

November 3, 2017

Amelia Wagner, Esq.
USEPA – Region 2
290 Broadway, 19th Floor
New York, NY 10007-1866

Re: Troy Chemical Company

Dear Ms. Wagner:

On behalf of our client Troy Chemical Corporation (“Troy”), enclosed is the executed Administrative Settlement Agreement and Order on Consent (“AOC” or “Agreement”) for the Troy Chemical Corporation, Inc. property at 1 Avenue L in Newark, NJ, which EPA has identified as operating Unit 2 of the Pierson’s Creek Superfund Site.

Troy has entered into the Agreement in an effort to expedite the verification of a remedy for its property. Due to Troy’s property having been extensively studied for more than 30 years, additional investigation required under the Agreement should be minimal. The work Troy has performed to date has demonstrated that a site-wide containment remedy is the only technologically feasible, cost effective remedy consistent with the National Contingency Plan for the site.

Although Troy has executed the AOC, it continues to have concerns about the document, as well as the implementation of the Remedial Investigation and Feasibility Study (“RI/FS”) contemplated therein.

1. USEPA Findings of Fact. Troy is concerned that the Findings of Fact in the Agreement do not accurately present the full background of the Troy property or the responsibility for its contamination and inaccurately singles out Troy’s former operations on what is now its plant site as the sole source of contamination. Other documents that are part of the record for the Pierson’s Creek Superfund Site demonstrate that the current Troy site is not the source of the majority of the contamination on the property. Other contamination arose from prior operators at the site (including a prior company with a similar name, but different ownership) and parties upstream of the Troy property that discharged to a City of Newark drainage channel that previously ran through the Troy property. As previously discussed with Sarah Flanagan of the EPA Region 2 Regional Counsel’s Office, the EPA will accept from Troy and place in the Administrative Record a more accurate statement of the factual background of this site.

2. Covenant Not to Sue the United States. Troy's interpretation of this section of the Agreement is that this covenant only applies to contribution claims for the costs of performing the RI/FS work. Troy agreed to sign the AOC including a covenant not to sue the United States reluctantly, as Troy has in its possession documentation which it will share with the USEPA in the near future, indicating that agencies of the federal government are potentially responsible parties under CERCLA. Troy reserves its rights to seek contribution from these agencies for costs it incurred prior to executing the AOC and for future remediation costs.

3. Oversight Costs. As noted in the Superfund Task Force Report, cooperating parties like Troy should not be faced with exorbitant oversight costs. Although we understand that the Task Force's recommendations have not yet been implemented, Troy will seek and expects to be the beneficiary of any future changes in policy, directives or guidance documents that limit oversight costs.

4. Dispute Resolution. Troy fully intends to perform all required work under the AOC and thereby avoid the need to invoke the dispute resolution provision in the Agreement. Should the need arise, however, Troy reserves its rights, as set forth in Paragraph 65 of the Agreement, to elevate an issue to dispute resolution. In that event, Troy will seek review from any EPA official at a higher level than that provided in the AOC, as contemplated by the plain language of the AOC and as pointed out to Troy by USEPA.

5. Statement of Work ("SOW"). As noted above, the Troy property has been extensively investigated for more than 30 years. All of this data have been shared with USEPA. The Remedial Investigation Work Plan will be based upon filling limited gaps in the available data and will reflect prior consideration of alternative remedies. Troy's Newark plant is an active manufacturing facility, and the Work Plan will be prepared and implemented to avoid interference with operations. Troy is prepared to proceed to implement the SOW and comply with the AOC. As you know, Troy has continued to work during the negotiations of the Settlement Agreement and has been submitting monthly progress reports in anticipation of the execution of the AOC. Troy looks forward to receiving the fully executed document and to proceeding promptly through the RI/FS process so that a remedy can be implemented as quickly as possible.

Very truly yours,



DENNIS M. TOFT
Member

DMT:da
Enclosures

Julie

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 2

IN THE MATTER OF:)	
)	
Pierson's Creek Superfund Site)	
)	
Troy Chemical Corporation, Inc.)	U.S. EPA, Region 2
)	CERCLA Docket No. 02-2016-2026
Respondent)	
)	
Proceeding Under Sections 104, 107)	
and 122 of the Comprehensive)	
Environmental Response, Compensation,)	
and Liability Act, 42 U.S.C. §§ 9604,)	
9607 and 9622.)	
)	

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ADMINISTRATIVE SETTLEMENT AGREEMENT
AND ORDER ON CONSENT FOR
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
PIERSON'S CREEK SUPERFUND SITE
OPERABLE UNIT NUMBER 2**

AMS

TABLE OF CONTENTS

I. JURISDICTION AND GENERAL PROVISIONS.....1
II. PARTIES BOUND2
III. STATEMENT OF PURPOSE2
IV. DEFINITIONS2
V. EPA'S FINDINGS OF FACT.....5
VI. EPA'S CONCLUSIONS OF LAW AND DETERMINATIONS6
VII. SETTLEMENT AGREEMENT AND ORDER7
VIII. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS7
IX. WORK TO BE PERFORMED9
X. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS12
XI. QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION.....14
XII. PROPERTY ACCESS AND INSTITUTIONAL CONTROLS16
XIII. COMPLIANCE WITH OTHER LAWS.....17
XIV. RETENTION OF RECORDS.....17
XV. DISPUTE RESOLUTION18
XVI. STIPULATED PENALTIES19
XVII. FORCE MAJEURE21
XVIII. PAYMENT OF RESPONSE COSTS.....22
XIX. COVENANT NOT TO SUE BY EPA.....24
XX. RESERVATIONS OF RIGHTS BY EPA24
XXI. COVENANT NOT TO SUE BY RESPONDENT26
XXII. OTHER CLAIMS28
XXIII. EFFECT OF SETTLEMENT/CONTRIBUTION28
XXIV. INDEMNIFICATION.....30
XXV. INSURANCE.....31
XXVI. FINANCIAL ASSURANCE31
XXVII. INTEGRATION/APPENDICES33
XXVIII. ADMINISTRATIVE RECORD33
XXIX. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION33
XXX. NOTICE OF COMPLETION OF WORK.....34

ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT
FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY
OPERABLE UNIT NO. 2

I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and Troy Chemical Corporation, Inc. ("Respondent"). The Settlement Agreement concerns the preparation and performance of a remedial investigation and feasibility study ("RI/FS") for Operable Unit ("OU") 02 consisting of Respondent's property located at One Avenue L, Newark, Essex County, New Jersey ("Property") at or in connection with the Pierson's Creek Superfund Site ("Site") and payment of Future Response Costs incurred by EPA in connection with the RI/FS for OU 02.

2. This Settlement Agreement 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, 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. 14-14-C (Administrative Actions Through Consent Orders, Apr. 15, 1994). These authorities were further redelegated by the Regional Administrator of EPA, Region 2 to the Director of the Emergency and Remedial Response Division by Regional Delegation 14-14-C on November 23, 2004.

3. In accordance with Sections 104(b)(2) and 122(j)(1) of CERCLA, 42 U.S.C. §§ 9604(b)(2) and 9622(j)(1), EPA notified the Federal natural resource trustees on December 1, 2014, of negotiations with potentially responsible parties regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal trusteeship.

4. EPA and Respondent recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondent does not admit, and retains the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of fact in Section V and the conclusions of law and determinations in Section VI. Respondent agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the basis or validity of this Settlement Agreement or its terms in any proceeding to implement or enforce this Settlement Agreement.



II. PARTIES BOUND

5. This Settlement Agreement applies to and is binding upon EPA and upon Respondent and its successors and assigns. Any change in ownership or corporate status of the 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 Agreement.

6. Respondent shall ensure that its personnel, contractors and subcontractors engaged in implementing this Settlement Agreement receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Respondent shall be responsible for any noncompliance with this Settlement Agreement by its personnel, contractors and subcontractors.

7. The undersigned representative of Respondent certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to execute and legally bind Respondent to this Settlement Agreement.

III. STATEMENT OF PURPOSE

8. In entering into this Settlement Agreement, the objectives of EPA and Respondent are: (a) to determine the nature and extent of contamination and any threat to the public health, welfare, or the environment caused by the release or threatened release of hazardous substances, pollutants, or contaminants at the Property, as defined below, or in areas necessary to select a remedy for OU2, by conducting additional sampling and preparing a RI Report as specifically set forth in the Statement of Work ("SOW") attached as Appendix A to this Settlement Agreement; (b) to identify and evaluate remedial alternatives to prevent, mitigate, or otherwise respond to or remedy any release or threatened release of hazardous substances, pollutants, or contaminants at or from the Property, by preparing an FS as specifically set forth in the SOW; and (c) to recover response and oversight costs incurred by EPA with respect to this Settlement Agreement.

9. The Work conducted under this Settlement Agreement is subject to approval by EPA and shall provide all appropriate and necessary information to assess conditions at the Property and evaluate alternatives to the extent necessary to select a remedy that will be consistent with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 ("NCP"). Respondent shall conduct all Work under this Settlement Agreement in compliance with CERCLA, the NCP, the SOW and all applicable EPA guidances, policies, and procedures.

IV. DEFINITIONS

10. Unless otherwise expressly provided in this Settlement Agreement, terms used in this Settlement Agreement 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 Agreement or its appendices, the following definitions shall apply:

Aut

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

“DOJ” shall mean the United States Department of Justice and its successor departments, agencies, or instrumentalities.

“Day” or “day” shall mean a calendar day. In computing any period of time under this Settlement Agreement, 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 Agreement as provided in Section XXIX.

“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 plans, reports, and other deliverables submitted pursuant to this Settlement Agreement, in overseeing implementation of the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Section XII (Site Access and Institutional Controls) (including, but not limited to, the cost of attorney time and any monies paid to secure access, including, but not limited to, the amount of just compensation), Paragraph 44 (emergency response), Paragraph 88 (Work takeover), and all costs incurred in connection with Section XV (Dispute Resolution) should EPA prevail. Future Response Costs shall also include Agency for Toxic Substances and Disease Registry costs. Future Response Costs will not include any EPA or DOJ costs related to the pending matter *Troy Chemical Corporation v. EPA*, Case No. 14-1290 (D.C. Cir.).

“Institutional controls” shall mean non-engineered instruments, such as administrative and/or legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land and/or resource use. Examples of institutional controls include easements and covenants, zoning restrictions, special building permit requirements, and well drilling prohibitions.

“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.

AMB

“MSW” shall mean Municipal Solid Waste that is waste material: (a) generated by a household (including a single or multifamily residence); or (b) generated by a commercial, industrial, or institutional entity, to the extent that the waste material (1) is essentially the same as waste normally generated by a household; (2) is collected and disposed of with other municipal solid waste as part of normal municipal solid waste collection services; and (3) contains a relative quantity of hazardous substances no greater than the relative quantity of hazardous substances contained in waste material generated by a typical single-family household.

“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.

“NJDEP” shall mean the New Jersey Department of Environmental Protection and any successor departments or agencies of the State.

“Operable Unit 2” shall mean response actions conducted on the Troy Chemical Corporation, Inc. property located at One Avenue L, Newark, New Jersey, as generally depicted on a map in Appendix B.

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

“Parties” shall mean EPA and Respondent.

“Property” shall mean the Troy Chemical Corporation, Inc. property located at One Avenue L, Newark, Essex County, New Jersey, including surface, subsurface and groundwater. The Property is situated within the Pierson’s Creek Superfund Site.

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

“Respondent” shall mean Troy Chemical Corporation, Inc.

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

“Settlement Agreement” shall mean this Administrative Settlement Agreement and Order on Consent, the SOW, all appendices attached hereto (listed in Section XXVII) 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 approval by EPA. In the event of conflict between this Settlement Agreement and any appendix or other incorporated documents, this Settlement Agreement shall control.

“Site” shall mean the Pierson’s Creek Superfund Site, located in Newark, Essex County, New Jersey and generally depicted on a map in Appendix B.

“Pierson’s Creek Superfund Site 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).

“State” shall mean the State of New Jersey.

“SOW” shall mean the Statement of Work for development of a RI/FS for Respondent’s Property within the Pierson’s Creek Superfund Site, OU 02, as set forth in Appendix A to this Settlement Agreement. The SOW is the principal document governing Work under this Settlement Agreement. It is incorporated into this Settlement Agreement and is an enforceable part of this Settlement Agreement as are any modifications made thereto in accordance with this Settlement Agreement.

“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, with respect to Work performed under this Settlement Agreement, (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 mixture containing any of the constituents noted in (a), (b) or (c), above.

“Work” shall mean all activities Respondent is required to perform under this Settlement Agreement and SOW, except those required by Section XIV (Retention of Records).

V. EPA’S FINDINGS OF FACT

11. Currently, Pierson’s Creek begins south of the Property where it receives stormwater runoff from a large culvert. The Creek continues to flow through a series of open channels and culverts in a general south-southwesterly direction before discharging into the Port Newark Channel of Newark Bay.

12. The manufacturing plant (“Plant”) located on the Property manufactured mercury compounds from approximately 1956 until approximately 1980. Manufacturing processes included purification of mercury, production of mercuric oxide from mercury and the manufacture of organic mercury compounds using mercuric oxide.

13. The mercuric oxide manufacturing process at the Plant was reported to be the primary source of mercury-bearing wastewater at the Plant, accounting for approximately 7,000 gallons per week. Other sources of mercury-bearing wastewater included spillage, leakage, and washing of equipment and floors of the mercury production areas of the Plant.

AMB

14. The Plant discharged its mercury-bearing wastewater directly into Pierson's Creek without any treatment until 1965. Sulfide precipitation pretreatment was used from 1965 until 1976. In 1976, the Plant was connected to the Passaic Valley Sewerage Commission ("PVSC") sewer system and began diverting wastewater from the mercury pretreatment system to an overall wastewater treatment plant where wastewaters were treated by settling, removal of suspended solids and oil, and neutralization before subsequent discharge to the PVSC system.

15. There were reported instances of mercury-containing wastewater and stormwater discharges from the Plant into Pierson's Creek after the Plant's connection to the PVSC sewer system. An NJDEP inspection in July 1977 revealed numerous pipes discharging into the Creek, none of which were depicted on the site plan for the facility. During an April 28, 1980 inspection, NJDEP observed stormwater and wastewater flowing into the Creek and its unnamed tributary via runoff, pipes, cracks in the Creek's concrete walls adjacent to a building at the Plant and tank farm, and overflow from the Plant's industrial wastewater collection sump. All of these discharges were found to contain mercury.

16. In July 1979, EPA collected a sediment sample from the Creek just downstream of the Plant's mercury wastewater treatment system and reported a mercury concentration of 22,400 milligrams per kilogram ("mg/kg") compared to upstream concentrations of 140 and 191 mg/kg. EPA also reported mercury concentrations above background for samples collected downstream of the Plant. A 2010 investigation indicated significant increases in sediment mercury concentrations at and downstream of the Plant compared to upstream sediment concentrations.

17. By letter dated August 9, 2011, NJDEP nominated Pierson's Creek for inclusion on the National Priorities List ("NPL").

18. EPA conducted an investigation of Pierson's Creek in October 2012 that confirmed the observed release of mercury to the Creek sediments. Mercury was detected in sediment samples collected throughout the accessible portions of the Creek and a Site-attributable observed release is documented for a distance of approximately 0.25 miles downstream of the Plant.

19. The Site was listed on the NPL pursuant to CERCLA Section 105, 42 U.S.C. § 9605, on September 22, 2014, 79 FR 56515.

20. The Respondent is a corporation located at One Avenue L in Newark, New Jersey. The Respondent is the current owner or operator under CERCLA Section 107(a) of Property located within the Site.

VI. EPA'S CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth in Section V, EPA has determined that:

Amc

21. The Plant is a “facility” as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

22. The contamination found at the Property, as identified in the Findings of Fact above, includes “hazardous substances” as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14) or constitutes “any pollutant or contaminant” that may present an imminent and substantial danger to public health or welfare under Section 104(a)(1) of CERCLA.

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

24. Respondent is a “person” as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

- a. Respondent is a responsible party under Sections 104, 107, and 122 of CERCLA, 42 U.S.C. §§ 9604, 9607 and 9622. Respondent is the “owner” and/or “operator” of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

25. The actions required by this Settlement Agreement 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).

26. EPA has determined that Respondent is qualified to conduct the RI/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 Respondent complies with the terms of this Settlement Agreement.

VII. SETTLEMENT AGREEMENT AND ORDER

27. Based upon the foregoing Findings of Fact and Conclusions of Law and Determinations, it is hereby Ordered and Agreed that Respondent shall comply with all provisions of this Settlement Agreement, including, but not limited to, all appendices to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VIII. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS

28. Selection of Contractors, Personnel. All Work performed under this Settlement Agreement shall be under the direction and supervision of qualified personnel. Respondent has selected and EPA has approved Geosyntec Consultants as the contractor to be used in carrying out the Work. Respondent has demonstrated that the proposed contractor has a quality system

AWS

that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995, or most recent version), by submitting a copy of the 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, March 2001; Reissued May 2006) or equivalent documentation as determined by EPA. The qualifications of the persons undertaking the Work for Respondent shall be subject to EPA's review, for verification that such persons meet minimum technical background and experience requirements. This Settlement Agreement is contingent on Respondent's demonstration to EPA's satisfaction that Respondent is qualified to perform properly and promptly the actions set forth in this Settlement Agreement. If EPA disapproves in writing of any person's technical qualifications, Respondent shall notify EPA of the identity and qualifications of the replacements within fifteen (15) days after the written notice. If EPA subsequently disapproves of the replacement, EPA reserves the right to terminate this Settlement Agreement and to conduct a complete RI/FS, and to seek reimbursement for costs and penalties from Respondent. During the course of the RI/FS, Respondent shall notify EPA in writing of any changes or additions in the personnel used to carry out such Work, providing their names, titles, and qualifications. EPA shall have the same right to disapprove changes and additions to personnel as it has hereunder regarding the initial notification.

29. Respondent has designated and EPA has approved Chris Greene, P.E., a Senior Principal at Geosyntec Consultants as the Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Settlement Agreement. Respondent has submitted to EPA the designated Project Coordinator's address, telephone number, and qualifications. If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within fourteen (14) days following EPA's disapproval. To the greatest extent possible, the Project Coordinator shall be present on the Property or readily available during Work on the Property. EPA retains the right to disapprove of the designated Project Coordinator. Respondent shall have the right to change their Project Coordinator, subject to EPA's right to disapprove. Respondent shall notify EPA fifteen (15) days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notification. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by Respondent.

30. EPA has designated Pamela Tames, P.E., of the New York Remediation Branch, Region 2 as its Remedial Project Manager ("RPM"). EPA will notify Respondent of a change of its designated RPM. Except as otherwise provided in this Settlement Agreement, Respondent shall direct all submissions required by this Settlement Agreement electronically, unless otherwise directed, to the RPM at tames.pam@epa.gov.

31. EPA's RPM shall have the authority lawfully vested in a RPM by the NCP. In addition, EPA's RPM shall have the authority consistent with the NCP, to halt any Work required

AMC

by this Settlement Agreement, and to take any necessary response action when she determines that conditions at the Site may present an immediate endangerment to public health or welfare or the environment. The absence of the EPA RPM from the area under study pursuant to this Settlement Agreement shall not be cause for the stoppage or delay of Work.

32. EPA has arranged for CDM Federal Programs Corporation to assist in its oversight and review of the conduct of the RI/FS, as required by Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). CDM shall have the authority to observe the Work and make inquiries in the absence of EPA, but not to modify the RI/FS Work Plan.

IX. WORK TO BE PERFORMED

33. Respondent shall conduct the Work in accordance with the provisions of this Settlement Agreement, the 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 and any other public written guidance that EPA uses in conducting an RI/FS as appropriate and consistent with the SOW, as may be amended or modified by EPA. The RI shall characterize Property conditions, determine the nature and extent of the contamination, assess risk to human health and the environment, and conduct treatability testing, as necessary, to evaluate the potential performance and cost of the treatment technologies that are being considered. The FS shall identify and evaluate (based on treatability testing, where appropriate) alternatives for remedial action to prevent, mitigate, or otherwise respond to or remedy the release or threatened release of hazardous substances, pollutants, or contaminants at or from the Property. The alternatives evaluated must include, but shall not be limited to, the range of alternatives described in the NCP, and shall include remedial actions that utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In evaluating the alternatives, Respondent shall address the factors required to be taken into account by Section 121 of CERCLA, 42 U.S.C. § 9621, and Section 300.430(e) of the NCP, 40 C.F.R. § 300.430(e).

34. Respondent shall submit all deliverables to EPA in electronic form. If any deliverable includes maps, drawings, or other exhibits that are larger than 8.5" by 11", Respondent shall also provide EPA with paper copies of such exhibits, unless directed otherwise by EPA.

35. Technical Specifications for Deliverables. Sampling and monitoring data will be submitted in standard regional Electronic Data Deliverable format. Other delivery methods may be allowed if electronic direct submission presents a significant burden or as technology changes.

36. Spatial data, including spatially-referenced data and geospatial data, should be submitted: (1) in the ESRI File Geodatabase format; and (2) as unprojected geographic coordinates in decimal degree format using North American Datum 1983 (NAD83) or World Geodetic System 1984 (WGS84) as the datum. If applicable, submissions should include the

AMC

collection method(s). Projected coordinates may optionally be included but must be documented. Spatial data should be accompanied by metadata, and such metadata should be compliant with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and its EPA profile, the EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor (EME), complies with these FGDC and EPA metadata requirements and is available at <https://edg.epa.gov/EME/>.

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

38. Spatial data submitted by Respondent does not, and is not intended to, define the boundaries of OU2.

39. Upon receipt of the draft FS report, EPA will evaluate, as necessary, the report's 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 durability, reliability, and effectiveness of any proposed Institutional Controls.

40. Modification of the RI/FS Work Plan.

a. The SOW contemplates Respondent preparing an RI/FS based in large part upon work already performed with some additional sampling reflected in an RI/FS Work Plan. If at any time during the RI/FS process, Respondent identifies a need for additional data, Respondent shall submit a memorandum documenting the need for additional data to the EPA RPM within thirty (30) days after identification. EPA in its discretion will determine whether the additional data will be collected by Respondent and whether it will be incorporated into plans, reports, and other deliverables.

b. In the event of unanticipated or changed circumstances affecting the Work at the Property, Respondent shall notify the EPA 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 to the RI/FS Work Plan, EPA shall modify or amend the RI/FS Work Plan in writing accordingly. Respondent shall perform the RI/FS Work Plan as modified or amended.

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

d. Respondent shall confirm its willingness to perform the additional Work in writing to EPA within seven (7) days after receipt of the EPA request. If Respondent objects to any modification determined by EPA to be necessary pursuant to this Paragraph, Respondent

Amb

may seek dispute resolution pursuant to Section XV (Dispute Resolution). The SOW and/or RI/FS Work Plan shall be modified in accordance with the final resolution of the dispute.

e. Respondent shall complete the additional Work according to the standards, specifications, and schedule set forth or approved by EPA in a written modification to the RI/FS Work Plan. EPA reserves the right to conduct the Work itself at any point, to seek reimbursement from Respondent, and/or to seek any other appropriate relief.

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

41. Off-Site Shipment.

a. Respondent may ship hazardous substances, pollutants and contaminants generated as a result of the Work 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. Respondent will be deemed to be in compliance with CERCLA Section 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if Respondent obtains a prior determination from EPA that the proposed receiving facility for such shipment is acceptable under the criteria of 40 C.F.R. § 300.440(b). Respondent may ship Investigation Derived Waste (IDW) from the Property to an off-site facility only if Respondent complies with EPA's "Guide to Management of Investigation Derived Waste," OSWER 9345.3-03FS (Jan. 1992).

b. Respondent may ship Waste Material generated as a result of the Work 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 the EPA RPM. This written 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. Respondent also shall notify the state environmental official referenced above and the EPA 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. Respondent shall provide the written notice after the award of the contract for remedial investigation and feasibility study and before the Waste Material is shipped.

42. Meetings. Respondent shall make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct, and completion of the RI/FS. In addition to discussion of the technical aspects of the RI/FS, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion.

43. Progress Reports. In addition to the plans, reports, and other deliverables set forth in this Settlement Agreement, Respondent shall provide to EPA monthly progress reports by the 15th day of the following month. At a minimum, with respect to the preceding month, these

AWC

progress reports shall (a) describe the actions that have been taken to comply with this Settlement Agreement during that month, (b) include all results of sampling and tests and all other data received by Respondent, (c) describe Work planned for the next two months with schedules relating such Work to the overall project schedule for RI/FS completion, and (d) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

44. Emergency Response and Notification of Releases.

a. In the event of any action or occurrence during arising from or relating to performance of the Work that causes or threatens a release of Waste Material from the Property that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action. Respondent shall take these actions in accordance with all applicable provisions of this Settlement Agreement, including, but not limited to, the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondent shall also immediately notify the Emergency Spill Reporting Hotline at (732) 548-8730 and the EPA RPM or, in the event of her unavailability, the Chief of the Passaic, Hackensack and Newark Bay Remediation Branch at (212) 637-4310 of the incident or Property conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondent shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XVIII (Payment of Response Costs).

b. In addition, in the event of any release of a hazardous substance from the Property, Respondent shall immediately notify the EPA RPM, and the National Response Center at (800) 424-8802. Respondent shall submit a written report to EPA within seven (7) days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, *et seq.*

X. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

45. After review of any plan, report, or other item that is required to be submitted for approval pursuant to this Settlement Agreement, in a notice to Respondent EPA shall: (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 Respondent modify the submission; or (e) any combination of the above. However, EPA shall not modify a submission without first providing Respondent at least one notice of deficiency and an opportunity to cure within thirty (30) days, except where to

AMB

do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects.

46. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Paragraph 457.a, 457.b, 457.c, or 457.d, Respondent shall proceed to take any action required by the plan, report, or other deliverable, as approved or modified by EPA subject only to their right to invoke the Dispute Resolution procedures set forth in Section XV (Dispute Resolution) with respect to the modifications or conditions made by EPA. Following EPA approval or modification of a submission or portion thereof, Respondent shall not thereafter alter or amend such submission or portion thereof unless directed by EPA. In the event that EPA modifies the submission to cure the deficiencies pursuant to Paragraph 457.c and the submission had a material defect, EPA retains the right to seek stipulated penalties, as provided in Section XVI (Stipulated Penalties).

47. Resubmission.

a. Upon receipt of a notice of disapproval, Respondent shall, as specified in the SOW or if not specified within thirty (30) days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. Any stipulated penalties applicable to the submission, as provided in Section XVI, shall accrue during the period specified in the SOW or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect as provided in Paragraphs 48 and 49, respectively.

b. Notwithstanding the receipt of a notice of disapproval, Respondent shall proceed to take any action required by any non-deficient portion of the submission, unless otherwise directed by EPA. Implementation of any non-deficient portion of a submission shall not relieve Respondent of any liability for stipulated penalties under Section XVI (Stipulated Penalties).

c. Respondent 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: RI/FS Work Plan and Sampling and Analysis Plan, Health and Safety Plan (HASP), Quality Assurance Project Plan (QAPP), Draft Remedial Investigation Report, Draft Feasibility Study Report, and if determined that additional Treatability Testing is required, the Treatability Testing Work Plan, Treatability Testing Sampling and Analysis Plan, Treatability Testing HASP, and the Treatability Testing QAPP. While awaiting EPA approval, approval on condition, or modification of these deliverables, Respondent shall proceed with all other tasks and activities that may be conducted independently of these deliverables, in accordance with the SOW.

d. For all remaining deliverables not listed above in Paragraph 47.c, Respondent shall proceed with all subsequent tasks, activities, and deliverables, required by the SOW, without awaiting EPA approval on the submitted deliverable. EPA reserves the right to

Handwritten initials/signature

stop Respondent from proceeding further, either temporarily or permanently, on any task, activity or deliverable at any point during the RI/FS.

48. If EPA disapproves a resubmitted plan, report, or other deliverable, or portion thereof, EPA may again direct Respondent to correct the deficiencies. EPA shall also retain the right to modify or develop the plan, report, or other deliverable. Respondent shall implement any such plan, report, or deliverable as corrected, modified, or developed by EPA, subject only to Respondent's right to invoke the procedures set forth in Section XV (Dispute Resolution).

49. If upon resubmission, a plan, report, or other deliverable is disapproved or modified by EPA due to a material defect, Respondent shall be deemed to have failed to submit such plan, report, or other deliverable timely and adequately unless Respondent invoke the dispute resolution procedures in accordance with Section XV (Dispute Resolution) and EPA's action is revoked or substantially modified pursuant to a Dispute Resolution decision issued by EPA or superseded by an agreement reached pursuant to that Section. The provisions of Section XV (Dispute Resolution) and Section XVI (Stipulated Penalties) shall govern the implementation of the Work and accrual and payment of any stipulated penalties during Dispute Resolution. If EPA's disapproval or modification is not otherwise revoked, substantially modified, or superseded as a result of a decision or agreement reached pursuant to the Dispute Resolution process set forth in Section XV, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XVI.

50. In the event that EPA takes over some of the tasks, but not the preparation of the RI Report or the FS Report, Respondent shall incorporate and integrate information supplied by EPA into the final reports.

51. All plans, reports, and other deliverables submitted to EPA under this Settlement Agreement or the SOW shall, upon approval or modification by EPA, be incorporated into and enforceable under this Settlement Agreement. In the event EPA approves or modifies a portion of a plan, report, or other deliverable submitted to EPA under this Settlement Agreement, the approved or modified portion shall be incorporated into and enforceable under this Settlement Agreement.

52. Neither failure of EPA to expressly approve or disapprove of Respondent's submissions within a specified time period, nor the absence of comments, shall be construed as approval or disapproval by EPA. Whether or not EPA gives express approval for Respondent's deliverables, Respondent is responsible for preparing deliverables acceptable to EPA.

XI. QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION

53. Quality Assurance. Respondent shall assure that Work performed, samples taken, and analyses conducted conform to the requirements of the SOW, the QAPP, and guidance identified therein. Respondent will assure that field personnel used by Respondent are properly

Amc

trained in the use of field equipment and in chain of custody procedures. Respondent shall only use laboratories that have a documented quality system that complies with "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.

54. Sampling.

a. All results of sampling, tests, modeling, or other data (including raw data) generated by Respondent, or on Respondent's behalf, during the period that this Settlement Agreement is effective, shall be submitted to EPA in the next monthly progress report as described in Paragraph 43. EPA will make available to Respondent validated data generated by EPA unless it is exempt from disclosure by any federal or state law or regulation.

b. Respondent shall verbally notify EPA at least fourteen (14) days prior to conducting significant field events as described in the SOW, RI/FS Work Plan, or Sampling and Analysis Plan. At EPA's verbal or written request, or the request of EPA's oversight assistant, Respondent shall allow split or duplicate samples to be taken by EPA (and its authorized representatives) of any samples collected in implementing this Settlement Agreement. All split samples of Respondent shall be analyzed by the methods identified in the QAPP.

55. Access to Information.

a. Respondent 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 its possession or control or that of its contractors or agents relating to activities to implement the SOW at the Property or to the implementation of this Settlement Agreement, 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 related to the Work. Respondent shall also make available to EPA, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

b. Respondent may assert business confidentiality claims covering part or all of the Records submitted to EPA under this Settlement Agreement, and/or covering information disclosed to EPA during EPA's presence on the Property, such as manufacturing or formulation processes, raw materials, production, volumes and inventory ("Property Information"), 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). Records and/or Property Information determined to be confidential by EPA 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 when the Property Information is disclosed to EPA, or if EPA has notified Respondent that the Records and/or Property Information 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

AMB

without further notice to Respondent. Respondent shall segregate and clearly identify all Records submitted under this Settlement Agreement, and shall clearly inform EPA when Property Information is disclosed to EPA, for which Respondent asserts business confidentiality claims. If EPA or its Representatives are legally compelled by subpoena or similar process, including a request for information pursuant to the Freedom of Information Act, to disclose any confidential Records or Property Information, EPA will provide Respondent with prompt prior notice so that Respondent may have a reasonable opportunity to seek a protective order or other appropriate remedy to protect the confidential Records or Property Information from disclosure. If the subpoena or similar process is not quashed or a protective order is not obtained, the confidential Records or Property Information disclosed in response to such subpoena or similar process shall be limited to that information which is legally required to be disclosed in such response.

c. Respondent may assert that certain Records are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Respondent asserts such a privilege in lieu of providing Records, it shall provide EPA with the following: (i) the title of the Record; (ii) the date of the Record; (iii) the name, title, affiliation (e.g., company or firm), and address of the author of the Record; (iv) the name and title of each addressee and recipient; (v) a description of the contents of the Record; and (vi) the privilege asserted by Respondent. However, no Records created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged or confidential.

d. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other Records evidencing conditions related to the Work at or around the Property.

56. In entering into this Settlement Agreement, Respondent waives any objections to any data gathered, generated, or evaluated by EPA, the State or Respondent 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 Agreement or any EPA-approved RI/FS Work Plans or Sampling and Analysis Plans. If Respondent objects to any other data relating to the RI/FS, Respondent 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 fifteen (15) days after the monthly progress report containing the data.

XII. PROPERTY ACCESS AND INSTITUTIONAL CONTROLS

57. Commencing on the Effective Date, Respondent shall provide EPA, and its representatives, including contractors, with access at all reasonable times to the Property, for the purpose of conducting any activity related to this Settlement Agreement. EPA and its representatives are aware that the Property is an operating chemical plant.

AMB

58. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use their best efforts to obtain all necessary access agreements within sixty (60) days after the Effective Date, or as otherwise specified in writing by the EPA RPM. Respondent shall immediately notify EPA if after using its best efforts it is unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondent shall describe in writing its efforts to obtain access. If Respondent cannot obtain access agreements, EPA may either (a) obtain access for Respondent or assist Respondent in gaining access, to the extent necessary to effectuate the response actions described in this Settlement Agreement, using such means as EPA deems appropriate; (b) perform those tasks or activities with EPA contractors; or (c) terminate the Settlement Agreement. Respondent shall reimburse EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XVIII (Payment of Response Costs). If EPA performs those tasks or activities with EPA contractors and does not terminate the Settlement Agreement, Respondent shall perform all other tasks or activities not requiring access to that property, and shall reimburse EPA for all costs incurred in performing such tasks or activities. Respondent shall integrate the results of any such tasks or activities undertaken by EPA into its plans, reports, and other deliverables.

59. Notwithstanding any provision of this Settlement Agreement, EPA retains all of its access authorities and rights as well as all of its rights to require land/water use restrictions], including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XIII. COMPLIANCE WITH OTHER LAWS

60. Respondent shall comply with all applicable state and federal laws and regulations when performing the RI/FS. No local, state, or federal permit shall be required for any portion of any action conducted entirely on OU2, 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 is to be conducted off-Site and requires a federal or state permit or approval, Respondent shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Settlement Agreement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XIV. RETENTION OF RECORDS

61. During the pendency of this Settlement Agreement and for a minimum of ten (10) years after commencement of construction of any remedial action, 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 the performance of the Work or the liability of any person under CERCLA with respect to the Property, regardless of any corporate retention policy to the contrary. Until ten (10) years after commencement of construction of any remedial action, Respondent shall also instruct its

AMG

contractors and agents to preserve all Records of whatever kind, nature, or description relating to performance of the Work.

62. At the conclusion of this document retention period, Respondent shall notify EPA at least ninety (90) days prior to the destruction of any such Records, and, upon request by EPA, Respondent shall deliver any such Records to EPA. Respondent may assert that certain Records are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege, it shall provide EPA with the following: (a) the title of the Record; (b) the date of the Record; (c) the name and title of the author of the Record; (d) the name and title of each addressee and recipient; (e) a description of the subject of the Record; and (f) the privilege asserted by Respondent. However, no Records created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged or confidential.

63. Respondent hereby certifies 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 the earlier of notification of potential liability by EPA or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA 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.

XV. DISPUTE RESOLUTION

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

65. If Respondent objects to any EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs, they shall notify EPA in writing of its objection(s) within twenty-one (21) days after such action, unless the objection(s) has/have been resolved informally. EPA and Respondent shall have thirty (30) days from EPA's receipt of Respondent's written objection(s) to resolve the dispute (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA. Such extension may be granted orally but must be confirmed in writing.

66. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by the Parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, an EPA management official at the Deputy Director of the Emergency and Remedial Response Division level or higher will issue a written decision. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondent's obligations under this Settlement Agreement shall not be tolled by submission of

FWB

any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs, and regardless of whether Respondent agrees with the decision.

XVI. STIPULATED PENALTIES

67. Respondent shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 68 and 69 for failure to comply with any of the requirements of this Settlement Agreement specified below unless excused under Section XVII (Force Majeure). "Compliance" by Respondent shall include completion of the Work under this Settlement Agreement or any activities contemplated under any RI/FS Work Plan or other plan approved under this Settlement Agreement identified below, in accordance with all applicable requirements of law, this Settlement Agreement, the SOW, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement. Any time schedule or deadline established within this Settlement Agreement or the SOW may be extended by mutual agreement of the Parties.

68. Stipulated Penalty Amounts – Major Deliverables, Payments, establishment or maintenance of Financial Assurance, and Other Requirements

<u>Penalty per Violation per Day</u>	<u>Period of Noncompliance</u>
\$ 1,000	1st through 14th day
\$ 1,500	15th through 30th day
\$ 5,000	31st day and beyond

69. Stipulated Penalty Amounts – Other Reports and Documents

a. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate deliverables, pursuant to Section X of this Settlement Agreement:

<u>Penalty per Violation per Day</u>	<u>Period of Noncompliance</u>
\$ 500	1st through 14th day
\$ 1,000	15th through 30th day
\$ 2,500	31st day and beyond

Amg

70. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 88 (Work Takeover), Respondent shall be liable for a stipulated penalty in the amount of \$250,000.

71. 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. However, stipulated penalties shall not accrue: (a) with respect to a deficient submission under Section X (EPA Approval of Plans and Other Submissions), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondent of any deficiency; and (b) with respect to a decision by the EPA management official designated in Paragraph 66 of Section XV (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 Agreement shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

72. Following EPA's determination that Respondent has failed to comply with a requirement of this Settlement Agreement, EPA may give Respondent written notification of the same and describe the noncompliance. EPA may send Respondent 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 Respondent of a violation.

73. All penalties accruing under this Section shall be due and payable to EPA within thirty (30) days after Respondent's receipt from EPA of a demand for payment of the penalties, unless Respondent invokes the dispute resolution procedures under Section XV (Dispute Resolution). Respondent shall make all payments required by this Paragraph to EPA by Fedwire Electronic Funds Transfer to:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York NY 10045
Field Tag 4200 of the Fedwire message should read "D 68010727 Environmental Protection Agency"

and shall reference stipulated penalties, Site/Spill ID Number 02MV, and the EPA docket number for this action.

74. At the time of payment required to be made in accordance with Paragraph 73, Respondent shall send notice by email that payment has been made to the EPA RPM and to the EPA Cincinnati Finance Office at cinwd_acctsreceivable@epa.gov and to

AMG

mcguffy.elizabeth@epa.gov and provide reference to the EPA docket number for this action and the Site/Spill ID Number, 02MV.

75. The payment of penalties shall not alter in any way Respondent's obligation to complete performance of the Work required under this Settlement Agreement

76. Penalties shall continue to accrue as provided in Paragraph 71 during any dispute resolution period, but need not be paid until fifteen (15) days after the dispute is resolved by agreement or by receipt of EPA's decision.

77. If Respondent fails to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondent shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 73.

78. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondent's violation of this Settlement Agreement 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 to 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 Agreement, except in the case of willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX (Reservation of Rights by EPA), Paragraph 88. 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 Agreement.

XVII. FORCE MAJEURE

79. Respondent agrees to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, *force majeure* is defined as any event arising from causes beyond the control of Respondent or of any entity controlled by Respondent, including but not limited to its contractors and subcontractors, which delays or prevents performance of any obligation under this Settlement Agreement despite Respondent's best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work or increased cost of performance.

80. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondent shall notify EPA orally within five (5) days of when Respondent first knew that the event might cause a delay. Within seven (7) days thereafter, Respondent shall provide to EPA in

AMB

writing 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; Respondent's rationale for attributing such delay to a *force majeure* event if it intends to assert such a claim; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of *force majeure* for that event for the period of time of such failure to comply and for any additional delay caused by such failure.

81. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure* event, the time for performance of the obligations under this Settlement Agreement that are affected by the *force majeure* event will be extended by EPA 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* event 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* event, EPA will notify Respondent in writing of its decision. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondent in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

XVIII. PAYMENT OF RESPONSE COSTS

82. Payments of Future Response Costs.

a. Respondent shall pay EPA all Future Response Costs for OU 2 not inconsistent with the NCP. On a periodic basis, EPA will send Respondent a bill requiring payment that includes a Superfund Cost Recovery Package Imaging and On-line system ("SCORPIOS") Report, which includes direct and indirect costs incurred by EPA, its contractors, and DOJ. Respondent shall make all payments within thirty (30) days after receipt of each bill requiring payment. Respondent and EPA agree that a letter from a branch chief within the Emergency and Remedial Response Division, EPA Region 2, providing the amount of costs incurred and accompanied by a SCORPIOS Report shall serve as the sole basis for payment demands by EPA. Respondent shall not demand any additional documentation beyond that specified in this subparagraph as a prerequisite for making any payments demanded by EPA for Future Response Costs. Payments shall be made to EPA by Fedwire Electronic Funds Transfer ("EFT") to:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York NY 10045

AWG

Field Tag 4200 of the Fedwire message should read "D 68010727 Environmental Protection Agency"

and shall reference Site/Spill ID Number 02MV and the EPA docket number for this action.

b. At the time of payment, Respondent shall send notice that payment has been made to the EPA RPM, and to the EPA Cincinnati Finance Center by email at cinwd_acctsreceivable@epa.gov and to mcguffey.elizabeth@epa.gov. Such notice shall reference Site/Spill ID Number 02MV and the EPA docket number for this action.

c. The total amount to be paid by Respondent pursuant to Paragraph 82.a. shall be deposited by EPA in the Pierson's Creek Superfund Site 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 Pierson's Creek Superfund Site 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. Any decision by EPA to deposit a Future Response Costs payment directly into the EPA Hazardous Substance Superfund for this reason shall not be subject to challenge by Respondent pursuant to the dispute resolution provisions of this Settlement or in any other forum.

83. Interest. If Respondent does not pay Future Response Costs within thirty (30) days after Respondent's receipt of a bill, Respondent shall pay Interest on the unpaid balance. The Interest on unpaid Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. If EPA receives a partial payment, Interest shall accrue on any unpaid balance. 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 Respondent's failure to make timely payments under this Section, including but not limited to, payments of stipulated penalties pursuant to Section XVI. Respondent shall make all payments required by this Paragraph in the manner described in Paragraph 82.a.

84. Respondent may contest payment of any Future Response Costs billed under Paragraph 82. if it determines that EPA has made a mathematical error or included a cost item that is not within the definition of Future Response Costs, or if it believes EPA incurred excess costs as a direct result of an EPA action that was inconsistent with a specific provision or provisions of the NCP. Such objection shall be made in writing within thirty (30) days after receipt of the bill and must be sent to the EPA RPM. Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, Respondent shall within the thirty (30) day period pay all uncontested Future Response Costs to EPA in the manner described in Paragraph 82a. Simultaneously, Respondent shall establish, in a duly chartered bank or trust company, an interest-bearing escrow account that is insured by the Federal Deposit Insurance Corporation, and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. Respondent shall send to the

AMB

EPA 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. Simultaneously with establishment of the escrow account, Respondent shall initiate the Dispute Resolution procedures in Section XV (Dispute Resolution). If EPA prevails in the dispute, within five (5) days after the resolution of the dispute, Respondent shall pay the sums due (with accrued interest) to EPA in the manner described in Paragraph 82. If Respondent prevails concerning any aspect of the contested costs, Respondent shall pay that portion of the costs (plus associated accrued interest) for which it did not prevail to EPA in the manner described in Paragraph 82. Respondent 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 XV (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondent's obligation to reimburse EPA for its Future Response Costs.

XIX. COVENANT NOT TO SUE BY EPA

85. In consideration of the actions that will be performed and the payments that will be made by Respondent under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work and Future Response Costs. This covenant not to sue shall take effect upon the Effective Date and is conditioned upon the complete and satisfactory performance by Respondent of all obligations under this Settlement Agreement, including, but not limited to, payment of Future Response Costs pursuant to Paragraph 82 (Payment of Future Response Costs). This covenant not to sue extends only to Respondent and does not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

86. Except as specifically provided in this Settlement Agreement, nothing in this Settlement Agreement 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 Property or the Site. Further, nothing in this Settlement Agreement shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law.

87. The covenant not to sue set forth in Section XIX above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement

AMG

Agreement is without prejudice to, all rights against Respondent with respect to all other matters, including, but not limited to:

- a. liability for failure by Respondent to meet a requirement of this Settlement Agreement;
- 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 Property; and
- h. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to OU 2 not paid as Future Response Costs under this Settlement Agreement.

88. Work Takeover. In the event EPA determines that Respondent has ceased implementation of any portion of the Work, is seriously or repeatedly deficient or late in its performance of the Work, or is 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 Respondent. Any Work Takeover Notice issued by EPA will specify the grounds upon which such notice was issued and will provide Respondent a period of seven (7) days within which to remedy the circumstances giving rise to EPA’s issuance of such notice. If, after expiration of the 7-day notice period, Respondent has 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 of the Work as EPA deems necessary (“Work Takeover”). Respondent may invoke the procedures set forth in Section XV (Dispute Resolution) to dispute EPA’s determination that takeover of the Work is warranted under this Paragraph. Costs incurred by EPA in performing the Work pursuant to this Paragraph shall be considered Future Response Costs that Respondent shall pay pursuant to Section XVIII (Payment of Response Costs). Notwithstanding any other provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

AMG

XXI. COVENANT NOT TO SUE BY RESPONDENT

89. Respondent covenants not to sue and agrees 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 Agreement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on 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 claim arising out of the Work or arising out of the response actions for which the Future Response Costs have or will be incurred, including any claim under the United States Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, or at common law; or

c. any claim pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, Section 7002(a) of RCRA, 42 U.S.C. § 6972(a), or state law relating to the Work or payment of Future Response Costs.

90. Except as expressly provided in Paragraphs 93 (Claims Against De Micromis Parties), 95 (Claims Against De Minimis and Ability to Pay Parties), and 96 (Claims Against Municipal Solid Waste Generators and Transporters), 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 XX (Reservations of Rights by EPA), other than in Paragraph 87.a. (liability for failure to meet a requirement of the Settlement Agreement) or 87.d. (criminal liability), but only to the extent that Respondent's claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

91. Respondent reserves, and this Settlement Agreement 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 Respondent's plans, reports, other deliverables, or activities.

AMS

92. 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).

93. Claims Against De Micromis Parties. Respondent agrees 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) or 113 of CERCLA) that it may have for all matters relating to the Property against any person where the person's liability to Respondent with respect to the Property is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Property, or having accepted for transport for disposal or treatment of hazardous substances at the Property, 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 Property was less than 110 gallons of liquid materials or 200 pounds of solid materials.

94. The waiver in Paragraph 93 shall not apply with respect to any defense, claim, or cause of action that Respondent may have against any person meeting the above criteria if such person asserts a claim or cause of action relating to the Property against Respondent. This waiver also shall not apply to any claim or cause of action against any person meeting the above criteria if EPA determines:

a. that such person has failed to comply with any EPA requests for information or administrative subpoenas issued pursuant to Section 104(e) or 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) or 9622(e), or Section 3007 of RCRA, or has impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Property, or has been convicted of a criminal violation for the conduct to which this waiver would apply and that conviction has not been vitiated on appeal or otherwise; or

b. that the materials containing hazardous substances contributed to the Property by such person have contributed significantly, or could contribute significantly, either individually or in the aggregate, to the cost of response action or natural resource restoration at the Property.

95. Claims Against De Minimis and Ability-to-Pay Parties. Respondent agrees 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) or 113 of CERCLA) that they may have for response costs relating to the Property against any person that in the future enters into a final Section 122(g) de minimis settlement, or a final settlement based on limited ability-to-pay, with EPA with respect to the Property as of the Effective Date. This waiver shall not apply with respect to any defense, claim, or cause of action that Respondent may have against any person if such person asserts a claim or cause of action relating to the Property against Respondent.

AMS

96. Claims Against Municipal Solid Waste Generators and Transporters. Respondent agrees 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) or 113 of CERCLA) that it may have for all matters relating to the Property against any person where the person's liability to Respondent with respect to the Property is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of Municipal Solid Waste ("MSW") at the Property, if the volume of MSW disposed, treated, or transported by such person to the Property did not exceed 0.2 percent of the total volume of waste at the Property.

97. The waiver in Paragraph 96 shall not apply with respect to any defense, claim, or cause of action that Respondent may have against any person meeting the above criteria if such person asserts a claim or cause of action relating to the Property against Respondent. This waiver also shall not apply to any claim or cause of action against any person meeting the above criteria if EPA determines that: (a) the MSW contributed significantly or could contribute significantly, either individually or in the aggregate, to the cost of the response action or natural resource restoration at the Property; (b) the person has failed to comply with any information request or administrative subpoena issued pursuant to Section 104(e) or 122(e) of CERCLA, 42 U.S.C. § 9604(e) or § 9622(e), or Section 3007 of RCRA, 42 U.S.C. § 6927; or (c) the person impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Property.

XXII. OTHER CLAIMS

98. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent.

99. Except as expressly provided in Paragraphs 933 (Claims Against De Micromis Parties), 95 (Claims Against De Minimis and Ability-to-Pay Parties), and 96 (Claims Against MSW Generators and Transporters), and Section XIX (Covenant Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Settlement Agreement, 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.

100. No action or decision by EPA pursuant to this Settlement Agreement 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).

XXIII. EFFECT OF SETTLEMENT/CONTRIBUTION

101. Except as provided in Paragraphs 93 (Claims Against De Micromis Parties), 95 (Claims Against De Minimis and Ability-to-Pay Parties), and 96 (Claims Against MSW

AMB

Generators and Transporters), nothing in this Settlement Agreement shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Settlement Agreement. Except as provided in Section XXI (Covenant Not to Sue by Respondent), 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 Property against any person not a Party hereto. Nothing in this Settlement Agreement 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). Nothing in this Settlement Agreement affects the pending matter entitled, *Troy Chemical Corporation v. EPA*, Case No. 14-1290 (D.C. Cir.).

102. The Parties agree that this Settlement Agreement constitutes an administrative settlement pursuant to which Respondent has, as of the Effective Date, resolved its 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 Agreement. The “matters addressed” in this Settlement Agreement are the Work and Future Response Costs.

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

104. Respondent shall, with respect to any suit or claim brought by it for matters related to this Settlement Agreement, notify EPA in writing no later than sixty (60) days prior to the initiation of such suit or claim. Respondent also shall, with respect to any suit or claim brought against it for matters related to this Settlement Agreement, notify EPA in writing within ten (10) days after service of the complaint or claim upon it. In addition, Respondent shall notify EPA within ten (10) days after service or receipt of any Motion for Summary Judgment and within ten (10) days after receipt of any order from a court setting a case for trial, for matters related to this Settlement Agreement.

105. In any subsequent administrative or judicial proceeding initiated by EPA, or by the United States on behalf of EPA, for injunctive relief, recovery of response costs, or other relief relating to the Property, Respondent 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 XIX.

Amg

106. Effective upon signature of this Settlement Agreement by Respondent, Respondent agrees that the time period commencing on the date of its signature and ending on the date EPA receives from such Respondent the payment(s) required by Section XVIII (Payment of Response Costs) and, if any, Section XVI (Stipulated Penalties) shall not be included in computing the running of any statute of limitations potentially applicable to any action brought by the United States related to the "matters addressed" as defined in Paragraph 102 and that, in any action brought by the United States related to the "matters addressed," Respondent will not assert, and may not maintain, any defense or claim based upon principles of statute of limitations, waiver, laches, estoppel, or other defense based on the passage of time during such period. If EPA gives notice to Respondent that it will not make this Settlement Agreement effective, the statute of limitations shall begin to run again commencing ninety (90) days after the date such notice is sent by EPA.

XXIV. INDEMNIFICATION

107. Respondent shall indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees, and representatives from any and all claims or causes of action arising from, or on account of negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors, and representatives in carrying out actions pursuant to this Settlement Agreement. In addition, Respondent agrees to pay the United States all costs incurred by the United States, 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 Respondent, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on its behalf or under its control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondent in carrying out activities pursuant to this Settlement Agreement. Neither Respondent nor any such contractor shall be considered an agent of the United States.

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

109. Respondent waives all claims 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 Respondent and any person for performance of Work on or relating to the Property or the Site. In addition, Respondent 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 Respondent and any person for performance of Work on or relating to the Property or the Site.

XXV. INSURANCE

110. At least thirty (30) days prior to commencing any Work on the Property under this Settlement Agreement, Respondent shall secure, and shall maintain for the duration of this Settlement Agreement, commercial general liability insurance with limits of 5 million dollars, for any one occurrence, and automobile insurance with limits of 5 million dollars, combined single limit, naming the EPA as an additional insured with respect to all liability arising out of the activities performed by or on behalf of Respondent pursuant to this Settlement Agreement. Within the same period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement Agreement, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Settlement Agreement. If Respondent demonstrates 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 an equal or lesser amount, then Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXVI. FINANCIAL ASSURANCE

111. Within thirty (30) days after the Effective Date, Respondent shall establish and maintain financial security for the benefit of EPA in the amount of \$1,700,000 in one or more of the following forms, in order to secure the full and final completion of Work by Respondent:

- a. a surety bond unconditionally guaranteeing payment and/or performance of the Work;
- b. one or more irrevocable letters of credit, payable to or at the direction of EPA, issued by financial institution(s) acceptable in all respects to EPA equaling the total estimated cost of the Work;
- c. a trust fund administered by a trustee acceptable in all respects to EPA;
- d. a policy of insurance issued by an insurance carrier acceptable in all respects to EPA, which ensures the payment and/or performance of the Work;
- e. a written guarantee to pay for or perform the Work provided by a related company of Respondent, or by one or more unrelated companies that have a substantial business relationship with Respondent, including a demonstration that any such guarantor company satisfies the financial test requirements of 40 C.F.R. Part 264.143(f); or

AMB

f. a demonstration of sufficient financial resources to pay for the Work made by Respondent, which shall consist of a demonstration that Respondent satisfies the requirements of 40 C.F.R. Part 264.143(f).

112. Any and all financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section (including, without limitation, the instrument(s) evidencing such assurances) are inadequate, Respondent shall, within thirty (30) days after receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 111, above. In addition, if at any time EPA notifies Respondent that the anticipated cost of completing the Work has increased, then, within thirty (30) days after such notification, Respondent shall obtain and present to EPA for approval a revised form of financial assurance (otherwise acceptable under this Section) that reflects such cost increase. Respondent's inability to demonstrate financial ability to complete the Work shall in no way excuse performance of any activities required under this Settlement Agreement.

113. If Respondent seeks to ensure completion of the Work through a guarantee pursuant to Paragraph 111.e or 111.f, Respondent shall (a) demonstrate to EPA's satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f); and (b) resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the Effective Date, or such other date as agreed by EPA, to EPA. For the purposes of this Settlement Agreement, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the dollar amount to be used in the relevant financial test calculations shall be the current cost estimate of \$1,700,000 for the Work plus any other RCRA, CERCLA or other federal environmental obligations financially assured by the Respondent or guarantor to EPA by means of passing a financial test.

114. If, after the Effective Date, Respondent can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 111 of this Section, Respondent may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining Work to be performed. Respondent shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security after receiving written approval from EPA. In the event of a dispute, Respondent may seek dispute resolution pursuant to Section XV (Dispute Resolution). Respondent may reduce the amount of security in accordance with EPA's written decision resolving the dispute.

115. Respondent may change the form of financial assurance provided under this Section at any time, upon notice to and prior written approval by EPA, provided that EPA determines that the new form of assurance meets the requirements of this Section. In the event

AMS

of a dispute, Respondent may change the form of the financial assurance only in accordance with the written decision resolving the dispute.

XXVII. INTEGRATION/APPENDICES

116. This Settlement Agreement and its appendices and any deliverables, technical memoranda, specifications, schedules, documents, plans, reports (other than progress reports), etc. that will be developed pursuant to this Settlement Agreement and become incorporated into and enforceable under this Settlement Agreement constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The Parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Settlement Agreement. The following appendices are attached to and incorporated into this Settlement Agreement:

“Appendix A” is the SOW.

“Appendix B” consists of maps of the Site and Property.

XXVIII. ADMINISTRATIVE RECORD

117. EPA will determine the contents of the administrative record file for selection of the remedial action. Respondent shall submit to EPA documents developed during the course of the RI/FS upon which selection of the response action may be based. Upon request of EPA, Respondent 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, Respondent shall additionally submit any previous studies conducted under state, local, or other federal authorities relating to selection of the response action, and all communications between Respondent and state, local, or other federal authorities concerning selection of the response action. At EPA’s discretion, Respondent shall establish a community information repository at or near the Property, to house one copy of the administrative record.

XXIX. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

118. This Settlement Agreement shall be effective the date that it is signed by the EPA Region 2 Director, Emergency and Remedial Response Division, or his delegatee.

119. This Settlement Agreement may be amended by mutual agreement of EPA and Respondent. Amendments shall be in writing and shall be effective when signed by EPA. EPA RPMs do not have the authority to sign amendments to the Settlement Agreement.

120. No informal advice, guidance, suggestion, or comment by the EPA RPM or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval

AMS

required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

XXX. NOTICE OF COMPLETION OF WORK

121. When EPA determines that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including but not limited to access, post-removal site controls, retention of records and payment of Future Response Costs, EPA will provide written notice to Respondent. If EPA determines that any Work has not been completed in accordance with this Settlement Agreement, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the RI/FS Work Plan if appropriate in order to correct such deficiencies, in accordance with Paragraph 40 (Modification of the RI/FS Work Plan). Failure by Respondent to implement the approved modified RI/FS Work Plan shall be a violation of this Settlement Agreement.

It is so ORDERED AND AGREED this _____ day of _____, 2017.

BY: _____
Walter Mugdan
Director, Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region 2
290 Broadway
New York, NY 10007

Agreed this 2nd day of November, 2017.

For Respondent, Troy Chemical Corporation, Inc.

By: Alexander M. Gerardo

ALEXANDER M. GERARDO
Printed Name

VICE PRESIDENT - GOVERNMENT RELATIONS
Title

Amc

Appendix A

AMB

APPENDIX A

ADMINISTRATIVE SETTLEMENT AGREEMENT
AND ORDER ON CONSENT STATEMENT OF WORK
FOR
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY OPERABLE
UNIT 2 (TROY CHEMICAL CORPORATION, INC. PROPERTY)
**PIERSON'S CREEK SUPERFUND
SITE**
Newark, Essex County, New Jersey

I. INTRODUCTION

- A. The purpose of the remedial investigation/feasibility study ("RI/FS") is to present the nature and extent of contamination, evaluate human health and ecological risks posed by this contamination, and develop and evaluate remedial alternatives that address the contamination at Operable Unit 2 (OU-2), the Troy Chemical Corporation, Inc. property ("Property"), of the Pierson's Creek Superfund Site (the "Site") as provided in this Statement of Work ("SOW"). The RI and FS are interactive and will be conducted concurrently so that the existing data influences the development of remedial alternatives in the FS, which in turn affects the data needs.
- B. Site investigations and remedial actions have been conducted since Troy acquired the Property in 1980. These were conducted under the regulatory authority of the New Jersey Department of Environmental Protection ("NJDEP") and the oversight of a New Jersey licensed site remediation professional ("LSRP"). During this oversight, several remedial actions were performed and several remedial alternatives and treatability studies were performed on the material in the concrete ditch and culvert. The concrete ditch and culvert were part of a City of Newark wastewater and storm water conveyance system that ultimately connected to Pierson's Creek. The Property is an operating chemical facility.
- C. The RI/FS shall be conducted in a manner that minimizes environmental impacts in accordance with the Environmental Protection Agency (EPA) Region 2 Clean and Green Policy (available at www.epa.gov/region02/superfund/green_remediation/policy.html) to the extent consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300. Respondent shall follow "Data Quality Objectives Process for Hazardous Waste Property Investigations," EPA QA/G-4HW, January 2000, in planning and conducting the RI/FS.
- D. Respondent shall produce draft RI/FS documents that are in accordance with this SOW, "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA" (EPA, Office of Emergency and Remedial Response, October 1988), and any other guidance that EPA uses in conducting a RI/FS, as appropriate and consistent with this SOW, as well as any additional requirements in the Administrative Settlement Agreement and Order on Consent ("Agreement"). The RI/FS Guidance describes the

AMG

report format and the required report content.

Respondent shall furnish all necessary personnel, materials, and services needed for, or incidental to, the performance of the RI/FS, except as otherwise specified in the Agreement.

- E. At the completion of the RI/FS, EPA will be responsible for the selection of the remedy for OU-2 and will document the remedy selection in a Record of Decision ("ROD"). The remedial action alternative selected by EPA will meet the cleanup standards specified in CERCLA Section 121. That is, the selected remedial action will be protective of human health and the environment, will be in compliance with, or include a waiver of, applicable or relevant and appropriate requirements of other laws ("ARARs"), will be cost-effective, minimize disruption to the operating plant, will utilize permanent solutions and alternative treatment technologies or resource recovery technologies, to the extent practicable consistent with current and reasonably anticipated future land use, and will address the statutory preference for treatment as a principal element. The final RI/FS report, as adopted by EPA, with the administrative record, will form the basis for the selection of the remedy for OU-2 and will provide the information necessary to support the development of the ROD.
- F. As specified in CERCLA Section 104(a) (1), EPA will provide oversight of Respondent's activities throughout the RI/FS. Respondent shall support EPA's initiation and conduct of activities related to the implementation of oversight activities.
- G. In the event that there is a conflict between this SOW and the Agreement, the provisions of the Agreement govern.

II. TASK 1 - OU-2 SITE CHARACTERIZATION REPORT AND INITIAL RISK ASSESSMENT DOCUMENTS

A. Respondent has submitted to EPA:

1. Proposed Remedial Approach Report, Geosyntec Consultants, September 2015
2. Final CEA Biennial Certification Combined Report, Geosyntec Consultants, October 12, 2015
3. Site Characterization Report (SCR), Geosyntec Consultants, November 18, 2016
4. Responses to February 16, 2017 Comment Letter, July 31, 2017

These documents compile, review, and summarize existing data for OU-2. The existing data include the results of previous OU-2 investigations; historical OU-2 uses and operations; aerial photographs; regional geologic, hydrogeologic, and hydrologic information; surrounding land and water use; and other relevant information gathered over several decades of investigation on the Property.

Respondent has evaluated the quality of existing data and presented the findings in the OU-2 SCR. The usability of the data was evaluated in accordance with Guidance on Environmental Data Verification and Data Validation (EPA 240-R-02-004 QA/G-8, November 2002) and Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use (EPA 540-R-08-005, January 2009).

B. Respondent has submitted a response letter to EPA's February 16, 2017 comments on the SCR submitted to Troy. Any outstanding items related to the SCR or EPA's comments thereon will be addressed in the RI/FS Work Plan, in the RI Report, or in a standalone letter correspondence to EPA.

C. Memorandum on Exposure Scenarios and Assumptions (MESA)

Within sixty (60) days after Respondent receives written notification of EPA's approval of the Agreement, Respondent shall submit a Memorandum of Exposure Scenarios and Assumptions ("MESA") describing the exposure scenarios and assumptions for the Baseline Human Health Risk Assessment (BHHRA), taking into account the present and reasonably anticipated future land use of the Property as industrial manufacturing and product distribution and based on Property conditions at the time the MESA is prepared. The MESA should include appropriate text describing the current Conceptual Site Model ("CSM") and exposure routes of concern for the Property, and include a completed RAGS Part D Table 1. This table shall describe the pathways that will be evaluated in the BHHRA, the rationale for their selection, and a description of those pathways that will not be evaluated. In addition, the MESA shall include a completed RAGS Part D Table 4 describing the exposure pathway parameters with appropriate references to EPA's 1991 Standard Default Assumptions and updated guidance developed by EPA. EPA may provide written comments on the MESA or approve the MESA. If written comments are received the Respondent shall amend and submit to EPA a revised MESA that is responsive to the directions of EPA's written comments, within thirty (30) days after receiving EPA's written comments or such longer time as specified or agreed to by EPA.

D. Screening Level Ecological Risk Assessment (SLERA)

Within sixty (60) days after Respondent receives written notification of EPA's approval of the Agreement, Respondent shall submit a SLERA in accordance with current Superfund ecological risk assessment guidance (Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments [ERAGS], USEPA, 1997 [EPA/540-R-97-006], OSWER Directive 9285.7-25, June 1997). The SLERA shall include a comparison of the maximum contaminant concentrations in each media of concern to appropriate conservative ecotoxicity screening values, and should use conservative exposure estimates. EPA will review the SLERA and determine whether a full Baseline Ecological Assessment is required. EPA will provide written comments on or approve the SLERA. If comments are provided, the Respondent shall amend and submit to EPA a revised SLERA that is responsive to the directions of EPA's written comments, within thirty (30) days after receiving EPA's written comments or such longer time

as specified or agreed to by EPA.

- E. If requested by EPA, within fourteen (14) days after submission of the MESA and SLERA, Respondent shall make a presentation to the EPA at which Respondent shall summarize the findings of the MESA and SLERA and discuss EPA's preliminary comments and concerns, if any, associated with the MESA and SLERA. EPA will either approve of the submittal pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Agreement, or will provide written comments on the MESA and SLERA presentation.

III. TASK 2 - RI/FS WORK PLAN

- A. Respondent shall submit to EPA a detailed work plan for the completion of the RI Report, and the FS Report and a schedule for the work related to OU-2 within thirty (30) days after Respondent receives written notification of EPA's approval of the Agreement. The RI sampling will be performed to resolve data gaps identified in the OU-2 SCR, and in EPA's February 16, 2017 comment letter on the SCR. Available OU-2-related information (as summarized in the SCR Report), including, but not limited to, existing sampling data, information on the historical use of the Property, and other material that reflects the historical waste disposal practices at the Property, will be used for planning the RI and FS work plan. The RI /FS work plan shall include a detailed schedule of activities through the submission of the FS. EPA will either approve the RI/FS work plan schedule pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Agreement or will provide written comments. Respondent will submit a revised RI/FS work plan schedule that is responsive to the EPA's written comments for approval pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Agreement, unless Respondent is directed otherwise by EPA in writing. The RI/FS work plan scope of work supplements the existing data and satisfies the following general requirements:

1. RI

The primary objectives of the RI are as follows:

- Confirm concentrations of potential contaminants of concern identified in the OU-2 SCR from soil boring locations within the interior of the Plant area that were collected in 2000. The interior Plant borings from 2000 were located outside of existing buildings and the concrete ditch/culvert.
- Collect surface soil data for the potential contaminants of concern from areas where workers may have direct contact exposure. These include areas where the existing cover (e.g. pavement or concrete) is in poor condition. The data will be collected to support the risk assessment.
- Verify shallow groundwater conditions along the upgradient property line (e.g. adjacent to the FedEx property) of OU-2. These

AME

data will be used to assess potential sources of contaminants in shallow groundwater from upgradient locations.

- Review currently available data on shallow groundwater conditions, collect additional groundwater samples from existing and/or new shallow wells on the Property.
- Verify the presence or absence of contaminants in the intermediate and deep aquifer by collecting additional groundwater samples from existing and new intermediate and deep monitoring wells on the Property.
- Evaluate the subsurface to indoor air vapor intrusion pathway at OU-2 buildings using subslab, indoor air, and/or groundwater sampling.

2. Define Sources of Contamination

If data gaps exist regarding the sources of contamination on the Property, Respondent shall delineate the physical characteristics and chemical constituents and their concentrations for all known and discovered sources of contamination. For each such location, the areal extent and depth of contamination shall be determined using OU-2 data.

Defining the sources of contamination may 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, as well as impacts from other neighboring sites and the urban background OU-2 conditions.

3. Describe the Nature and Extent of Contamination

Respondent shall gather any necessary supplemental information to characterize the nature and extent of contamination on the Property where data gaps exist according to conclusions of the above work in order to select a remedy for OU-2. To characterize the nature and extent of contamination, Respondent shall utilize the information on the OU-2 physical and biological characteristics and sources of contamination. The information on the nature and extent of contamination will be used to identify OU-2 specific human health and ecological risks consistent with current and reasonably anticipated future land use. Respondent shall use this information to assess aspects of the appropriate remedial action alternatives to be evaluated.

4. Evaluate OU-2 Property Characteristics

Respondent shall collect, analyze, and evaluate the data to describe: (1) physical and biological characteristics at OU-2, (2) contaminant characteristics of sources, (3) nature and extent of contamination, (4) contaminant fate and transport, and (5) develop an OU-2-specific human health and ecological risk evaluation. Results of the analyses of the physical characteristics, source

AUB

characteristics, and extent of contamination will be utilized in the analysis of contaminant fate and transport for likely completed exposure pathways. The evaluation will include 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.

5. Data Management Procedures

Respondent shall consistently document the quality and validity of field and laboratory data compiled during the RI.

a. Document Field Activities

Information gathered during characterization of the Property will be consistently documented and adequately recorded by Respondent in field logs and laboratory reports. The method(s) of documentation must be specified in the QAPP. Field logs or dedicated field log-books must be utilized to document observations, measurements, and significant events that have occurred during field activities. Laboratory reports must document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies.

b. Maintain Sample Management and Tracking

Respondent shall maintain field reports, sample shipment records, analytical results, and QA/QC reports to ensure that only validated analytical data are reported and utilized in the risk assessment and evaluation of remedial alternatives. Analytical results developed under the work plan must be accompanied by, or cross-referenced to, a corresponding QA/QC report. In addition, Respondent shall safeguard chain of custody forms and other project records to prevent loss, damage, or alteration of project documentation.

6. Reuse Assessment

A Reuse Assessment is not required provided the Property remains an active manufacturing and product distribution facility or other industrial use which maintains the selected remedy. If the current use changes the EPA may determine a Reuse Assessment is required and will notify the Respondent. The Reuse Assessment Report should provide sufficient information to develop realistic assumptions of the reasonably anticipated future uses for the Property. Respondent shall prepare the Reuse Assessment Report in accordance with EPA guidance including, but not limited to, "Reuse Assessment: A Tool to Implement the Superfund Land Use Directive," OSWER Directive 9355.7-06P, June 4, 2001, or subsequently issued guidance. EPA may provide written comments on the submitted Reuse Assessment Report, in which case Respondent shall amend and submit to EPA a revised Reuse Assessment Report that is responsive to the directions of EPA's written comments.

HWB

7. Quality Assurance Project Plan (QAPP)

A QAPP will be developed for the RI work, as necessary. The QAPP shall be consistent with the Uniform Federal Policy for Quality Assurance Project Plans (UFP-QAPP), Parts 1, 2 and 3, EPA-505-B-04-900A, Band C, March 2005 or newer, and other guidance documents referenced in the afore mentioned guidance documents. The UFP documents may be found at: http://www.epa.gov/fedfac/documents/intergov_qual_task_force.htm. In addition, the guidance and procedures located in the EPA Region 2 DESA/HWSB web site: <http://www.epa.gov/region02/qa/documents.htm>, as well as other OSWER directives and EPA Region 2 policies should be followed, as needed.

- a. All sampling, analysis, data assessment, and monitoring shall be performed in accordance with the "Region II CERCLA Quality Assurance Manual," Revision 1, EPA Region 2, dated October 1989, and any updates thereto, or an alternate EPA-approved test method, and the guidelines set forth in the Agreement. All testing methods and procedures shall be fully documented and referenced to established methods or standards.
- b. The QAPP shall provide for collection of data sufficient to delineate Property related contamination in potentially affected media, to the extent necessary to select an appropriate remedy; to evaluate cross-media contaminant transport (e.g., groundwater to surface water or soil to surface water) as necessary to support the assessment of risks associated with potential or actual exposures to Property related contamination under current and reasonably likely future conditions; and to evaluate remedial alternatives that address Property related contamination (for example, sufficient engineering data for the projection of contaminant fate and transport and development and screening of remedial action alternatives, including information to assess treatment technologies).
- c. The QAPP shall specifically include the following items:
 - i. An explanation of the way(s) the sampling, analysis, testing, and monitoring will produce data for the RI/FS;
 - ii. A detailed description of the sampling, analysis, and testing to be performed, including sampling methods, analytical and testing methods, sampling locations and frequency of sampling;
 - iii. A description of how sampling data to be generated following the effective date of this Agreement and a Property base map will be submitted in a manner that is consistent with the Region 2 Electronic Data Deliverable (EDD) format (information available at www.epa.gov/region02/superfund/medd.htm);

Amb

- iv. Cultural Resources Survey Work Plan to address the requirements of the National Historic Preservation Act (see CERCLA Compliance with Other Laws Manual: Part II: Clean Air Act and Other Environmental Statutes and State Requirements, OSWER Directive 9234.1-02, August 1989, available at www.epa.gov/superfund/policy/remedy/pdfs/540g-89009-s.pdf).
 - v. A map depicting sampling locations (to the extent that these can be defined when the QAPP is prepared); and
 - vi. A schedule for performance of the specific tasks in subparagraphs (c)(i)-(iii) of this Section III.B.1.
- d. In the event that additional sampling locations, testing, and analyses are required beyond RI activities, Respondent shall submit a memorandum documenting the need for additional data to the EPA Project Coordinator within thirty (30) days of identification. EPA in its discretion will determine whether the additional data will be collected by Respondents and whether it will be incorporated into plans, reports and other deliverables.
- e. To provide quality assurance and maintain quality control with respect to all samples to be collected, Respondent shall ensure the following:
- i. Quality assurance and chain-of-custody procedures shall be performed in accordance with standard EPA protocol and guidance, including the guidance provided in the EPA Region 2 Quality Assurance Homepage, and the guidelines set forth in the Agreement.

AMB

ii. Once laboratories have been chosen, each laboratory's quality assurance plan ("LQAP") shall be submitted for review by EPA. In addition, the laboratory shall submit to EPA current copies (within the past six months) of laboratory certification provided from either a State or Federal Agency which conducts certification. The certification shall be applicable to the matrices and analyses that are to be conducted. If the laboratory does not participate in the Contract Laboratory Program ("CLP"), it must submit to EPA the results of performance evaluation ("PE") samples for the constituents of concern from within the past six months or it must complete PEs for the matrices and analyses to be conducted and the results must be submitted with the LQAP.

For any analytical work performed, including that done in a fixed laboratory, in a mobile laboratory, or in on-site screening analyses, Respondent must submit to EPA a "Non-CLP Superfund Analytical Services Tracking System" form for each laboratory utilized during a sampling event, within thirty (30) days after acceptance of the analytical results. Upon completion, such documents shall be submitted to the EPA Project Coordinator, with a copy of the form and transmittal letter to:

Regional Sample Control Center Coordinator
U.S. EPA Region 2
Division of Environmental Science & Assessment
2890 Woodbridge Avenue, Bldg. 209, MS-215
Edison, NJ 08837

- iii. The laboratories utilized for analyses of samples must perform all selected analyses according to approved EPA methods.
- iv. Unless indicated otherwise in the approved QAPP, upon receipt from the laboratory, all data shall be validated.
- v. Submission of the validation package (checklist, report and Form I's containing the final data) to EPA, prepared in accordance with the provisions of Subparagraph vi. below as part of the RI Report submittal.
- vi. Assurance that all analytical data that are validated as required by the QAPP are validated according to the latest version of EPA Region 2 data validation Standard Operating Procedures. Region 2 Standard Operating Procedures are available at:
<http://www.epa.gov/region02/qa/documents.htm>,

Unless indicated otherwise in the QAPP, Respondent shall require deliverables equivalent to CLP data packages from the laboratory for analytical data. Upon EPA's request, Respondent shall submit to EPA

AMS

the full documentation (including raw data) for these analytical data. EPA reserves the right to perform an independent data validation, data validation check, or qualification check on generated data.

viii. Respondent shall insert a provision in their contract(s) with the laboratory utilized for analyses of samples that requires granting access to EPA personnel and authorized representatives of the EPA for the purpose of ensuring the accuracy of laboratory results related to the Property.

8. Health and Safety Plan (HSP)

A HSP shall be developed to address any RI scope of work and shall conform to 29 CFR §1910.120, "OSHA Hazardous Waste Operations Standards," and the EPA guidance document, "Standard Operating Safety Guidelines" (OSWER, 1988).

EPA will either approve the HSP pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Agreement or will provide written comments. Respondent will submit a revised HSP that is responsive to the EPA's written comments for approval pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Agreement, unless Respondents are directed otherwise by EPA in writing, which the Respondents will address.

9. Treatability Studies Work Plan (As Necessary)

If Respondent or EPA determines that additional treatability testing is necessary to complete the FS, then such additional treatability testing will be performed by Respondent to assist in the detailed analysis of alternatives. Data from previously performed treatability studies should be incorporated into the FS or referenced, as appropriate. If a decision to conduct additional treatability studies is made, the following activities will be performed by Respondent.

a. Evaluate Treatability Studies

Respondent and EPA will decide on the type of treatability testing to use (e.g., bench versus pilot). Because of the time required to design, fabricate, and install pilot scale equipment as well as perform testing for various operating conditions, the decision to perform pilot testing should be made as early in the process as possible to minimize potential delays of the FS.

b. Treatability Testing Work Plan

The Treatability Testing Work Plan shall describe remedial technology(ies) to be tested, test objectives, experimental procedures,

AMB

treatability conditions to be tested, measurements of performance, analytical methods, data management and analysis, health and safety, and residual waste management. The Data Quality Objectives ("DQOs") for treatability testing should be documented as well. If pilot-scale treatability testing is to be performed, the pilot-scale Work Plan will 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, Respondent shall address all necessary permitting requirements to the satisfaction of EPA.

IV. TASK 3-COMMUNITY RELATIONS

To the extent requested by EPA, Respondent shall provide information relating to the work required hereunder for EPA's use in developing and implementing a Community Relations Plan. As requested by EPA, Respondent shall participate in the preparation of appropriate information disseminated to the public, and participate in public meetings, which may be held or sponsored by EPA, to explain activities at or concerning the OU-2 Property.

V. TASK 4-REMEDIAL INVESTIGATION REPORT

Respondent shall prepare a Remedial Investigation (RI) Report that accurately establishes the OU-2 characteristics such as the contaminated media, nature and extent of contamination, and the physical boundaries of the contamination within ninety (90) days of receipt of comments on the MESA and the SLERA. This report shall summarize results of previous field activities to characterize OU-2, sources of contamination, and the fate and transport of contaminants.

Respondent shall obtain the data necessary to determine the nature and extent of contamination for the contaminants of potential concern (COPCs) consistent with expected exposure pathways. The COPCs will be identified based on persistence and mobility in the environment and the degree of hazard. Respondent shall establish OU-2 specific applicable, relevant or appropriate requirements (ARARs), and with EPA approval, shall use the approved ARARs to evaluate effects on human receptors who may be exposed to the COPCs above appropriate standards or guidelines where completed pathways of exposure to OU-2 COPCs currently exist or could occur under the current or reasonably anticipated future use of the Property. The RI Report will incorporate information presented in the OU-2 SCR and corresponding response letters, the MESA, and the SLERA.

The RI Report shall be written in accordance with the "Guidance for Conducting Remedial Investigations/Feasibility Studies under CERCLA," OSWER Directive 9355.3-01, October 1988, Interim Final (or latest revision) and "Guidance for Data Usability in Risk Assessment," (EPA/540/G-90/008), September 1990 (or latest

AMS

revision).

Respondent shall refer to the RI/FS Guidance, as appropriate, for an outline of the report format and contents. Following written comment by EPA, Respondent shall prepare a final RI Report which incorporates EPA's written comments, pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Agreement.

In addition to the requirements described above, the RI Report will also include the following:

A. Risk Assessment

Actual and potential cancer risks and non-cancer hazards to human health shall be identified and characterized in accordance with CERCLA, the NCP, and EPA guidance documents including, but not limited to, the RI/FS Guidance, "Land Use in the CERCLA Remedy Selection Process" (OSWER Directive No. 9355.7-04) and the definitions and provisions of "Risk Assessment Guidance for Superfund ("RAGS")," Volume 1, "Human Health Evaluation Manual," (December 1989) (EPA/540/1-89/002). Other EPA guidance documents to be used in the development of risk assessments are identified in Attachment 1 to this SOW.

Incorporated into the Risk Assessment in the RI Report will be the following sections:

1. Pathway Analysis Report ("PAR")

Respondent shall prepare and submit a PAR as part of the Risk Assessment in the RI Report. The PAR shall be developed in accordance with OSWER Directive 9285.7-01D dated January 1998 (or more recent version), entitled, *Risk Assessment Guidelines for Superfund Part D* and other appropriate guidance in Attachment 1 and updated thereto. The PAR shall contain the information necessary for a reviewer to understand how the risks at OU-2 will be assessed. The PAR will build on the MESA describing the risk assessment process and how the risk assessment will be prepared. The PAR shall include completed RAGS Part D Tables 2, 3, 5, and 6 as described below.

a) Chemicals of Potential Concern ("COPCs"). The PAR shall contain the information necessary for a reviewer to understand how the risks at OU-2 will be evaluated.

i. Based on the validated analytical data Respondent shall list the hazardous substances present in sampled media (e.g., groundwater, soils, sediment, etc.) and the COPCs as described in RAGS Part A.

ii. Table 2 Selection of COPCs. COPCs and associated concentrations in sample media for the PAR shall be

AMB

specified utilizing currently available and appropriate media-specific validated analytical data generated during the RI/FS. The selection of COPCs shall follow RAGS Part A and before hazardous substances are eliminated as COPCs they shall be evaluated against the residential and industrial screening levels in accordance with the "Regional Screening Levels for Chemical Contaminants at Superfund Sites" screening level/preliminary remediation goal website. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm). The industrial screening level shall not be used as a basis for eliminating any hazardous substance as a COPC. The COPCs shall be presented in completed RAGS Part D Table 2 format.

- b) Table 3 - Media Specific Exposure Point Concentrations. Using the COPCs selected in Table 2, this Table shall summarize the Exposure Point Concentrations for all COPCs for the various media. The calculation of the Exposure Point Concentration shall follow the Supplemental Guidance to RAGS: Calculating the Concentration Term (1992), using EPA's ProUCL 4.0 2007 (or most recent version) Software, which evaluates the distribution of the data using Shapiro-Wilk's and Lilliefors' tests, in accordance with 2003 ProUCL's User's Guide. In those cases where the 95% Upper Confidence Limit ("UCL") exceeds the maximum, the maximum concentration shall be used as the Exposure Point Concentration.
- c) Tables 5 and 6 -Toxicological Information. This section of the PAR shall provide the toxicological data (e.g., Cancer Slope Factors, Reference Doses, Reference Concentrations, Weight of Evidence for Carcinogens, and adjusted dermal toxicological factors where appropriate) for the COPCs. The toxicological data shall be presented in completed RAGS Part D Tables 5 and 6. The sources of data in order of priority are:
- Tier 1 - Integrated Risk Information System ("IRIS") database (EPA, current version).
 - Tier 2 - Provision Peer Reviewed Toxicity Values ("PPRTV") - The Office of Research and Development/National Center for Environmental Assessment/Superfund Health Risk Technical Support Center ("STSC") develops PPRTVs on a chemical specific basis when requested by EPA's Superfund program. Provisional values will either be obtained from the "Regional Screening Levels for Chemical Contaminants at Superfund Sites" or from Region 2.

AMS

- Tier 3 - Other Toxicity Values - Tier 3 includes additional EPA and non-EPA sources of toxicity information. Priority will be given to those sources of information that are the most current, the basis for which is transparent and publicly available and which have been peer reviewed. Tier 3 values include toxicity values obtained from CalEPA, Agency for Toxic Substances and Disease Registry's ("ATSDR's") Minimum Risk Levels ("MRLs") and toxicity values obtained from the HEAST (EPA 1997 b).

To facilitate a timely completion of the PAR, Respondent shall submit a list of chemicals for which IRIS values are not available to EPA as soon as identified, thus allowing EPA to facilitate obtaining this information from EPA's National Center for Environmental Assessment.

2. Baseline Human Health Risk Assessment (BHHRA) and Baseline Ecological Risk Assessment (BERA)

This section of the RI Report shall include completed RAGS Part D 7 through 10 summarizing the calculated cancer risks and non-cancer hazards and appropriate text in the risk characterization with a discussion of uncertainties and critical assumptions (e.g., background concentrations and conditions). Respondent shall perform the BHHRA and if necessary, the BERA in accordance with the approach and parameters described in the MESA, SLERA, and the PAR, as described above.

If the BERA is determined to be required, it shall address the following:

- i. Hazard Identification (sources): Respondent shall review available information on the hazardous substances present at OU-2 and identify the major contaminants of concern.
- ii. Dose-Response Assessment: Respondent shall identify and select contaminants of concern based on their intrinsic toxicological properties.
- iii. Characterization of OU-2 and Potential Receptors: Respondent shall identify and characterize environmental exposure pathways.
- iv. Chemicals, Indicator Species, and End Points: In preparing the assessment, Respondent shall select representative chemicals, indicator species (species which are especially sensitive to environmental contaminants), and end points on which to

AMG

concentrate.

- v. **Exposure Assessment:** The exposure assessment shall 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, Respondent shall develop reasonable maximum estimates of exposure for both current land use conditions and potential land use conditions at the Property.
- vi. **Toxicity Assessment/Ecological Effects Assessment:** The toxicity and ecological effects assessment shall 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.
- vii. **Risk Characterization:** During risk characterization, chemical-specific toxicity information, combined with quantitative and qualitative information from the exposure assessment, shall be compared to measured levels of contaminant exposure levels and/or the levels predicted through environmental fate and transport modeling. These comparisons shall determine whether concentrations of contaminants at or released from the Property are affecting or could potentially affect the environment.
- viii. **Identification of Limitations/ Uncertainties:** Respondent shall identify critical assumptions (e.g., background concentrations and conditions) and uncertainties in the report.
- ix. **Conceptual OU-2 Model:** Based on contaminant identification, exposure assessment, toxicity assessment, and risk characterization, Respondent shall revise the Preliminary CSM, as appropriate.

B. Identification of Candidate Technologies and Development and Screening of Remedial Alternatives Memorandum

An Identification of Candidate Technologies and Development and Screening of Remedial Alternative Memorandum shall be prepared by the Respondent. This document will be submitted as a standalone deliverable.

The candidate technologies identified shall include appropriate treatment

AMB

technologies (as defined in the RI/FS Guidance) where appropriate. Data from previously performed treatability studies will be incorporated into the memorandum or referenced, as appropriate. Additionally, the Respondent shall develop and evaluate remedial action objectives that ensure protection of human health and the environment consistent with exposure pathways confirmed in the Baseline Risk Assessment. The development and screening of remedial alternatives shall identify and develop an appropriate range of remedial action objectives consistent with OU-2 conditions at the time Work is conducted. This range of alternatives should include options in which treatment is used to reduce the toxicity, mobility, or volume of wastes, including, at a minimum, the principal threats posed by OU-2, but that 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 following activities will be performed as a function of the development and screening of remedial alternatives.

1. Develop Remedial Action Objectives

Respondent shall develop remedial action objectives, which are medium specific or operable-unit specific goals for protecting human health or the environment that specify the COCs, exposure route(s) and receptor(s) and preliminary remediation goals.

2. Develop General Response Actions

Respondent shall develop general response actions for each medium of interest defining containment, treatment, excavation, pumping, or other actions, singly or in combination to satisfy the remedial action objective.

3. Identify Areas or Volumes of Media

Respondent shall identify areas or volumes of media to which general response actions may apply, taking into account requirements for protectiveness as identified in the remedial action objectives. The chemical and physical characterization of OU-2 will also be taken into account.

4. Assemble and Document Alternatives

Respondent shall assemble selected representative technologies into alternatives for each affected medium.

Together, all of the alternatives will represent a range of treatment and containment combinations that will address OU-2. A summary of the assembled alternatives and their related action-specific ARARs will be

AMG

prepared by Respondent for inclusion in the Development and Screening of Remedial Alternatives Technical Memorandum.

The reasons for eliminating alternatives during the preliminary screening process must be specified.

5. Refine Alternatives

Respondent shall refine the remedial alternatives to identify contaminant volume addressed by the proposed process and sizing of critical unit operations as necessary. Sufficient information will be collected for an adequate comparison of alternatives. Preliminary Remediation Goals (or Regional Screening Levels) for each chemical in each medium will also be modified as necessary to incorporate any new risk assessment information presented in the baseline risk assessment report. Additionally, action specific ARARs will be updated as the remedial alternatives are refined.

6. Conduct and Document Screening Evaluation of Each Alternative

Respondent 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 detailed analysis. If necessary, the screening of alternatives will be conducted to assure that only the alternatives with the most favorable composite evaluation of all factors are retained for further analysis. As appropriate, the screening will preserve the range of treatment and containment alternatives that was initially developed. The range of remaining alternatives will include options that use treatment technologies and permanent solutions to the maximum extent practicable.

C. Draft Remedial Investigation Report

EPA may provide written comments on the draft RI Report, in which case Respondent shall amend and submit to EPA a revised report that is responsive to all of EPA's written comments.

Within fourteen (14) days after submission of the draft RI Report, Respondent shall make a presentation to the EPA at which Respondent shall summarize the findings of the draft RI Report and discuss EPA's preliminary comments and concerns, if any, associated with the draft RI Report. EPA will either approve of the submittal pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Agreement, or will provide written comments on the Draft RI Report.

D. Final Remedial Investigation Report

AMG

Within ninety (90) days after receiving EPA's written comments on the Draft RI Report, or such longer time as specified or agreed to by EPA, Respondent shall amend and submit to EPA a Final RI Report that is responsive to the directions in all of EPA's written comments unless Respondent are directed otherwise by EPA in writing.

VI. TASK 5 - IMPLEMENTATION OF RI or TREATABILITY TESTING, AS NECESSARY

- A. Following EPA's written approval or modification of the RI/FS Work Plan, pursuant to Section X of the Settlement Agreement, Respondent shall implement the RI activities to further characterize the Property, as necessary. Respondent shall notify EPA at least fourteen (14) days in advance regarding the planned dates for any field investigation activities.
- B. Respondent shall provide EPA with validated analytical data within ninety (90) days after each sampling activity, in the electronic format required by EPA at the time of submission, showing the location, medium and results.
- C. Within seven (7) days after completion of field activities, Respondent shall so advise EPA in writing.

VII. TASK 6-MONTHLY PROGRESS REPORTS AND BI-MONTHLY MEETINGS

Respondent shall provide a monthly progress report and participate in meetings with EPA at major milestones in the RI/FS process, as described herein and outlined in the RI Report/FS work plan. The monthly progress reports shall be submitted to EPA by the 15th day of the following month. At a minimum, with respect to the preceding month, these progress reports shall (1) describe the actions which have been taken to comply with this Agreement during that month, (2) include a summary of sampling and tests performed at OU-2 by the Respondent, (3) describe Work planned for the next two months with schedules relating such Work to the overall project schedule for RI/FS completion, and (4) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

Additionally, the Respondent and EPA will hold bi-monthly (e.g. every other month) meetings to facilitate reviews and discuss interim deliverables. The meetings will be technically focused. Fourteen days (14 days) prior to the meeting the Respondent will send an agenda to the EPA and support information that will be discussed in the meeting. The meetings may be postponed, combined with other milestone meetings or canceled if agreed upon by the Respondent and EPA.

AMS

VIII. TASK 7 -FEASIBILITY STUDY REPORT

Respondent shall prepare a FS Report consisting of a detailed analysis of the remedial alternatives, in accordance with the NCP as well as the most recent guidance. The detailed analysis will focus on alternatives identified from the screening process as part of Task 4 above. Respondent shall submit to EPA a draft FS Report which reflects the findings in the approved Baseline Risk Assessment. Respondent shall refer to the RI/FS Work Plan and the RI/FS Guidance, as appropriate, and this SOW for report content and format. Respondent shall obtain the data necessary to determine the key contaminants movement and extent of contamination. The key contaminants are selected based on persistence and mobility in the environment and the degree of hazard. Respondent shall use existing standards and guidelines and other criteria as specified in the ARARs accepted by EPA for OU-2. Standards identified in the ARAR analysis deemed appropriate for OU-2 will be used to evaluate whether human receptors may be exposed to OU-2 COCs above those standards or guidelines. Within fourteen (14) days after submission of the draft FS Report, Respondent shall make a presentation to EPA at which Respondent shall summarize the findings of the draft FS Report and discuss EPA's preliminary comments and concerns, if any, associated with the draft FS Report. EPA will either approve of the submittal pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Agreement, or will provide written comments on the draft FS Report. Within sixty (60) days after receiving EPA's written comments on the draft FS Report, Respondent will submit a revised FS Report that is responsive to the directions of EPA's written comments to EPA for approval pursuant to Section X (EPA Approval of Plans and Other Submissions) of the Agreement, unless Respondent is directed otherwise by EPA in writing.

A. The FS report shall:

1. Describe existing remedial measures or responses
2. Incorporate RI and/or treatability study information
3. Incorporate information from OU-2 SCR and RI Report
4. Summarize Feasibility Study objectives
5. Summarize remedial action objectives
6. Articulate general response actions
7. Identify and screen remedial technologies
8. Describe remedial alternatives
9. Incorporate a detailed analysis of remedial alternatives

AMG

10. Present a summary and conclusions

Respondent's technical feasibility considerations shall include the careful study of any problems that may prevent a remedial alternative from mitigating OU-2 problems. Therefore, OU-2 characteristics from the RI must be kept in mind as the technical feasibility of the alternative is studied. Specific items to be addressed are reliability (operation over time), safety, operation and maintenance, ease with which the alternative can be implemented, and time needed for implementation.

1. Detailed Analysis of Alternatives

Respondent shall conduct a detailed analysis of alternatives which will consist of an analysis of each option against the nine evaluation criteria specified in the NCP and a comparative analysis of all options using the same evaluation criteria as a basis for comparison.

2. Apply Nine Criteria and Document Analysis

Respondent shall apply the nine evaluation criteria to the assembled remedial alternatives to ensure that the selected remedial alternative will be protective of human health and the environment; will be in compliance 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 extent practicable consistent with current and reasonably anticipated future land use; and will address the statutory preference for treatment as a principal element. The evaluation criteria are: (1) overall protection of human health and the environment; (2) compliance with ARARs; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume through treatment; (5) short-term effectiveness; (6) implementability; (7) cost; (8) State (or support agency) acceptance; and (9) community acceptance.

For each alternative, Respondent shall provide: (1) a description of the alternative that outlines the remedial strategy involved and identifies the key ARARs associated with each alternative, and (2) a discussion of the individual criterion assessment. If Respondent does not have direct input on criteria (8) State (or support agency) acceptance and (9) community acceptance, these criteria will be addressed by EPA.

3. Compare Alternatives Against Each Other and Document the Comparison of Alternatives

Respondent shall perform a comparative analysis between the remedial alternatives. That is, each alternative will be compared against the others using the nine evaluation criteria as a basis of comparison. Identification and selection

AWS

of the preferred alternative are reserved by EPA. Respondent shall incorporate the results of the comparative analysis in the FS Report.

Amb

ATTACHMENT A

REFERENCES FOR CITATION

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RI/FS process:

The National Hazardous Substance and Oil Pollution Contingency Plan, 40 CFR 300 *et seq.*

"Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 9355.3-01.

"Interim Guidance on Potentially Responsible Party Participation in Remedial Investigation and Feasibility Studies," U.S. EPA, Office of Waste Programs Enforcement, Appendix A to OSWER Directive No. 9355.3-01.

"Guidance on Oversight of Potentially Responsible Party Remedial Investigations and Feasibility Studies," U.S. EPA, Office of Waste Programs Enforcement, OSWER Directive No. 9835.3.

"A Compendium of Superfund Field Operations Methods," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.

"EPA NEIC Policies and Procedures Manual," May 1978, revised November 1984, EPA-330/9-78-001-R.

"Data Quality Objectives for Remedial Response Activities," U.S. EPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.

"Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Research and Development, Cincinnati, OH, QAMS-004/80, December 29, 1980.

"EPA Requirements for QAPPs for Environmental Data Operations," U.S. EPA, Office of Emergency and Remedial Response, QA/R-5, October 1998.

"Interim Guidelines and Specifications for Quality Assurance Project Plans," U.S. EPA, Office of Emergency and Remedial Response, QAMS-005/80, December 1980.

"Users Guide to the EPA Contract Laboratory," U.S. EPA, Sample Management Office, August 1982.

"CERCLA Compliance with Other Laws Manual," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (draft), OSWER Directive No. 9234.1-01 and -02.

AMB

"Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites," U.S. EPA, Office of Emergency and Remedial Response, (draft), OSWER Directive No. 9283.1-2.

"Draft Guidance on Superfund Decision Documents," U.S. EPA, Office of Emergency and Remedial Response, March 1988, OSWER Directive No. 9355.-02.

"Risk Assessment Guidance for Superfund - Volume I Human Health Evaluation Manual" (Part A), EPA/540/1-89/002.

"Risk Assessment Guidance for Superfund - Volume I Human Health Evaluation Manual" (Part B), EPA/540/R-92/003.

"Risk Assessment Guidance for Superfund - Volume II Environmental Evaluation Manual," March 1989, EPA/540/1-89/001.

"Guidance for Data Usability in Risk Assessment," October, 1990, EPA/540/G-90/008.

"Performance of Risk Assessments in Remedial Investigation/ Feasibility Studies (RI/FSs) Conducted by Potentially Responsible Parties (PRPs)," August 28, 1990, OSWER Directive No.9835.15.

"Risk Evaluation of Remedial Alternatives" (Part C), December 1991, OSWER Directive 9285.7-01C.

"Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions," April 22, 1991, OSWER Directive No. 9355.0-30.

"Supplemental Guidance to RAGS: Calculating the Concentration Term," May 1992, OSWER Directive 9285.7-081.

"Health and Safety Requirements Employed in Field Activities," U.S. EPA, Office of Emergency and Remedial Response, July 12, 1981, EPA Order No. 1440.2.

OSHA Regulations in 29 CFR 1910.120 (Federal Register 45654, December 19, 1986).

"Interim Guidance on Administrative Records for Selection of CERCLA Response Actions," U.S. EPA, Office of Waste Programs Enforcement, March 1, 1989, OSWER Directive No. 9833.3A.

"Community Relations in Superfund: A Handbook," U.S. EPA, Office of Emergency and Remedial Response, June 1988, OSWER Directive No. 9230.03B.

"Community Relations During Enforcement Activities And Development of the Administrative Record," U.S. EPA, Office of Programs Enforcement, November 1988, OSWER Directive No. 9836.0-1a.

AMG

"Considering Reasonably Anticipated Future Land Use and Reducing Barriers to Re-use at EPA-Lead Superfund Remedial Sites," U.S. EPA Office of Superfund Remediation and Technology Innovation, March 17, 2010, OSWER Directive 9355.7-19.

"Reuse Assessment: A Tool to Implement the Superfund Land Use Directive," OSWER Directive 9355.7-06P, June 4, 2001. Available at:
www.cluin.org/download/toolkit/thirdednew/reuseassesstool.pdf

"Interim Guidance on Implementing the Superfund Administrative Reform on PRP Oversight," U.S. EPA, Office of Emergency and Remedial Response, May 17, 2000, OSWER Directive No. 9200.0-32P. Available at: www.epa.gov/superfund/programs/reforms/final01.pdf

EPA Region 2 Clean and Green Policy. Available at:
www.epa.gov/region02/superfund/green_remediation/policy.html

National Historic Preservation Act, 16 U.S.C. § 470 et seq.

HUMAN HEALTH RISK ASSESSMENT GUIDANCE DOCUMENTS

Superfund Risk Assessment Guidance

USEPA, 1989, Risk Assessment Guidance for Superfund(RAGS); Volume I Human Health Evaluation Manual Part A. OERR. EPA/540/1-89/002. Available at:
www.epa.gov/superfund/programs/risk/ragsa/index.htm

USEPA, 1990, Risk Assessment Guidance for Superfund (RAGS); Volume I, Human Health Evaluation Manual, (Part B, Development of Risk-Based Preliminary Remediation Goals) OERR, EPA/540/R-92/003. Available at:
www.epa.gov/superfund/programs/risk/ragsb/index.htm

USEPA, 1991. Risk Assessment Guidance for Superfund (RAGS); Volume I, Human Health Evaluation Manual (Part C, Risk Evaluation of Remedial Alternatives), OSWER Directive 9285.7-01C, December 1991. Available at:
www.epa.gov/superfund/programs/risk/ragsc/index.htm

USEPA, 1996. Revised Policy on Performance of Risk Assessments During Remedial Investigation/Feasibility Studies (RI/FS) Conducted by Potentially Responsible Parties, OSWER Directive No. 9340.1-02 mistakenly numbered 9835.15c.

USEPA, 1997. Risk Assessment Guidance for Superfund (RAGS); Volume I, Human Health Evaluation Manual, Part D., OERR, Interim Publication No. 9285.7-01D. Available at:
www.epa.gov/superfund/programs/risk/ragsd/index.htm

AMG

USEPA, 1999. Risk Assessment Guidance for Superfund (RAGS). Volume I, Community Involvement in Superfund Risk Assessments. OSWER 9285.7-01, EPA540-R-98-042, PB-99-96303, March 1999. Available at: www.epa.gov/superfund/programs/risk/ragsa/cl_ra.pdf.

Exposure Factors

USEPA, 1991. RAGS Volume I: Human Health Evaluation Manual Supplemental Guidance. Standard Default Exposure Factors. OSWER Directive 9285.6-03. March 25, 1991.

USEPA, 1992. Supplemental Guidance to RAGS: Calculating the Concentration Term. OSWER 9285.7-081. May 1992.

USEPA, 1997. Exposure Factors Handbook - Final, Office of Health and Environmental Assessment, Washington, D.C. Available at: www.epa.gov/ncea/exposfac.htm.

Dermal Exposure

USEPA, 1992. Dermal Exposure Assessment: Principles and Applications. OSWER. EPA/600/8-91/011B. January. Available at: www.epa.gov/ncea/dermal.htm.

USEPA, 1999. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual: (Part E, Supplemental Guidance for Dermal Risk Assessment) Interim Guidance, OSWER Directive 9285.7-10. Please contact Region II risk assessors to discuss any potential updates to the factors in this guidance.

Toxicity and Chemical Specific Guidance

USEPA, current version. Integrated Risk Information System (IRIS); On-line Service. Available at: www.epa.gov/iris.

USEPA, 1993. Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons. EPA/600/R-93/C89. July 1993.

USEPA, 1996. PCBs: Cancer dose-response assessment and application to environmental mixtures. EPA/600/P-96/00 IA. Available at: www.epa.gov/ncea/pcbs.html.

USEPA. 1997. Health Effects Assessment Summary Tables (HEAST), FY'97 Update. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. EPA/540-F-97-036. July 1997.

"Regional Screening Levels for Chemical Contaminants at Superfund Sites" screening level/preliminary remediation goal website. Available at: www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm.

AMB

Risk Characterization Guidance

USEPA 1995. Memorandum from Carole Browner on Risk Characterization, U.S. EPA, February 22, 1995. Available at: www.epa.gov/ordntrnt/ORD/spc/2riskchr.html.

USEPA, 1995. EPA Risk Characterization Program. Memo from Administrator Carol Browner dated March 21, 1995. Available at: www.epa.gov/ordntrnt/ORD/spc/2riskchr.html.

Risk Assessment Guidelines and Policies

USEPA, 1986. Risk Assessment Guidelines for Mutagenicity Risk Assessment. 51 Federal Register 34006, September 24, 1986.

USEPA, 1986. Risk Assessment Guidelines for Chemical Mixtures 51 Federal Register 34014, September 24, 1986.

USEPA, 1992. Risk Assessment Guidelines for Exposure Assessment. Federal Register. Available at: www.epa.gov/nceawwwl/exposure.htm

USEPA, 1995. Neurotoxicity Cancer Guidelines. Federal Register. 60 FR 52-32-52056, October 4, 1995.

USEPA, 1996. Proposed Guidelines for Carcinogen Risk Assessment. EPA/600/P-92/003C. Available from: www.epa.gov/ORD/WebPubs/carcinogen/.

USEPA, 1996. Guidelines for Reproductive Toxicity Risk Assessment. EPA/630/R-96/009, September 1996. Available at: www.epa.gov/ORD/WebPubs/repro/.

USEPA, 1996. Proposed Guidelines for Carcinogen Risk Assessment. EPA/600/P-92/003C, April 1996. Available at: www.epa.gov/ORD/WebPubs/carcinogen.

Data Usability and Quality

USEPA, 1992. Final Guidance on Data Usability in Risk Assessment (Part A), OSWER Directive 9285.7-09A., June 1992. Available at: www.epa.gov/programs/risk/datause/parta.htm.

USEPA, 1992. Guidance for Data Usability in Risk Assessment (Part B), OSWER Directive 9285.7-09B, August 1992. Available at: www.epa.gov/programs/risk/datause/partb.html.

USEPA, 1993. Data Quality Objectives Process for Superfund, Interim Final Guidance. OSWER Publication 93559-01, EPA 540-R-93-071.

USEPA, 1989. Air/Superfund national Technical Guidance Study Services, Volumes I-IV, EPA 450/1-89/001, 002, 003, 004, July 1989.

AME

Soil

USEPA, 1993. Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities. OSWER Directive #9355.4-12.

USEPA, 1996. Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soils. Available at: www.epa.gov/superfund/programs/lead/prods.htm.

USEPA, 1996. Soil Screening Guidance, Fact Sheet. EPA 540/F-95/041. Available at: www.epa.gov/superfund/resources/soil/index.htm#fact.

USEPA, 1996. Soil Screening Guidance: User's Guide. EPA Doc.# 540/R-96/018, July 1996. Available at: www.epa.gov/superfund/resources/soil/

USEPA, 1996. Final Soil Screening Guidance, and Associated Appendices. May 17, 1996. Soil Screening Guidance User's Guide, EPA 540/R-96/018. Available at: www.epa.gov/superfund/resources/soil/

USEPA, 1996. Soil Screening Guidance: Technical Background Document (TBD). EPA Document Number: EPA/540/R-95/128, July 1996. Available at: www.epa.gov/superfund/resources/soil/.

USEPA, 1994. Technical Support Document for the Integrated Exposure Uptake Biokinetic Model for Lead in Children (December 1994) [NTIS #PB94-963505, OSWER #9285.7-22]. Software available at: www.epa.gov/superfund/programs/lead/prods.html.

USEPA, 1994. Validation Strategy for The Integrated Exposure Uptake Biokinetic Model for Lead in Children (December 1994). Available at: www.epa.gov/superfund/programs/lead/prods.htm.

USEPA, 1994. Guidance Manual for the Integrated Exposure Uptake Biokinetic Model for Lead in Children (February 1994) [NTIS #PB93-963510, OSWER #9285.7-15-1]. Available at: www.epa.gov/superfund/programs/lead/prods.htm.

USEPA, 1998. Proposed TSCA §403 Soil Lead Hazard and OSWER's Lead-in-Soils Policy. EPA 540-F-98-061, OSWER 9200.4-29, PB 99-963211. Memorandum from Lynn Goldman and Tim Fields to Regional Administrators. Available at: www.epa.gov/superfund/programs/lead/prods.htm

USEPA, 1998. Clarification to the 1994 Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities. OSWER Directive 9200.4-27, EPA/540/F-98/030

PB98-963244, OSWER Directive# 9200.4-27P. Memorandum from: Tim Fields to Regional Administrators. Available at: <http://www.epa.gov/superfund/programs/lead/prods.htm>.

Risk Management

USEPA, 1992. National Oil and Hazardous Substances Pollution Contingency Plan (The NCP). OERR, OSWER Publication 9200.2-14, January 1992. USEPA, 1993. Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions, OSWER Directive 9355.0-30.

USEPA, 1993. Guidance for Conducting Non-Time Critical Removal Actions Under CERCLA. OSWER 540-R-93-057, August, 1993.

USEPA, 1996. Revised policy on performance of risk assessments during RVFS conducted by Potentially Responsible Parties. OSWER Directive No. 9340.1-02.

Monte Carlo Analysis

USEPA, 1997. Policy for Use of Probabilistic Analysis in Risk Assessment at the U.S. Environmental Protection Agency. Guiding Principles for Monte Carlo Analysis - (EPA Document No. EPA/630/R-97/001, March 1997). Available at: www.epa.gov/ORD/spc/probpol.html.

USEPA, 1997. Guiding Principles for Monte Carlo Analysis. EPA/630/R-97/001, March 1997. Available at: www.epa.gov/ncea/monteabs.html.

Children's Health Issues

USEPA, 1995. New Policy on Evaluating Health Risks to Children. From Administrator Carol Browner to: Assistant Administrators, General Counsel, Inspector General, Associate Administrators and Regional Administrators. October 20, 1995. Available at: www.epa.gov/ORD/spc/memo1020.html

USEPA, 1995. Policy on Policy on Evaluating Health Risks to Children. Available at: www.epa.gov/ORD/spc/memohlth.html.

Additional Guidance

USEPA, 1997. Special Report on Environmental Endocrine Disruption: An Effects Assessment and Analysis. EPA/630/R-96/012. February, 1997 Available at: www.epa.gov/ORD/WebPubs/endocrine

USEPA, 1997. Cumulative Risk Assessment Guidance-Phase I Planning and Scoping. Memorandum to: Assistant Administrators, General Counsel, Inspector General, Associate Administrators, Regional Administrators and Staff Office Directors, dated July 3, 1997. Available at: <http://www.epa.gov/ORD/spc/cumulrsk.html>.

USEPA, 1997. Guidance on Cumulative Risk Assessment. Part 1. Planning and Scoping. U.S. Environmental Protection Agency, Science Policy Council, July 3, 1997. Available at:

Handwritten signature

www.epa.gov/ORD/spc/cumrisk2.html

Chemical Specific Documents of Interest

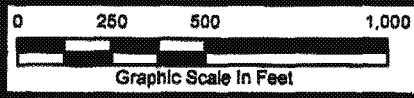
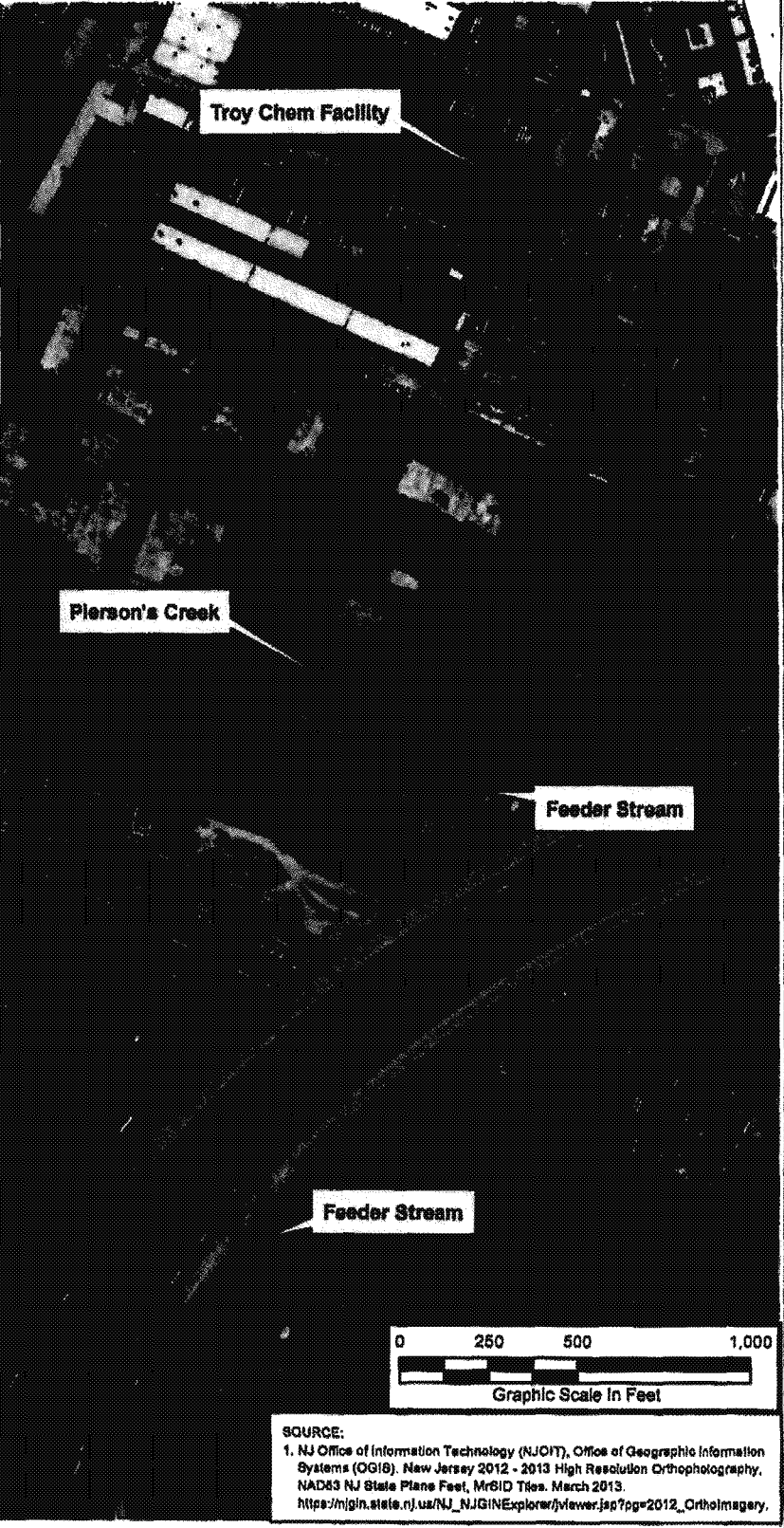
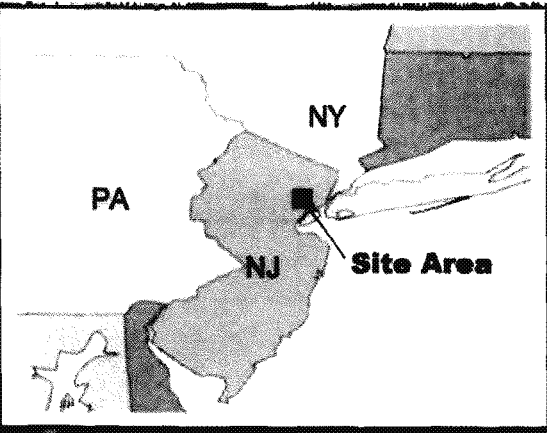
Chemical specific documents for mercury, lead, and perchlorate are available at:
www.epa.gov/nceawwwl/healthri.html

EPA homepage for human health risk assessment documents:
<http://www.epa.gov/superfund/programs/risk/toolthh.htm#GG>

AUS

Appendix B

AMS



SOURCE:
1. NJ Office of Information Technology (NJGIT), Office of Geographic Information Systems (OGIS). New Jersey 2012 - 2013 High Resolution Orthophotography. NAD83 NJ State Plane Feet, MrSID Tiles. March 2013.
https://mgin.state.nj.us/NJ_NJGINExplorer/jviewer.jsp?pg=2012_Orthomagery.

LEGEND:	
	Pierson's Creek
	Feeder Streams (Unnamed Tributaries)
	Flow Direction
	Facility Boundary

TITLE:
**Location Map
Troy Chem Corp Inc
Newark, Essex County, NJ**

PROJECT:
Troy Chem Corp Inc

CLIENT NAME:
EPA

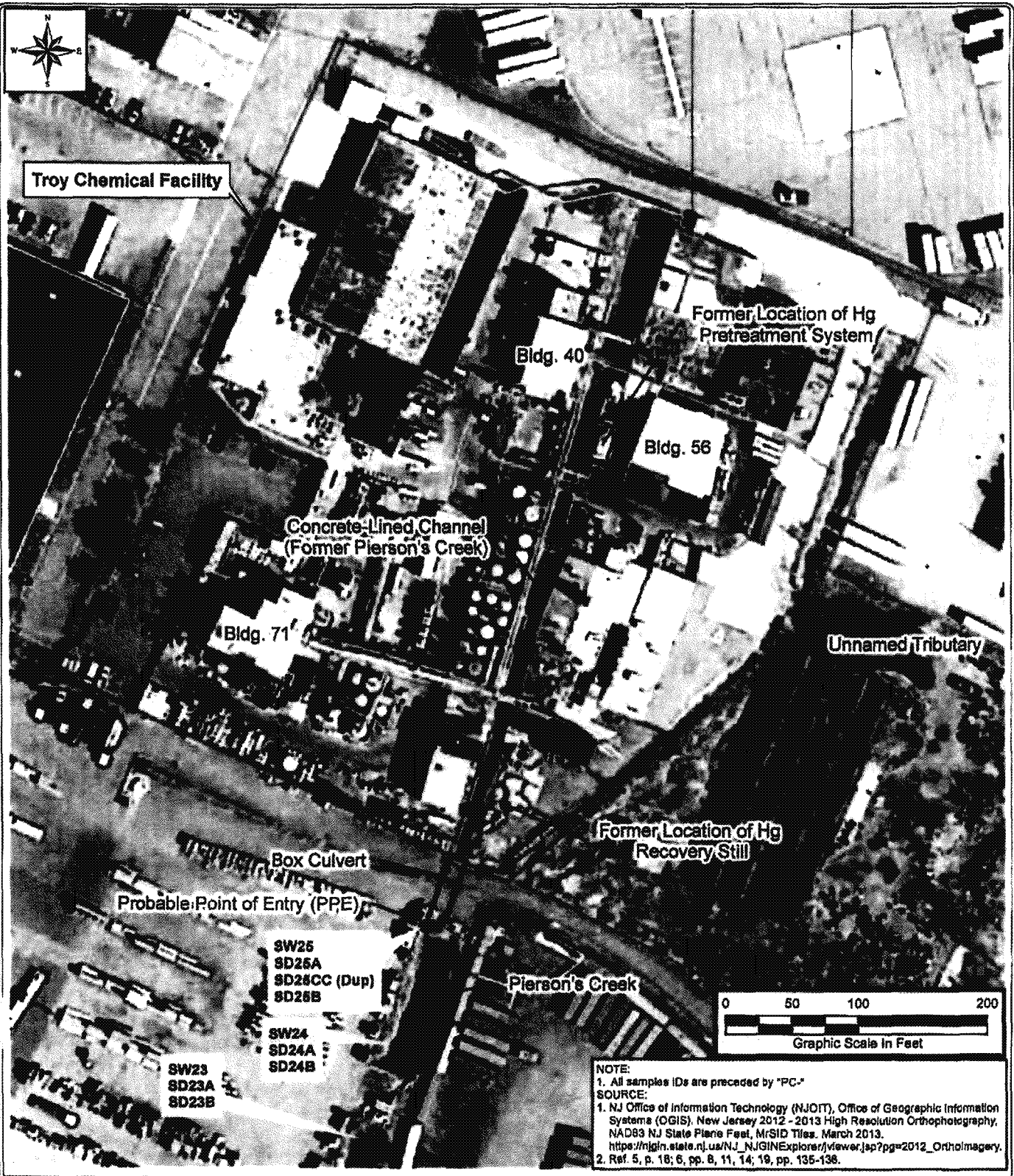


DATE:
August 2013

FIGURE #
1

P:\SAT\2\Piersons Creek\MOX\2013_08_HRS113534_TCC_Site_Loc_201308.mxd

AMG



NOTE:
 1. All sample IDs are preceded by "PC-"
 SOURCE:
 1. NJ Office of Information Technology (NJ/OIT), Office of Geographic Information Systems (OGIS), New Jersey 2012 - 2013 High Resolution Orthophotography, NAD83 NJ State Plane East, MrSID Tiles, March 2013. https://njgis.state.nj.us/NJ_NJGISExplorer/viewer.jsp?pg=2012_Ortho/magery.
 2. Ref. 5, p. 16; 6, pp. 6, 11, 14, 19, pp. 135-138.

P:\SAT\PIersons Creek\AKD\2013_DB_HRS\13585_TCC_Historic_Facility.mxd

LEGEND:	
	Sample Location
	Facility Boundary

PROJECT:
 Troy Chem Corp Inc

CLIENT NAME:
 EPA

TITLE:
 Historical Facility Map
 Troy Chem Corp Inc
 Newark, Essex County, NJ



DATE:
 August 2013

FIGURE #:
 2