the names, titles, addresses, telephone numbers, email addresses, and qualifications of the personnel, including contractors, subcontractors, consultants, and laboratories to be used in carrying out such Work. If, after the commencement of Work, Respondents retain additional contractors or subcontractors, Respondents shall notify EPA of the names, titles, contact information, and qualifications of such contractors or subcontractors retained to perform the Work at least 20 days prior to commencement of Work by such additional contractors or subcontractors. EPA retains the right, at any time, to disapprove of any or all of the contractors and/or subcontractors retained by Respondents. If EPA disapproves of a selected contractor or subcontractor, Respondents shall retain a different contractor or subcontractor and shall notify EPA of that contractor’s or subcontractor’s name, title, contact information, and qualifications within 7 days after EPA’s disapproval. With respect to any proposed contractor, Respondents shall demonstrate that the proposed contractor demonstrates compliance with ASQ/ANSI E4:2014 “Quality management systems for environmental information and technology programs – Requirements with guidance for use” (American Society for Quality, February 2014), by submitting a copy of the proposed contractor’s Quality Management Plan (QMP). The QMP should be prepared in accordance with “EPA Requirements for Quality Management Plans (QA/R-2),” EPA/240/B-01/002 (Reissued May 2006) or equivalent documentation as determined by EPA. The qualifications of the persons undertaking the Work for Respondents shall be subject to EPA’s review for verification based on objective assessment criteria (e.g., experience,

capacity, technical expertise) and that they do not have a conflict of interest with respect to the project.

55. Within 30 days after the Effective Date, Respondents shall designate a Project Coordinator who shall be responsible for administration of the Work required by this Settlement and shall submit to EPA the designated Project Coordinator's name, title, address, telephone number, email address, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during the Work. EPA retains the right to disapprove of a designated Project Coordinator who does not meet the requirements of Paragraph 54 (Selection of Contractors, Personnel). If EPA disapproves of the designated Project Coordinator, Respondents shall retain a different Project Coordinator and shall notify EPA of that person's name, title, contact information, and qualifications within 7 days following EPA's disapproval. Notice or communication relating to this Settlement from EPA to Respondents' Project Coordinator shall constitute notice or communication to all Respondents.

56. EPA has designated Kathleen Meier of the Superfund and Emergency Management Division, Region 5 as its Remedial Project Manager (RPM). EPA will notify Respondents of a change of its designated RPM. Communications between Respondents and EPA, and all documents concerning the activities performed pursuant to this Settlement, shall be directed to the EPA RPM in accordance with Paragraph 66. All deliverables, notices, notifications, proposals, reports, and requests specified in this Settlement must be in writing, unless otherwise specified, and be submitted by email to Kathleen Meier at meier.kathleen@epa.gov.

57. EPA's RPM shall have the authority lawfully vested in a Remedial Project Manager (RPM) and On-Scene Coordinator (OSC) by the NCP. In addition, EPA's RPM shall have the authority, consistent with the NCP, to halt, conduct, or direct any Work required by this Settlement, or to direct any other response action when s/he determines that conditions at the Site constitute an emergency situation or may present a threat to public health or welfare or the environment. The EPA RPM's absence from the area under study pursuant to this Settlement shall not be cause for stoppage or delay of Work.

VIII. WORK TO BE PERFORMED

58. For any regulation or guidance referenced in the Settlement, 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.

59. Respondents shall conduct the SRI/FS and prepare all plans in accordance with the provisions of this Settlement, the attached SOW, CERCLA, the NCP, and EPA guidance, including, but not limited to the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" ("RI/FS Guidance"), OSWER Directive # 9355.3-01 (October 1988), available at <https://semspub.epa.gov/src/document/11/128301>, "Guidance for Data Useability in Risk Assessment (Part A), Final," OSWER Directive #9285.7-09A, PB 92-963356 (April 1992), available at <http://semspub.epa.gov/src/document/11/156756>, and guidance referenced therein, and guidance referenced in the SOW. The Supplemental Remedial

Investigation (SRI) shall consist of collecting data related to short- and long-term protectiveness issues identified in the Sixth Five-Year Review for the Site, determining the nature and extent of the contamination at or from the Site, assessing risk to human health and the environment, and conducting treatability testing as necessary to evaluate the potential performance and cost of the treatment technologies that are being considered. The Feasibility Study (FFS) shall determine alternatives for additional remedial action at OU 1 directed to resolving short- and long-term remedy protectiveness issues identified in the Sixth Five-Year Review for the Site. In evaluating the alternatives, the FFS shall address the factors required to be taken into account by Section 121 of CERCLA, 42 U.S.C. § 9621, and 40 C.F.R. § 300.430(e).

60. Respondents shall submit all written documents they prepare pursuant to this Settlement in accordance with Section IX (Submission and Approval of Deliverables). With the exception of progress reports and the Health and Safety Plan, EPA will review and approve all such submittals in accordance with Section IX (Submission and Approval of Deliverables). Respondents shall implement all EPA-approved, conditionally approved, or modified deliverables.

61. Upon receipt of the draft Feasibility Study Report (“FFS Report”), EPA will evaluate, as necessary, the estimates of the risk to the public and environment that are expected to remain after a particular remedial alternative has been completed, and will evaluate the cost, implementability, and long-term effectiveness of any proposed ICs for that alternative.

62. Modification of the SRI/FS Work Plan

a. If at any time during the SRI/FS process, Respondents identify a need for additional data, Respondents shall submit a memorandum documenting the need for additional data to EPA’s RPM within 10 days after identification. EPA in its discretion will determine whether Respondents will collect the additional data and whether it will be incorporated into deliverables.

b. In the event of unanticipated or changed circumstances at the Site, Respondents shall notify EPA’s RPM by telephone within 24 hours of discovery of the unanticipated or changed circumstances. In the event that EPA determines that the unanticipated or changed circumstances warrant changes in the SRI/FS Work Plan, EPA shall modify the SRI/FS Work Plan in writing accordingly or direct Respondents to modify and submit the modified SRI/FS Work Plan to EPA for approval. Respondents shall perform the SRI/FS Work Plan as modified.

c. EPA may determine that, in addition to tasks defined in the initially approved SRI/FS Work Plan, other additional work may be necessary to accomplish the objectives of the SRI/FS. Respondents shall perform these response actions in addition to those required by the initially approved SRI/FS Work Plan, including any approved modifications, if EPA determines that such actions are necessary for a thorough SRI/FS.

d. Respondents shall confirm their willingness to perform the additional work in writing to EPA within 7 days after receipt of the EPA request. If Respondents object to any modification EPA determines to be necessary pursuant to this Paragraph, Respondents may seek dispute resolution pursuant to Section XVII (Dispute Resolution).

The SOW and/or SRI/FS Work Plan shall be modified in accordance with the final resolution of the dispute.

e. Respondents shall complete the additional work according to the standards, specifications, and schedule set forth or approved by EPA in a written modification to the SRI/FS Work Plan or written SRI/FS Work Plan supplement. EPA reserves the right to conduct the work itself, to seek reimbursement from Respondents for the costs incurred in performing the work, and/or to seek any other appropriate relief.

f. Nothing in this Paragraph shall be construed to limit EPA's authority to require further response actions at the Site.

63. Off-Site Shipments

a. Respondents 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. 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 from the Site to an out-of-state waste management facility only if, prior to any shipment, they provide written notice to the appropriate state environmental official in the receiving facility's state and to EPA's RPM. This notice requirement shall not apply to any off-Site shipments when the total quantity of all such shipments will not exceed ten cubic yards. The written 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 shall also notify the state environmental official referenced above and EPA's RPM 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 written notice after the award of the contract for the SRI/FS and before the Waste Material is shipped.

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

64. Meetings. Respondents shall make presentations at, and participate in, meetings at EPA's request during the SRI/FS. In addition to discussing the technical aspects of the

SRI/FS, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion.

65. **Progress Reports.** In addition to the deliverables set forth in this Settlement, Respondents shall submit written monthly progress reports to EPA by the tenth day of the following month. At a minimum, with respect to the preceding month, these progress reports shall:

- a. describe the actions that have been taken to comply with this Settlement;
- b. include all results of sampling and tests and all other data Respondents receive;
- c. describe Work planned for the next two months with schedules relating such Work to the overall project schedule for SRI/FS completion; and
- d. describe all problems encountered in complying with the requirements of this Settlement and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

IX. SUBMISSION AND APPROVAL OF DELIVERABLES

66. Submission of Deliverables

a. General Requirements for Deliverables

(1) Except as otherwise provided in this Settlement, Respondents shall direct all submissions required by this Settlement to EPA's RPM at

Kathleen Meier; 312-886-9861; meier.kathleen@epa.gov;
U.S. EPA Region 5
77 West Jackson Boulevard, Mail Code SR-6J
Chicago, Illinois 60604

and to the State at

Jennifer Jevnisek; 651-757-2181; jennifer.jevnisek@state.mn.us;
Minnesota Pollution Control Agency (MPCA)
520 Lafayette Rd North
St. Paul, MN 55155

Respondents shall submit all deliverables required by this Settlement, the attached SOW, or any approved work plan in accordance with the schedule set forth in such plan.

(2) Respondents shall submit all deliverables in electronic form. Technical specifications for sampling and monitoring data and spatial data are addressed in Paragraph 66.b. All other deliverables shall be submitted in the electronic form EPA's RPM specifies. If any deliverable includes maps, drawings, or other exhibits that are larger than 8.5 x 11 inches, Respondents shall also provide paper copies of such exhibits.

b. Technical Specifications for Deliverables

(1) Sampling and monitoring data should be submitted in standard regional Electronic Data Deliverable (EDD) format. Please use the following resources: <https://www.epa.gov/superfund/region-5-superfund-electronic-data-submission> and <https://www.epa.gov/superfund/region-5-superfund-electronic-data-submission-documents>.

(2) Spatial data, including spatially-referenced data and geospatial data, should be submitted: (i) in the ESRI File Geodatabase format; and (ii) 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. Metadata should accompany spatial data, and such metadata should comply 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/>.

(3) Each file must include an attribute name for each site unit or sub-unit submitted. Consult <https://www.epa.gov/geospatial/geospatial-policies-and-standards> for any further available guidance on attribute identification and naming.

(4) Spatial data Respondents submit does not, and is not intended to, define the boundaries of the Site.

67. Approval of Deliverables

a. Initial Submissions

(1) After review of any deliverable that is required to be submitted for EPA approval under this Settlement or the attached SOW, EPA shall: (i) approve, in whole or in part, the submission; (ii) approve the submission upon specified conditions; (iii) disapprove, in whole or in part, the submission; or (iv) any combination of the foregoing.

(2) EPA also may modify the initial submission to cure deficiencies in the submission if: (i) EPA determines that disapproving the submission and

awaiting a resubmission would cause substantial disruption to the Work; or
(ii) previous submission(s) have been disapproved due to material defects and the deficiencies in the initial submission under consideration indicate a bad faith lack of effort to submit an acceptable deliverable.

b. **Resubmissions.** Upon receipt of a notice of disapproval under Paragraph 67.a(1) (Initial Submissions), or if required by a notice of approval upon specified conditions under Paragraph 67.a(1), Respondents shall, within 15 days or such longer time as EPA specifies in such notice, correct the deficiencies and resubmit the deliverable for approval. After review of the resubmitted 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 Respondents to correct the deficiencies; or (e) any combination of the foregoing.

c. **Implementation.** Upon approval, approval upon conditions, or modification by EPA under Paragraph 67.a (Initial Submissions) or Paragraph 67.b (Resubmissions), of any deliverable, or any portion thereof: (i) such deliverable, or portion thereof, will be incorporated into and enforceable under the Settlement; and (ii) Respondents shall take any action required by such deliverable, or portion thereof. Implementation of any non-deficient portion of a submission shall not relieve Respondents of any liability for penalties under Section XIX (Stipulated Penalties) for violations of this Settlement.

68. Notwithstanding the receipt of a notice of disapproval, Respondents shall proceed to take any action required by any non-deficient portion of the submission, unless EPA directs otherwise.

69. In the event that EPA takes over some of the tasks, but not the preparation of the Supplemental Remedial Investigation Report (“SRI Report”) or the FFS Report, Respondents shall incorporate and integrate information supplied by EPA into those reports.

70. Respondents shall not proceed with any activities or tasks dependent on the following deliverables until receiving EPA approval, approval on condition, or modification of such deliverables: SRI/FS Work Plan; Sampling and Analysis Plan; draft SRI Report; Treatability Testing Work Plan; Treatability Testing Sampling and Analysis Plan; Treatability Testing Health and Safety Plan and draft FFS Report. While awaiting EPA approval, approval on condition, or modification of these deliverables, Respondents shall proceed with all other tasks and activities that may be conducted independently of these deliverables, in accordance with the schedule set forth under this Settlement.

71. For all remaining deliverables not listed in Paragraph 70, Respondents shall proceed with all subsequent tasks, activities, and deliverables without awaiting EPA approval of the submitted deliverable. EPA reserves the right to stop Respondents from proceeding further, either temporarily or permanently, on any task, activity or deliverable at any point during the Work.

72. **Material Defects.** If an initially submitted or resubmitted plan, report, or other deliverable contains a material defect, and the plan, report, or other deliverable is disapproved or modified by EPA under Paragraph 67.a (Initial Submissions) or 67.b (Resubmissions) due to such material defect, Respondents shall be deemed in violation of this Settlement for failure to submit such plan, report, or other deliverable timely and adequately. Respondents may be subject to penalties for such violation as provided in Section XIX (Stipulated Penalties).

73. Neither failure of EPA to expressly approve or disapprove of Respondents' submissions within a specified time period, nor the absence of comments, shall be construed as approval by EPA.

X. QUALITY ASSURANCE, SAMPLING, AND DATA ANALYSIS

74. Respondents shall use quality assurance, quality control, and other technical activities and chain of custody procedures for all samples consistent with "EPA Requirements for Quality Assurance Project Plans (QA/R5)," EPA/240/B-01/003 (March 2001, reissued May 2006), "Guidance for Quality Assurance Project Plans (QA/G-5)," EPA/240/R-02/009 (December 2002), and "Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3, EPA/505/B-04/900A-900C (March 2005).

75. Laboratories

a. Respondents shall ensure that EPA personnel and its authorized representatives are allowed access at reasonable times to all laboratories utilized by Respondents pursuant to this Settlement. In addition, Respondents shall ensure that such laboratories shall analyze all samples submitted by EPA pursuant to the Quality Assurance Project Plan (QAPP) for quality assurance, quality control, and technical activities that will satisfy the stated performance criteria as specified in the QAPP and that sampling and field activities are conducted in accordance with the Agency's "EPA QA Field Activities Procedure" CIO 2105-P-02.1 (9/23/2014), available at <https://www.epa.gov/irmpoli8/epa-qa-field-activities-procedures>. Respondents shall ensure that the laboratories they utilize for the analysis of samples taken pursuant to this Settlement meet the competency requirements set forth in EPA's "Policy to Assure Competency of Laboratories, Field Sampling, and Other Organizations Generating Environmental Measurement Data under Agency-Funded Acquisitions," available at <https://www.epa.gov/measurements/documents-about-measurement-competency-under-acquisition-agreements>, and that the laboratories perform all analyses using EPA-accepted methods. Accepted EPA methods consist of, but are not limited to, methods that are documented in the EPA's Contract Laboratory Program (<https://www.epa.gov/superfund/programs/clp/>), SW 846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (<https://www.epa.gov/hw-sw846>), "Standard Methods for the Examination of Water and Wastewater" (<http://www.standardmethods.org/>), and 40 C.F.R. Part 136, "Air Toxics - Monitoring Methods" (<https://www.epa.gov/ttnamti1/airtox.html>).

b. Upon EPA's approval, Respondents may use other appropriate analytical methods, as long as (i) quality assurance/quality control (QA/QC) criteria are contained in the methods and the methods are included in the QAPP, (ii) the analytical methods are at least as stringent as the methods listed above, and (iii) the methods have been approved for use by a nationally recognized organization responsible for verification and publication of analytical methods, e.g., EPA, ASTM, NIOSH, OSHA, etc.

c. Respondents shall ensure that all laboratories they use for analysis of samples taken pursuant to this Settlement have a documented Quality System that complies with ASQ/ANSI E4:2014 "Quality Management Systems for Environmental Information and Technology Programs – Requirements With Guidance for Use" (American Society for Quality, February 2014), and "EPA Requirements for Quality Management Plans (QA/R-2)" EPA/240/B-01/002 (March 2001, reissued May 2006), or equivalent documentation as determined by EPA. EPA may consider Environmental Response Laboratory Network (ERLN) laboratories, laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP), or laboratories that meet International Standardization Organization (ISO 17025) standards or other nationally recognized programs as meeting the Quality System requirements.

d. Respondents shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Settlement are conducted in accordance with the procedures set forth in the approved QAPP.

76. **Sampling**

a. Upon request, Respondents shall provide split or duplicate samples to EPA or its authorized representatives. Respondents shall notify EPA not less than 10 days in advance of any sample collection activity unless shorter notice is agreed to by EPA. In addition, EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall provide to Respondents split or duplicate samples of any samples it takes as part of EPA's oversight of Respondents' implementation of the Work, and any such samples shall be analyzed in accordance with the approved QAPP.

b. Respondents shall submit to EPA, in the next monthly progress report as described in Paragraph 65 (Progress Reports) the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondents with respect to the Site and/or the implementation of this Settlement.

c. Respondents waive any objections to any data gathered, generated, or evaluated by EPA, the State or Respondents in the performance or oversight of the Work that has been verified according to the quality assurance/quality control (QA/QC) procedures required by the Settlement or any EPA-approved SRI/FS Work Plans or Sampling and Analysis Plans. If Respondents object to any other data relating to the SRI/FS, Respondents shall submit to EPA a report that specifically identifies and explains its objections, describes the acceptable uses of the data, if any, and identifies any limitations to the use of the data. The report must be submitted to EPA within 15 days after the monthly progress report containing the data.

XI. PROPERTY REQUIREMENTS

77. **Agreements Regarding Access and Non-Interference.** Respondents shall, with respect to any Non-Settling Owner's Affected Property, use best efforts to secure from such Non-Settling Owner an agreement, enforceable by Respondents and the United States, providing that such Non-Settling Owner: (i) provide EPA and the other Respondents, and their representatives, contractors, and subcontractors with access at all reasonable times to such Affected Property to conduct any activity regarding the Settlement, including those listed in Paragraph 77.a (Access Requirements); and (ii) refrain from using such Affected Property in any manner that EPA determines will pose an unacceptable risk to human health or to the environment due to exposure to Waste Material, or interfere with or adversely affect the implementation or integrity of the Work. Respondents shall provide a copy of any such access and use restriction agreement(s) to EPA.

a. **Access Requirements.** The following is a list of activities for which access is required regarding the Affected Property:

- (1) Monitoring the Work;
- (2) Verifying any data or information submitted to EPA;
- (3) Conducting investigations regarding contamination at or near the Site;
- (4) Obtaining samples;
- (5) Assessing the need for, planning, implementing, or monitoring response actions;
- (6) Assessing implementation of quality assurance and quality control practices as defined in the approved QAPP;
- (7) Implementing the Work pursuant to the conditions set forth in Paragraph 118 (Work Takeover);
- (8) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Respondents or their agents, consistent with Section XII (Access to Information);
- (9) Assessing Respondents' compliance with the Settlement;
- (10) Determining whether the Affected Property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under the Settlement; and

(11) Implementing, monitoring, maintaining, reporting on, and enforcing any land, water, or other resource use restrictions regarding the Affected Property.

78. **Best Efforts.** As used in this Section, “best efforts” means the efforts that a reasonable person in the position of Respondents would use so as to achieve the goal in a timely manner, including the cost of employing professional assistance and the payment of reasonable sums of money to secure access and/or use restriction agreements, as required by this Section. If Respondents are unable to accomplish what is required through “best efforts” in a timely manner, they shall notify EPA and include a description of the steps taken to comply with the requirements. If EPA deems it appropriate, it may assist Respondents, or take independent action, in obtaining such access and/or use restrictions. All costs incurred by the United States in providing such assistance or taking such action, including the cost of attorney time and the amount of monetary consideration or just compensation paid, constitute Future Response Costs to be reimbursed under Section XVI (Payment of Response Costs).

79. If EPA determines in a decision document prepared in accordance with the NCP that Institutional Controls in the form of state or local laws, regulations, ordinances, zoning restrictions, or other governmental controls or notices are needed, Respondents shall cooperate with EPA’s efforts to secure and ensure compliance with such Institutional Controls.

80. In the event of any Transfer of the Affected Property, unless EPA otherwise consents in writing, Respondents shall continue to comply with their obligations under the Settlement, including their obligation to secure access and ensure compliance with any land, water, or other resource use restrictions regarding the Affected Property.

81. Notwithstanding any provision of the Settlement, EPA retains all of its access authorities and rights, as well as all of its rights to require land, water, or other resource use restrictions, including enforcement authorities related thereto under CERCLA, RCRA, and any other applicable statute or regulations.

XII. ACCESS TO INFORMATION

82. Respondents shall provide to EPA, upon request, copies of all records, reports, documents, and other information (including records, reports, documents, and other information in electronic form) (hereinafter referred to as “Records”) within Respondents’ possession or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Settlement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information regarding the Work. Respondents shall also make available to EPA, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

83. Privileged and Protected Claims

a. Respondents may assert that all or part of a Record EPA requests is privileged or protected as provided under federal law, in lieu of providing the Record,

provided Respondents comply with Paragraph 83.b, and except as provided in Paragraph 83.b.

b. If Respondents assert a claim of privilege or protection, they shall provide EPA with the following information regarding such Record: its title; its date; the name, title, affiliation (e.g., company or firm), and address of the author, of each addressee, and of each recipient; a description of the Record's contents; and the privilege or protection asserted. If a claim of privilege or protection applies only to a portion of a Record, Respondents shall provide the Record to EPA in redacted form to mask the privileged or protected portion only. Respondents shall retain all Records that they claim to be privileged or protected until EPA has had a reasonable opportunity to dispute the privilege or protection claim and any such dispute has been resolved in Respondents' favor.

c. Respondents may make no claim of privilege or protection regarding: (1) any data regarding the Site, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, radiological, or engineering data, or the portion of any other Record that evidences conditions at or around the Site; or (2) the portion of any Record that Respondents are required to create or generate pursuant to this Settlement.

84. **Business Confidential Claims.** Respondents may assert that all or part of a Record provided to EPA under this Section or Section XIII (Record Retention) is business confidential to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Respondents shall segregate and clearly identify all Records or parts thereof submitted under this Settlement for which Respondents assert business confidentiality claims. Records claimed as confidential business information will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies Records when they are submitted to EPA, or if EPA has notified Respondents that the Records are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to Respondents.

85. Notwithstanding any provision of this Settlement, EPA retains all of its information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XIII. RECORD RETENTION

86. Until ten (10) years after EPA provides Respondents with notice, pursuant to Section XXIX (Notice of Completion of Work), that all Work has been fully performed in accordance with this Settlement, each Respondent shall preserve and retain all non-identical copies of Records (including Records in electronic form) now in its possession or control, or that come into its possession or control, that relate in any manner to its liability under CERCLA with regard to the Site, provided, however, that Respondents who are potentially liable as owners or operators of the Site must retain, in addition, all Records that relate to the liability of any other person under CERCLA with respect to the Site. Each Respondent must also retain, and instruct

its contractors and agents to preserve, for the same period of time specified above all non-identical copies of the last draft or final version of any Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Work, provided, however, that each Respondent (and its contractors and agents) must retain, in addition, copies of all data generated during the performance of the Work and not contained in the aforementioned Records required to be retained. Each of the above record retention requirements shall apply regardless of any corporate retention policy to the contrary.

87. At the conclusion of the document retention period, Respondents shall notify EPA at least 90 days prior to the destruction of any such Records, and, upon EPA's request, and except as provided in Paragraph 83 (Privileged and Protected Claims), Respondents shall deliver any such Records to EPA.

88. Each Respondent certifies individually that, to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any Records (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by EPA or the State and that it has fully complied with any and all EPA and State requests for information regarding the Site pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927, and state law.

XIV. COMPLIANCE WITH OTHER LAWS

89. Nothing in this Settlement limits Respondent's obligations to comply with the requirements of all applicable state and federal laws and regulations when performing the SRI/FS. No local, state, or federal permit shall be required for any portion of the Work conducted entirely on-site (i.e., within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Work), including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work that is not on-site requires a federal or state permit or approval, Respondents shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. Respondents may seek relief under the provisions of Section XVIII (Force Majeure) for any delay in the performance of the Work resulting from a failure to obtain, or a delay in obtaining, any permit or approval required for the Work, provided that they have submitted timely and complete applications and taken all other actions necessary to obtain all such permits or approvals. This Settlement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XV. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

90. **Emergency Response.** If any event occurs during performance of the Work that causes or threatens to cause a release of Waste Material on, at, or from the Site that either constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action to prevent, abate, or minimize such release or threat of release. Respondents shall take these actions in accordance

with all applicable provisions of this Settlement, including, but not limited to, the Health and Safety Plan. Respondents shall also immediately notify EPA's RPM or, in the event of his/her unavailability, the Regional Duty Officer, Emergency Response Branch, EPA Region 5 at (312) 353-2318 of the incident or Site conditions. In the event that Respondents fail to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondents shall reimburse EPA for all costs of such response action not inconsistent with the NCP pursuant to Section XVI (Payment of Response Costs).

91. **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 orally notify EPA's RPM or, in the event of his/her unavailability, the Regional Duty Officer, Emergency Response Branch, EPA Region 5 at (312) 353-2318 and the National Response Center at (800) 424-8802. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103 of CERCLA, 42 U.S.C. § 9603, and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004.

92. For any event covered under this Section, Respondents shall submit a written report to EPA within 7 days after the onset of such event, setting forth the action or event that occurred and the measures taken, and to be taken, to mitigate any release or threat of release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release or threat of release.

XVI. PAYMENT OF RESPONSE COSTS

93. **Payments for Future Response Costs.** Respondents shall pay to EPA all Future Response Costs not inconsistent with the NCP.

a. **Periodic Bill.** On a periodic basis, EPA will send Respondents a bill requiring payment that includes an Itemized Cost Summary, which includes direct and indirect costs EPA, its contractors, subcontractors, and the United States Department of Justice incur. Respondents shall make all payments within 30 days after Respondents' receipt of each bill requiring payment, except as otherwise provided in Paragraph 95 (Contesting Future Response Costs). Respondents shall make the payment at <https://www.pay.gov> in accordance with the following payment instructions: enter "sfo 1.1" in the search field to access EPA's Miscellaneous Payment Form – Cincinnati Finance Center. Complete the form, including the Site Name, docket number, and Site/Spill ID Number 051T. Respondents shall send to EPA, in accordance with Paragraph 56, a notice of this payment including these references.

b. **Deposit of Future Response Costs Payments.** The total amount to be paid by Respondents pursuant to Paragraph 93.a (Periodic Bill) shall be deposited by EPA in the Waite Park Wells Special Account to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund, provided, however, that EPA may deposit a Future Response Costs payment directly into the EPA Hazardous Substance Superfund if,

at the time the payment is received, EPA estimates that the Waite Park Wells Special Account balance is sufficient to address currently anticipated future response actions to be conducted or financed by EPA at or in connection with the Site.

94. **Interest.** In the event that any payment for Future Response Costs is not made by the date required, Respondents shall pay Interest on the unpaid balance. The Interest on Future Response Costs shall begin to accrue on the date of the bill. The Interest shall accrue through the date of Respondents' payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondents' failure to make timely payments under this Section, including but not limited to, payment of stipulated penalties pursuant to Section XIX (Stipulated Penalties).

95. **Contesting Future Response Costs.** Respondents may initiate the procedures of Section XVII (Dispute Resolution) regarding payment of any Future Response Costs billed under Paragraph 93 (Payments for Future Response Costs) if they determine that EPA has made a mathematical error or included a cost item that is not within the definition of Future Response Costs, or if they believe EPA incurred excess costs as a direct result of an EPA action that was inconsistent with a specific provision or provisions of the NCP. To initiate such a dispute, Respondents shall submit a Notice of Dispute in writing to EPA's RPM within 30 days after receipt of the bill. Any such Notice of Dispute shall specifically identify the contested Future Response Costs and the basis for objection. If Respondents submit a Notice of Dispute, Respondents shall within the 30-day period, also as a requirement for initiating the dispute, (a) pay all uncontested Future Response Costs to EPA in the manner described in Paragraph 93, and (b) establish, in a duly chartered bank or trust company, an interest-bearing escrow account that is insured by the Federal Deposit Insurance Corporation (FDIC) and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. Respondents shall send to EPA's RPM a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. If EPA prevails in the dispute, within 5 days after the resolution of the dispute, Respondents shall pay the sums due (with accrued interest) to EPA in the manner described in Paragraph 93. If Respondents prevail concerning any aspect of the contested costs, Respondents shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to EPA in the manner described in Paragraph 93. Respondents shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XVII (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondents' obligation to reimburse EPA for its Future Response Costs.

XVII. DISPUTE RESOLUTION

96. Unless otherwise expressly provided for in this Settlement, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement. The Parties shall attempt to resolve any disagreements concerning this Settlement expeditiously and informally.

97. **Informal Dispute Resolution.** If Respondents object to any EPA action taken pursuant to this Settlement, including billings for Future Response Costs, they shall send EPA a written Notice of Dispute describing the objection(s) within 10 days after such action. EPA and Respondents shall have 30 days from EPA's receipt of Respondents' Notice of Dispute to resolve the dispute through informal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at EPA's sole discretion. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon the Parties' signature, be incorporated into and become an enforceable part of this Settlement.

98. **Formal Dispute Resolution.** If the Parties are unable to reach an agreement within the Negotiation Period, Respondents shall, within 20 days after the end of the Negotiation Period, submit a statement of position to EPA's RPM. EPA may, within 20 days thereafter, submit a statement of position. Thereafter, an EPA management official at the Division Director level or higher will issue a written decision on the dispute to Respondents. EPA's decision shall be incorporated into and become an enforceable part of this Settlement. Respondents shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs.

99. Except as provided in Paragraph 95 (Contesting Future Response Costs) or as agreed by EPA, the invocation of formal dispute resolution procedures under this Section does not extend, postpone, or affect in any way any obligation of Respondents under this Settlement. Except as provided in Paragraph 110, stipulated penalties with respect to the disputed matter shall continue to accrue but payment shall be stayed pending resolution of the dispute. Notwithstanding the stay of payment, stipulated penalties shall accrue from the first day of noncompliance with any applicable provision of this Settlement. In the event that Respondents do not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XIX (Stipulated Penalties).

XVIII. FORCE MAJEURE

100. "Force Majeure" for purposes of this Settlement, is defined as any event arising from causes beyond the control of Respondents, of any entity controlled by Respondents, or of Respondents' contractors, that delays or prevents the performance of any obligation under this Settlement despite Respondents' best efforts to fulfill the obligation. The requirement that Respondents exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure and best efforts to address the effects of any potential force majeure (a) as it is occurring and (b) following the potential force majeure such that the delay and any adverse effects of the delay are minimized to the greatest extent possible. "Force majeure" does not include financial inability to complete the Work or increased cost of performance.

101. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement, Respondents shall notify EPA's RPM orally or, in his or her absence, the alternate EPA RPM, or, in the event both of EPA's designated representatives are unavailable, the Director of the Superfund and Emergency Management Division, EPA Region 5, within 3 days of when Respondents first knew that the event might cause a delay. Within 3 days thereafter, Respondents shall provide in writing to EPA an explanation and description of

the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondents' rationale for attributing such delay to a force majeure; and a statement as to whether, in the Respondents' opinion, such event may cause or contribute to an endangerment to public health or welfare, or the environment. Respondents shall include with any notice all available documentation supporting their claim that the delay was attributable to a force majeure. Respondents shall be deemed to know of any circumstance of which Respondents, any entity controlled by Respondents, or Respondents' contractors knew or should have known. Failure to comply with the above requirements regarding an event shall preclude Respondents from asserting any claim of force majeure regarding that event, provided, however, that if EPA, despite the late or incomplete notice, is able to assess to its satisfaction whether the event is a force majeure under Paragraph 100 and whether Respondents have exercised their best efforts under Paragraph 100, EPA may, in its unreviewable discretion, excuse in writing Respondents' failure to submit timely or complete notices under this Paragraph.

102. If EPA agrees that the delay or anticipated delay is attributable to a force majeure, EPA will extend the time for performance of the obligations under this Settlement that are affected by the force majeure for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure, EPA will notify Respondents in writing of its decision. If EPA agrees that the delay is attributable to a force majeure, EPA will notify Respondents in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure.

103. If Respondents elect to invoke the dispute resolution procedures set forth in Section XVII (Dispute Resolution), they shall do so no later than 15 days after receipt of EPA's notice. In any such proceeding, Respondents shall have the burden of demonstrating by a preponderance of the evidence that a force majeure has caused or will cause the delay or anticipated delay, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondents complied with the requirements of Paragraphs 100 and 101. If Respondents carry this burden, the delay at issue shall be deemed not to be a violation by Respondents of the affected obligation of this Settlement identified to EPA.

104. The failure by EPA to timely complete any obligation under the Settlement is not a violation of the Settlement, provided, however, that if such failure prevents Respondents from meeting one or more deadlines under the Settlement, Respondents may seek relief under this Section.

XIX. STIPULATED PENALTIES

105. Respondents shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 106.a and 107 for failure to comply with the obligations specified in Paragraphs 106.b and 107, unless excused under Section XVIII (Force Majeure). "Comply" as

used in the previous sentence includes compliance by Respondents with all applicable requirements of this Settlement, within the deadlines established under this Settlement.

106. Stipulated Penalty Amounts: Payments, Financial Assurance, Major Deliverables, and Other Milestones

a. The following stipulated penalties shall accrue per violation per day for any noncompliance with any obligation identified in Paragraph 106.b:

Penalty Per Violation Per Day	Period of Noncompliance
\$1,000	1st through 14th day
\$2,000	15th through 30th day
\$3,000	31st day and beyond

b. **Obligations**

(1) Payment of any amount due under Section XVI (Payment of Response Costs).

(2) Establishment and maintenance of financial assurance in accordance with Section XXVII (Financial Assurance).

(3) Establishment of an escrow account to hold any disputed Future Response Costs under Paragraph 95 (Contesting Future Response Costs).

107. Stipulated Penalty Amounts: Other Deliverables. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate deliverables required by this Settlement, other than those specified in Paragraph 106.b:

Penalty Per Violation Per Day	Period of Noncompliance
\$750	1st through 14th day
\$1,500	15th through 30th day
\$3,000	31st day and beyond

108. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 118 (Work Takeover), Respondents shall be liable for a stipulated penalty in the amount of \$5,000. Stipulated penalties under this Paragraph are in addition to the remedies available to EPA under Paragraphs 118 (Work Takeover) and 141 (Access to Financial Assurance). All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. Penalties shall continue to accrue during any dispute resolution period and shall be paid within 15 days after the agreement or the receipt of EPA's decision. However, stipulated penalties shall not accrue: (a) with respect to a deficient submission under Section IX (Submission and Approval of Deliverables), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondents of any deficiency; and (b) with respect to a decision by the EPA Management Official at the Division Director level or higher, under Paragraph 98 (Formal

Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the EPA Management Official issues a final decision regarding such dispute. Nothing in this Settlement shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement.

109. Following EPA's determination that Respondents have failed to comply with a requirement of this Settlement, EPA may give Respondents written notification of the failure and describe the noncompliance. EPA may send Respondents a written demand for the payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified Respondents of a violation.

110. All penalties accruing under this Section shall be due and payable to EPA within 30 days after Respondents' receipt from EPA of a demand for payment of the penalties, unless Respondents invoke the Dispute Resolution procedures under Section XVII (Dispute Resolution) within the 30-day period. Respondents shall make all payments and shall send notice of such payments in accordance with the procedures under Paragraph 93 (Payments for Future Response Costs). Respondents shall indicate in the comment field on the www.pay.gov payment form that the payment is for stipulated penalties.

111. If Respondents fail to pay stipulated penalties when due, Respondents shall pay Interest on the unpaid stipulated penalties as follows: (a) if Respondents have timely invoked dispute resolution such that the obligation to pay stipulated penalties has been stayed pending the outcome of dispute resolution, Interest shall accrue from the date stipulated penalties are due pursuant to Paragraph 108 until the date of payment; and (b) if Respondents fail to timely invoke dispute resolution, Interest shall accrue from the date of demand under Paragraph 110 until the date of payment. If Respondents fail to pay stipulated penalties and Interest when due, the United States may institute proceedings to collect the penalties and Interest.

112. The payment of penalties and Interest, if any, shall not alter in any way Respondents' obligation to complete performance of the Work required under this Settlement.

113. Nothing in this Settlement shall be construed as prohibiting, altering, or in any way limiting EPA's ability to seek any other remedies or sanctions available by virtue of Respondents' violation of this Settlement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(*l*) of CERCLA, 42 U.S.C. § 9622(*l*), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), provided, however, that EPA shall not seek civil penalties pursuant Section 122(*l*) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided in this Settlement, except in the case of willful violation of this Settlement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 118 (Work Takeover).

114. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement.

XX. COVENANTS BY EPA

115. Except as provided in Section XXI (Reservations of Rights by EPA), EPA covenants not to sue or to take administrative action against Respondents pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work and Future Response Costs. These covenants shall take effect upon the Effective Date. These covenants are conditioned upon the Respondents' complete and satisfactory performance of their obligations under this Settlement. These covenants extend only to Respondents and do not extend to any other person.

XXI. RESERVATIONS OF RIGHTS BY EPA

116. Except as specifically provided in this Settlement, nothing in this Settlement shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants, or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing in this Settlement shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law.

117. The covenant not to sue set forth in Section XX (Covenants by EPA) above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement is without prejudice to, all rights against Respondents with respect to all other matters, including, but not limited to:

- a. liability for failure by Respondents to meet a requirement of this Settlement;
- b. liability for costs not included within the definition of Future Response Costs;
- c. liability for performance of response action other than the Work;
- d. criminal liability;
- e. liability for violations of federal or state law that occur during or after implementation of the Work;
- f. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;
- g. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and

h. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site not paid as Future Response Costs under this Settlement.

118. **Work Takeover**

a. In the event EPA determines that Respondents: (1) have ceased implementation of any portion of the Work; (2) are seriously or repeatedly deficient or late in their performance of the Work; or (3) are implementing the Work in a manner that may cause an endangerment to human health or the environment, EPA may issue a written notice (“Work Takeover Notice”) to Respondents. Any Work Takeover Notice issued by EPA (which writing may be electronic) will specify the grounds upon which such notice was issued and will provide Respondents a period of 10 days within which to remedy the circumstances giving rise to EPA’s issuance of such notice.

b. If, after expiration of the 10-day notice period specified in Paragraph 118.a, Respondents have not remedied to EPA’s satisfaction the circumstances giving rise to EPA’s issuance of the relevant Work Takeover Notice, EPA may at any time thereafter assume the performance of all or any portion(s) of the Work as EPA deems necessary (“Work Takeover”). EPA will notify Respondents in writing (which writing may be electronic) if EPA determines that implementation of a Work Takeover is warranted under this Paragraph. Funding of Work Takeover costs is addressed under Paragraph 141 (Access to Financial Assurance). Respondents may invoke the procedures set forth in Section XVII (Dispute Resolution) to dispute EPA’s implementation of a Work Takeover under Paragraph 118.a. However, notwithstanding Respondents’ invocation of such dispute resolution procedures, and during the pendency of any such dispute, EPA may in its sole discretion commence and continue a Work Takeover under Paragraph 118.a until the earlier of (1) the date that Respondents remedy, to EPA’s satisfaction, the circumstances giving rise to EPA’s issuance of the relevant Work Takeover Notice, or (2) the date that a written decision terminating such Work Takeover is rendered in accordance with Paragraph 98 (Formal Dispute Resolution).

c. Notwithstanding any other provision of this Settlement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

XXII. COVENANTS BY RESPONDENTS

119. Respondents covenant not to sue and agree not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, Future Response Costs, or this Settlement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the EPA Hazardous Substance Superfund through Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claims under Sections 107 and 113 of CERCLA, Section 7002(a) of RCRA, 42 U.S.C. § 6972(a), or state law regarding the Work, Future Response Costs, and this Settlement; or

c. any claim arising out of response actions at or in connection with the Site, including any claim under the United States Constitution, the Minnesota Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, or at common law.

120. Except as provided in Paragraph 123 (Waiver of Claims by Respondents) these covenants not to sue shall not apply in the event the United States brings a cause of action or issues an order pursuant to the reservations set forth in Section XXI (Reservations of Rights by EPA), other than in Paragraph 117.a (liability for failure to meet a requirement of the Settlement), 117.d (criminal liability), or 117.e (liability for violations of federal or state law), but only to the extent that Respondents' claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

121. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

122. Respondents reserve, and this Settlement is without prejudice to, claims against the United States, subject to the provisions of Chapter 171 of Title 28 of the United States Code, and brought pursuant to any statute other than CERCLA or RCRA and for which the waiver of sovereign immunity is found in a statute other than CERCLA or RCRA, for money damages for injury or loss of property or personal injury or death caused by the negligent or wrongful act or omission of any employee of the United States, as that term is defined in 28 U.S.C. § 2671, while acting within the scope of his or her office or employment under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred. However, the foregoing shall not include any claim based on EPA's selection of response actions, or the oversight or approval of Respondents' deliverables or activities.

123. **Waiver of Claims by Respondents**

a. Respondents agree not to assert any claims and to waive all claims or causes of action (including but not limited to claims or causes of action under Sections 107(a) and 113 of CERCLA) that they may have:

(1) **De Micromis Waiver.** For all matters relating to the Site against any person where the person's liability to Respondents with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Site, or having accepted for transport for disposal or treatment of hazardous substances at the Site, if all or part of the disposal, treatment, or transport occurred before April 1, 2001, and the total amount of material containing hazardous substances contributed by such person to the Site was less than 110 gallons of liquid materials or 200 pounds of solid materials;

XXIII. OTHER CLAIMS

124. By issuance of this Settlement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents. The United States or EPA shall not be deemed a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Settlement.

125. Except as expressly provided in Paragraphs 123 (Waiver of Claims by Respondents) and Section XX (Covenants by EPA), nothing in this Settlement constitutes a satisfaction of or release from any claim or cause of action against Respondents or any person not a party to this Settlement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages, and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

126. No action or decision by EPA pursuant to this Settlement shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXIV. EFFECT OF SETTLEMENT/CONTRIBUTION

127. Except as provided in Paragraphs 123 (Waiver of Claims by Respondents), nothing in this Settlement shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Settlement. Except as provided in Section XXII (Covenants by Respondents), each of the Parties expressly reserves any and all rights (including, but not limited to, pursuant to Section 113 of CERCLA, 42 U.S.C. § 9613), defenses, claims, demands, and causes of action which each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto. Nothing in this Settlement diminishes the right of the United States, pursuant to Section 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

128. The Parties agree that this Settlement constitutes an administrative settlement pursuant to which each Respondent has, as of the Effective Date, resolved liability to the United States within the meaning of Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), and is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, or as may be otherwise provided by law, for the “matters addressed” in this Settlement. The “matters addressed” in this Settlement are the Work and Future Response Costs.

129. The Parties further agree that this Settlement constitutes an administrative settlement pursuant to which each Respondent has, as of the Effective Date, resolved liability to the United States within the meaning of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B).

130. Each Respondent shall, with respect to any suit or claim brought by it for matters related to this Settlement, notify EPA in writing no later than 60 days prior to the initiation of such suit or claim. Each Respondent also shall, with respect to any suit or claim brought against

it for matters related to this Settlement, notify EPA in writing within 10 days after service of the complaint or claim upon it. In addition, each Respondent shall notify EPA within 10 days after service or receipt of any Motion for Summary Judgment and within 10 days after receipt of any order from a court setting a case for trial, for matters related to this Settlement.

131. In any subsequent administrative or judicial proceeding EPA initiates, or the United States initiates on EPA's behalf, for injunctive relief, recovery of response costs, or other relief relating to the Site, Respondents shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenant by EPA set forth in Section XX (Covenants By EPA).

XXV. INDEMNIFICATION

132. The United States does not assume any liability by entering into this Settlement or by virtue of any designation of Respondents as EPA's authorized representatives under Section 104(e) of CERCLA, 42 U.S.C. § 9604(e), and 40 C.F.R. § 300.400(d)(3). Respondents shall indemnify, save, and hold harmless the United States, its officials, agents, employees, contractors, subcontractors, and representatives for or from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Respondents, their officers, directors, employees, agents, contractors, or subcontractors, and any persons acting on Respondents' behalf or under their control, in carrying out activities pursuant to this Settlement. Further, Respondents agree to pay the United States all costs it incurs, including but not limited to attorneys' fees and other expenses of litigation and settlement arising from, or on account of, claims made against the United States based on negligent or other wrongful acts or omissions of Respondents, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Settlement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondents in carrying out activities pursuant to this Settlement. Neither Respondents nor any such contractor shall be considered an agent of the United States.

133. The United States shall give Respondents notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondents prior to settling such claim.

134. Respondents covenant not to sue and agree not to assert any claims or causes of action against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between any one or more of Respondents and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, Respondents shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between any one or more of Respondents and any person for

performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

XXVI. INSURANCE

135. No later than 30 days before commencing any on-site Work, Respondents shall secure, and shall maintain until the first anniversary after issuance of Notice of Completion of Work pursuant to Section XXIX (Notice of Completion of Work), commercial general liability insurance with limits of liability of \$1 million per occurrence, automobile liability insurance with limits of liability of \$1 million per accident, and umbrella liability insurance with limits of liability of \$5 million in excess of the required commercial general liability and automobile liability limits, naming EPA as an additional insured with respect to all liability arising out of the activities performed by or on behalf of Respondents pursuant to this Settlement. In addition, for the duration of the Settlement, Respondents shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondents shall resubmit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement, Respondents shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing Work on behalf of Respondents in furtherance of this Settlement. If Respondents demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in a lesser amount, then, with respect to the contractor or subcontractor, Respondents need provide only that portion of the insurance described above that is not maintained by the contractor or subcontractor. Respondents shall ensure that all submittals to EPA under this Paragraph identify the Waite Park Wells, St. Cloud, Minnesota and the EPA docket number for this action.

XXVII. FINANCIAL ASSURANCE

136. In order to ensure completion of the Work, Respondents shall secure financial assurance, initially in the amount of \$2,000,000 ("Estimated Cost of the Work"), for the benefit of EPA. The financial assurance must be one or more of the mechanisms listed below, in a form substantially identical to the relevant sample documents available from EPA or under the "Financial Assurance - Settlements" category on the Cleanup Enforcement Model Language and Sample Documents Database at <https://cfpub.epa.gov/compliance/models/>, and satisfactory to EPA. Respondents may use multiple mechanisms if they are limited to surety bonds guaranteeing payment, letters of credit, trust funds, and/or insurance policies.

- a. A surety bond guaranteeing payment and/or performance of the Work that is issued by a surety company among those listed as acceptable sureties on federal bonds as set forth in Circular 570 of the U.S. Department of the Treasury;
- b. An irrevocable letter of credit, payable to or at the direction of EPA, that is issued by an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency;

c. A trust fund established for the benefit of EPA that is administered by a trustee that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency;

d. A policy of insurance that provides EPA with acceptable rights as a beneficiary thereof and that is issued by an insurance carrier that has the authority to issue insurance policies in the applicable jurisdiction(s) and whose insurance operations are regulated and examined by a federal or state agency;

e. A demonstration by a Respondent that it meets the financial test criteria of Paragraph 138, accompanied by a standby funding commitment, which obligates the affected Respondent to pay funds to or at the direction of EPA, up to the amount financially assured through the use of this demonstration in the event of a Work Takeover; or

f. A guarantee to fund or perform the Work executed in favor of EPA by a company: (1) that is a direct or indirect parent company of a Respondent or has a “substantial business relationship” (as defined in 40 C.F.R. § 264.141(h)) with a Respondent; and (2) can demonstrate to EPA’s satisfaction that it meets the financial test criteria of Paragraph 138.

137. Respondents shall, within 30 days of the Effective Date, obtain EPA’s approval of the form of Respondents’ financial assurance. Within 30 days of such approval, Respondents shall secure all executed and/or otherwise finalized mechanisms or other documents consistent with the EPA-approved form of financial assurance and shall submit such mechanisms and documents to the Regional Financial Management Officer at U.S. EPA Region 5, 77 West Jackson Boulevard, Mail Code MC-10J, Chicago, Illinois 60604, with a reference to this Site.

138. Respondents seeking to provide financial assurance by means of a demonstration or guarantee under Paragraph 136.e or 136.f, must, within 30 days of the Effective Date:

a. Demonstrate that:

(1) the affected Respondent or guarantor has:

- i. Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and
- ii. Net working capital and tangible net worth each at least six times the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee; and
- iii. Tangible net worth of at least \$10 million; and

- iv. Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee; or

(2) The affected Respondent or guarantor has:

- i. A current rating for its senior unsecured debt of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A or Baa as issued by Moody's; and
- ii. Tangible net worth at least six times the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee; and
- iii. Tangible net worth of at least \$10 million; and
- iv. Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the Estimated Cost of the Work and the amounts, if any, of other federal, state, or tribal environmental obligations financially assured through the use of a financial test or guarantee; and

b. Submit to EPA for the affected Respondent or guarantor: (1) a copy of an independent certified public accountant's report of the entity's financial statements for the latest completed fiscal year, which must not express an adverse opinion or disclaimer of opinion; and (2) a letter from its chief financial officer and a report from an independent certified public accountant substantially identical to the sample letter and reports available from EPA or under the "Financial Assurance-Settlements" subject list category on the Cleanup Enforcement Model Language and Sample Documents Database at <https://cfpub.epa.gov/compliance/models/>.

139. Respondents providing financial assurance by means of a demonstration or guarantee under Paragraph 136.e or 136.f must also:

a. Annually resubmit the documents described in Paragraph 138.b within 90 days after the close of the affected Respondent's or guarantor's fiscal year;

b. Notify EPA within 30 days after the affected Respondent or guarantor determines that it no longer satisfies the relevant financial test criteria and requirements set forth in this Section; and

c. Provide to EPA, within 30 days of EPA's request, reports of the financial condition of the affected Respondent or guarantor in addition to those specified in Paragraph 138.b; EPA may make such a request at any time based on a belief that the affected Respondent or guarantor may no longer meet the financial test requirements of this Section.

140. Respondents shall diligently monitor the adequacy of the financial assurance. If any Respondent becomes aware of any information indicating that the financial assurance provided under this Section is inadequate or otherwise no longer satisfies the requirements of this Section, such Respondent shall notify EPA of such information within 7 days. If EPA determines that the financial assurance provided under this Section is inadequate or otherwise no longer satisfies the requirements of this Section, EPA will notify the affected Respondent of such determination. Respondents shall, within 30 days after notifying EPA or receiving notice from EPA under this Paragraph, secure and submit to EPA for approval a proposal for a revised or alternative financial assurance mechanism that satisfies the requirements of this Section. EPA may extend this deadline for such time as is reasonably necessary for the affected Respondent, in the exercise of due diligence, to secure and submit to EPA a proposal for a revised or alternative financial assurance mechanism, not to exceed 60 days. Respondents shall follow the procedures of Paragraph 142 (Modification of Amount, Form, or Terms of Financial Assurance) in seeking approval of, and submitting documentation for, the revised or alternative financial assurance mechanism. Respondents' inability to secure financial assurance in accordance with this Section does not excuse performance of any other obligation under this Settlement.

141. Access to Financial Assurance

a. If EPA issues a notice of implementation of a Work Takeover under Paragraph 118.a, then, in accordance with any applicable financial assurance mechanism, EPA is entitled to: (1) the performance of the Work; and/or (2) require that any funds guaranteed be paid in accordance with Paragraph 141.d.

b. If EPA is notified by the issuer of a financial assurance mechanism that it intends to cancel the mechanism, and the affected Respondent fails to provide an alternative financial assurance mechanism in accordance with this Section at least 30 days prior to the cancellation date, the funds guaranteed under such mechanism must be paid prior to cancellation in accordance with Paragraph 141.d.

c. If, upon issuance of a notice of implementation of a Work Takeover under Paragraph 118.a, either: (1) EPA is unable for any reason to promptly secure the resources guaranteed under any applicable financial assurance mechanism, whether in cash or in kind, to continue and complete the Work; or (2) the financial assurance is a demonstration or guarantee under Paragraphs 136.e or 136.f, then EPA is entitled to demand an amount, as determined by EPA, sufficient to cover the cost of the remaining Work to be performed. Respondents shall, within 30 days of such demand, pay the amount demanded as directed by EPA.

d. Any amounts required to be paid under this Paragraph 141 shall be, as directed by EPA: (i) paid to EPA in order to facilitate the completion of the Work by

EPA or by another person; or (ii) deposited into an interest-bearing account, established at a duly chartered bank or trust company that is insured by the FDIC, in order to facilitate the completion of the Work by another person. If payment is made to EPA, EPA may deposit the payment into the EPA Hazardous Substance Superfund or into the Waite Park Wells Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

e. All EPA Work Takeover costs not paid under this Paragraph 141 must be reimbursed as Future Response Costs under Section XVI (Payment of Response Costs).

142. Modification of Amount, Form, or Terms of Financial Assurance.

Respondents may submit, on any anniversary of the Effective Date or at any other time agreed to by the Parties, a request to reduce the amount, or change the form or terms, of the financial assurance mechanism. Any such request must be submitted to EPA in accordance with Paragraph 137, and must include an estimate of the cost of the remaining Work, an explanation of the bases for the cost calculation, and a description of the proposed changes, if any, to the form or terms of the financial assurance. EPA will notify Respondents of its decision to approve or disapprove a requested reduction or change pursuant to this Paragraph. Respondents may reduce the amount of the financial assurance mechanism only in accordance with: (a) EPA's approval; or (b) if there is a dispute, the agreement or written decision resolving such dispute under Section XVII (Dispute Resolution). Respondents may change the form or terms of the financial assurance mechanism only in accordance with EPA's approval. Any decision made by EPA on a request submitted under this Paragraph to change the form or terms of a financial assurance mechanism shall not be subject to challenge by Respondents pursuant to the dispute resolution provisions of this Settlement or in any other forum. Within 30 days after receipt of EPA's approval of, or the agreement or decision resolving a dispute relating to, the requested modifications pursuant to this Paragraph, Respondents shall submit to EPA documentation of the reduced, revised, or alternative financial assurance mechanism in accordance with Paragraph 137.

143. Release, Cancellation, or Discontinuation of Financial Assurance.

Respondents may release, cancel, or discontinue any financial assurance provided under this Section only: (a) if EPA issues a Notice of Completion of Work under Section XXIX (Notice of Completion of Work); (b) in accordance with EPA's approval of such release, cancellation, or discontinuation; or (c) if there is a dispute regarding the release, cancellation or discontinuance of any financial assurance, in accordance with the agreement or final decision resolving such dispute under Section XVII (Dispute Resolution).

XXVIII. MODIFICATION

144. EPA's RPM may modify any plan, or schedule, or the SOW in writing or by oral direction. EPA shall promptly memorialize in writing any oral modification, but the modification's effective date shall be the date of EPA's RPM's oral direction. Any other requirements of this Settlement may be modified in writing by mutual agreement of the parties.

145. If Respondents seek permission to deviate from any approved work plan or schedule or the SOW, Respondents' Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis. Respondents may not proceed with the requested deviation until receiving oral or written approval from EPA's RPM pursuant to Paragraph 144.

146. No informal advice, guidance, suggestion, or comment by EPA's RPM or other EPA representatives regarding any deliverable submitted by Respondents shall relieve Respondents of their obligation to obtain any formal approval required by this Settlement, or to comply with all requirements of this Settlement, unless it is formally modified.

XXIX. NOTICE OF COMPLETION OF WORK

147. When EPA determines that all Work has been fully performed in accordance with this Settlement, with the exception of any continuing obligations required by this Settlement, including but not limited to payment of Future Response Costs and record retention, EPA will provide written notice to Respondents. If EPA determines that any Work has not been completed in accordance with this Settlement, EPA will notify Respondents, provide a list of the deficiencies, and require that Respondents modify the SRI/FS Work Plan, if appropriate, in order to correct such deficiencies. Respondents shall implement the modified and approved SRI/FS Work Plan and shall submit a modified draft SRI Report and/or FFS Report in accordance with the EPA notice. Failure by Respondents to implement the approved modified SRI/FS Work Plan shall be a violation of this Settlement.

XXX. INTEGRATION/APPENDICES

148. This Settlement and its appendices constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement. The parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Settlement. The following appendices are attached to and incorporated into this Settlement:

- a. "Appendix A" is the description and/or map of the Site.
- b. "Appendix B" is the SOW.

XXXI. ADMINISTRATIVE RECORD

149. EPA will determine the contents of the administrative record file for selection of the remedial action. Respondents shall submit to EPA documents developed during the course of the SRI/FS upon which selection of the remedial action may be based. Upon request of EPA, Respondents shall provide copies of plans, task memoranda for further action, quality assurance memoranda and audits, raw data, field notes, laboratory analytical reports, and other reports. Upon request of EPA, Respondents shall additionally submit any previous studies conducted under state, local, or other federal authorities that may relate to selection of the remedial action, and all communications between Respondents and state, local, or other federal authorities concerning selection of the remedial action.

XXXII. EFFECTIVE DATE

This Settlement shall be effective 3 business days after the Settlement is signed by the Director, Superfund and Emergency Response Division, Region 5.

[Signature pages follow]

**Matter of Waite Park Wells Site
St. Cloud, Minnesota
AOC for SRI/FS**

IT IS SO AGREED AND ORDERED:

U.S. ENVIRONMENTAL PROTECTION AGENCY:

Dated

Douglas Ballotti
Superfund and Emergency Response Division, Region 5

**Matter of Waite Park Wells Site
St. Cloud, Minnesota
AOC for SRI/FS**

For Eaton Corporation:

Dated

Name: _____

Title: _____

Address: _____

**Matter of Waite Park Wells Site
St. Cloud, Minnesota
AOC for SRI/FS**

For ABB Inc.:

Dated

Name: _____

Title: _____

Address: _____

STATEMENT OF WORK
FOR A SUPPLEMENTAL REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
AT THE WAITE PARK WELLS SITE
OPERABLE UNIT 1 (OU1)
STEARNS COUNTY, MINNESOTA

I. PURPOSE

This Statement of Work (SOW) sets forth the requirements for conducting a Supplemental Remedial Investigation and Feasibility Study (SRI/FS) at Operable Unit 1 (OU1) of Waite Park Wells (WPW) Superfund Site (Site), in the Cities of Waite Park and St. Cloud, Minnesota. OU1 includes the previous Electric Machinery property located in St. Cloud and any nearby areas where hazardous substances, pollutants or contaminants from the property or from former operations at the property have or may have come to be located, including the City of Waite Park. The issues raised in the Sixth Five Year Review (FYR) (2020) for OU1 identified the need to investigate the extent of the groundwater plume, particularly north and east of the Site because of persistent contaminants of concern in the groundwater above drinking water criteria. Additionally, the 2020 FYR identified the need to complete the vapor intrusion investigation of on and off-site buildings, which was started in 2017. The SRI Report shall build on previously collected site investigatory information to fully evaluate the nature and extent of hazardous substances, pollutants or contaminants at and/or from OU1. The SRI Report shall also assess the risk which these hazardous substances, pollutants or contaminants present for human health and the environment. The SRI Report shall provide sufficient data to develop and evaluate effective remedial alternatives. The FS Report shall evaluate alternatives for addressing the impact to human health and the environment from hazardous substances, pollutants or contaminants at OU1.

Respondents shall prepare and complete the RI and FS Reports in compliance with the Administrative Order on Consent (AOC), SOW, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 C.F.R. Part 300), as amended, and all requirements and guidance for RI/FS studies and reports including, but not limited to, United States Environmental Protection Agency (EPA) Superfund Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (EPA/540/G-89/004, October 1988) (RI/FS Guidance), and any other guidance that EPA uses in conducting or submitting deliverables for an RI/FS. Exhibit B sets forth a partial list of guidance used by EPA for an RI/FS.

Respondents shall furnish all personnel, materials, and services necessary for, or incidental to, performing the SRI/FS at OU1, except as otherwise specified herein.

II. DOCUMENT REVIEW

Respondents shall submit all documents or deliverables required as part of this SOW to EPA, with a copy to the Minnesota Pollution Control Agency (MPCA), for EPA's review and approval. After review of any plan, report or other item which is required to be submitted for approval pursuant to this AOC, EPA, after reasonable opportunity for review and comment by MPCA, may: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions;

(c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondents modify the submission; or (e) any combination of the above. However, EPA will not modify a submission without first providing Respondents at least one notice of deficiency and opportunity to cure within 45 days. (See Section X of the AOC for procedures concerning EPA Approval of Plans and Other Submissions).

III. SCOPE

Respondents shall complete the following tasks as part of this SRI/FS:

- Task 1: Project Scoping and SRI/FS Planning Documents
- Task 2: Community Relations
- Task 3: OU1 Characterization
- Task 4: Remedial Investigation Report
- Task 5: Treatability Studies
- Task 6: Development and Screening of Alternatives (Technical Memorandum)
- Task 7: Detailed Analysis of Alternatives (FS Report)
- Task 8: Progress Reports

TASK 1: PROJECT SCOPING AND SRI/FS PLANNING DOCUMENTS

1.1 OU1 Background

Respondents shall gather and analyze the existing OU1 background information and, if needed, shall conduct a Site visit to assist in planning the scope of the SRI/FS.

1.1.1 Collect and Analyze Existing Data

Before planning the SRI/FS activities, Respondents shall thoroughly compile and review all existing OU1 data. Historical data shall be submitted electronically according to EPA Region 5 specifications¹. Existing OU1 data includes presently available data relating to the varieties and quantities of hazardous substances, pollutants and contaminants at OU1, past disposal practices, the results of previous sampling activities, EPA's air photo analysis of the Site. Examples of existing information about the Site includes previous OU1 Investigation Reports, Preliminary Assessment Reports, OU1 Inspection Reports, Focused Site Inspection Prioritization Reports, Site Team Evaluation Prioritization Report and additional information submitted to EPA. Existing data may also include geological and hydrogeological data collected during previous WPW OU1 Site work.

1.1.2 Conduct Site Visit

If needed, as decided by the RPM, the Respondents shall visit the Site during the project scoping phase to develop a better understanding of OU1 and focus on the sources and the areas of

¹ Details on the electronic data deliverable (EDD) format are here: <https://www.epa.gov/superfund/region-5-superfund-electronic-data-submission>

contamination, as well as potential exposure pathways and receptors at the Site. During the Site visit, the Respondents shall observe, to the extent possible, the Site's physiography, hydrology, geology, and demographics, as well as natural resource, ecological and cultural features. The Respondents shall coordinate this visit with the EPA Remedial Project Manager (RPM).

1.2 SRI/FS Planning Documents (Work Plan/SAP/QAPP)

1.2.1 General Requirements

Within 90 calendar days after the effective date of the AOC, the Respondents shall submit draft SRI/FS Planning Documents specific to OU1 (including the Work Plan (WP)/SAP, Quality Assurance Project Plan (QAPP), and Health and Safety Plan (HASP) to EPA, with a copy to MPCA, for EPA review and approval. To the extent practicable, Respondents may utilize and modify (specific to OU1) existing EPA approved Planning Documents that exist for the WPW OU1.

The objective of the SRI/FS Planning Documents is to develop an SRI/FS strategy and general management plan that accomplishes the following:

- An RI that fully delineates the nature and extent of the release or threatened release of hazardous substances, pollutants, or contaminants at and from OU1, including characterizing the hydrogeologic “window” feature near EM-22D and the complete boundary of the plume. In performing this investigation, Respondents shall gather sufficient data, samples, and other information to fully characterize the nature and extent of the contamination at OU1, to support the human health and ecological risk assessments, and to provide sufficient data for the identification and evaluation of remedial alternatives for OU1.
- An RI that fully investigates the potential for Site-related vapor intrusion, as discussed in the 2020 FYR. In performing this vapor intrusion investigation, Respondents shall gather sufficient data, samples, and other information to fully characterize the vapor intrusion pathway at OU1, to support the human health risk assessments, and to provide sufficient data for the identification and evaluation of remedial alternatives to mitigate the risks of vapor intrusion at OU1.
- An FS that identifies and evaluates alternatives for remedial action to protect human health and the environment by preventing, eliminating, controlling or mitigating the release or threatened release of hazardous substances, pollutants, or contaminants at and from OU1.

When scoping the specific aspects of the project, Respondents shall meet with EPA to discuss all project planning decisions and special concerns associated with OU1.

The SRI/FS Planning Documents shall include a detailed description of the tasks Respondents shall perform, the information needed for each task, a detailed description of the information Respondents shall produce during and at the conclusion of each task, and a description of the work products that Respondents shall submit to EPA and MPCA. This includes the deliverables set forth in this SOW (See Exhibit A, Schedule for Major Deliverables); a schedule for each of the required activities consistent with the SRI/FS Guidance and other relevant guidance; and a project

management plan including a data management plan (e.g., requirements for project management systems and software, minimum data requirements, requirements for submittal of electronic data, data format and backup data management), monthly reports to EPA and MPCA, and meetings and presentations to EPA and MPCA at the conclusion of each major phase of the SRI/FS. The Respondents shall refer to Appendix B of the RI/FS Guidance for a description of the required contents of the RI/FS Planning Documents.

The SRI/FS Planning Documents shall include the preliminary objectives for the remedial action at OU1; preliminary potential state and federal Applicable or Relevant and Appropriate Requirements (ARARs) (chemical-specific, location-specific and action-specific); a description of the OU1 management strategy developed by the Respondents and EPA during scoping; a preliminary identification of remedial alternatives; and data needs for fully characterizing the nature and extent of the contamination at OU1, evaluating risks and developing and evaluating remedial alternatives. The SRI/FS Planning Documents shall reflect coordination with treatability study requirements, if any. The SRI/FS Planning Documents shall also include a process for and manner of refining and/or identifying additional Federal and State ARARs, and for preparing the human health and ecological risk assessments and the FS.

1.2.2 Specific Requirements

Respondents shall prepare the SRI/FS Planning Documents as described in, “Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA,” October 1988. To the extent practicable, Respondents may utilize and modify (specific to OU1) existing EPA approved Planning Documents that exist for the WPW OU1 and shall include:

1.2.2.1 OU1 Background

The OU1 Background section shall include a brief summary of the Site location, description, physiography, hydrology, geology, demographics, ecological, cultural and natural resource features, OU1 history, description of previous investigations and responses conducted at OU1 by local, state, federal, or private parties, and Site data evaluations and project planning completed during the scoping process.

The Site Background section shall discuss areas of waste handling and disposal activities, the locations of existing groundwater monitoring wells, if any, and previous surface water, sediment, soil, groundwater, and air sampling locations, and shall include a summary description of available data and identify areas where hazardous substances, pollutants or contaminants were detected and the detected levels. Relevant data from the previous RI/FS and additional information Respondents submitted to EPA may be utilized and incorporated into this Section as appropriate. The Site Background section shall include tables displaying the minimum and maximum levels of detected hazardous substances, pollutants or contaminants in OU1 areas and media.

1.2.2.2 Work Plan and Sampling and Analysis Plan (SAP)².

Respondents shall prepare (subject to EPA approval and meeting current submission requirements) the WP/SAP³ portion of the SRI/FS Planning Documents to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the sample collection and data meet the OU1-specific Data Quality Objectives (DQOs) as established in the UFP-QAPP. All sampling and analyses performed shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control (QA/QC), data validation, and chain of custody procedures. Respondents shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with EPA guidance.

Upon EPA's request Respondents shall have such a laboratory analyze samples EPA submits for quality assurance monitoring. Respondents shall provide EPA with the QA/QC procedures followed by all sampling teams and laboratories performing data collection and/or analysis. Respondents shall also ensure the provision of analytical tracking information consistent with OSWER Directive No. 9240.0-2B, "Extending the Tracking of Analytical Services to PRP-Lead Superfund Sites."

Upon EPA's request, Respondents shall allow EPA or its authorized representatives to take split and/or duplicate samples of any samples collected by the Respondents or their contractors or agents. Respondents shall notify EPA not less than 15 business days in advance of any sample collection activity EPA shall have the right to take any additional samples that it determines to be necessary.

1.2.2.3 Data Gap Description/Data Acquisition

As part of the SAP, Respondents shall analyze the currently available data. Respondents shall identify those areas of OU1 and nearby areas that require data and evaluation in order to define the extent of hazardous substances, pollutants or contaminants. This Section of the SAP shall include a description of the number, types, and locations of samples to be collected. The SAP shall include an environmental program to accomplish the following:

- Conduct OU1 Reconnaissance. The Respondents shall conduct:
 - Site surveys including property, boundary, utility rights-of-way, and topographic information
 - Well Survey

² If a QAPP is prepared in accordance with the UFP-QAPP, and it addresses all 37 original (or 28 optimized) worksheets, then it will address all required content of a SAP, as described in the NCP. According to the NCP Sections 300.415(b)(4) and 300.420(c)(4), a SAP consists of a Field Sampling Plan (FSP), which describes the number, type, and location of samples and the type of analyses, and a QAPP, which describes policy, organization, functional activities, and the DQOs and measures necessary to achieve adequate data quality. <https://www.epa.gov/fedfac/frequently-asked-questions-uniform-federal-policy-quality-assurance-project-plans>

³ The QAPP, as part of the SAP, must be prepared using the Uniform Federal Policy for Quality Assurance Project Plans Worksheets. <https://www.epa.gov/fedfac/assuring-quality-federal-cleanups#ufp-qapp>

- Conduct Geological Investigations (Soils and Sediments). The Respondents shall conduct geological investigations to determine the extent of hazardous substances, pollutants or contaminants in surface soils, subsurface soils and sediments at OU1. As part of this geological investigation Respondents shall:
 - Collect Surface Soil Samples
 - Collect Subsurface Soil Samples
 - Perform Soil Boring and Permeability Sampling
 - Collect Sediments Samples
 - Survey Soil Gases, including a characterization of soil gas around the hydrogeologic window near EM-22D, including previous soil gas borings from the 2017 VI investigation at SB-5, SB-8 and SB-9
 - Test Pit
 - Identify real-world horizontal, vertical, and elevation coordinates for all samples and Site features in accordance with EPA Region 5 electronic data requirements

- Conduct Air Investigations. The Respondents shall conduct air investigations to determine the extent of atmospheric hazardous substances, pollutants or contaminants at and from OU1, which shall include:
 - Collect Air Samples
 - Establish Air Monitoring Station

- Conduct Hydrogeological Investigations (Groundwater). The Respondents shall conduct hydrogeological investigations of groundwater to determine the horizontal and vertical distribution of hazardous substances, pollutants or contaminants in the groundwater and the extent, fate and transport of any groundwater plumes containing hazardous substances, pollutants or contaminants. The hydrogeological investigation shall include:
 - Collect Samples from Upgradient, Downgradient, Private and Municipal wells
 - Collect Samples During Drilling (e.g., HydroPunch or Equivalent)
 - Installing and updating (developing) monitoring well networks
 - Conduct VAS transects
 - Perform Hydraulic Tests (such as Pump Tests, Slug Tests and Grain Size Analyses);
 - Measure Ground-Water Elevations and determine horizontal and vertical sample locations in accordance with EPA Region 5 electronic data requirements
 - Modeling
 - Determine the direction of regional and local groundwater flow, including a characterization of the hydrogeologic “window” feature near EM-22D
 - Identify the local uses of groundwater including the number, location, depth and use of nearby private and municipal wells

- Complete the Vapor Intrusion (VI) Investigations to assess the potential for vapor intrusion of hazardous substances, pollutants or contaminants at and from OU1 using the following multiple lines of evidence approach:
 - Develop a VI specific Conceptual Site Model for OU1 to determine if relevant pathways from OU1 exist by examining the contaminant source extent, including depth and distance to buildings and utilities; geology (including preferential pathways); chemical type and concentrations; building and receptor characteristics.

- Where relevant pathways exist, conduct soil gas investigations at and near potentially impacted structures, followed by building specific investigations.
 - Conduct a site-specific risk assessment for the potential VI pathway at the St. Cloud Recovery Hospital.
- Conduct Geophysical Investigation. The Respondents shall conduct geophysical investigations to delineate waste depths, thicknesses and volume; the elevations of the underlying natural soil layer and the extent of cover over fill areas including the following, as appropriate:
 - Surface Geophysical Activity
 - Magnetometer
 - Electromagnetic
 - Ground-Penetrating Radar
 - Seismic Refraction/Reflection
 - Resistivity
 - Site Meteorology
 - Cone Penetrometer Survey
 - Remote Sensor Survey
 - Radiological Investigation
 - Test Pits, trenches and soil borings
- Dispose of Investigation-Derived Waste. The Respondents shall characterize and dispose of investigation-derived wastes in accordance with local, state, and federal regulations as specified in the SAP (see the Fact Sheet, Guide to Management of Investigation-Derived Wastes, 9345.3-03FS (January 1992)).
- Evaluate and Document the Need for Treatability Studies. If the Respondents or EPA identify remedial actions that involve treatment, the Respondents shall include treatability studies as outlined in Task 5 of this SOW unless the Respondents satisfactorily demonstrate to EPA that such studies are not needed. When treatability studies are needed, the Respondents shall plan initial treatability testing activities (such as research and study design) to occur concurrently with OU1 characterization activities.

1.2.2.4 Quality Assurance Project Plan (QAPP)

Respondents shall prepare a QAPP that is OU1-specific and covers sample analysis and data handling for samples collected during the RI, based on the AOC and guidance provided by EPA. The Respondents shall prepare the QAPP in accordance with “EPA Requirements of Quality Assurance Project Plans (QA/R-5)” (EPA/240/B-01/003, March 2001) and “EPA Guidance for Quality Assurance Project Plans (QA/G-5)” (EPA/600/R-02/009, December 2002).), the “Uniform Federal Policy for Quality Assurance Project Plans” (UFP-QAPP) Manual (EPA/505/B-04/900A, March 2005), the “EPA Uniform Federal Policy for Quality Assurance Project Plans Optimized UFP-QAPP Worksheets” (March 2012), and EPA “Guidance on Systematic Planning Using the Data Quality Objectives Process” (February 2006) or equivalent documentation as determined by EPA. The QAPP may include field based analytical methods, if appropriate and scientifically defensible.

The Respondents shall demonstrate, in advance and to EPA's satisfaction, that each laboratory it may use is qualified to conduct the proposed work. This includes use of methods and analytical protocols for the chemicals of concern in the media sampled within detection and quantification limits consistent with both QA/QC procedures and data quality objectives (DQO) approved in the OU1 QAPP by EPA. The laboratory must have and follow an approved QA program. If a laboratory not in the Contract Laboratory Program is selected, methods consistent with CLP methods that would be used at OU1 for the purposes proposed and QA/QC procedures approved by EPA shall be used. The Respondents shall only use laboratories which have a documented Quality Assurance Program which complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995) and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01-002, March 2001) or equivalent documentation as determined by EPA.

The Respondents shall participate in a pre-QAPP meeting or conference call with EPA. The purpose of this meeting or conference call is to discuss QAPP requirements and obtain any clarification needed to prepare the QAPP.

1.2.2.5 Health and Safety Plan

The Respondents shall prepare a Health and Safety Plan (HASP) that conforms to its health and safety program and complies with the Occupational Safety and Health Administration (OSHA) regulations and protocols outlined in 29 C.F.R. Part 1910. The HASP shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). The Health and Safety Plan shall include the 11 elements described in the RI/FS Guidance such as a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and Site control. EPA does not "approve" the Respondent's HASP, but rather EPA reviews it to ensure that all the necessary elements are included, and that the plan provides for the protection of human health and the environment, and after that review provides comments as may be necessary and appropriate. The safety plan must, at a minimum, follow EPA's guidance document Standard Operating Safety Guides (Publication 9285.1-03, PB92-963414, June 1992).

TASK 2: COMMUNITY INVOLVEMENT SUPPORT

In addition to the previously identified tasks, the OU1 Respondents shall provide the personnel, services, materials, and equipment to assist the EPA with the community relations program. The OU1 Respondents will, as requested, perform community involvement activities in support of the EPA in accordance with the NCP and *Community Relations in Superfund – A Handbook*, OSWER Directive No. 9230.0-3C (Jan. 1992). This program will be integrated closely with the remedial investigation activities to help ensure community understanding of the actions being taken and to obtain community input on the OU1 SRI/FS process. The EPA will provide additional information and direction regarding this item as the OU1 investigation progresses and will largely focus on communications with community members and other stakeholders as OU1-related milestones and associated submittals/information become available.

TASK 3: OU1 CHARACTERIZATION

3.1 Investigate and Define OU1 Physical and Biological Characteristics

The Respondents shall implement the Work Plan/SAP and collect data on the physical and biological characteristics of OU1 and its surrounding areas including the physical physiography, geology, and hydrology, and specific physical characteristics. This information will be ascertained through a combination of previous reports, physical measurements, observations, and sampling efforts and will be utilized to define potential transport pathways and human and ecological receptor populations. Recognizing the amount of work completed by the Respondents in the OU1 area associated with WPW OU1, the WP/SAP can be streamlined based on the findings of this body of work. In defining OU1's physical characteristics the Respondents will also obtain sufficient engineering data (such as pumping characteristics) for the projection of contaminant fate and transport, and development and screening of remedial action alternatives, including information to assess treatment technologies.

The Respondents shall provide the RPM, or the entity designated by the RPM, with an electronic copy (according to EPA Region 5 format specification) of laboratory data within the monthly progress reports and in no event later than 90 days after samples are shipped for analysis. In addition, the monthly progress reports will summarize field activities (including drilling locations, depths and field notes if requested by RPM), problems encountered, solutions to problems, and upcoming field activities.

Upon request by EPA, the Respondents shall allow EPA or its authorized representatives to take split and/or duplicate samples of any samples collected by the Respondents or their contractors or agents. The Respondents shall notify EPA and the state not less than 15 business days in advance of any sample collection activity, unless a shorter time period is agreed to by all parties. The EPA shall have the right to take any additional samples that it deems necessary.

3.2 Define Sources of Contamination

The Respondents shall locate each source of contamination. For each location, Respondents shall determine the areal extent and depth of contamination by sampling at incremental depths on a sampling grid. Respondents shall determine the physical characteristics and chemical constituents and their concentrations for all known and discovered sources of contamination.

The Respondents shall conduct sufficient sampling to define the boundaries of the contaminant sources to the level established in the QAPP and DQOs. Defining the source of contamination will include analyzing the potential for contaminant release (e.g., long term leaching from soil), contaminant mobility and persistence, and characteristics important for evaluating remedial actions, including information to assess treatment technologies.

3.3 Describe the Nature and Extent/Fate and Transport of Contamination

The Respondents shall gather information to describe the nature and extent of contamination as a final step during the field investigation. To describe the nature and extent of contamination, the Respondents will utilize the information on OU1 physical and biological characteristics and sources of contamination to give a preliminary estimate of the contaminants that may have migrated. The Respondents will then implement an iterative monitoring program and any study program identified

in the work plan or sampling plan such that by using analytical techniques sufficient to detect and quantify the concentration of contaminants, the migration of contaminants through the various media at OU1 can be determined. In addition, Respondents shall gather data for calculations of contaminant fate and transport. This process is continued until the area and depth of contamination are known to the level of contamination established in the QAPP and DQOs. This information will be used to develop a Conceptual Site Model for OU1 that will be updated over time as new information becomes available.

3.3.1 Evaluate OU1 Characteristics

The Respondents shall analyze and evaluate the data to describe OU1: (1) physical and biological characteristics; (2) contaminant source characteristics; (3) nature and extent of contamination; and (4) contaminant fate and transport. Results of the OU1 physical characteristics, source characteristics, and extent of contamination analyses are utilized in the analysis of contaminant fate and transport. Respondents shall evaluate the actual and potential magnitude of releases from the sources, and horizontal and vertical spread of contamination as well as mobility and persistence of contaminants. Where modeling is appropriate, such models shall be identified to EPA in a technical memorandum prior to their use. All data and programming, including any proprietary programs, shall be made available to EPA together with a sensitivity analysis. The RI data for OU1 shall be presented electronically according to EPA Region 5 format requirements. Analysis of data collected for OU1 characterization will meet the DQOs developed in the SAP and QAPP (or revised during the RI).

3.3.2 Baseline Human Health Risk Assessment

As an attachment to the SRI Report, the Respondents for OU1 shall prepare and submit an OU1 Baseline Human Health Risk Assessment Report to EPA, with a copy to MPCA, for review and approval by EPA. The Respondents shall conduct the baseline risk assessment to determine whether OU1 contaminants pose a current or potential risk to human health and the environment. The major components of the Baseline Risk Assessment include contaminant identification, exposure assessment, toxicity assessment, and human health and ecological risk characterization.

Respondents shall conduct a Baseline Human Health Risk Assessment that focuses on actual and potential risks to persons coming into contact with on-site hazardous substances, pollutants or contaminants as well as risks to the nearby residential, recreational and industrial worker populations from exposure to hazardous substances, pollutants or contaminants in groundwater, soils, sediments, surface water, air, soil gas, and ingestion of contaminated organisms in nearby, impacted ecosystems. The human health risk assessment shall define central tendency and reasonable maximum estimates of exposure for current land use conditions and reasonable future land use conditions. The human health risk assessment shall use data from OU1 to identify the contaminants of concern (COC), provide an estimate of how and to what extent human receptors might be exposed to these COCs, and provide an assessment of the health effects associated with these COCs. The human health risk assessment shall project the potential risk of health problems occurring if no cleanup action is taken at the OU1 and/or nearby areas, and establish target action levels for COCs (carcinogenic and non-carcinogenic).

Respondents shall conduct the human health risk assessment in accordance with EPA guidance including, at a minimum: “Risk Assessment Guidance for Superfund (RAGS), Volume I - Human Health Evaluation Manual (Part A),” Interim Final (EPA-540-1-89-002),” OSWER Directive 9285.7-01A; December 1, 1989; and “Risk Assessment Guidance for Superfund (RAGS), Volume I - Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments),” Interim, (EPA 540-R-97-033), OSWER 9285.7-01D, January 1998 or subsequently issued guidance.

Respondents shall also conduct the human health risk assessment in accordance with the following additional guidance found in the following EPA OSWER directives:

- 1) “Clarification to the 1994 Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities,” OSWER Directive 9200.4-27; August 1998;
- 2) “Implementation of the Risk Assessment Guidance for Superfund (RAGS) Volume I - Human Health Evaluation Manual, (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments) (Interim),” OSWER Directive 9285.7-01D-1; December 17, 1997;
- 3) “Soil Screening Guidance: Technical Background Document,” OSWER Directive 9355.4-17A; May 1, 1996 and “Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, OSWER Directive 9355.4; March 24, 2001;
- 4) “Soil Screening Guidance: User’s Guide,” Publication 9355.4-23; April 1996;
- 5) “Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities,” OSWER Directive 9355.4-12; July 14, 1994;
- 6) “Guidance Manual for the Integrated Exposure Uptake Biokinetic (IEUBK) Model for Lead in Children,” Publication 9285.7-15-1; February 1994, and associated, clarifying Short Sheets on IEUBK Model inputs, including but not limited to OSWER 9285.7-32 through 34;
- 7) “Integrated Exposure Uptake Biokinetic (IEUBK) Model for Lead in Children,” Version 0.99D, NTIS PB94-501517, 1994 or “Integrated Exposure Uptake Biokinetic (IEUBK) Model for Lead in Children”;
- 8) “Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual: (Part B, Development of Risk-based Preliminary Remediation Goals),” Interim, OSWER Directive 9285.7-01B; December 1991;
- 9) “Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors, “OSWER No. 9200.1-120. February 2014; and
- 10) “Exposure Factors Handbook” September 2011 (EPA/600/R-090/052).

Respondents shall also comply with the guidance on assessing human health risk associated with adult exposures to lead in soil as found in the following document: “Recommendations of the

Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil,” December 1996. This document may be downloaded from the Internet at the following address: <https://www.epa.gov/superfund/lead-superfund-sites-risk-assessment>

Additional applicable or relevant guidance may be used only if approved by EPA. Respondents shall prepare the Human Health Risk Assessment Report according to the guidelines outlined below:

- Hazard Identification (sources). Respondents shall review available information on the hazardous substances present at OU1 and identify the major contaminants of concern;
- Dose-Response Assessment. Respondents shall select contaminants of concern based on their intrinsic toxicological properties and identify toxicity values from EPA-approved sources as defined in “Human Health Toxicity Values in Superfund Risk Assessments” (OSWER No. 9285.7-53, December 2003);
- Conceptual Exposure/Pathway Analysis. Respondents shall identify and analyze all relevant exposure pathways (e.g., drinking water). The proximity of contaminants to exposure pathways and their potential to migrate into critical exposure pathways shall be assessed;
- Characterization of OU1 and Potential Receptors. Respondents shall identify and characterize human populations in the exposure pathways;
- Exposure Assessment. The exposure assessment will identify the magnitude of actual or potential human exposures, the frequency and duration of these exposures, and the routes by which receptors are exposed. The exposure assessment shall include an evaluation of the likelihood of such exposures occurring and shall provide the basis for the development of acceptable exposure levels. In developing the exposure assessment, Respondents shall develop reasonable maximum estimates and central tendency estimates of exposure for both current land use conditions and potential land use conditions at OU1;
- Risk Characterization. During risk characterization, Respondents shall compare chemical-specific toxicity information, combined with quantitative and qualitative information from the exposure assessment, to measured levels of contaminant exposure levels and the levels predicted through environmental fate and transport modeling. These comparisons shall determine whether concentrations of contaminants at or near OU1 are affecting or could potentially affect human health. The health risks shall be compared with acceptable risk levels established in the National Contingency Plan (NCP EPA, 1990);
- Identification of Limitations/Uncertainties. Respondents shall identify critical assumptions (e.g., background concentrations and conditions) and uncertainties in the report; and
- Site Conceptual Model. Based on contaminant identification, exposure assessment, toxicity assessment, and risk characterization, Respondents shall develop a conceptual model of OU1.

3.3.3 Baseline Ecological Risk Assessment

As an attachment to the SRI Report, the Respondents shall submit a Baseline Ecological Risk Assessment Report to EPA, with a copy to MPCA, for review and approval by EPA. In the Ecological Risk Assessment Report, the Respondents shall evaluate and assess the risk to the environment posed by OU1 contaminants. Respondents shall prepare the Ecological Risk Assessment Report in accordance with EPA guidance including, at a minimum: “Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments, (EPA-540-R-97-006, June 1997), OSWER Directive 9285.7-25 and shall follow the guidelines outlined below:

- Hazard Identification (sources). The Respondents shall review available information on the hazardous substances present at OU1 and identify the major contaminants of concern.
- Dose-Response Assessment. The Respondents must select contaminants of concern based on their intrinsic toxicological properties.
- Conceptual Exposure/Pathway Analysis. Critical exposure pathways (e.g., surface water) shall be identified and analyzed. The proximity of contaminants to exposure pathways and their potential to migrate into critical exposure pathways shall be assessed.
- Characterization of OU1 and Potential Receptors. The Respondents shall identify and characterize environmental exposure pathways.
- Selection of Chemicals, Indicator Species, and End Points. In preparing the assessment, the Respondents will select representative chemicals, indicator species (species that are especially sensitive to environmental contaminants), and end points on which to concentrate.
- Exposure Assessment. In the exposure assessment, Respondents must identify the magnitude of actual or environmental exposures, the frequency and duration of these exposures, and the routes by which receptors are exposed. The exposure assessment shall include an evaluation of the likelihood of such exposures occurring and shall provide the basis for the development of acceptable exposure levels. In developing the exposure assessment, the Respondents shall develop reasonable maximum estimates of exposure for both current land use conditions and potential land use conditions at OU1.
- Toxicity Assessment/Ecological Effects Assessment. The toxicity and ecological effects assessment will address the types of adverse environmental effects associated with chemical exposures, the relationships between magnitude of exposures and adverse effects, and the related uncertainties for contaminant toxicity (e.g., weight of evidence for a chemical's carcinogenicity).
- Risk Characterization. During risk characterization, Respondents shall compare chemical-specific toxicity information, combined with quantitative and qualitative information from the exposure assessment, to measured levels of contaminant exposure levels and the levels predicted through environmental fate and transport modeling. These comparisons shall

determine whether concentrations of contaminants at or near OU1 are affecting or could potentially affect the environment.

- Identification of Limitations/Uncertainties. The Respondents shall identify critical assumptions (e.g., background concentrations and conditions) and uncertainties in the report.
- Site Conceptual Model. Based on contaminant identification, exposure assessment, toxicity assessment, and risk characterization, the Respondents shall develop a conceptual model of OU1.

3.4 Current and Future Land Uses and Reuse Assessment

As an Attachment to the SRI Report, Respondents shall submit a Memorandum to EPA, for review and approval, that evaluates the current and reasonably anticipated future land uses at OU1. The Memorandum shall identify: 1) past uses at the Site including title and lien information; 2) current uses of the Site and neighboring areas; 3) the owner's plans for the Site following cleanup and any prospective purchasers; 4) applicable zoning laws and ordinance; 5) current zoning; 6) applicable local area land use plans, master plans and how they affect the Site; 7) existing local restrictions on property; 8) property boundaries; 9) groundwater use determinations, wellhead protection areas, recharge areas and other areas identified in the state's Comprehensive Ground Water Protection Program; 10) flood plains, wetland, or endangered or threatened species; and 11) utility rights of way.

If EPA, in its sole discretion, determines that a Reuse Assessment is necessary, Respondents will perform the Reuse Assessment in accordance with EPA guidance, including, but not limited to: "Reuse Assessments: A Tool to Implement the Superfund Land Use Directive," OSWER 9355.7-06P, June 4, 2001, upon request of EPA. The Reuse Assessment should provide sufficient information to develop realistic assumptions of the reasonably anticipated future uses for OU1.

TASK 4: REMEDIAL INVESTIGATION (RI) REPORT

Within 120 calendar days following the receipt of the last set of analytical data collected as part of the RI or unless otherwise approved by EPA, the Respondents shall submit to EPA for review and approval, with a copy to the state, an SRI Report for OU1. The SRI Report shall be consistent with the AOC and this SOW, and shall accurately establish OU1 characteristics such as media contaminated, extent of contamination, and the physical boundaries of the contamination. Pursuant to this objective, Respondents shall obtain all the essential amount of data necessary to determine the key contaminant(s) movement and extent of contamination. The key contaminant(s) must be selected based on persistence and mobility in the environment and the degree of hazard. The key contaminant(s) identified in the RI shall be evaluated for receptor exposure and an estimate of the key contaminant(s) level reaching human or environmental receptors must be made.

The Respondents shall use current standards and guidelines such as drinking-water standards, water-quality criteria, and other federal and state criteria accepted by the EPA as appropriate for the situation may be used to evaluate effects on human and environmental receptors that may be

exposed to the key contaminant(s) above appropriate standards or guidelines. Respondents shall complete the SRI Report in accordance with the following requirements:

Respondents shall submit an SRI Report to EPA for review and approval pursuant to Section II of the SOW, which includes the following:

- Executive Summary
- Site Background. The Respondents shall assemble and review available facts about the regional conditions and conditions specific to OU1
- Investigation
 - OU1 Reconnaissance
 - Field Investigation & Technical Approach
 - Chemical Analysis & Analytical Methods
 - Field Methodologies
 - Biological
 - Surface Water
 - Sediment
 - Soil Borings
 - Soil Sampling
 - Monitoring Well Installation
 - Groundwater Sampling
 - Hydrogeological Assessment
 - Air Sampling
 - Soil Gas Sampling
 - Waste Investigation
 - Geophysical Investigation
- Site Characteristics
 - Geology
 - Hydrogeology and geochemistry
 - Meteorology
 - Demographics and Land Use
 - Ecological Assessment
 - Hydrodynamics
- Nature and Extent of Contamination
 - Contaminant Sources
 - Contaminant Distribution and Trends
 - Background groundwater quality
- Fate and Transport
 - Contaminant Characteristics
 - Transport Processes
 - Contaminant Migration Trends
- Human Risk Assessment
 - Hazard Identification (sources)

- Dose-Response Assessment
 - Prepare Conceptual Exposure/Pathway Analysis
 - Characterization of OU1 and Potential Receptors
 - Exposure Assessment
 - Risk Characterization
 - Identification of Limitations/Uncertainties
 - Site Conceptual Model
- Ecological Risk Assessment
 - Hazard Identification (sources)
 - Dose-Response Assessment
 - Prepare Conceptual Exposure/Pathway Analysis
 - Characterization of OU1 and Potential Receptors
 - Selection of Chemicals, Indicator Species, and End Points
 - Exposure Assessment
 - Toxicity Assessment/Ecological Effects Assessment
 - Risk Characterization
 - Identification of Limitations/Uncertainties
 - Site Conceptual Model
- Summary and Conclusions

TASK 5: TREATABILITY STUDIES

If EPA or the Respondents determine that treatability testing is necessary, the Respondents shall conduct treatability studies. If applicable, Respondents shall use the testing results and operating conditions in the detailed design of the selected remedial technology. Respondents shall perform the following activities.

5.1 Determine Candidate Technologies and the Need for Testing

At the time of submittal of the draft SRI Report or earlier, the Respondents shall submit a Candidate Technologies and Testing Needs Technical Memorandum to EPA, with a copy to the state agency, for EPA's review and approval. The Memorandum shall identify candidate technologies for a treatability studies program. The list of candidate technologies shall cover the range of technologies required for alternatives analysis. Respondents shall determine and refine the specific data requirements for the testing program during OU1 characterization and the development and screening of remedial alternatives.

5.1.1 Conduct Literature Survey and Determine the Need for Treatability Testing

Within the Candidate Technologies and Testing Needs Technical Memorandum, the Respondents shall conduct a literature survey to gather information on the performance, relative costs, applicability, removal efficiencies, operation and maintenance (O&M) requirements, and implementability of candidate technologies. Respondents shall conduct treatability studies except where Respondents can demonstrate to EPA's satisfaction that they are not needed.

5.2 Treatability Testing and Deliverables

5.2.1 Treatability Testing Work Plan and Sampling and Analysis Plan (SAP)

If EPA determines that treatability testing is necessary, EPA will decide on the type of treatability testing to use (e.g., bench versus pilot). Within 30 days of EPA's request, the Respondents shall submit a Treatability Testing Work Plan and a SAP, or amendments to the original SRI/FS Work Plan, SAP and QAPP to EPA, with a copy to MPCA, for EPA's review and approval, that describes OU1 background, the remedial technology(ies) to be tested, test objectives, experimental procedures, treatability conditions to be tested, measurements of performance, analytical methods, data management and analysis, health and safety, and residual waste management. The Respondents shall document the DQOs for treatability testing as well. If pilot scale treatability testing is to be performed, the Treatability Study Work Plan shall describe pilot plant installation and start-up, pilot plant operation and maintenance procedures, operating conditions to be tested, a sampling plan to determine pilot plant performance, and a detailed health and safety plan. If testing is to be performed off-site, the plans shall address all permitting (or permitting equivalent) requirements. The requirements of SAPs (which are fulfilled by the QAPP if the QAPP is prepared in accordance with the UFP-QAPP, and it addresses all 37 original (or 28 optimized) worksheets) are outlined in Task 1.2.2.2 of this SOW.

5.2.2 Treatability Study Health and Safety Plan

If the original Health and Safety Plan is not adequate for defining the activities to be performed during the treatability tests, the Respondents shall submit a separate or amended Health and Safety Plan. Task 1.2.2.5 of this SOW provides additional information on the requirements of the Health and Safety Plan. EPA and MPCA review, but do not "approve" the Treatability Study Health and Safety Plan.

5.2.3 Treatability Study Evaluation Report

Following the completion of the treatability testing, the Respondents shall analyze and interpret the testing results in a technical report to EPA and state agency. Respondents shall submit the treatability study report according to the schedule in the Treatability Study Work Plan. This report may be a part of the OU1 Characterization Technical Memorandum, the SRI Report or submitted as a separate deliverable. The Treatability Study Evaluation Report shall evaluate each technology's effectiveness, implementability and cost, and actual results as compared with predicted results. The report shall also evaluate full scale application of the technology, including a sensitivity analysis identifying the key parameters affecting full-scale operation.

TASK 6: DEVELOPMENT AND SCREENING OF ALTERNATIVES (Technical Memorandum)

The Respondents shall develop and screen an appropriate range of remedial alternatives that will be evaluated by the Respondents. This range of alternatives shall include, as appropriate, options in which treatment is used to reduce the toxicity, mobility, or volume of wastes, but which vary in the types of treatment, the amount treated, and the manner in which long-term residuals or untreated wastes are managed; options involving containment with little or no treatment; options involving

both treatment and containment; and a no-action alternative. The Respondents shall perform the following activities as a function of the development and screening of remedial alternatives.

6.1 Alternatives Development and Screening Deliverables

The Respondents shall prepare and submit three technical memoranda for this task: a Remedial Action Objectives Technical Memorandum, an Alternative Arrays Technical Memorandum and a Comparative Analysis of Alternatives Memorandum. These memos can be combined into a single memo as appropriate.

6.1.1 Remedial Action Objectives Technical Memorandum

The Respondents shall submit a Remedial Action Objectives Technical Memorandum to EPA with a copy to MPCA for review and approval by EPA. The Respondents shall submit the Remedial Action Objectives Technical Memorandum at the same time as the Draft SRI Report. Based on the baseline human health and ecological risk assessments, the Respondents shall document OU1-specific remedial action objectives in a Remedial Action Objectives Technical Memorandum. The remedial action objectives shall specify the contaminants and media of concern, potential exposure pathways and receptors; and contaminant level or range of levels (at particular locations for each exposure route) that are protective of human health and the environment. Remedial action objectives shall be developed by considering the factors set forth in 40 C.F.R. § 300.430(e)(2)(i). The Respondents shall incorporate EPA's comments on the Remedial Action Objectives Technical Memorandum in the Alternatives Screening Technical Memorandum.

6.1.2 Alternatives Screening Technical Memorandum

The Respondents shall submit an Alternatives Screening Technical Memorandum to EPA, with a copy to MPCA, for EPA's review and approval. The Alternatives Screening Technical Memorandum shall summarize the work performed and the results of each of the above tasks, and shall include an alternatives array summary. If required by EPA, the Respondents shall modify the alternatives array to assure that the array identifies a complete and appropriate range of viable alternatives to be considered in the detailed analysis. The Alternatives Screening Technical Memorandum shall document the methods, the rationale and the results of the alternatives screening process. The Respondents shall incorporate EPA's comments on the Alternatives Screening Technical Memorandum in the Comparative Analysis of Alternatives Technical Memorandum. The Respondents shall submit the Alternatives Screening Technical Memorandum within 30 calendar days after receipt of EPA's comments on the Remedial Action Objectives Technical Memorandum.

6.1.2.1 Develop General Response Actions

In the Alternatives Technical Memorandum, the Respondents shall develop general response actions for each medium of interest including containment, treatment, excavation, pumping, or other actions, singly or in combination, to satisfy the EPA-approved remedial action objectives.

6.1.2.2 Identify Areas or Volumes of Media

In the Alternatives Technical Memorandum, the Respondents shall identify areas or volumes of media to which the general response actions may apply, taking into account requirements for protectiveness as identified in the remedial action objectives. The Respondents shall also take into account the chemical and physical characterization of OU1.

6.1.2.3 Identify, Screen, and Document Remedial Technologies

In the Alternatives Technical Memorandum, the Respondents shall identify and evaluate technologies applicable to each general response action to eliminate those that cannot be implemented at OU1. The Respondents shall refine applicable general response actions to specify remedial technology types. The Respondents shall identify technology process options for each of the technology types concurrently with the identification of such technology types or following the screening of considered technology types. The Respondents shall evaluate process options on the basis of effectiveness, implementability, and cost factors to select and retain one or, if necessary, more representative processes for each technology type. The Respondents shall summarize and include the technology types and process options in the Alternatives Screening Technical Memorandum. Whenever practicable, the alternatives shall also consider the CERCLA preference for treatment over conventional containment or land disposal approaches.

In the Alternatives Technical Memorandum, Respondents shall provide a preliminary list of alternatives to address contaminated soil, sediments, surface water, groundwater, and air contamination at OU1 that shall consist of, but is not limited to, treatment technologies, removal and off-site treatment/disposal, removal and on-site disposal, and in-place containment for soils, sediments, and wastes. See 40 C.F.R. § 300.430(e)(1)-(7). The Respondents shall specify the reasons for eliminating any alternatives.

6.1.2.4 Assemble and Document Alternatives

The Respondents shall assemble the selected representative technologies into alternatives for each affected medium or operable unit. Together, all of the alternatives shall represent a range of treatment and containment combinations that shall address either the Site or the operable unit as a whole. The Respondents shall prepare a summary of the assembled alternatives and their related ARARs for the Alternatives Screening Technical Memorandum. The Respondents shall specify the reasons for eliminating alternatives during the preliminary screening process.

6.1.2.5 Refine Alternatives

The Respondents shall refine the remedial alternatives to identify the volumes of contaminated media addressed by the proposed processes and size critical unit operations as necessary. The Respondents shall collect sufficient information for an adequate comparison of alternatives. The Respondents shall also modify the remedial action objectives for each chemical in each medium as necessary to incorporate any new human health and ecological risk assessment information presented in the Respondents' baseline human health and ecological risk assessment reports. Additionally, Respondents shall update ARARs as the remedial alternatives are refined.

6.1.3 Conduct and Document Screening Evaluation of Each Alternative

The Respondents may perform a final screening process based on short- and long-term aspects of effectiveness, implementability, and relative cost. Generally, this screening process is only necessary when there are many feasible alternatives available for a detailed analysis. If necessary, the Respondents shall conduct the screening of alternatives to assure that only the alternatives with the most favorable composite evaluation of all factors are retained for further analysis. As appropriate, the screening shall preserve the range of treatment and containment alternatives that was initially developed. The range of remaining alternatives shall include options that use treatment technologies and permanent solutions to the maximum extent practicable. The Respondents shall prepare an Alternatives Screening Technical Memorandum that summarizes the results and reasoning employed in screening; arrays the alternatives that remain after screening; and identifies the action-specific ARARs for the alternatives that remain after screening.

TASK 7: DETAILED ANALYSIS of ALTERNATIVES (FS REPORT)

The Respondents shall conduct and present a detailed analysis of remedial alternatives to provide EPA with the information needed to select an OU1 remedy.

7.1 Detailed Analysis of Alternatives

The Respondents shall conduct a detailed analysis of the remedial alternatives for OU1. The detailed analysis shall include an analysis of each remedial option against each of the nine evaluation criteria set forth in 40 C.F.R. § 300.430(e)(9)(iii) and a comparative analysis of all options using the same nine criteria as a basis for comparison.

7.1.1 Apply Nine Criteria and Document Analysis

The Respondents shall apply the nine evaluation criteria to the assembled remedial alternatives to ensure that the selected remedial alternative will protect human health and the environment and meet remedial action objectives; will comply with, or include a waiver of, ARARs; will be cost-effective; will utilize permanent solutions and alternative treatment technologies, or resource recovery technologies, to the maximum extent practicable; and will address the statutory preference for treatment as a principal element. The evaluation criteria include: (1) overall protection of human health and the environment and how the alternative meets each of the remedial action objectives; (2) compliance with ARARs; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8) state (or support agency) acceptance; and (9) community acceptance. (Note: criteria 8 and 9 are considered after the SRI/FS report has been released to the general public.) For each alternative the Respondents shall provide: (1) a description of the alternative that outlines the waste management strategy involved and identifies the key ARARs associated with each alternative, and (2) a discussion of the individual criterion assessment. If the Respondents do not have direct input on criteria (8) state (or support agency) acceptance and (9) community acceptance, EPA will address these criteria.

7.1.2 Compare Alternatives and Document the Comparison of Alternatives

The Respondents shall perform a comparative analysis between the remedial alternatives. That is, the Respondents shall compare each alternative against the other alternatives using the evaluation

criteria as a basis of comparison. EPA will identify and select the preferred alternative. The Respondents shall prepare a Comparative Analysis of Alternatives Technical Memorandum which summarizes the results of the comparative analysis and fully and satisfactorily addresses and incorporates EPA's comments on the Alternatives Screening Technical Memorandum. The Respondents shall incorporate EPA's comments on the Comparative Analysis of Alternatives Technical Memorandum in the draft FS Report. The Respondents shall submit the Comparative Analysis of Alternatives Memorandum within 30 calendar days after receipt of EPA's comments on the Alternatives Screening Technical Memorandum.

7.1.3. Alternatives Analysis for Institutional Controls

For any Alternatives that rely on Institutional Controls, Respondents shall include in the Alternatives Screening Technical Memorandum, Comparative Analysis of Alternative Technical Memorandum and Feasibility Study an evaluation of the following: 1) Overall Protection of Human Health and the Environment including what specific institutional control components will ensure that the alternative will remain protective and how these specific controls will meet remedial action objectives; 2) Compliance with ARARs; 3) Long Term Effectiveness including the adequacy and reliability of institutional controls and how long the institutional control must remain in place; 4) Short Term Effectiveness including the amount of time it will take to impose the Institutional Control; 5) Implementability including research and documentation that the proper entities (e.g., potentially responsible parties, state, local government entities, local landowners conservation organizations) are willing to enter into any necessary agreement or restrictive covenant with the proper entities and/or that laws governing the restriction exist or allow implementation of the institutional control; 6) Cost including the cost to implement, maintain, monitor and enforce the institutional control; 7) State and Community acceptance of the Institutional Control.

7.2 Feasibility Study Report

Within 60 days after receipt of EPA's comments on the Comparative Analysis of Alternatives Technical Memorandum, the Respondents shall prepare and submit a draft FS Report to EPA for its review pursuant to Section II of the SOW. The FS report shall summarize the development and screening of the remedial alternatives and present the detailed analysis of remedial alternatives. In addition, the FS Report shall also include the information EPA will need to prepare relevant sections of the Record of Decision (ROD) for the OUI [see Chapters 6 and 9 of EPA's A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents (EPA 540-R-98-031, July 1999) for the information that is needed].

TASK 8: PROGRESS REPORTS

The Respondents shall submit monthly written progress reports to EPA and MPCA concerning actions undertaken pursuant to the AOC and this SOW, beginning with a monthly progress report for the first complete calendar month after the effective date of the AOC, until the termination of the AOC, unless otherwise directed in writing by the RPM. These reports shall include, but not be limited to, a description of all significant developments during the preceding period, including the specific work that was performed and any problems that were encountered; and the developments anticipated during the next reporting period, including a schedule of work to be performed, anticipated problems, and actual or planned resolutions of past or anticipated problems.

The monthly progress reports will summarize the field activities conducted each month including, but not limited to, drilling and sample locations, depths and descriptions; boring logs; sample collection logs; field notes; problems encountered; solutions to problems; a description of any modifications to the procedures outlined in the SRI/FS Work Plan, the SAP, QAPP or Health and Safety Plan, with justifications for the modifications; a summary of all data received during the reporting period and the analytical results; and upcoming field activities. In addition, the Respondent[s] shall provide the RPM or the entity designated by the RPM with all laboratory data within the monthly progress reports and in no event later than 60 days after samples are shipped for analysis.

EXHIBIT A
SCHEDULE FOR MAJOR DELIVERABLES

DELIVERABLE	DUE DATE
TASK 1.2.1 – SRI/FS Planning Documents, including Work Plan/SAP, Quality Assurance Project Plan and Health and Safety Plan	SRI/FS Planning documents due 90 calendar days after the effective date of the AOC. Final SRI/FS Planning Documents due 45 days after EPA notification of deficiencies pursuant to Section II of the SOW and Section IX of the AOC.
TASK 3 – OU1 Characterization Technical Communications	To be included in the monthly Progress Reports.
TASK 4 – SRI Report	Draft SRI Report due 120 calendar days following EPA receipt of the last set of analytical data collected as part of the RI. Final SRI Report due 45 calendar days after receipt of EPA’s notification of deficiencies pursuant to Section II of the SOW and Section IX of the AOC.
TASK 5.1 – Candidate Technologies and Testing Needs Technical Memorandum	Submitted no later than at the time of submittal of the draft SRI Report.
TASK 5.2.1 – Draft and Final Treatability Testing Work Plan, SAP and/or QAPP or Amendments to the Original SRI/FS Work Plan, SAP and/or QAPP.	Within 30 days of request of EPA.
TASK 5.2.2 – Draft and Final Treatability Testing Health and Safety Plan or Amendment to the Original Health and Safety Plan	Within 30 days of request of EPA.
DELIVERABLE	DUE DATE
TASK 5.2.3 – Draft and Final Treatability Study Evaluation Report	With the OU1 Characterization Technical Memorandum, the SRI Report (Task 4), or as approved by EPA in the Work Plan/SAP.
TASK 6 – Remedial Action Objectives Technical Memorandum	With the draft SRI Report (Task 4).

TASK 6 – Alternatives Screening Technical Memorandum	30 calendar days after receipt of EPA’s comments on the Remedial Action Objectives Technical Memorandum.
TASK 7 – Comparative Analysis of Alternatives Technical Memorandum	30 calendar days after receipt of EPA’s comments on the Alternatives Screening Technical Memorandum.
Task 7 – FS Report	FS Report due 60 calendar days after receipt of EPA’s comments on the Comparative Analysis of Alternatives Technical Memorandum. Final FS Report due 60 calendar days after receipt of EPA’s notification of deficiency on the draft FS Report pursuant to Section II of the SOW and Section IX of the AOC.
TASK 8 – Monthly Progress Reports	On the 15 th day of each month or the first business day after the 15 th of the month commencing 30 calendar days after the effective date of the AOC.
Miscellaneous Documents	In accordance with the submittal date provided by RPM.

EXHIBIT B
PARTIAL LIST OF GUIDANCE

The following list, although not comprehensive or necessarily current, comprises many of the regulations and guidance documents that apply to the RI/FS process. The most current versions shall be used as appropriate. The majority of these guidance documents, and additional applicable guidance documents, may be downloaded from the following websites:

- General Superfund: <http://www.epa.gov/superfund/>
- Site Characterization, Monitoring and Remediation: <https://clu-in.org/technologies/>
- Site Characterization and Monitoring: <https://www.epa.gov/remedytech/characterization-and-monitoring-technologies-cleaning-contaminated-sites>
- Quality Assurance: <http://www.epa.gov/quality/>
- Human Risk Assessment: <https://www.epa.gov/risk/superfund-risk-assessment-human-health-topics>
- Ecological Risk Assessment: <https://www.epa.gov/risk/superfund-risk-assessment-ecological-risk-topics>
- Lead Risk Assessment: <https://www.epa.gov/superfund/lead-superfund-sites-risk-assessment>
- Risk Assessment Exposure Factors: <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=20563>
- General Publications Clearinghouse: <https://nepis.epa.gov/EPA/html/pubindex.html>
- General Publications Clearinghouse: <https://www.epa.gov/nscep>
- UFP-QAPP Manual: https://www.epa.gov/sites/production/files/documents/ufp_qapp_v1_0305.pdf
- UFP-QAPP Worksheets: https://www.epa.gov/sites/production/files/documents/ufp_qapp_worksheets.pdf

1. The (revised) National Contingency Plan.
2. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, EPA, Office of Emergency and Remedial Response, OSWER Directive No. 9355.3-01, EPA/540/G-89/004, October 1988.
3. Conducting Remedial Investigations/Feasibility Studies for CERCLA Municipal Landfill Sites, EPA, Office of Emergency and Remedial Response, EPA/540/P-91/001, February 1991.
4. Implementing Presumptive Remedies, EPA, Office of Emergency and Remedial Response, EPA-540-R-97-029, October 1997.
5. Presumptive Remedy for CERCLA Municipal Landfill Sites, EPA, OSWER Directive No. 9355.0-49FS, EPA-540-F-93-035, September 1993.
6. Presumptive Remedies: CERCLA Landfill Caps RI/FS Data Collection Guide, EPA, OSWER 9355.3-18FS, EPA/540/F-95/009, August 1995.

7. Presumptive Response Strategy and Ex-Situ Treatment Technologies for Contaminated Ground Water at CERCLA Sites, OSWER 9283.1-12, EPA-540-R-96-023, October 1996.
8. Field Analytical and Site Characterization Technologies Summary of Applications, EPA, EPA-542-F-97-024, November 1997.
9. CLU-IN Hazardous Waste Clean-Up Information World Wide Web Site, EPA, EPA-542-F-99-002, February 1999.
10. Field Sampling and Analysis Technology Matrix and Reference Guide, EPA, EPA-542-F-98-013, July 1998.
11. Subsurface Characterization and Monitoring Techniques: A Desk Reference Guide, Volumes 1 and 2, EPA, EPA/625/R-93/003, May 1993.
12. Use of Airborne, Surface, and Borehole Geophysical Techniques at Contaminated Sites: A Reference Guide, EPA, EPA/625/R-92/007(a,b), September 1993.
13. Innovations in Site Characterization: Geophysical Investigation at Hazardous Waste Sites, EPA, EPA-542-R-00-003, August 2000.
14. Innovative Remediation and Site Characterization Technology Resources, EPA, OSWER, EPA-542-F-01-026b, January 2001.
15. Handbook of Suggested Practices for the Design and Installation of Ground-Water Monitoring Wells, EPA, EPA/600/4-89/034, 1991.
16. Ground-Water Sampling Guidelines for Superfund and RCRA Project Managers, EPA, EPA-542-S-02-001, May 2002.
17. Ground Water Issue: Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures, EPA, EPA/540/S-95/504, April 1996.
18. Superfund Ground Water Issue: Ground Water Sampling for Metals Analysis, EPA, EPA/540/4-89/001, March 1989.
19. Resources for Strategic Site Investigation and Monitoring, EPA, OSWER, EPA-542-F-010030b, September 2001.
20. Region 5 Framework for Monitored Natural Attenuation Decisions for Groundwater, EPA Region 5, September 2000.
21. Ground Water Issue: Suggested Operating Procedures for Aquifer Pumping Tests, EPA, OSWER, EPA/540/S-93/503, February 1993.

22. Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water, EPA, EPA/600/R-98/128, September 1998.
23. Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action and Underground Storage Tank Sites, EPA, OSWER Directive 9200.4-17P, April 21, 1999.
24. Ground Water Issue: Fundamentals of Ground-Water Modeling, EPA, OSWER, EPA/540/S-92/005, April 1992.
25. Assessment Framework for Ground-Water Model Applications, EPA, OSWER Directive #9029.00, EPA-500-B-94-003, July 1994.
26. Ground-Water Modeling Compendium - Second Edition: Model Fact Sheets, Descriptions, Applications and Cost Guidelines, EPA, EPA-500-B-94-004, July 1994.
27. A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents, EPA, Office of Solid Waste and Emergency Response, OSWER Directive No. 9200.1-23P, EPA 540-R-98-031, July 1999.
28. Region 5 Instructions on the Preparation of a Superfund Division Quality Assurance Project Plan Based on EPA QA/R-5, Revision 0, EPA Region 5, June 2000.
29. Guidance for the Data Quality Objectives Process (QA-G-4), EPA, EPA/600/R-96/055, August 2000.
30. Guidance for the Data Quality Objectives Process for Hazardous Waste Sites (QA/G-4HW), EPA, EPA/600/R-00/007, January 2000.
31. Guidance for the Preparation of Standard Operating Procedures (QA-G-6), EPA, EPA/240/B-01/004, March 2001.
32. EPA Requirements for Quality Management Plans (QA/R-2), EPA, EPA/240/B-01/002, March 2001.
33. EPA Requirements for QA Project Plans (QA/R-5), EPA, EPA/240/B-01/003, March 2001.
34. Guidance for Quality Assurance Project Plans (QA/G-5), EPA, EPA/600/R-98/018, February 1998.
35. Users Guide to the EPA Contract Laboratory Program, EPA, Sample Management Office, OSWER Directive No. 9240.0-01D, January 1991.
36. Technical Guidance Document: Quality Assurance and Quality Control for Waste Containment Facilities, EPA, EPA/600/R-93/182, 1993.

37. Risk Assessment Guidance for Superfund - Volume I Human Health Evaluation Manual (Part A), EPA, EPA/540/1-89/002, December 1989.
38. Risk Assessment Guidance for Superfund - Volume I Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals), EPA, EPA/540/R-92/003, OSWER Publication 9285.7-01B, December 1991.
39. Risk Assessment Guidance for Superfund - Volume I Human Health Evaluation Manual (Part C - Risk Evaluation of Remedial Alternatives), EPA, Office of Emergency and Remedial Response, Publication 9285.7-01C, October 1991.
40. Risk Assessment Guidance for Superfund - Volume I Human Health Evaluation Manual (Part D - Standardized Planning, Reporting, and Review of Superfund Risk Assessments), EPA, Office of Emergency and Remedial Response, Publication 9285.7-47, December 2001.
41. Risk Assessment Guidance for Superfund: Volume III - Part A, Process for Conducting Probabilistic Risk Assessment, EPA, OSWER Publication 9285.7-45, EPA-540-R-02-002, December 2001.
42. Policy for Use of Probabilistic in Risk Assessment at the Environmental Protection Agency, EPA, Office of Research and Development, 1997.
43. Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors, EPA, OSWER Directive 9285.6-03, March 25, 1991.
44. Exposure Factors Handbook, Volumes I, II, and III, EPA, EPA/600/P-95/002Fa,b,c, August 1997.
45. Supplemental Guidance to RAGS: Calculating the Concentration Term, EPA, OSWER Publication 9285.7-08I, May 1992.
46. Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, EPA, OSWER Directive 9355.4-12, EPA/540/F-94/043, July 14, 1994.
47. Clarification to the 1994 Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, EPA, OSWER Directive 9200.4-27, EPA/540/F-98/030, August 1998.
48. Guidance Manual for the Integrated Exposure Uptake Biokinetic (IEUBK) Model for Lead in Children, EPA, OSWER Publication 9285.7-15-1, February 1994; and associated, clarifying Short Sheets on IEUBK Model inputs, including but not limited to OSWER 9285.7-32 through 34, as listed on the OSWER lead internet site at <https://www.epa.gov/superfund/lead-superfund-sites-risk-assessment> and <https://www.epa.gov/superfund/lead-superfund-sites-guidance>

49. Integrated Exposure Uptake Biokinetic (IEUBK) Model for Lead in Children, NTIS PB94-501517, 1994 or Integrated Exposure Uptake Biokinetic (IEUBK) Model for Lead in Children.
50. Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions, EPA, OSWER Directive 9355.0-30, April 22, 1991.
51. Performance of Risk Assessments in Remedial Investigation /Feasibility Studies (RI/FSs) Conducted by Potentially Responsible Parties (PRPs), OSWER Directive No. 9835.15, August 28, 1990.
52. Supplemental Guidance on Performing Risk Assessments in Remedial Investigation Feasibility Studies (RI/FSs) Conducted by Potentially Responsible Parties (PRPs), OSWER Directive No. 9835.15(a), July 2, 1991.
53. Role of Background in the CERCLA Cleanup Program, EPA, OSWER 9285.6-07P, April 26, 2002.
54. Soil Screening Guidance: User's Guide, EPA, OSWER Publication 9355.4-23, July 1996.
55. Soil Screening Guidance: Technical Background Document, EPA, EPA/540/R95/128, May 1996.
56. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites (Peer Review Draft), EPA, OSWER Publication 9355.4-24, March 2001.
57. Ecological Risk Assessment Guidance for Superfund: Process for Designing & Conducting Ecological Risk Assessments, EPA, OSWER Directive 9285.7-25, EPA-540-R-97-006, February 1997.
58. Guidelines for Ecological Risk Assessment, EPA, EPA/630/R-95/002F, April 1998.
59. The Role of Screening-Level Risk Assessments and Refining Contaminants of Concern in Baseline Ecological Risk Assessments, EPA, OSWER Publication 9345.0-14, EPA/540/F-01/014, June 2001.
60. Ecotox Thresholds, EPA, OSWER Publication 9345.0-12FSI, EPA/540/F-95/038, January 1996.
61. Issuance of Final Guidance: Ecological Risk Assessment and Risk Management Principles for Superfund Sites, EPA, OSWER Directive 9285.7-28P, October 7, 1999.
62. Guidance for Data Usability in Risk Assessment (Quick Reference Fact Sheet), OSWER 9285.7-05FS, September 1990.

63. Guidance for Data Usability in Risk Assessment (Part A), EPA, Office of Emergency and Remedial Response, Publication 9285.7-09A, April 1992.
64. Guide for Conducting Treatability Studies Under CERCLA, EPA, EPA/540/R-92/071a, October 1992.
65. CERCLA Compliance with Other Laws Manual, Two Volumes, EPA, Office of Emergency and Remedial Response, OSWER Directive No. 9234.1-01 and -02, EPA/540/G-89/009, August 1988.
66. Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites, EPA, Office of Emergency and Remedial Response, (Interim Final), OSWER Directive No. 9283.1-2, EPA/540/G-88/003, December 1988.
67. Considerations in Ground-Water Remediation at Superfund Sites and RCRA Facilities - Update, EPA, OSWER Directive 9283.1-06, May 27, 1992.
68. Methods for Monitoring Pump-and-Treat Performance, EPA, EPA/600/R-94/123, June 1994.
69. Pump-and-Treat Ground-Water Remediation A Guide for Decision Makers and Practitioners, EPA, EPA/625/R-95/005, July 1996.
70. Ground-Water Treatment Technology Resource Guide, EPA, OSWER, EPA-542-B-94/009, September 1994.
71. Land Use in the CERCLA Remedy Selection Process, EPA, OSWER Directive No. 9355.7-04, May 25, 1995.
72. Reuse Assessments: A Tool to Implement the Superfund Land Use Directive, EPA, OSWER 9355.7-06P, June 4, 2001.
73. Reuse of CERCLA Landfill and Containment Sites, EPA, OSWER 9375.3-05P, EPA-540-F-99-015, September 1999.
74. Reusing Superfund Sites: Commercial Use Where Waste is Left on Site, EPA, OSWER 9230.0-100, February 2002.
75. Covers for Uncontrolled Hazardous Waste Sites, EPA, EPA/540/2-85/002, 1985.
76. Technical Guidance Document: Final Covers on Hazardous Waste Landfills and Surface Impoundments, EPA, OSWER, EPA/530-SW-89-047, July 1989.
77. Engineering Bulletin: Landfill Covers, EPA, EPA/540/S-93/500, 1993.

78. Principles for Managing Contaminated Sediment Risks at Hazardous Waste Sites, EPA OSWER Directive 9285.6-08, February 12, 2002.
79. Institutional Controls: A Site Manager's Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups, EPA, OSWER 9355.0-74FS-P, EPA/540-F-00-005, September 29, 2000.
80. Health and Safety Requirements of Employees Employed in Field Activities, EPA, Office of Emergency and Remedial Response, EPA Order No. 1440.2, July 12, 1981.
81. OSHA Regulations in 29 CFR 1910.120, Federal Register 45654, December 19, 1986.
82. Standard Operating Safety Guides, PB92-963414, June 1992.
83. Community involvement in Superfund: A Handbook, EPA, Office of Emergency and Remedial Response, OSWER Directive No. 9230.0#3B June 1988; and OSWER Directive No. 9230.0-3C, January 1992.
84. USEPA's *Guidance on Systematic Planning Using the Data Quality Objectives Process*, February 2006.
https://www.epa.gov/sites/production/files/documents/guidance_systematic_planning_dqo_process.pdf
85. "Uniform Federal Policy for Quality Assurance Project Plans Optimized UFP-QAPP Worksheets (March 2012)
86. USEPA's *Guidance on Systematic Planning Using the Data Quality Objectives Process* (February 2006)