

IN THE MATTER OF:

The Poplar Point Site

National Park Service,  
National Capital – East Park

United States Department of the  
Interior

District of Columbia

Proceeding Under Sections 104  
and 122 of the Comprehensive  
Environmental Response,  
Compensation, and Liability Act,  
as amended (42 U.S.C. §9604  
and §9622)

**ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON  
CONSENT GOVERNING THE CONDUCT OF THE REMEDIAL  
INVESTIGATION AND FEASIBILITY STUDY AT THE POPLAR POINT SITE**

## I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") is entered into voluntarily by the National Park Service ("NPS") and the District of Columbia (the "District") (hereinafter collectively referred to as the "Parties"). The Settlement Agreement concerns the preparation and performance of a remedial investigation and feasibility study ("RI/FS") at Poplar Point, a 110 acre portion of Anacostia Park located along the south-southeast bank of the Anacostia River approximately one mile upstream from the confluence of the Anacostia and Potomac Rivers, as depicted on the Map attached hereto as Appendix A (hereinafter, "the Site"), and the reimbursement for Future Oversight Costs incurred by NPS in connection with the RI/FS.

2. This Settlement Agreement is entered into under the authority vested in the President of the United States by Sections 104, 122(a), and 122(d)(3) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended ("CERCLA"), 42 U.S.C. §§ 9604, 9622(a), and 9622(d)(3). Authority under CERCLA Sections 104 and 122 was delegated to the Secretary of the Department of the Interior ("DOI") by Executive Order 12580, 52 Fed. Reg. 2923 (1987), as amended by Executive Order 13016, 61 Fed. Reg. 45871 (1996). The Section 104 and Section 122 authorities delegated to the Secretary have been re-delegated to the Director of NPS with respect to land under the jurisdiction, custody, or control of NPS and the Solicitor of DOI, respectively, by DOI Departmental Manual Part 207 Chapter 7. The Solicitor is exercising Section 122 authority in this Settlement Agreement with the concurrence of the U.S. Department of Justice.

3. The Parties recognize that this Settlement Agreement has been negotiated in good faith and that the terms of this Settlement Agreement, and the actions taken by the District thereunder, do not constitute an admission by the District of any of the facts, findings, conclusions or statements set forth herein or an admission of any liability by the District, NPS, or any other department, agency, or instrumentality of the United States. The District does not admit or agree with the findings of fact, conclusions of law or other determinations in this Settlement Agreement, and expressly retains the right to controvert any or all of the same in any subsequent proceedings, but, notwithstanding the foregoing, the District agrees not to controvert the validity or enforceability of this Settlement Agreement in any proceeding brought by NPS seeking to enforce it. The District agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the authority or jurisdiction of NPS to issue or enforce this Settlement Agreement, nor contest in any such action by NPS implementing or enforcing this Settlement Agreement the validity of this Settlement Agreement. Notwithstanding the foregoing or anything to the contrary herein, the District asserts that other entities, including departments, agencies or instrumentalities of the United States, are potentially responsible parties with respect to the Site, and the Parties agree that the Findings of Fact, Conclusions of Law, and other determinations herein shall not be used in any other

proceeding for the purpose of determining whether or to what extent the District, NPS, the United States, or any of its departments, agencies or instrumentalities, is liable for, or should contribute to, costs incurred by either the District or NPS in implementing this Agreement.

4. Notwithstanding anything in this Settlement Agreement, nothing in this Settlement Agreement obligates the District to expend any funds that have not lawfully been appropriated for such purpose.

## II. PARTIES BOUND

5. This Settlement Agreement applies to and is binding upon NPS and upon the District and its agents, successors, and assigns. Any change in ownership of Poplar Point shall not alter the District's responsibilities under this Settlement Agreement. Nothing herein is intended to, or shall establish, modify, increase, or otherwise affect the authority of NPS over or concerning the Site, should any change in ownership of Poplar Point occur.

6. The District has agreed to carry out all activities required by this Settlement Agreement.

7. The District shall comply with this Settlement Agreement. Additionally, the District shall ensure that its contractors, subcontractors, and representatives receive a copy of this Settlement Agreement and shall require all of them to comply with this Settlement Agreement.

8. Each undersigned representative of the District 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 the District to this Settlement Agreement.

## III. STATEMENT OF PURPOSE

9. In entering into this Settlement Agreement, the objectives of NPS and the District 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 or from the Site, by conducting a Remedial Investigation as more specifically set forth in the Statement of Work ("SOW") attached as Appendix B 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 Site, by conducting a Feasibility Study as more specifically set forth in the SOW in Appendix B to this Settlement Agreement; (c) to provide for the reimbursement of Future Oversight Costs incurred by NPS with respect to this Settlement Agreement.

10. The Work conducted under this Settlement Agreement is subject to approval by NPS. The Work conducted under this Settlement Agreement shall provide all appropriate and necessary information to assess Site conditions and evaluate alternatives to the extent

necessary to select and implement 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"). The District shall conduct all Work under this Settlement Agreement in compliance with CERCLA, the NCP, and all applicable NPS or Environmental Protection Agency ("EPA") guidance, policies, and procedures.

11. In entering into this Settlement Agreement, the Parties recognize that nothing herein is to be construed as modifying, affecting, waiving, prejudicing or in any manner limiting the responsibilities of the Parties to comply with the Federal and District of Columbia Government Real Property Act of 2006, Pub. L. No. 109-396, 120 Stat. 2711 (Dec. 15, 2006) ("Federal Lands Act"), including but not limited to sections 402 and 404 of that Act, and the Parties recognize and agree that all obligations under the Federal Lands Act are reserved and preserved.

#### IV. DEFINITIONS

12. Unless otherwise expressly provided herein, 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 in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

- a. "AOC" shall mean the Architect of the Capitol.
- b. "AOF" shall mean the United States Park Police Aviation Operations Facilities.
- c. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, *et seq.*
- d. "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 District holiday, the period shall run until the close of business of the next working day.
- e. The "District" shall mean the District of Columbia.
- f. "DC Nursery" shall mean the former District of Columbia Lanham Tree Nursery.
- g. "DDOE" shall mean the District of Columbia Department of the Environment.
- h. "Effective Date" shall be the effective date of this Settlement Agreement as provided in Section XXVI.
- i. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

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

k. "Future Oversight Costs" shall mean all oversight costs, including, but not limited to, direct and indirect oversight costs, that the United States incurs in reviewing or developing plans, reports, and other items pursuant to this Settlement Agreement, verifying the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory cost, Agency for Toxic Substances and Disease Registry ("ATSDR") costs.

l. "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.

m. "Municipal solid waste" shall mean waste material: (i) generated by a household (including a single or multifamily residence); or (ii) generated by a commercial, industrial or institutional entity, to the extent that the waste material -- (I) is essentially the same as waste normally generated by a household; (II) is collected and disposed of with other municipal solid waste as part of normal municipal solid waste collection services; and (III) 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.

n. "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.

o. "NPS" shall mean the National Park Service.

p. "NRS" shall mean the Naval Receiving Station that occupied the middle portion of Poplar Point from the 1940s through the 1960s.

q. "Paragraph" shall mean a portion of this Settlement Agreement identified by an Arabic numeral.

r. The "Parties" shall mean NPS and District.

s. "RCRA" shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901, *et seq.*

t. "Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral.

u. "Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent, the SOW, all appendices attached hereto (listed in Section XXIV) and all documents incorporated by reference into this document including without limitation NPS-approved submissions. NPS-approved submissions (other than progress reports) are incorporated into and become a part of the Settlement Agreement upon approval by NPS. In the event of conflict between this Settlement Agreement and any appendix or other incorporated documents, this Settlement Agreement shall control.

v. "Site" shall mean the area encompassing Poplar Point, a 110 acre portion of Anacostia Park located along the south-southeast bank of the Anacostia River approximately one mile upstream from the confluence of the Anacostia and Potomac Rivers, as depicted on the Map attached hereto as Appendix A.

w. "Statement of Work" or "SOW" shall mean the Statement of Work for development of a RI/FS for Poplar Point, as described in Paragraph 34 of this Settlement Agreement. The Statement of Work, upon its approval by NPS, shall be appended to this Settlement Agreement as Appendix B, and shall henceforth be enforceable part of this Settlement Agreement as are any other modifications made thereto in accordance with this Settlement Agreement.

x. "United States" shall mean the United States of America and all departments, instrumentalities, agencies, and branches thereof, including but not limited to NPS, the United States Army Corps of Engineers, the Department of the Navy, and the Architect of the Capitol.

y. "Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); (4) any "hazardous waste" under the District of Columbia Hazardous Waste Management Act, D.C. Official Code §§ 8-1302.2; (5) any "pollutant" as defined in the District's Water Pollution Control Act, D.C. Official Code § 8-103.01(19); (6) any "hazardous substance" as defined in the District's Brownfield Revitalization Act, D.C. Official Code § 8-631.02; and any "regulated substance," as defined in the District's Underground Storage Tank Management Act, D.C. Official Code § 8-113.01(7).

z. "Work" shall mean all activities the District is required to perform under this Settlement Agreement, except those required by Section XIV (Retention of Records).

## V. FINDINGS OF FACT

13. The Site is generally located on the south-southeast bank of the Anacostia River, approximately one mile upstream from the confluence with the Potomac River and

comprises approximately 110 acres of Anacostia Park. The Site is generally bordered to the northeast by the 11th Street Bridge and to the southwest by the South Capitol Street Bridge (Frederick Douglas Memorial Bridge), with the north-northwestern border being the Anacostia River adjacent to Anacostia Drive. The south and southeastern border generally follows the Anacostia Freeway (Interstate 295) and various transportation right-of-ways, undeveloped parcels and adjacent commercial/residential use properties along Howard Road, as depicted on the Map attached hereto as Appendix A. Approximately 65 acres of the Site are an area which contains the NPS Headquarters for National Capital Parks-East and the U.S. Park Police Anacostia Operations and Helicopter facilities.

14. Previous environmental assessments and related investigations have focused primarily on the southwestern portion of the Site. This portion of the Site has historically been divided into two parcels, both of which supported nurseries from the mid-1920s until 1993. The District of Columbia's former Lanham Tree Nursery ("DC Nursery") occupied 19-acres within the southwestern portion of the Site. The nursery grounds and greenhouses have been fallow and vacant for the last several years. In addition, the Naval Receiving Station ("NRS") occupied the middle portion of the Site from the 1940s through the 1960s.

15. Tidal marshes of the Anacostia River beneath the Site were filled nearly a century ago, and the Poplar Point area has undergone a variety of uses since this time. Currently, METRO's Green line runs underground through the western end of the former NRS, while the National Park Service occupies some of the former NRS buildings to the east. Stickfoot Sewer runs under the eastern portion of the site and conveys both storm water and Stickfoot Creek from areas south of the site to the Anacostia River.

16. Potential risks to human health and the environment include risks include risks to park workers and visitors, and natural resources at or near the Site.

17. Hazardous substances have been released into several environmental media at and from the Site including, without limitation, soils, surface water, and ground water.

18. A portion of the Site is included in the CERCLIS databasc with ID number 0305662, designated as the Poplar Point Nursery.

19. Significant environmental investigation activities have been completed primarily in the Nursery portions of the Site. The following investigations and/or assessments have been performed at the Site:

a. *Report of Phase I Environmental Site Assessment, Poplar Point, Southeast, Washington, D.C.*, by MACTEC (March 2007).

b. *Summary of Environmental Site Assessment, Site Investigation and Risk Assessment Document, Poplar Point Property, 1900 Anacostia Drive, Washington, D.C.* (November 2006).

- c. *Screening Level Ecological and Human Health Risk Assessment (Powerpoint Presentation), Poplar Point, Washington, D.C.*, by EVS Environmental Consultants (undated; assumed 2004)
- d. *Screening Level Ecological and Human Health Risk Assessment, Poplar Point, Washington, D.C.*, by EVS Environmental Consultants (February, 2004).
- e. *Site Characterization Report, Poplar Point, Washington, D.C.*, by Ridolfi Inc. (October 2003).
- f. *Phase I Environmental Site Assessment, Poplar Point Site (Section One), Washington, D.C.*, by Ridolfi Engineers Inc. (January 31, 2003).
- g. *Field Report for Drum and Debris Survey of the Poplar Point Site*, by Ridolfi Engineers Inc. (September 25, 2002).
- h. *Draft Phase I Environmental Site Assessment, District of Columbia Properties Poplar Point, Washington, D.C.*, by Ridolfi Engineers Inc. (May 17, 2002).
- i. *Completion and Compilation of Site Inspection and Remedial Assessment Activities at 1900 Anacostia Drive, Southeast, Washington, D.C.*, by ENVIRON International Corporation (March 2002).
- j. *Industrial History of the Former Naval Receiving Station, Anacostia Park Washington, D.C.*, by James E. Dolph, Portsmouth Naval Shipyard (December 20, 2001).
- k. *U.S. Park Police Aviation Section Hangar and Fuel System Improvements, Environmental Assessment – Anacostia Park*, by National Parks-East, National Capital Region, National Park Service, Department of the Interior (August 2000).

## VI. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above, NPS has determined that:

- 20. The Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).
- 21. The contaminants found at the Site, as identified in the Findings of Fact above, include "hazardous substance(s)" as defined by section 101(14) of CERCLA, 42 U.S.C. § 9601(14).
- 22. The conditions described in the Findings of Fact 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).

23. The District is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

24. Consistent with Paragraph 3 of this Settlement Agreement, entering into this Settlement Agreement and any actions undertaken by the District in accordance with this Settlement Agreement do not constitute an admission of any liability or of any of the facts, conclusions of fact or law, determinations, allegations or statements set forth herein. The District does not admit or agree with the findings of fact, conclusions or law, or other determinations in this Settlement Agreement and expressly retains the right to controvert any or all of the same in any subsequent proceedings, but, notwithstanding the foregoing, the District agrees not to controvert the validity or enforceability of this Settlement Agreement in any proceeding brought by NPS seeking to enforce it.

25. The District is a responsible party under Sections 104, 107 and 122 of CERCLA, 42 U.S.C. §§ 9604, 9607 and 9622.

26. The actions required by this Settlement Agreement are necessary to protect the public health, welfare or the environment, are in the public interest are consistent with CERCLA and the NCP, and will expedite effective remedial action and minimize litigation, as provided in Sections 104, 107, and 122 of CERCLA, 42 U.S.C. §9604, 9607, and 9622.

27. NPS has determined that the District is qualified to conduct the RI/FS within the meaning of Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). Additionally, NPS has determined that the District 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 the District carries out the Work in accordance with the terms of this Settlement Agreement.

#### **VII. SETTLEMENT AGREEMENT AND ORDER**

28. Based upon the foregoing Findings of Fact and Conclusions of Law and Determinations, it is hereby Ordered and Agreed that District shall implement 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**

29. Selection of Contractors, Personnel. All Work performed under this Settlement Agreement shall be under the direction and supervision of qualified personnel. The District has notified NPS in writing of the names, titles, and qualifications of the personnel, including contractors, subcontractors, consultants and laboratories to be used in carrying out such Work, and NPS has approved the use of the proposed response action contractor. Within thirty (30) days of the Effective Date of this Settlement Agreement, the District shall demonstrate that the proposed response action contractor has a quality system which 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 its 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 or subsequently issued guidance) or equivalent documentation as determined by EPA. The qualifications of the persons undertaking the Work for the District shall be subject to NPS' review, for verification that such persons meet minimum technical background and experience requirements. This Settlement Agreement is contingent on the District's demonstration to NPS' satisfaction that the District is qualified to perform properly and promptly the actions set forth in this Settlement Agreement. If NPS disapproves in writing of any person's technical qualifications, the District shall notify NPS of the identity and qualifications of the replacements within thirty (30) days of the written notice. If NPS subsequently disapproves of the replacement, NPS reserves the right to terminate this Settlement Agreement and to conduct a complete RI/FS. During the course of the RI/FS, the District shall notify NPS in writing of any changes or additions in the personnel used to carry out such Work, providing their names, titles, and qualifications. NPS shall have the same right to disapprove changes and additions to personnel as it has hereunder regarding the initial notification.

30. The District has designated a Project Coordinator who shall be responsible for administration of all actions by the District required by this Settlement Agreement and has submitted to NPS the designated Project Coordinator's name, address, telephone number, and qualifications. NPS has approved the Project Coordinator. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site Work. NPS retains the right to disapprove of the designated Project Coordinator. If NPS disapproves of the designated Project Coordinator, the District shall retain a different Project Coordinator and shall notify NPS of that person's name, address, telephone number and qualifications within 30 days following NPS' disapproval. The District shall have the right to change their Project Coordinator, subject to NPS' right to disapprove. The District shall notify NPS thirty (30) 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 the District's Project Coordinator of any notice or communication from NPS relating to this Settlement Agreement shall constitute receipt by the District.

31. NPS will notify the District of its designated Project Coordinator in writing within ten (10) days of entry of this Settlement Agreement. NPS will notify the District of a change of its designated Project Coordinator. Except as otherwise provided in this Settlement Agreement, the District shall direct all submissions required by this Settlement Agreement to the Project Coordinator. Receipt by NPS' Project Coordinator of any notice or communication from the District relating to this Settlement Agreement.

32. NPS' Project Coordinator shall have the authority lawfully vested in a Remedial Project Manager ("RPM") and On-Scene Coordinator ("OSC") by the NCP. In addition, NPS' Project Coordinator shall have the authority consistent with the NCP, to halt any Work required by this Settlement Agreement, and to take any necessary response action

when s/he determines that conditions at the Site may present an immediate endangerment to public health or welfare or the environment. The absence of the NPS Project Coordinator from the area under study pursuant to this Settlement Agreement shall not be cause for the stoppage or delay of Work.

33. NPS shall arrange for a qualified person 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. Section 9604(a).

#### **IX. WORK TO BE PERFORMED**

34. No later than 10 days after the Effective Date, the District shall submit to NPS a proposed Statement of Work ("SOW") for the RI/FS. The proposed SOW shall be subject to the review and approval provisions in Section X of this Settlement Agreement.

35. The District shall conduct the RI/FS 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" (OSWER Directive # 9355.3-01, October 1988 or subsequently issued guidance), "Guidance for Data Usability in Risk Assessment" (OSWER Directive #9285.7-05, October 1990 or subsequently issued guidance), and guidance referenced therein, and guidance referenced in the SOW, as may be amended or modified by NPS or EPA. The Remedial Investigation ("RI") shall consist of collecting data to characterize site conditions, determining the nature and extent of the contamination at or from the Site, assessing risk to human health and the environment and conducting treatability testing as necessary to evaluate the potential performance and cost of the treatment technologies that are being considered. The Feasibility Study ("FS") shall determine 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 Site. 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. Such alternatives shall be fully evaluated for compliance with all ARARs, including NPS location-specific ARARs. In evaluating the alternatives, the District 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). Upon request by NPS, the District shall submit in electronic form all portions of any plan, report or other deliverable that the District is required to submit pursuant to provisions of this Settlement Agreement.

36. Modification of the Work.

a. If at any time during the Work, the District identifies a need for additional data, the District shall submit a memorandum documenting the need for additional data to the NPS Project Coordinator within fifteen (15) days of identification. NPS shall

determine whether the additional data will be collected by the District and whether it will be incorporated into plans, reports and other deliverables.

b. In the event of unanticipated or changed circumstances at the Site, the District shall notify the NPS Project Coordinator by telephone within 24 hours of discovery of the unanticipated or changed circumstances. In the event that NPS determines that the immediate threat or the unanticipated or changed circumstances warrant changes in the Work, NPS shall modify or amend the appropriate Work plan in writing accordingly. The District shall perform the Work as modified or amended.

c. NPS may determine that in addition to tasks defined in the initially approved Work, other additional Work may be necessary to accomplish the objectives of this Settlement Agreement. The District agrees to perform these response actions in addition to those required by the initially approved Work, including any approved modifications, if NPS determines that such actions are necessary.

d. The District shall complete the additional Work according to the standards, specifications, and schedule set forth or approved by NPS in a written modification to the RI/FS Work plan or written supplement. NPS reserves the right to conduct the Work itself at any point, to seek reimbursement from the District, and/or exercise any rights it may have under applicable law to seek any appropriate relief.

37. Nothing in this Settlement Agreement shall be construed to limit NPS' authority to require performance of further response actions at the Site.

38. Off-Site Shipment of Waste Material. The District shall, prior to any off-site shipment of Waste Material from the Site to an out-of-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official in the receiving facility's state and to NPS' Designated Project Coordinator. However, this notification requirement shall not apply to any off-site shipments when the total volume of all such shipments will not exceed 10 cubic yards.

a. The District shall include in the written notification the following information: (1) the name and location of the facility to which the Waste Material is to be shipped; (2) the type and quantity of the Waste Material to be shipped; (3) the expected schedule for the shipment of the Waste Material; and (4) the method of transportation. The District shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.

b. The identity of the receiving facility and state will be determined by the District following the award of the contract for the remedial investigation and feasibility study. The District shall provide the information required by Subparagraph 38.a and 38.c as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

c. Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-site location, the District shall obtain NPS' approval and EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. The District shall only send hazardous substances, pollutants, or contaminants from the Site to an off-site facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence.

39. Progress Reports. In addition to the plans, reports and other deliverables set forth in this Settlement Agreement, the District shall provide to NPS quarterly progress reports 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 Settlement Agreement during that month, (2) include all results of sampling and tests and all other data received by the District, (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.

40. Emergency Response and Notification of Releases.

a. In the event of any action or occurrence during performance of the Work which causes or threatens a release of Waste Material at or from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, the District shall immediately take all appropriate action. The District 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. The District shall also immediately notify the NPS Project Coordinator of the incident or Site conditions. In the event that the District fails to take appropriate response action as required by this Paragraph, NPS reserves its right to take such action instead.

b. In addition, in the event of any release of a hazardous substance from the Site, the District shall immediately notify the NPS Project Coordinator and the National Response Center at (800) 424-8802. The District shall submit a written report to NPS within 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.*

c. Nothing in the preceding paragraphs or in this Settlement Agreement shall be deemed to limit any authority of the United States or the District: a) to take all appropriate action to protect public health or welfare or the environment or to prevent, abate, respond to, or minimize an actual or threatened release of hazardous substances,

pollutants, contaminants, or other waste material at or from the Site; or b) to direct or order such action, or seek a Court order, to protect public health or welfare or the environment or to prevent, abate, respond to, or minimize an actual or threatened release of hazardous substances, pollutants, contaminants, or other waste material at or from the Site.

#### **X. NPS APPROVAL OF PLANS AND OTHER SUBMISSIONS**

41. 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 the District, NPS 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 the District modifies the submission; or (e) any combination of the above. However, NPS shall not modify a submission without first providing the District at least one notice of deficiency and an opportunity to cure within fifteen (15) days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects. NPS shall use diligent and good faith efforts to promptly review and respond to such submissions in an expeditious manner.

42. In the event of approval, approval upon conditions, or modification by NPS, pursuant to Subparagraph 35(a), (b), (c) or (e), the District shall proceed to take any action required by the plan, report or other deliverable, as approved or modified by NPS 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 NPS. Following NPS approval or modification of a submission or portion thereof, the District shall not thereafter alter or amend such submission or portion thereof unless directed by NPS.

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

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

#### **XI. QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION**

45. Quality Assurance. A Quality Assurance Project Plan ("QAPP") must be developed for the long-term monitoring activities planned. The EPA guidance documents, "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations," (EPA QA/R-5, Draft Final, October 1997), and "Guidance for Quality Assurance Project

Plans" (EPA QA/G-5, February 1998) or any guidance that supersedes these documents shall be used when preparing the QAPP. The QAPP must be approved by NPS. The District shall assure that Work performed, samples taken and analyses conducted conform to the requirements of the SOW, the QAPP and guidances identified therein. The District will assure that field personnel used by the District are properly trained in the use of field equipment and in chain of custody procedures. The District shall only use laboratories which have a documented quality system that complies with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by NPS.

46. Sampling.

a. All results of sampling, tests, modeling or other data (including raw data) generated by the District, or on the District's behalf, during the period that this Settlement Agreement is effective, shall be submitted to NPS in the next quarterly progress report as described in Paragraph 39 of this Settlement Agreement. NPS will make available to the District validated data generated by NPS.

b. The District shall verbally notify NPS at least 15 days prior to conducting significant field events as described in the SOW, RI/FS Work Plan or Sampling and Analysis Plan. At NPS' verbal or written request, or the request of NPS' oversight assistant, the District shall allow split or duplicate samples to be taken by NPS (and its authorized representatives) of any samples collected in implementing this Settlement Agreement. All split samples of the District shall be analyzed by the methods identified in the QAPP.

47. Access to Information. The District shall provide to NPS, upon request, copies of all documents and information within their possession or control or that of their contractors or agents relating to activities at the Site 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. The District shall also make available to NPS, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work. Nothing herein shall require the District to provide privileged information; however, the Parties recognize that sampling results and other scientific data required to be generated by this Agreement are not privileged.

## XII. SITE ACCESS AND INSTITUTIONAL CONTROLS

48. NPS will provide access to NPS-managed lands to employees, contractors, agents, consultants, and representatives of the District to the extent such access is necessary to implement this Settlement Agreement. NPS retains, however, all rights to condition or otherwise regulate such access as needed to manage affected public lands consistent with CERCLA and all applicable NPS requirements, policies, and procedures.

49. Notwithstanding any provision of this Settlement Agreement, NPS retains all of its access authorities and rights, including enforcement authorities related thereto, under CERCLA and any other applicable statutes or regulations or common law.

### **XIII. COMPLIANCE WITH OTHER LAWS**

50. The District shall comply with all applicable local, state and federal laws and regulations when performing the RI/FS. No NPS permit shall be required for any portion of the Work that is conducted entirely on-Site. Where any portion of the Work is to be conducted off-site and requires a federal or state permit or approval, the District shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals and the Parties shall use their best efforts such that the permits shall be promptly issued. 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**

51. During the pendency of this Settlement Agreement and for a minimum of 10 years after commencement of construction of any remedial action, the District and NPS shall preserve and retain all non-identical copies of documents, records, and other information (including documents, records, or other information in electronic form) now in its possession or control or which 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 Site, regardless of any document retention policy to the contrary. Until 10 years after commencement of construction of any remedial action, the District shall also instruct the response action contractors and agents to preserve all documents, records, and other information of whatever kind, nature or description relating to performance of the Work.

52. At the conclusion of this document retention period, the District shall notify NPS at least 90 days prior to the destruction of any such documents, records or other information, and, upon request by NPS, the District shall deliver any such documents, records, or other information to NPS. The District may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the District asserts such a privilege, they shall provide NPS with the following: 1) the title of the document, record, or other information; 2) the date of the document, record, or other information; 3) the name and title of the author of the document, record, or other information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or other information; and 6) the privilege asserted by the District. However, no documents, records or other information created or generated pursuant to the requirements of this Order shall be withheld on the grounds that they are privileged.

53. The District 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, documents or other information (other than identical copies) relating to its potential liability regarding the Site.

#### XV. DISPUTE RESOLUTION

54. 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 at the Project Manager Level.

55. If the District objects to any NPS action taken pursuant to this Settlement Agreement, and the Parties cannot expeditiously and informally resolve a dispute at the Project Manager Level, the District shall notify NPS' Project Coordinator in writing of its objection(s) within 14 days of such action. NPS and the District shall have 30 days from NPS' receipt of the District's written objection(s) to resolve the dispute (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of NPS. Such extension may be granted verbally but must be confirmed in writing.

56. 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, the NPS Associate Director, Park Planning, Facilities and Lands will issue a written decision. NPS' decision shall be incorporated into and become an enforceable part of this Settlement Agreement unless challenged by the District as may be permitted pursuant to applicable law. The District's obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, the District shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with the final resolution of the dispute, whichever occurs, and regardless of whether the District agrees with the resolution. If the District does not perform the work in accordance with the final resolution, NPS reserves the right to conduct the work itself pursuant to applicable law, seek reimbursement from the District under applicable law, seek enforcement of the resolution, and/or seek any other appropriate relief permitted by applicable law.

57. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of NPS 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 sections 106(b), 109 and 122(f) of CERCLA, 42 U.S.C. §§ 9606(b), 9609 and 9622(f), and punitive damages pursuant to section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(e)(3). The District expressly reserves any and all defenses it may have in response to such an action.

## XVI. FORCE MAJEURE

58. The District 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 the District or of any entity controlled by the District, including but not limited to their contractors and subcontractors, which delays or prevents performance of any obligation under this Settlement Agreement despite the District's best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work or increased cost of performance.

59. 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, the District shall notify NPS orally within seven (7) days of when the District first knew that the event might cause a delay. Within seven (7) days thereafter, the District shall provide to NPS in writing the 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 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; the District's rationale for attributing such delay to a *force majeure* event if they intend to assert such a claim; and a statement as to whether, in the opinion of the District, 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 the District 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.

60. If NPS 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 NPS 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 NPS does not agree that the delay or anticipated delay has been or will be caused by a *force majeure* event, NPS will notify the District in writing of its decision. If NPS agrees that the delay is attributable to a *force majeure* event, NPS will notify the District in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

## XVII. PAYMENT OF FUTURE OVERSIGHT COSTS

61. The District shall pay NPS all Future Oversight Costs not inconsistent with the NCP. On a semi-annual basis, NPS will send the District a bill requiring payment. The District shall make all payments within 60 days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 61 of this Settlement Agreement. The District shall make all payments in accordance with instructions to be provided by NPS. Such

instructions will specify the form of payment (wire transfer or certified or cashier's check), identity of payee, manner of delivery, and address. Notwithstanding anything in Section XVII (Payment of Future Oversight Costs), or anything else in this Settlement Agreement, the Parties recognize and agree that this Agreement does not prejudice, waive, release, diminish, or otherwise affect the District's right to claim that the United States, including any department, agency or instrumentality thereof, and/or any other person or entity is liable for some or all of the Future Oversight Costs or any other costs of performing the Work. Further, the Parties recognize and agree that the District is not admitting that it is liable for some or all of the Future Oversight Costs.

62. If the District does not pay Future Oversight Costs within 45 days of the District's receipt of a bill, the District shall pay Interest on the unpaid balance of Future Oversight Costs. The Interest on unpaid Future Oversight Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. If NPS receives a partial payment, Interest shall accrue on any unpaid balance. Payment of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of the District's failure to make timely payments under this Section. The District shall make all payments required by this Paragraph in the manner described in Paragraph 61.

63. The District may contest payment of any Future Oversight Costs under Paragraph 61 if it determines that NPS has made an accounting error or if it believes NPS incurred excess costs as a direct result of an NPS action that was inconsistent with the NCP. Such objection shall be made in writing within 45 days of receipt of the bill and must be sent to the NPS Project Coordinator. Any such objection shall specifically identify the contested Future Oversight Costs and the basis for objection. In the event of an objection, the District shall within the 45-day period pay all uncontested Future Response Costs to NPS in the manner described in Paragraph 61. Simultaneously, the District shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the District of Columbia and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. The District shall send to the NPS Project Coordinator 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, the District shall initiate the Dispute Resolution procedures in Section XV (Dispute Resolution). If NPS prevails in the dispute, within 5 days after final resolution of the dispute, the District shall pay the sums due (with accrued interest) to NPS in the manner described in Paragraph 61. If the District prevails concerning any aspect of the contested costs, it shall pay that portion of the costs (plus associated accrued interest) for which it did not prevail thereof pay all Future Oversight Costs determined to be due to NPS in the manner described in Paragraph 61. The District 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 the District's obligation to reimburse NPS for its Future Response Costs.

#### **XVIII. COVENANT NOT TO SUE BY NPS**

64. In consideration of the actions that will be performed and the payments that will be made by the District under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, NPS covenants not to sue or to take administrative action against the District pursuant to Sections 106 or 107(a) of CERCLA, 42 U.S.C. §§ 9606, 9607(a), for the Work performed under this Settlement Agreement or for recovery of Future Oversight Costs. This covenant not to sue shall take effect upon the Effective Date and is conditioned upon the complete and satisfactory performance by the District of all obligations under this Settlement Agreement, including, but not limited to, payment of Future Oversight Costs pursuant to Section XVII. This covenant not to sue is given only by NPS, extends only to the District and does not extend to any other person. The United States specifically reserves its right to assert against the District any claims or causes of action brought on behalf of EPA or a federal natural resources trustee, and nothing in this Settlement Agreement shall constitute or be construed as a waiver, limitation or release of any claims or causes of action by the United States to enforce any federal laws or regulations at or in connection with the Site.

#### **XIX. RESERVATIONS OF RIGHTS**

65. Except as specifically provided in this Settlement Agreement, nothing herein shall limit the power and authority of NPS or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent NPS 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 the District in the future to perform additional activities pursuant to CERCLA or any other applicable law.

66. The United States reserves, and this Settlement Agreement is without prejudice to, all rights against the District with respect to matters, including, but not limited to:

- a. claims based on a failure by the District to meet a requirement of this Order;
- b. liability for costs not included within the definition of Future Oversight Costs;
- c. liability for performance of response action;
- d. criminal liability;

e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;

f. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site;

g. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site;

h. claims for contribution pursuant to Section 113 of CERCLA, 42 U.S.C. § 9613; and

i. any claims for cost recovery or contribution pursuant to Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), other than those claims expressly released by NPS in Paragraph 64 above.

67. Work Takeover. In the event NPS determines that the District has ceased implementation of any portion of the Work, are seriously or repeatedly deficient or late in their performance of the Work, or are implementing the Work in a manner which may cause an endangerment to human health or the environment, NPS may assume the performance of all or any portion of the Work as NPS determines necessary. The District may invoke the procedures set forth in Section XV (Dispute Resolution) to dispute NPS' determination that takeover of the Work is warranted under this Paragraph. Notwithstanding any other provision of this Settlement Agreement, NPS retains all authority and reserves all rights to take any and all response actions authorized by law.

68. Except for claims expressly released by NPS in Paragraph 64 above, the District, NPS and the United States reserve any and all of their rights, under any and all applicable laws, to seek, claim, collect, recover, recoup, and/or apportion any and all past, current, or future damages, costs, Future Oversight Costs, amounts, expenditures, payments, obligations, and/or expenses related in any manner to the response actions and/or Work to be performed at or about Poplar Point or any other environmental conditions at or about Poplar Point from the other Party hereto, the United States, and/or any person or entity not a Party hereto in connection with Poplar Point ("Reserved Claims"). The Reserved Claims include but are not limited to claims, counterclaims, or cross-claims under CERCLA and RCRA.

## XX. OTHER CLAIMS

69. Nothing in this Settlement 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).

70. By entering into this Settlement Agreement, the United States and NPS assume no liability for injuries or damages to persons or property resulting from any acts or omissions of the District.

71. Nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against any Party, the United States, or any person or entity 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 District and/or the United States for costs, damages and interest under Sections 106 and, 107, 113, and/or 120 of CERCLA, 42 U.S.C. §§ 9606 and, 9607, 9613, and/or 9620.

72. No action or decision by NPS 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).

73. Nothing in this Settlement Agreement precludes the United States or District from asserting any claims, causes of action, or demands for indemnification, contribution, or cost recovery against any persons not parties to this Settlement Agreement. Nothing herein diminishes the right of the United States or the District, pursuant to Sections 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).

#### XXII. AGENCY

74. The United States shall not be held out as a party to any contract entered into by or on behalf of the District in carrying out activities pursuant to this Settlement Agreement. Neither the District nor any such contractor shall be considered an agent of the United States.

#### XXIII. INSURANCE

75. At least 7 days prior to commencing any on-Site Work under this Settlement Agreement, the District shall ensure that the response action contractors secure, and maintain for the duration of this Settlement Agreement, comprehensive general liability insurance and automobile insurance with limits of five million dollars, professional and contractors pollution liability insurance with limits of five million dollars, combined single limit naming the United States and its employees as additional insureds. The foregoing professional and contractors' pollution liability insurance shall additionally include (i) transportation coverage, and (ii) non-owned locations coverage, to insure the transportation of Waste Material from the Site to disposal facilities as well as the disposal of Waste Material at such off-site disposal facilities. Within the same time period, the response action contractors shall provide NPS with certificates of such insurance and a copy of each insurance policy. The contractors 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, the contractors shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on

behalf of the contractors in furtherance of this Order. If the contractors demonstrate by evidence satisfactory to NPS 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 the District's contractors need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

#### **XXIV. INTEGRATION/APPENDICES**

76. 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 or shall be, attached to and incorporated into this Settlement Agreement:

"Appendix A" is the map of the Site

"Appendix B" shall be the SOW.

#### **XXV. ADMINISTRATIVE RECORD**

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

#### **XXVI. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION**

78. This Settlement Agreement shall be effective immediately upon the Settlement Agreement being signed by NPS and the District of Columbia. The undersigned representative of each Party certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind that Party to this document.

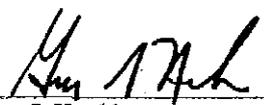
79. This Settlement Agreement may be amended by mutual agreement of NPS and the District. Amendments shall be in writing and shall be effective when signed by NPS. NPS Project Coordinators do not have the authority to sign amendments to the Settlement Agreement.

#### XXVII. NOTICE OF COMPLETION OF WORK

80. When NPS 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, NPS will provide written notice to the District. If NPS determines that any such Work has not been completed in accordance with this Settlement, NPS will notify the District, provide a list of the deficiencies, and require that the District modify the Work if appropriate in order to correct such deficiencies, in accordance with Paragraph 35 (Modification of the Work ). Failure by the District to implement the approved modified SOW for the RI/FS shall be a violation of this Settlement Agreement.

Agreed this 19<sup>th</sup> day of September, 2008.

For the District of Columbia

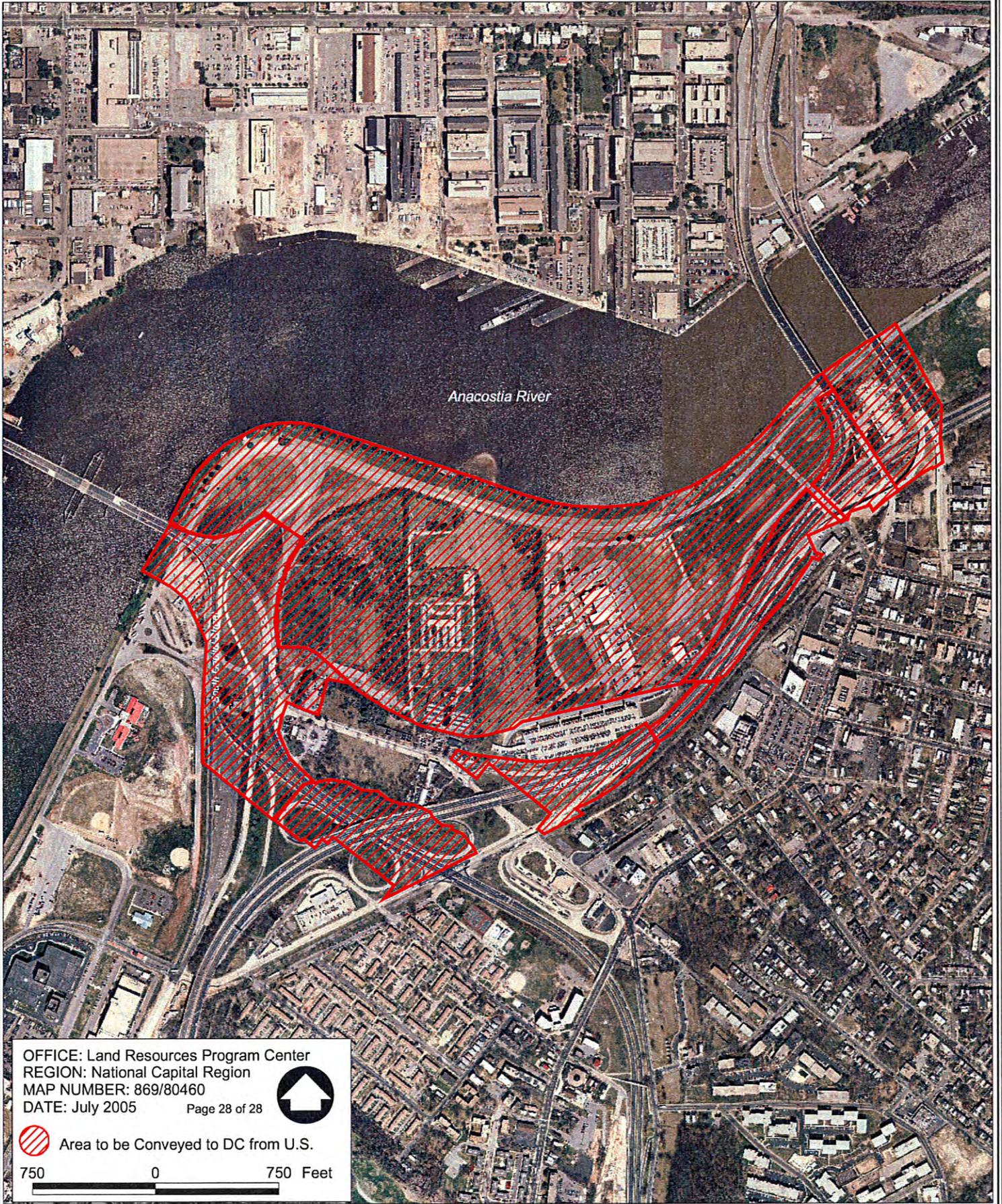
By:   
George S. Hawkins  
Director, District Department of the Environment  
51 N St. N.E., 6<sup>th</sup> Floor  
Washington, D.C. 20002

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**Appendix A**



### (9) POPLAR POINT Conveyance from U.S. to DC



OFFICE: Land Resources Program Center  
REGION: National Capital Region  
MAP NUMBER: 869/80460  
DATE: July 2005      Page 28 of 28



 Area to be Conveyed to DC from U.S.

750      0      750 Feet

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**Appendix B**

It is so ORDERED AND AGREED this 10<sup>th</sup> day of September, 2008.

By: Steven E. Whitesell Date: 9-19-08

Steven E. Whitesell  
Associate Director  
Park Planning, Facilities, and Lands  
National Park Service  
1849 C Street, N.W. - Room 3120  
Washington, DC 20240-0001

By: Barry N. Rotit, Acting For Date: 9-19-08

Barry N. Rotit  
Associate Solicitor  
Division of Parks and Wildlife  
Office of the Solicitor  
United States Department of the Interior  
1849 C Street, N.W. - Room 6557  
Washington, DC 20240-0001

STATEMENT OF WORK  
for  
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY  
at the  
Poplar Point Site

1.0 INTRODUCTION

This Statement of Work (SOW) sets forth requirements for preparation of a remedial investigation and feasibility study for the Poplar Point Site (Site) in the District of Columbia.

The purposes of the remedial investigation (RI) are to assess site conditions and to collect data necessary to adequately characterize the site for the purpose of developing and evaluating effective remedial alternatives. The primary objective of the feasibility study (FS) is to ensure that appropriate remedial alternatives are developed and evaluated such that relevant information concerning the remedial action options can be presented to a decision-maker and an appropriate remedy selected. The RI/FS shall comply with all requirements and guidance for RI/FS reports (see list below) and with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), 42 U.S.C. §§ 9601 *et seq.*, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300.

The District of Columbia (District) will conduct the RI/FS and will produce draft RI and FS reports that are in accordance with this SOW and all applicable guidances, including the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (U.S. EPA, Office of Emergency and Remedial Response, October 1988). The RI/FS Guidance describes the report format and the required report content. The District will furnish all necessary personnel, materials, and services needed, or incidental to, performing the RI/FS, except as otherwise specified in the AOC.

The remedial action alternative(s) selected for the Site will meet the cleanup standards specified in CERCLA Section 121, 42 U.S.C. § 9621. That is, the selected remedial action(s) 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 (ARARs) of other laws, will be cost-effective, will utilize permanent solutions and alternative treatment technologies or resource recovery technologies, to the maximum extent practicable. The final RI/FS report, as approved and adopted by the National Park Service (NPS), will, with the administrative record, form the basis for the selection of the Site remedy and will provide the information necessary to support development of the ROD.

NPS will provide oversight of the District's activities throughout the RI/FS.

## 2.0 TASK 1 -SCOPING (*RI/FS Guidance, Chapter2*)

Scoping is the initial planning process of the RI/FS. The District will document the project scope in a work plan. Because the work required to perform an RI/FS is not fully known at the onset, and is phased in accordance with a site's complexity and the amount of available information, it may be necessary to modify the work plan during the RI/FS to satisfy the objectives of the study.

### 2.1 Scoping Activities

When scoping the specific aspects of a project, the District shall meet with the Project Coordinators to discuss all project planning decisions and special concerns associated with the Site. The following activities shall be performed by the District as a function of the project planning process.

#### 2.1.1 Site Background

The District will gather and analyze the existing Site background information and will conduct a Site visit to assist in planning the scope of the RI/FS.

Collect and analyze existing data and document the need for additional data (*RI/FS Guidance Sections 2.2.2; 2.2.6; 2.2.7*)

Before planning RI/FS activities, all existing Site data will be thoroughly compiled and reviewed by the District. Specifically, this will include presently available data relating to the varieties and quantities of hazardous substances at the Site, and past disposal practices. This will also include results from any previous sampling events that may have been conducted. The District will refer to Table 2-1 of the RI/FS Guidance for a comprehensive list of data collection information sources. This information will be utilized in determining additional data needed to characterize the Site, better define potential ARARs, and develop a range of preliminarily identified remedial alternatives. Data Quality Objectives (DQOs), which specify the usefulness of existing data, will be established subject to NPS approval. NPS will select Site DQOs, preliminary remedial action objectives and preliminary remedial action goals (PRGs).

#### 2.1.2 Conduct Site Visit

The District will conduct Site visits during the project scoping phase to assist in developing a conceptual understanding of sources and areas of contamination as well as potential exposure pathways and receptors at the Site. During the Site visits the District should observe the Site's physiography, hydrology, geology, and demographics, as well as natural resource, ecological and cultural features. This information will be utilized to better scope the project and to determine the extent of additional data necessary to characterize the Site, better define potential ARARs, and narrow the range of preliminarily identified remedial alternatives.

### 2.1.3 Project Planning (*RI/FS Guidance, 2.2*)

Once the District has collected and analyzed existing data and conducted a Site visit, the specific project scope will be planned. Project planning activities include those tasks described below as well as identifying data needs, developing a work plan, designing a data collection program, and identifying health and safety protocols. The District and NPS will meet early in the planning phase to discuss the Scoping Deliverables to be developed during the planning process.

#### 2.1.3.1 Refine and Document Preliminary Remedial Action Objectives and Alternatives (*RI/FS Guidance, 2.2.3*)

Once existing Site information has been analyzed and a conceptual understanding of the potential Site risks is reached, the District will review and, if necessary, refine the remedial action objectives that have been identified by NPS for each actually or potentially contaminated medium. The revised remedial action objectives will be documented in a technical memorandum and subject to NPS approval. The District will then identify a preliminary range of broadly defined potential remedial action alternatives and associated technologies. The range of potential alternatives should encompass where appropriate, alternatives in which treatment significantly reduces the toxicity, mobility, or volume of the waste; alternatives that involve containment with little or no treatment; and a no-action alternative

#### 2.1.3.2 Document the Need for Treatability Studies (*RI/FS Guidance, 2.2.4*)

If remedial actions involving treatment have been identified by the District or NPS, the District shall conduct treatability studies, or rely on relevant studies of treatment methods, as needed to adequately identify and screen potential remedial measures, and later to adequately assess them in accordance with CERCLA and the NCP.

#### 2.1.3.3 Begin Preliminary Identification of Potential ARARs (*RI/FS Guidance, 2.2.5*)

The District will conduct a preliminary identification of potential District and federal ARARs (chemical-specific, location-specific and action-specific), including NPS-specific ARARs, in the work plan to assist in the refinement of remedial action objectives, and the initial identification of remedial alternatives and ARARs associated with particular actions. ARAR identification will continue as Site conditions, contaminants, and remedial action alternatives are better defined.

### 2.1.4 Scoping Deliverables (*RI/FS Guidance, 2.3*)

At the conclusion of the project planning phase, the District will submit a conceptual RI scoping document, an RI/FS work plan, a quality assurance project plan, a field sampling plan, and a Site-specific health and safety plan. The conceptual RI scoping document will present the District's proposed approach to identifying data needs for the RI. The purpose of the conceptual RI scoping document is to facilitate development of the RI/FS work plan by giving the NPS the opportunity to comment on the District's proposed approach as it is developed. The RI/FS work

plan, quality assurance project plan, and field sampling plans must be reviewed and approved by the NPS prior to the initiation of field activities. If more than one phase is required, appropriate addenda will be made to the work plan, sampling and analysis plan, and health and safety plan, following the same procedures required for the original documents.

#### 2.1.4.1 RI/FS Work Plan (*RI/FS Guidance, 2.3.1*)

An RI/FS work plan documenting the decisions and evaluations completed during the scoping process will be submitted for review and approval by the NPS. The work plan should be developed in conjunction with the sampling and analysis plan and the Site health and safety plan, although each plan may be delivered under separate cover. The work plan will include a comprehensive description of the work to be performed, including the methodologies to be utilized, as well as a corresponding schedule for completion. In addition, the work plan must include the rationale for performing the required activities.

Specifically, the work plan will present a statement of the problems and potential problems posed by the Site and the objectives of the RI/FS. Furthermore, the plan will include a Site background summary setting forth the Site description including the geographic location of the Site, and to the extent possible, a description of the Site's physiography, hydrology, geology, demographics, ecological, cultural and natural resource features; a synopsis of the Site history and a description of previous responses, if any, that have been conducted by local, state, federal, or private parties; a summary of the existing data in terms of physical and chemical characteristics of the contaminants identified, and their distribution among the environmental media at the Site. The plan should include a preliminary identification of remedial alternatives and data needs for evaluation of remedial alternatives, as appropriate. The plan will reflect coordination with treatability study requirements (see Tasks 1 and 5). It will also include a process for and manner of identifying federal and state ARARs (chemical-specific, location-specific and action-specific).

The major part of the work plan is a detailed description of the tasks to be performed, information needed for each task (*e.g.*, for health and environmental risk evaluation), information to be produced during and at the conclusion of each task, and a description of the work products that will be submitted to the NPS. This includes the deliverables set forth in the remainder of this statement of work; a schedule for each of the required activities through submittal of the draft RI report, which is consistent with the RI/FS guidance; and a project management plan, including a data management plan (*e.g.*, requirements for project management systems and software, minimum data requirements, data format and backup data management), monthly reports to the NPS, and meetings and presentations to the NPS at the conclusion of each major phase of the RI/FS.

All analytical results are to be made available in electronic form compatible with Microsoft Excel. Copies of each report, including figures, will be submitted in hard copy and electronic format.

The District will refer to Appendix B of the RI/FS Guidance for a comprehensive description of the contents of the required work plan. Because of the unknown nature of the Site and the iterative nature of the RI/FS, additional data requirements and analyses may be identified

throughout the process. The District will submit a technical memorandum documenting the need for additional data and identifying the DQOs whenever such requirements are identified. NPS will determine whether the additional data will be collected by the District and whether it will be incorporated into plans, reports and other deliverables. In any event, the District is responsible for fulfilling additional data and analysis needs identified by the NPS.

Note that the use of the term “work plan” in this SOW refers to the RI/FS work plan and any addenda thereto.

#### 2.1.4.2 Sampling and Analysis Plan (*RI/FS Guidance, 2.3.2*)

The District will prepare a sampling and analysis plan (SAP) to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data meet DQOs. The SAP provides a mechanism for planning field activities and consists of a field sampling plan (FSP) and a quality assurance project plan (QAPP). The RI will require as many phases as necessary to develop the data to delineate the nature and extent of contamination and to identify appropriate remedial action alternatives. The FSP will define in detail the sampling and data-gathering methods that will be used. It will include sampling objectives, sample location and frequency, sampling equipment and procedures, and sample handling and analysis.

Standard operating procedures (SOPs) will be included in the SAP, and may be bound in a separate document. SOPs will be included for all field activities such as documentation; decontamination; sample numbering, handling, custody, tracking, and shipping; monitoring well installation; monitoring well development; monitoring well sampling; measurement of water levels; direct push sampling; soil sampling; hand auger sampling; sediment sampling; surface water sampling; drum sampling; handling, storage, and disposal of investigation-derived waste, and any other activities as appropriate.

The QAPP will describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that will be used to achieve the desired DQOs. The QAPP will be prepared in accordance with “EPA Requirements for Quality Assurance Project Plans (QA/R-5)” (EPA/240/B-01/003, March 2001) and “EPA Guidance for Quality Assurance Project Plans (QA/G-5)” (EPA/600/R-98/018, February 1998). The DQOs will at a minimum reflect use of analytical methods for identifying contamination and remediating contamination consistent with the levels for remedial action objectives identified in the proposed National Contingency Plan, pages 51425-26 and 51433 (December 21, 1988). In addition, the QAPP will address sampling procedures, sample custody, analytical procedures, and data reduction, validation, reporting and personnel qualifications. One hundred percent of the data will undergo a data review. The data review will include the review of the QC parameters listed below, following general guidance from USEPA National Functional Guidelines for Organic/Inorganic Review (1999/1994).

- Chain of custody
- Cooler receipt form

- Case narrative
- Method blanks
- Reagent/preparation blanks (applicable to inorganic analysis).
- MS/MS4Ds
- Surrogate spikes
- Laboratory duplicates
- Laboratory control standards

In addition, approximately 10 percent of the data will undergo a data validation. This validation will follow the USEPA National Functional Guidelines for Organic/Inorganic Review (1999/1994). The data validation will include the review and recalculation of the raw data, whereas the data review does not include the review and recalculation of raw data. The QC parameters to be validated include the following, unless pre-approved for deletion by the NPS:

- Method blanks
- Reagent/preparation blanks (applicable to inorganic analysis)
- Instrument blanks
- MS/MSDs
- Surrogate spikes
- Analytical spikes (graphite furnace)
- Laboratory duplicates
- Laboratory control standards
- Internal standard areas for GC/MS analysis
- Mass tuning for GC/MS analysis
- Endrin/DDT degradation checks for GC/EC analysis
- Second, dissimilar column confirmation for GC/EC and HPLC analyses

While the referenced National Functional Guidelines for Organic/Inorganic Review (1999/1994) document will be used as guidance during the data review and validation procedures, the document was written for Contract Laboratory Program (CLP) Statement of Work (SOW) analyses. However, samples will be analyzed by USEPA SW-846 when methods are available, and the National Functional Guidelines for Organic/Inorganic Review (1999/1994) will be used where applicable to the methods used for analysis.

Field personnel should be available for QA/QC training and orientation where applicable. The District will demonstrate, in advance to the NPS' satisfaction, that each laboratory it may use is qualified to conduct the proposed work. This includes use of methods and analytical protocols for the chemicals of concern in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs approved in the QAPP for the Site by the NPS. The laboratory must have and follow an approved QA program. The District shall only use laboratories which have a documented Quality Assurance Program which complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995) and "EPA Requirements for Quality Management Plans (QA/R-2)"

(EPA/240/B-01-002, March 2001) or equivalent documentation as determined by the NPS. A laboratory QA program must be submitted for review and approval by the NPS. The laboratory must be accredited through the National Environmental Laboratory Accreditation Program (NELAP). The NPS may require that the District submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment and material specifications. The District will provide assurances that NPS has access to laboratory personnel, equipment and records for sample collection, transportation and analysis.

#### 2.1.4.3 Site Health and Safety Plan (*RI/FS Guidance, 2.3.3*)

A health and safety plan will be prepared in conformance with the District's health and safety program, and in compliance with OSHA regulations and protocols. The health and safety plan will include the 11 elements described in the RI/FS Guidance, such as a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and Site control. It should be noted that the NPS does not "approve" the District's health and safety plan; rather, the NPS reviews it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment.

### 3.0 TASK 2 -COMMUNITY INVOLVEMENT AND ADMINISTRATIVE RECORD

NPS acknowledges that community involvement activities relating to the development of the Poplar Point Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) are on-going. CERCLA and the NCP also require community relations activities to be conducted. NPS and the District will use their best efforts to coordinate the community relations activities for the RI/FS, EIS and other Site processes.

Under the NCP, NPS is responsible for planning, updating and implementing the community relations program for the Site RI/FS. To that end, NPS and the District will share the specific community involvement tasks required as set out herein. The District and NPS jointly will conduct the community interviews required by 40 CFR § 300.430(c)(2)(i), and the District will draft the community relations (involvement) plan (CIP) required by 40 CFR § 300.430(c)(2)(ii) for NPS review and approval. The interviews will be conducted and the CIP drafted before field work for the RI is commenced. The District also may provide information regarding the history of the Site, participate in Site RI/FS-related public meetings, or prepare fact sheets for distribution to the general public.

Pursuant to 40 CFR Part 300, Subpart I, NPS will compile, update, and maintain the Administrative Record for the Site, and will provide the requisite notices of availability when the Administrative Record File is made available for public review. NPS also will establish a community information repository at or near the Site, to house one copy of the Administrative Record.

The District may be asked to prepare baseline risk assessment memoranda which will summarize the toxicity assessment and components of the baseline risk assessment. These memoranda will be placed in the Administrative Record. The District's community relations responsibilities will

be subject to oversight by the NPS, pursuant to 40 CFR § 300.430(c)(3).

#### 4.0 TASK 3 -SITE CHARACTERIZATION (*RI/FS Guidance, Chapter3*)

As part of the RI, the District will perform the activities described in this task, including the preparation of a Site characterization summary and RI report. The overall objective of site characterization is to describe areas of a site that may pose a threat to human health or the environment. This is accomplished by first determining the Site's physiography, geology, and hydrology. Surface and subsurface pathways of migration will be defined. The District will identify the sources of contamination and define the nature, extent, and volume of the sources of contamination, including their physical and chemical constituents as well as their concentrations at incremental locations to background in the affected media. The District will also investigate the extent of migration of this contamination as well as its volume and any changes in its physical or chemical characteristics, to provide for a comprehensive understanding of the nature and extent of contamination at the Site. Using this information, contaminant fate and transport is then determined and projected.

During this phase of the RI/FS, the work plan, SAP, and health and safety plan are implemented. Field data are collected and analyzed to provide the information required to accomplish the objectives of the study. The District will notify the NPS at least two weeks in advance of the field work regarding the planned dates for all field activities related to the RI/FS. The District will demonstrate that the laboratory and type of laboratory analyses that will be utilized during Site characterization meets the specific QA/QC requirements and the DQOs of the investigation as specified in the SAP. In view of the unknown Site conditions, activities are often iterative, and to satisfy the objectives of the RI/FS it may be necessary for the District to supplement the work specified in the initial work plan. In addition to the deliverables below, the District will provide quarterly progress reports and participate in meetings/teleconferences at major points in the RI/FS.

#### 4.1 Field Investigation (*RI/FS Guidance, 3.2*)

The field investigation includes the gathering of data to define Site physical and biological characteristics, sources of contamination, and the nature and extent of contamination at the Site. These activities will be performed by the District in accordance with the work plan and SAP and any applicable addenda. At a minimum, the field investigation shall address the following:

##### 4.1.1 Implement and Document Field Support Activities (*RI/FS Guidance, 3.2.1*)

The District will initiate field support activities following approval of the work plan and SAP. Field support activities may include obtaining access to the Site, scheduling, and procuring equipment, office space, laboratory services, and/or contractors. The District will notify the NPS at least two weeks prior to initiating field support activities so it may adequately schedule oversight tasks. The District will also notify the NPS in writing upon completion of field support activities.

#### 4.1.2 Investigate and Define Site Physical and Biological Characteristics (*RI/FS Guidance, 3.2.2*)

The District will collect data on the characteristics of the Site and its surrounding areas including the physiography, geology, and hydrology, and specific physical characteristics identified in the work plan. This information will be ascertained through a combination of physical measurements, observations, and sampling efforts and will be utilized to define potential transport pathways and receptor populations. In defining the Site's physical characteristics, the District will also obtain 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.

#### 4.1.3 Define Sources of Contamination (*RI/FS Guidance, 3.2.3*)

The District will locate each source of contamination. For each location, the areal extent and depth of contamination will be determined by sampling at incremental depths on a sampling grid. The physical characteristics and chemical constituents and their concentrations will be determined for all known and discovered sources of contamination. The District shall conduct sufficient sampling to define the boundaries of the contaminant sources to the level established in the QAPP and DQOs. Defining the source of contamination will include analyzing the potential for contaminant release (*e.g.*, long term leaching from soil), contaminant mobility and persistence, and characteristics important for evaluating remedial actions, including information to assess treatment technologies.

#### 4.1.4 Describe the Nature and Extent of Contamination (*RI/FS Guidance, 3.2.4*)

The District will gather information to describe the nature and extent of contamination as a final step during the field investigation. To describe the nature and extent of contamination, the District will utilize the information on the Site's physical and biological characteristics and sources of contamination to give a preliminary estimate of the contaminants that may have migrated. The District will then implement an iterative monitoring program and any study program identified in the work plan or SAP such that by using analytical techniques sufficient to detect and quantify the concentration of contaminants, the migration of contaminants through the various media at the Site can be determined. In addition, the District will gather data for calculations of contaminant fate and transport. This process is continued until the area and depth of contamination are known to the level of contamination established in the QAPP and DQOs. The NPS will use the information on the nature and extent of contamination to determine the level of risk presented by the Site. District will use this information to help determine aspects of the appropriate remedial action alternatives to be evaluated.

#### 4.2 Data Analysis (*RI/FS Guidance, 3.4*)

##### 4.2.1 Evaluate Site Characteristics (*RI/FS Guidance, 3.4.1*)

The District will analyze and evaluate the data to describe: (1) the Site's physical and biological

characteristics; (2) contaminant source characteristics; (3) nature and extent of contamination; and (4) contaminant fate and transport. Results of these analyses are utilized in the analysis of contaminant fate and transport. 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. Where modeling is appropriate, such models shall be identified to the NPS in a technical memorandum prior to their use. All data and programming, including any proprietary programs, shall be made available to the NPS, together with a sensitivity analysis. Also, this evaluation shall include any information relevant to Site characteristics necessary for evaluation of the need for remedial action in the baseline risk assessment and for the development and evaluation of remedial alternatives. Analysis of data collected for Site characterization will meet the DQOs developed in the work plan.

#### 4.3 Data Management Procedures (*RI/FS Guidance, 3.5*)

The District will consistently document the quality and validity of field and laboratory data compiled during the RI.

##### 4.3.1 Document Field Activities (*RI/FS Guidance, 3.5.1*)

Information gathered during Site characterization will be consistently documented and adequately recorded by the District in well maintained field logs and laboratory reports, and in accordance with the District's SOPs which will have been submitted with the SAP. The methods of field documentation must be specified in the SOPs included with the SAP. Field logs 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.

##### 4.3.2 Maintain Sample Management and Tracking (*RI/FS Guidance, 3.5.2, 3.5.3*)

The District will maintain field reports, sample shipment records, analytical results, and QA/QC reports to ensure that only valid analytical data are reported and utilized in the evaluation of remedial alternatives. Analytical results developed under the work plan will not be included in any Site characterization reports unless accompanied by or cross-referenced to a corresponding QA/QC report. In addition, the District will establish a data security system to safeguard chain-of-custody forms and other project records to prevent loss, damage, or alteration of project documentation.

#### 4.4 Site Characterization Deliverables (*RI/FS Guidance, 3.7*)

The District will prepare the preliminary Site characterization summary and the remedial investigation report.

#### 4.4.1 Preliminary Site Characterization Summary (*RI/FS Guidance, 3.7.2*)

After completing the first phase of field sampling and analysis, the District will prepare a concise characterization summary. This summary will review the investigative activities that have taken place, and describe and display validated data documenting the location and characteristics of surface and subsurface features and contamination at the Site including the affected medium, types, location types, physical state, concentration of contaminants and quantity. In addition, the location, dimensions, physical condition and varying concentrations of each contaminant throughout each source and the extent of contaminant migration through each of the affected media will be documented. The Site characterization summary will provide a preliminary reference for developing the risk assessment, and evaluating the development and screening of remedial alternatives and the refinement and identification of ARARs.

#### 4.4.2 Remedial Investigation (RI) Report (*RI/FS Guidance, 3.7.3*)

The District will prepare and submit a draft RI report for review and approval by the NPS. This report shall summarize results of field activities to characterize the Site, sources of contamination, nature and extent of contamination, and the fate and transport of contaminants and shall include the results of the human health and ecological risk assessments. The District will refer to the RI/FS Guidance for an outline of the report format and contents. Following receipt of comments by the NPS, the District will prepare a final RI report which satisfactorily addresses the NPS' comments.

### 5.0 TASK 4 - RISK ASSESSMENT (*RI/FS Guidance, 3.4.2*)

The Risk Assessment will determine whether Site contaminants pose a current or potential risk to human health and the environment in the absence of any remedial action. The District shall perform the contaminant identification, exposure assessment, toxicity assessment, and risk characterization. The Risk Assessment will be used to determine whether remediation is necessary at the Site, provide justification for performing remedial action, and determine what exposure pathways need to be remediated.

#### 5.1 Human Health Risk Assessment.

The District shall evaluate and assess the risk to human health posed by Site contaminants.

##### 5.1.1 Draft Human Health Risk Assessment Report

The District shall prepare a draft Human Health Risk Assessment Report that addresses the following:

(1) Hazard Identification (sources). The District shall review available information on the hazardous substances present at the Site and identify the major contaminants of concern.

(2) Dose-Response Assessment. Contaminants of concern should be selected based on their intrinsic toxicological properties.

(3) Prepare Conceptual Exposure/Pathway Analysis. Critical exposure pathways (*e.g.*, drinking water) shall be identified and analyzed. The proximity of contaminants to exposure pathways and their potential to migrate into critical exposure pathways shall be assessed.

(4) Characterization of Site and Potential Receptors. The District shall identify and characterize human populations in the exposure pathways.

(5) Exposure Assessment. The exposure assessment will identify the magnitude of actual or potential human exposures, the frequency and duration of these exposures, and the routes by which receptors are exposed. The exposure assessment shall include an evaluation of the likelihood of such exposures occurring and shall provide the basis for the development of acceptable exposure levels. In developing the exposure assessment, the District shall develop reasonable maximum estimates of exposure for both current land use conditions and potential land use conditions at the Site.

(6) 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 the levels predicted through environmental fate and transport modeling. These comparisons shall determine whether concentrations of contaminants at or near the Site are affecting or could potentially affect human health.

(7) Identification of Limitations/Uncertainties. The District shall identify critical assumptions (*e.g.*, background concentrations and conditions) and uncertainties in the report.

(8) Site Conceptual Model. Based on contaminant identification, exposure assessment, toxicity assessment, and risk characterization, the District shall develop a conceptual model of the Site.

#### 5.1.2 Final Human Health Risk Assessment Report.

After the draft Human Health Risk Assessment Report has been reviewed and commented on by the NPS, the District will incorporate NPS' comments and submit the final Human Health Risk Assessment Report.

#### 5.2 Ecological Risk Assessment.

The District shall evaluate and assess the risk to the environment posed by Site contaminants.

##### 5.2.1 Draft Ecological Risk Assessment Report.

Prepare a draft Ecological Risk Assessment Report that addresses the following:

(1) Hazard Identification (sources). The District shall review available information on the hazardous substances present at the Site and identify the major contaminants of concern.

(2) Dose-Response Assessment. Contaminants of concern should be selected based on their intrinsic toxicological properties.

(3) Prepare Conceptual Exposure/Pathway Analysis. Critical exposure pathways (*e.g.*, surface water) shall be identified and analyzed. The proximity of contaminants to exposure pathways and their potential to migrate into critical exposure pathways shall be assessed.

(4) Characterization of Site and Potential Receptors. The District shall identify and characterize environmental exposure pathways.

(5) Select Chemicals, Indicator Species, and End Points. In preparing the assessment, the District will select representative chemicals, indicator species (species that are especially sensitive to environmental contaminants), and end points on which to concentrate.

(6) Exposure Assessment. The exposure assessment will identify the magnitude of actual or environmental exposures, the frequency and duration of these exposures, and the routes by which receptors are exposed. The exposure assessment shall include an evaluation of the likelihood of such exposures occurring and shall provide the basis for the development of acceptable exposure levels. In developing the exposure assessment, the District shall develop reasonable maximum estimates of exposure for both current land use conditions and potential land use conditions at the Site.

(7) Toxicity Assessment/Ecological Effects Assessment. The toxicity and ecological effects assessment will address the types of adverse environmental effects associated with chemical exposures, the relationships between magnitude of exposures and adverse effects, and the related uncertainties for contaminant toxicity (*e.g.*, weight of evidence for a chemical's carcinogenicity).

(8) 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 the levels predicted through environmental fate and transport modeling. These comparisons shall determine whether concentrations of contaminants at or near the Site are affecting or could potentially affect the environment.

(9) Identification of Limitations/Uncertainties. The District shall identify critical assumptions (*e.g.*, background concentrations and conditions) and uncertainties in the report.

(10) Site Conceptual Model. Based on contaminant identification, exposure assessment, toxicity assessment, and risk characterization, the District shall develop a conceptual model of the Site.

### 5.2.2 Final Ecological Risk Assessment Report.

After the draft Ecological Risk Assessment Report has been reviewed and commented on by the NPS, the District will incorporate NPS comments and submit the final Ecological Risk Assessment Report.

## 6.0 TASK 5 -TREATABILITY STUDIES (*RI/FS Guidance, Chapter5*)

If appropriate, treatability testing will be performed by the District to assist in the detailed analysis of alternatives. In addition, if applicable, testing results and operating conditions will be used in the detailed design of the selected remedial technology. The following activities will be performed by the District.

### 6.1 Determination of Candidate Technologies and of the Need for Testing (*RI/FS Guidance 5.2, 5.4*)

#### 6.1.1 Testing

The specific data requirements for the testing program will be determined and refined during Site characterization and the development and screening of remedial alternatives (Tasks 3 and 7, respectively).

#### 6.1.2 Conduct Literature Survey and Determine the Need for Treatability Testing (*RI/FS Guidance 5.2*)

The District will conduct a literature survey to gather information on performance, relative costs, applicability, removal efficiencies, operation and maintenance (O&M) requirements, and implementability of candidate technologies. Where it is determined by the NPS that treatability testing is required, and unless the District can demonstrate to the agencies' satisfaction that they are not needed, the District will submit a statement of work outlining the steps and data necessary to evaluate and initiate the treatability testing program.

#### 6.1.3 Evaluate Treatability Testing (*RI/FS Guidance 5.4*)

If a decision has been made to perform treatability testing, the District and the NPS 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 to 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 in the FS.

### 6.2 Treatability Testing and Deliverables (*RI/FS Guidance 5.5, 5.6, 5.8*)

The deliverables that are required include a statement of work, work plan, a sampling and analysis plan, and a final treatability evaluation report. NPS may also require a treatability testing health and safety plan, where appropriate.

#### 6.2.1 Treatability Testing Work Plan Addendum (*RI/FS Guidance 5.5*)

The District will prepare a treatability testing work plan as either part of the RI/FS work plan or as an addendum to the RI/FS work plan for review and approval by the NPS. The treatability

testing work plan will describe the Site's background, remedial technologies to be tested, test objectives, experimental procedures, treatability conditions to be tested, measurements of performance, analytical methods, data management and analysis, health and safety, and residual waste management. The 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, permitting requirements will be addressed.

#### 6.2.2 Treatability Testing SAP Addendum (*RI/FS Guidance 5.5*)

If the original QAPP or FSP is not adequate for defining the activities to be performed during the treatability testing, an addendum to the original SAP will be prepared by the District for review and approval by the NPS. Task 1, Section 2.1.4.2 of this statement of work provides additional information on the requirements of the SAP.

#### 6.2.3 Treatability Testing Health and Safety Plan (*RI/FS Guidance 5.5*)

If the original health and safety plan is not adequate for defining the activities to be performed during the treatability tests, a separate or amended health and safety plan will be developed by the District. Task 1, Section 2.1.4.3 of this statement of work provides additional information on the requirements of the health and safety plan. As noted above, the NPS does not "approve" the treatability testing health and safety plan.

#### 6.2.4 Treatability Testing Evaluation Report (*RI/FS Guidance 5.6*)

Following completion of treatability testing, if it is done, the District will analyze and interpret the testing results in a technical report to the NPS. The report will evaluate each technology's effectiveness, implementability, cost and actual results as compared with predicted results. The report will also evaluate full scale application of the technology, including a sensitivity analysis identifying the key parameters affecting full-scale operation.

### 7.0 TASK 6 - DEVELOPMENT AND SCREENING OF REMEDIAL ALTERNATIVES (*RI/FS Guidance, Chapter 4*)

The development and screening of remedial alternatives is performed to develop an appropriate range of waste management options that will be evaluated. This range of alternatives should include as appropriate, options in which treatment is used to reduce the toxicity, mobility, or volume of wastes, but varying 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.

## 7.1 Development and Screening of Remedial Alternatives (*RI/FS Guidance 4.2*)

The District will begin to develop and evaluate a range of appropriate waste management options that ensure protection of human health and the environment, concurrent with the RI Site characterization task.

### 7.1.1 Refine and Document Remedial Action Objectives (*RI/FS Guidance 4.2.1*)

Based on the baseline risk assessment, the District will review and, if necessary, propose to modify the Site-specific remedial action objectives, especially the PRGs, which were previously established by the NPS. The revised PRGs will be documented in a technical memorandum and submitted to the NPS for review and comment. These modified PRGs will specify the contaminants and media of interest, exposure pathways and receptors, and an acceptable contaminant level or range of levels (at particular locations for each exposure route). Such PRGs are subject to NPS review and shall not become final until approved by the NPS, which shall finally determine all Site remedial goals.

### 7.1.2 Develop General Response Actions (*RI/FS Guidance 4.2.2*)

The District will develop general actions for each medium of interest defining containment, treatment, excavation, pumping, or other actions, singly or in combination, to satisfy the remedial action objectives.

### 7.1.3 Identify Areas or Volumes of Media (*RI/FS Guidance 4.2.3*)

The District will 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 the Site will also be taken into account.

### 7.1.4 Identify, Screen, and Document Remedial Technologies (*RI/FS Guidance 4.2.4, 4.2.5*)

The District will identify and evaluate technologies applicable to each general response action to eliminate those that cannot be implemented at the Site. General response actions will be refined to specify remedial technology types. Technology process options for each of the technology types will be identified either concurrent with the identification of technology types, or following the screening of the considered technology types. Process options will be evaluated on the basis of effectiveness, implementability, and cost factors to select and retain one or, if necessary, more representative processes for each technology type. The technology types and process options will be summarized for inclusion in a technical memorandum. The reasons for eliminating alternatives must be specified.

### 7.1.5 Assemble and Document Alternatives (*RI/FS Guidance 4.2.6*)

The District will assemble selected representative technologies into alternatives for each affected medium or operable unit. Together, all of the alternatives will represent a review of treatment

and containment combinations that will address either the Site or the operable unit as a whole. A summary of the assembled alternatives and their related action-specific ARARS will be prepared by the District for inclusion in a technical memorandum. The reasons for eliminating alternatives during the preliminary screening process must be specified.

#### 7.1.6 Refine Alternatives

District will 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. PRGs 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.

#### 7.1.7 Conduct and Document Screening Evaluation of Each Alternative (*RI/FS Guidance 4.3*)

The District 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. The District will prepare a technical memorandum summarizing the results and reasoning employed in screening, arraying alternatives that remain after screening, and identifying the action-specific ARARs for the alternatives that remain after screening.

#### 7.2 Alternatives Development and Screening Deliverables (*RI/FS Guidance 4.5*)

The District will prepare a technical memorandum summarizing the work performed in and the results of each task above, including an alternatives array summary for NPS review and comment. This deliverable will document the methods, rationale, and results of the alternatives screening process.

### 8.0 TASK 7 - DETAILED ANALYSIS OF REMEDIAL ALTERNATIVES (*RI/FS Guidance, Chapter 6*)

The detailed analysis will be conducted by the District to provide the NPS with the information needed to allow for the selection of a Site remedy. This analysis is the final task to be performed by District during the FS.

## 8.1 Detailed Analysis of Alternatives (*RI/FS Guidance 6.2*)

The District will conduct a detailed analysis of alternatives which will consist of an analysis of each option against a set of nine evaluation criteria and a comparative analysis of all options using the same evaluation criteria as a basis for comparison.

### 8.1.1 Apply Nine Criteria and Document Analysis (*RI/FS Guidance 6.2.1-6.2.4*)

The District will apply nine evaluation criteria to the assembled remedial alternatives to ensure that the selected remedial alternatives 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 maximum extent practicable; and will address the statutory preference for treatment as a principal element. The evaluation criteria include: (1) overall protection of human health and the environment; (2) compliance with ARARs; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8) District (or support agency) acceptance; and (9) community acceptance. (Note: criteria 8 and 9 are considered after the RI/FS report has been released to the general public.) For each alternative the District should provide: (1) a description of the alternative that outlines the waste management strategy involved and identifies the key ARARs associated with each alternative, and (2) a discussion of the individual criterion assessment. If the District does not have direct input on criterion (9) community acceptance, this will be addressed by the NPS.

### 8.1.2 Compare Alternatives Against Each Other and Document the Comparison of Alternatives (*RI/FS Guidance 6.2.5, 6.2.6*)

The District will perform a comparative analysis between the remedial alternatives. That is, each alternative will be compared against the others using the evaluation criteria as a basis of comparison. Identification and selection of the preferred alternative are reserved by the NPS. The District will prepare a technical memorandum summarizing the results of the comparative analysis.

## 8.2 Detailed Analysis Deliverables (*RI/FS Guidance 6.5*)

In addition to the technical memorandum summarizing the results of the comparative analysis, the District will submit a draft FS report for review and approval by the NPS.

### 8.2.1 Feasibility Study Report (*RI/FS Guidance 6.5*)

The District will prepare a draft FS report for review and approval by the NPS. This report as ultimately adopted or amended provides a basis for remedy selection by the NPS and documents the development and analysis of remedial alternatives. The District will refer to the RI/FS Guidance for an outline of the report format and the required report content. The District will prepare a FS report which satisfactorily addresses NPS' comments.

## 9.0 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 (revised) National Contingency Plan

“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, Volume I” U.S. EPA, Office of Waste Programs Enforcement, July 1, 1991, OSWER Directive No. 9835.1(c).

“Guidance on Oversight of Potentially Responsible Party Remedial Investigations and Feasibility Studies, Volume II,” U.S. EPA, Office of Waste Programs Enforcement, July 1, 1991, OSWER Directive No. 9835.1(d).

“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.

“Guidance for the Data Quality Objectives Process (QA-G-4),” (EPA/600/R-96/055, August 2000).

“Guidance for the Data Quality Objectives Process for Hazardous Waste Sites (QA/G-4HW),” (EPA/600/R-00/007, January 2000).

“Guidance for the Preparation of Standard Operating Procedures (QA-G-6),” (EPA/240/B-01/004, March 2001).

“EPA Requirements for Quality Management Plans (QA/R-2),” (EPA/240/B-01/002, March 2001).

“EPA Requirements for Quality Assurance Project Plans (QA/R-5),” (EPA/240/B-01/003, March 2001).

“Guidance for Quality Assurance Project Plans (QA/G-5),” (EPA 600/R-98/018, February 1998).

“Users Guide to the EPA Contract Laboratory,” U.S. EPA, Sample Management Office, January 1991, OSWER Directive No. 9240.0-01D.

“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.

“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 Preparing Superfund Decision Documents,” U.S. EPA, Office of Emergency and Remedial Response, March 1988, OSWER Directive No. 9355.3-02.

“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),” May 1991, USEPA.

“Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual, Supplemental Guidance, Standard Default Exposure Factors,” March 1991, USEPA.

“Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments,” U.S. EPA OSWER Directive No. 9285.7-25, February 1997.

“Guidance for Data Useability 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.

“Supplemental Guidance on Performing Risk Assessments in Remedial Investigation /Feasibility Studies (RI/FSs) Conducted by Potentially Responsible Parties (PRPs),” July 2, 1991, OSWER Directive No. 9835.15(a).

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

“Health and Safety Requirements of Employees 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, January 1992, OSWER Directive No. 9230.0-3C.

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