UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 2

IN THE MATTER OF: Lower Passaic River Study Area Portion of the Diamond Alkali Superfund Site In and About Essex, Hudson, Bergen and Passaic Counties, New Jersey Occidental Chemical Corporation, Respondent.	UNILATERAL ADMINISTRATIVE ORDER FOR REMOVAL RESPONSE ACTIVITIES U.S. EPA Region 2 CERCLA Docket No. 02-2012-2020 Proceeding Under Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §9606(a)

CONTENTS

I. JURISDICTION AND GENERAL PROVISIONS

1. This Unilateral Administrative Order (the "Order") is issued to Respondent Occidental Chemical Corporation by the United States Environmental Protection Agency ("EPA") under the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580 (52 Fed. Reg. 2926, January 29, 1987), and was further delegated to EPA Regional Administrators on September 13, 1987 by EPA Delegation No. 14-14-B. This authority was further redelegated on November 23, 2004 by the Regional Administrator of EPA Region 2 to the Director of the Emergency and Remedial Response Division ("ERRD") by EPA Region 2 Delegation No. 14-14-B.

2. This Order pertains to the Lower Passaic River Study Area ("LPRSA") portion of the Diamond Alkali Superfund Site (the "Site") generally located in and about Essex, Hudson, Bergen and Passaic Counties, New Jersey.

3. This Order requires Respondent to conduct the removal activities described herein to abate an imminent and substantial endangerment to the public health, welfare or the environment that may be presented by the actual and/or threatened release of hazardous substances at or from the Site.

4. EPA has notified the State of New Jersey of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

II. PARTIES BOUND

5. This Order applies to and is binding upon Respondent and its successors and assigns. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter Respondent's responsibilities under this Order.

6. Respondent shall ensure that its contractors, subcontractors, and representatives receive a copy of this Order and comply with this Order. Respondent shall be responsible for any noncompliance with this Order by any of its contractors, subcontractors, and representatives.

III. DEFINITIONS

7. Unless otherwise expressly provided herein, the terms used in this Order 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 Order or in the appendices hereto and incorporated hereunder, the following definitions shall apply:

a. "Action Memorandum/Enforcement" shall mean the EPA Action Memorandum relating to the Site signed on May 21, 2012, by the Director of the Emergency and Remedial Response Division, EPA Region 2, and all attachments thereto. The Action Memorandum/Enforcement is attached as Appendix B.

b. "Administrative Record" shall mean the administrative record established by EPA pursuant to Section 113(k) of CERCLA, 42 U.S.C. § 9613(k) supporting the response action that is the subject of this Order.

c. "Bench-Scale Tests" shall mean, individually and collectively, the bench-scale tests described in the SOW. The Bench-Scale Tests are intended to provide sufficient information to determine whether to undertake Pilot-Scale Tests.

d. "Bench-Scale Test Report" shall mean the report submitted to EPA upon completion of the Bench-Scale Tests.

e. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, *et seq.*

f. "CPG" shall mean the Lower Passaic River Study Area Cooperating Parties Group.

g. "Day" shall mean a calendar day. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of business of the next working day.

h. "Effective Date" shall be the date that this Order is effective as provided in Section XXI.

i. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

j. "Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

k. "Lower Passaic River Study Area" or "LPRSA" shall mean that portion of the Passaic River encompassing the 17-mile stretch of the Passaic River and its tributaries from Dundee Dam to Newark Bay located in and about Essex, Hudson, Bergen and

Passaic Counties, New Jersey. The LPRSA is part of the Site, as hereinafter defined.

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

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

n. "OSC" shall mean the On-Scene Coordinator designated by EPA pursuant to Paragraph 16 of the RM 10.9 Settlement Agreement.

o. "Paragraph" shall mean a portion of this Order identified by an Arabic numeral.

p. "Parties" shall mean EPA and Respondent.

q. "Pilot-Scale Tests" shall mean, individually and collectively, the pilot-scale tests that RM 10.9 Settling Parties decide to undertake as described in the SOW, if any.

r. "RI/FS Settlement Agreement" shall mean the Administrative Settlement Agreement and Order on Consent for Remedial Investigation and Feasibility Study, U.S. EPA Region 2, CERCLA Docket No. 02-2007-2009, effective May 8, 2007.

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

t. "RM 10.9 Removal Area" shall mean the approximately 5-acre area in the LPRSA within the RM 10.9 Study Area that is the subject of the Work to be performed under this Order. A figure showing the RM 10.9 Removal Area is attached as Appendix C.

u. "RM 10.9 Settlement Agreement" shall mean the Administrative Settlement Agreement and Order on Consent, Docket No. 02-2012-2015, effective on June 18, 2012. The RM 10.9 Settlement Agreement is attached as Appendix D.

v. "RM 10.9 Settling Parties" shall mean the signatories to the RM 10.9 Settlement Agreement.

w. "RM 10.9 Study Area" shall mean the area of sediments on the eastern side of the LPRSA that extends approximately 2,380 feet from RM 10.65 to RM 11.1, along an inside bend of the river upstream of the Delesse-Avondale Street Bridge and that includes the mudflat and point bar in the eastern half of the river channel.

x. "RPM" shall mean the Remedial Project Manager currently designated by EPA under Paragraph 34 of the RI/FS Settlement Agreement, or his or her successor or successors.

y. "Section" shall mean a portion of this Order identified by a Roman numeral.

z. "Site" for purposes of this Order shall mean the Diamond Alkali Superfund Site, including the Diamond Alkali plant located at 80 and 120 Lister Avenue in Newark, New Jersey, and the Lower Passaic River Study Area, and the areal extent of contamination.

aa. "State" shall mean the State of New Jersey.

bb. "Statement of Work" or "SOW" shall mean the statement of work for implementation of the removal action in the RM 10.9 Removal Area, attached as Appendix A to this Order, and any modifications made thereto in accordance with the RM 10.9 Settlement Agreement.

cc. "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); and 3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

dd. "Work" shall mean all activities Respondent is required to perform under this Order.

IV. EPA FINDINGS OF FACT

8. EPA makes the following findings of fact:

a. Since at least the early 1800s, the LPRSA has been a highly industrialized waterway, receiving direct and indirect discharges from numerous industrial facilities, as well as discharges and bypasses from sewage treatment facilities and surface water runoff.

b. Between March 1951 and August 1969, the Diamond Alkali Company operated a facility at 80 Lister Avenue, in Newark, New Jersey. Among other chemicals, the company manufactured dichlorodiphenyl trichloroethane ("DDT"), 2,4-dichlorophenoxy acetic acid ("2,4-D"), 2,4,5-trichlorophenol ("2,4,5-TCP"), and 2,4,5-trichlorophenoxy acetic acid ("2,4,5-T"), a by-product of which is 2,3,7,8-Tetrachloro-dibenzo-p-dioxin ("2,3,7,8-TCDD"). Production activities at the Diamond Alkali facility ceased in August 1969.

c. In 1967, Diamond Alkali Company changed its name to Diamond Shamrock Corporation. In 1983, it changed its name to Diamond Shamrock Chemicals Company. On September 4, 1986, all outstanding stock in Diamond Shamrock Chemicals Company was acquired by Oxy-Diamond Alkali Corporation, a wholly-owned indirect subsidiary of Occidental Petroleum Corporation. Diamond Shamrock Chemicals Company changed its name to Occidental Electrochemicals Corporation. Effective November 30, 1987, Occidental Electrochemicals Corporation was merged into Occidental Chemical Corporation.

d. In 1983, hazardous substances were detected at various locations in Newark, New Jersey, including the Diamond Alkali facility located at 80 Lister Avenue.

e. EPA, pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, placed the Diamond Alkali Superfund Site on the National Priorities List, which is set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on September 21, 1984, 49 Fed. Reg. 37070.

f. Pursuant to Administrative Orders on Consent with NJDEP, Diamond Shamrock Chemicals Company conducted investigations and response work for the 80 and 120 Lister Avenue portion of the Diamond Alkali Superfund Site. The investigation included the sampling and assessment of sediment contamination within the Passaic River.

g. Sampling and assessment of sediments in the lower reaches of the Passaic River revealed the presence of many hazardous substances including, but not limited to, polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (collectively, "PCDDs/PCDFs"), polychlorinated biphenyls ("PCBs"), polyaromatic hydrocarbons ("PAHs"), DDT, dieldrin, chlordane, mercury, cadmium, copper, and lead. Hazardous substances identified in the sediments included elevated concentrations of 2,3,7,8-TCDD, known to have been generated at the Diamond Alkali facility.

h. EPA issued a Record of Decision ("ROD") that set forth an interim remedy for the 80 and 120 Lister Avenue portion of the Diamond Alkali Superfund Site on September 30, 1987. Pursuant to a judicial Consent Decree with EPA and NJDEP, Respondent and Chemical Land Holdings, Inc. (now known as Tierra Solutions, Inc.), which had acquired the property shortly before the 1986 stock transaction and was a party to the Consent Decree for specific, limited purposes, agreed to implement the 1987 ROD. The interim remedy was completed in 2004.

i. Respondent, as successor to Diamond Shamrock Chemicals Company, executed an Administrative Order on Consent ("AOC"), Index No. II-CERCLA-0117 with EPA to investigate a six-mile stretch of the Passaic River whose southern boundary was the abandoned Conrail Railroad bridge located at the U.S. Army Corps of Engineers

("USACE") station designation of 40+00 to a transect six miles upriver located at the USACE station designation of 356+80. The primary objectives of the investigation were to determine: (1) the spatial distribution and concentration of hazardous substances, both horizontally and vertically in the sediments; (2) the primary human and ecological receptors of contaminated sediments; and (3) the transport of contaminated sediment.

j. The sampling results from the investigation of the six-mile area and other environmental studies demonstrated that evaluation of a larger area was necessary because sediments contaminated with hazardous substances and other potential sources of hazardous substances are present along at least the entire LPRSA. Further, the tidal nature of the Lower Passaic River has resulted in greater dispersion of hazardous substances.

k. Sampling results show concentrations of PCDDs/PCDFs, PCBs, mercury, and other substances that in some areas significantly exceed the levels that can produce toxic effects to biota. Based on the results of monitoring and research undertaken since the mid-1970s, the State of New Jersey has taken a number of steps, in the form of consumption advisories, closures, and sales bans, to limit the exposure of the fish-eating public to toxic contaminants in the lower Passaic River, Newark Bay, the Hackensack River, the Arthur Kill and the Kill Van Kull. The initial measures prohibited the sale, and advised against the consumption, of several species of fish and eel and were based on the presence of PCB contamination in the seafood. The discovery of widespread dioxin contamination in the LPRSA and Newark Bay led the State of New Jersey to issue a number of fish consumption advisories in 1983 and 1984 which prohibited the sale or consumption of all fish, shellfish, and crustaceans from the LPRSA. These State fish advisories and prohibitions are still in effect.

l. EPA commenced a remedial investigation and feasibility study ("RI/FS") encompassing the 17-mile LPRSA. In May 2007, the CPG entered into the RI/FS Settlement Agreement, under which it agreed to complete the RI/FS for the LPRSA. The work pursuant to the RI/FS Settlement Agreement is ongoing under the direction and oversight of EPA. The RI/FS is being performed under CERCLA and has been coordinated with the USACE and the New Jersey Department of Transportation, its local sponsor until 2009, and NJDEP under the authority of the Water Resources Development Act ("WRDA") in order to identify and address water quality improvement, remediation, and restoration opportunities in the LPRSA. Further, the federal and State Natural Resource Trustees (the Fish and Wildlife Service of the U.S. Department of the Interior, the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce, and NJDEP) have provided input to the process. Concurrently, EPA is performing a Focused Feasibility Study with respect to an eight-mile portion of the LPRSA.

m. Although the LPRSA ends at the mouth of Passaic River, because of the tidal nature of the Passaic River, there is reason to believe that the areal extent of

contamination extends beyond that boundary. Consequently, in order to determine more accurately the boundaries of contamination from the area studied originally under the AOC, in February 2004, EPA and Respondent entered into an AOC to perform an RI/FS for Newark Bay. This RI/FS is also ongoing.

n. As part of the RI/FS for the LPRSA, EPA and the CPG have collected and analyzed sediment samples throughout the LPRSA.

o. Sediment samples collected in the RM 10.9 Study Area suggested that significantly elevated concentrations of PCDDs/PCDFs, PCBs, mercury, PAHs and other contaminants might be present in this area. In April 2011, the CPG proposed, and EPA agreed, that the CPG would undertake additional sampling and analysis, and perform bathymetry and hydrodynamic survey work, to characterize and develop information about the extent of contamination in the RM 10.9 Study Area. The data from the samples collected by the CPG confirmed that portions of the sediment located in the RM 10.9 Study Area, which includes a mudflat on the eastern shore of the Passaic River that is exposed at low tide, contains significantly elevated concentrations of PCDDs/PCDFs, PCBs, mercury, PAHs and other hazardous substances. In the first six inches of sediment, peak concentrations detected include 2,3,7,8-TCDD at 21.6 parts per billion ("ppb"), PCBs at 34 parts per million ("ppm"), mercury at 22 ppm and high molecular weight PAHs at 510 ppm. These concentrations represent some of the highest surface concentrations observed in the Passaic River. Elevated concentrations of PCDDs/PCDFs, PCBs and mercury are generally co-located in surface and subsurface sediments.

p. A park owned by Bergen County is located on the eastern shore of the River at the RM 10.9 Study Area, directly adjacent to the mudflat that forms part of the highly contaminated area of sediment. Individuals utilizing the River, including boaters, waders and anglers, could be exposed to the sediments. The sediment at the surface is also exposed to erosion and resuspension and thus may act as a source of contamination to other parts of the river, including the lower eight miles.

q. EPA and the CPG engaged in discussions concerning the removal activities required by the RM 10.9 Settlement Agreement from February 2012 through late May 2012.

r. In or about late May 2012, EPA and the RM 10.9 Settling Parties reached agreement on the SOW attached as Appendix A. Pursuant to the RM 10.9 Settlement Agreement, the RM 10.9 Settling Parties have agreed to perform the removal activities described in the SOW.

s. Respondent was given the opportunity to consent to perform the removal activities required by this Order by entering into the RM 10.9 Settlement Agreement as one of the RM 10.9 Settling Parties, but did not do so.

V. EPA CONCLUSIONS OF LAW AND DETERMINATIONS

9. Based on EPA's Findings of Fact set forth above, EPA has determined that:

a. The LPRSA is a "facility" as defined in Section 101(9) of CERCLA, § 9601(9).

b. The contamination found at the RM 10.9 Study Area includes "hazardous substance(s)" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), that may present an imminent and substantial endangerment pursuant to Sections 104(a)(1) and 106(a) of CERCLA, 42 U.S.C. §§ 9604(a)(1) and 9606(a).

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

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

e. Respondent is a responsible party under Sections 104, 107 and 122 of CERCLA, 42 U.S.C. §§ 9604, 9607 and 9622. Respondent is a person that owned and/or operated the 80 Lister Avenue portion of the Site at the time of disposal of hazardous substances and that arranged for disposal of hazardous substances at the LPRSA, which is part of the Site. Respondent therefore may be liable under Sections 107(a)(2) and (a)(3) of CERCLA, 42 U.S.C. § 9607(a)(2) and (a)(3).

f. The conditions in the sediments at the RM 10.9 Study Area meet a number of the specific factors identified in 40 C.F.R. § 300.415(b)(2) for EPA to consider in determining the appropriateness of a removal action, including, but not limited to:

i. an actual or potential release of hazardous substances, including PCDDs/PCDFs, PCBs, mercury and PAHs, exposing nearby human populations, animals or the food chain (40 C.F.R. §300.415(b)(2)(i));

ii. actual or potential contamination of sensitive ecosystems due to the presence of hazardous substances, including PCDDs/PCDFs, PCBs, mercury and PAHs (40 C.F.R. §300.415(b)(2)(ii)); and

iii. high levels of hazardous substances, including PCDDs/PCDFs, PCBs, mercury and PAHs, present at or near the surface of the sediment that could migrate or be released due to weather and/or hydrologic conditions (40 C.F.R. §300.415(b)(2)(iv)-(v)).

g. Based upon the foregoing Findings of Fact and Conclusions of Law and Determinations, and the entirety of the Administrative Record, EPA has determined that the release or threatened release of hazardous substances from RM 10.9 Removal Area may present an imminent and substantial endangerment to the public health or welfare or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

h. The removal action required by this Order is necessary to protect the public health, welfare or the environment, is in the public interest, 42 U.S.C. § 9622(a), and, if carried out in accordance with this Order, the SOW and the Work Plan, will be consistent with CERCLA and the NCP, as provided in Section 300.700(c)(3)(ii) of the NCP.

VI. NOTICE

10. EPA has notified NJDEP of this Order pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

VII. ORDER

11. Based upon the foregoing, EPA hereby orders Respondent to comply with the following provisions, including but not limited to all attachments to this Order, all documents incorporated by reference into this Order, and all schedules and deadlines in this Order, attached to this Order, or incorporated by reference into this Order.

VIII. PARTICIPATION AND COOPERATION

12. The RM 10.9 Settlement Agreement requires the RM 10.9 Settling Parties to conduct the same response actions as those required by this Order. Respondent shall make best efforts to coordinate with the RM 10.9 Settling Parties. Best efforts to coordinate shall include, at a minimum:

a. communication with the RM 10.9 Settling Parties in writing within five (5) days of the Effective Date of this Order concerning the substance of Respondent's notice to EPA of its intent to comply with this Order, consistent with Section XXIII, below;

b. submission within fourteen (14) days of the Effective Date of this Order of a good-faith offer to the RM 10.9 Settling Parties to implement the SOW, in whole or in part, or in lieu of performance to pay for the work required under the SOW, in whole or in part; and

c. engaging in good-faith negotiations with the RM 10.9 Settling Parties to perform, in whole or in part, or in lieu of performance to pay for the work required by the SOW, in whole or in part, if the RM 10.9 Settling Parties refuses Respondent's first offer.

13. To the extent the RM 10.9 Settling Parties are performing the work required pursuant to the RM 10.9 Settlement Agreement, Respondent shall make best efforts to participate in the performance of the SOW with the RM 10.9 Settling Parties. Best efforts to participate shall include, at a minimum:

    a. performance of such work required under the SOW that the Respondent and the RM 10.9 Settling Parties agree is to be undertaken by Respondent; and

    b. payment of all amounts that Respondent and the RM 10.9 Settling Parties agree are to be paid by Respondent if, in lieu of performance, Respondent has offered to pay for the work required under the SOW, in whole or in part.

14. Respondent shall provide EPA with notice of its intent to comply with this Order, consistent with Section XXIII, below, and with a copy of its good faith offer to the RM 10.9 Settling Parties pursuant to Paragraph 12(b). Respondent shall notify EPA in writing: (1) within five (5) days of the rejection, if any, by the RM 10.9 Settling Parties of Respondent's offer to perform, in whole or in part, or, in lieu of performance, to pay for the work required under the SOW, in whole or in part; and/or (2) within five (5) days of reaching agreement with the RM 10.9 Settling Parties with respect to the Work to be undertaken by Respondent or the amount to be paid by Respondent in lieu of performance.

15. The undertaking or completion of any requirement of this Order by any other person, with or without the participation of Respondent, shall not relieve Respondent of its obligation to perform each and every other requirement of this Order.

16. Any failure to perform, in whole or in part, any requirement of the SOW by any other person with whom Respondent is coordinating or participating in the performance of such requirement shall not relieve Respondent of its obligation to perform each and every requirement of this Order.

IX. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS

17. Selection of Contractors, Personnel. All Work performed under this Order shall be under the direction and supervision of qualified personnel. Within fourteen (14) days after reaching agreement with the RM 10.9 Settling Parties on the Work, Respondent shall notify EPA in writing of the names and qualifications of the contractors, subcontractors, consultants and laboratories to be used in carrying out such Work. Respondent shall also notify EPA of the names and qualifications of any other contractors, subcontractors, consultants and laboratories to be used in carrying out the Work at least ten (10) days prior to their commencement of their particular aspect of the Work. The qualifications of the contractors, subcontractors, consultants and laboratories undertaking the Work for Respondent shall be subject to EPA's review, for verification that such contractors,

subcontractors, consultants and laboratories meet minimum technical background and experience requirements. With respect to any proposed contractor, Respondent shall demonstrate that the proposed contractor has a quality system that complies with ANSI/ASIC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995, or most recent version), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"), 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. If EPA disapproves in writing of any of the technical qualifications of any contractors, subcontractors, consultants and laboratories, Respondent shall notify EPA of the identity and qualifications of the replacements within thirty (30) days of the written notice.

18. Within fourteen (14) days after the Effective Date, Respondent shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Order and shall submit to EPA the designated Project Coordinator's name, address, telephone number, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on-site or readily available during on-site Work. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number and qualifications within ten (10) days following EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by Respondent.

19. EPA has designated RPM Stephanie Vaughn as its Project Coordinator. EPA may designate an On-Scene Coordinator ("OSC") from the Removal Action Branch in the Emergency and Remedial Response Division, Region 2 to oversee the Work. At EPA's discretion, the OSC will work collaboratively with the Project Coordinator to provide field oversight of the Work and review plans, reports and other documents submitted by Respondent. If EPA does not designate an OSC, EPA's Project Coordinator shall have the authority lawfully vested in an RPM and an OSC by the NCP, including the authority to halt any Work required by this Order, 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 EPA Project Coordinator from the Site shall not be cause for the stoppage or delay of Work.

20. Respondent shall have the right to change its Project Coordinator, subject to EPA's right to disapprove. Respondent shall notify EPA fourteen (14) days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notification. EPA will notify Respondent of a change of its designated Project Coordinator, in writing and if possible, ten (10) days before such a change is made.

21. EPA may arrange for a qualified person to assist in its oversight and review of the conduct of the Work, as required by Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). Such person shall have the authority to observe Work and make inquiries in the absence of EPA, but shall not modify the Work Plan.

X. REMOVAL ACTION

22. Respondent shall conduct the removal activities necessary to implement the SOW in participation and cooperation with the RM 10.9 Settling Parties, and in accordance with CERCLA, the NCP, relevant guidance that EPA identifies to Respondent, and the Removal/Capping Work Plan/Basis of Design Report ("BODR") and the Removal/Capping Final Design approved by EPA under the RM 10.9 Settlement Agreement, as they may be amended or modified by EPA.

23. Respondent shall, in participation and cooperation with the RM 10.9 Settling Parties, submit to EPA a work plan for performance of the Work to be conducted by Respondent, determined as a result of Respondent's communications and negotiations with the RM 10.9 Settling Parties pursuant to Paragraphs 12 and 13 ("Work Plan"). The schedule for implementation of the Work Plan must correspond with and allow for the implementation of the removal action by the RM 10.9 Settling Parties pursuant to the schedule in the SOW, and the Removal/Capping Work Plan/BODR and the Removal/Capping Final Design approved by EPA under the RM 10.9 Settlement Agreement.

24. Health and Safety Plan. Respondent shall, in participation and cooperation with the RM 10.9 Settling Parties, submit for EPA review and comment a plan that ensures the protection of the public health and safety during performance of Work under this Order. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. Respondent shall incorporate all changes to the plan recommended by EPA and shall implement the plan during the pendency of the Work.

25. Quality Assurance and Sampling.

a. Respondent shall use quality assurance, quality control, and chain of custody procedures for all design, compliance, and monitoring samples in accordance with "EPA Requirements for Quality Assurance Project Plans (QA/R5)" (EPA/240/B-01/003, March 2001, reissued May 2006), "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), and subsequent amendments to such guidelines upon notification by EPA to Respondent of such amendment. Amended guidelines shall apply only to procedures conducted after such notification.

b. Prior to the commencement of any sampling or monitoring project under this Order, Respondent shall submit to EPA for approval a Quality Assurance Project Plan ("QAPP") that is consistent with the SOW and the NCP. Respondent shall ensure that EPA personnel and its authorized representatives are allowed access at reasonable times to all laboratories utilized by Respondent in implementing this Order. Respondent shall ensure that the laboratories they utilize for the analysis of samples taken pursuant to this Order perform all analyses according to accepted EPA methods. Accepted EPA methods consist of those methods that are documented in the "USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, ILM05.4," and the "USEPA Contract Laboratory Program Statement of Work for Organic Analysis, SOM01.2," and any amendments made thereto during the course of the implementation of this Order; however, upon approval by EPA, Respondent may use other analytical methods that are as stringent as or more stringent than the CLP-approved methods. Respondent shall ensure that all laboratories they use for analysis of samples taken pursuant to this Order participate in an EPA or EPA-equivalent quality assurance/quality control ("QA/QC") program. Respondent shall use only laboratories that have a documented Quality System that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001, reissued May 2006) or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP") as meeting the Quality System requirements. Respondent shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Order are conducted in accordance with the procedures set forth in the QAPP approved by EPA.

26. Upon request, Respondent shall allow split or duplicate samples to be taken by EPA or its authorized representatives. Respondent shall notify EPA not less than 14 days in advance of any sample collection activity unless shorter notice is agreed to by EPA. EPA shall have the right to collect additional samples, in which case EPA will notify Respondent and upon request, allow split or duplicate samples to be taken by Respondent if Respondent is able to do so in a timely manner.

27. Respondent shall submit to EPA copies of the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondent with respect to the Site and/or the implementation of this Order unless EPA agrees otherwise.

28. Modifications.

a. The OSC, in consultation with the RPM, may make modifications to any work plan or schedule in writing or by oral direction. Any oral modification will be memorialized in writing by EPA promptly, but shall have as its effective date the date of the OSC's oral direction.

b. In the event of unanticipated or changed circumstances, Respondent shall notify

the EPA Project Coordinator by telephone within twenty-four (24) hours of discovery by Respondent of the unanticipated or changed circumstances. If Respondent seeks permission to deviate from any approved work plan or schedule, Respondent's Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis. Respondent may not proceed with the requested deviation until receiving oral or written approval from the OSC pursuant to Paragraph 28(a). Respondent may request minor field modifications within the scope of any EPA-approved work plan or schedule without submission of a formal amendment, and the OSC may authorize minor field modifications to any approved work plan provided that any such modifications are consistent with the SOW, and the modifications are memorialized in writing.

c. EPA may determine that tasks in addition to those in the initially approved Work Plan are necessary to accomplish the objectives of this Order. Within thirty (30) days of receipt of EPA's notice that additional work is necessary, Respondent shall submit for EPA's approval a work plan modified in accordance with EPA's determination. Upon EPA's approval of the plan pursuant to Section XI, Respondent shall implement the work plan for additional work in accordance with the provisions and schedule contained therein.

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

29. Off-Site Shipment of Waste Material.

a. Respondent 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 the EPA Project Coordinator.

b. Respondent shall include in the written notification required by Subparagraph 29(a) 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. Respondent 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.

c. Respondent shall provide the information required by Subparagraphs 29(b) and 29(d) as soon as practicable after EPA approval of the Work Plan and before the Waste Material is actually shipped.

d. Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-site location, Respondent shall obtain 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. Respondent 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.

30. Meetings. Respondent shall make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct, and completion of the removal action. In addition to discussion of the technical aspects of the removal and capping of the RM 10.9 Removal Area, topics will include anticipated problems or new issues. Meetings will be scheduled at reasonable times and at EPA's discretion.

31. Community Involvement. EPA will conduct community involvement activities in accordance with the Lower Passaic River Restoration Project and Newark Bay Study Final Community Involvement Plan (June 2006) ("CIP"). Although implementation of the CIP is the responsibility of EPA, Respondent shall assist by providing information for dissemination to the public and participating in public meetings. The extent of Respondent's involvement in community involvement activities is left to the discretion of EPA. All Respondent-conducted community involvement activities pursuant to the CIP will be subject to oversight by EPA.

32. Reporting. Respondent shall submit a monthly progress report to EPA concerning actions undertaken pursuant to this Order on the 15th day of every month after the Effective Date until termination of this Order, unless otherwise directed in writing EPA. 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 Order during that month, (2) describe Work planned for the next forty-five (45) days with schedules relating such Work to the overall project schedule, and (3) 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. If an event of significance occurs, such as a fire or injury, this shall be documented in writing and the written report shall be submitted to EPA within three (3) days of the event.

33. Except as otherwise provided in this Order, Respondent shall submit copies of all plans, reports or other submissions required by this Order, the SOW, or any approved work plan, in electronic form or, upon request, in paper form. One copy of each report shall be submitted to the following:

U.S. Environmental Protection Agency
2890 Woodbridge Avenue
Edison, New Jersey 08837
Attn: Lower Passaic River Study Area On-Scene Coordinator

Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region 2
290 Broadway, 19th Floor
New York, New York 10007-1866
Attn: Lower Passaic River Study Area Remedial Project Manager

Office of Regional Counsel
U.S. Environmental Protection Agency, Region 2
290 Broadway, 17th Floor
New York, New York 10007-1866
Attn: Lower Passaic River Study Area Site Attorney

New Jersey Department of Environmental Protection
Site Remediation Program
401 E. State Street
P.O. Box 028
Trenton, New Jersey 08265-0028
Attn: Lower Passaic River Study Area Project Manager

In the event that EPA requests more than the number of copies of any report or other documents required by this Order for itself or NJDEP, Respondent shall provide the number of copies requested.

34. Final Report.

Within 90 days after completion of all Work required by this Order, Settling Parties shall submit for EPA review and approval a final report summarizing the actions taken to comply with this Order. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports." The final report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the Order, a listing of quantities and types of materials removed off-Site or handled on-Site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (*e.g.*, manifests, invoices, bills, contracts, and permits). The final report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

"Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties

for submitting false information, including the possibility of fine and imprisonment for knowing violations."

35. 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 from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action. Respondent shall take these actions in accordance with all applicable provisions of this Order, including, but not limited to, the Health and Safety Plan, in order to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondent shall also immediately notify the OSC, or, in the event of his/her unavailability, the EPA Regional Emergency 24-hour telephone number 732-548-8730 of the incident or Site conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, EPA may respond to the release or endangerment and reserves the right to pursue cost recovery for all costs of response not inconsistent with the NCP.

b. In addition, in the event of any release of a hazardous substance from the Site, Respondent shall immediately notify the OSC at 732-548-8730 and the National Response Center at (800) 424-8802. Respondent shall submit a written report to EPA 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*.

XI. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

36. After review of any plan, report or document that is required to be submitted for approval pursuant to this Order, EPA shall, in writing: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondent modify the submission; or (e) any combination of the above. If EPA disapproves of or requires modifications to any plan, report or other document required to be submitted to EPA for approval pursuant to this Order, Respondent shall have fourteen (14) days from the receipt of EPA's notice of disapproval or modification to address each of EPA's comments, correct any deficiencies and resubmit the plan, report or other document for EPA's approval, unless EPA specifies a shorter or longer time in the notice.

37. If EPA disapproves a resubmitted plan, report or other document, or portion thereof, EPA may again direct Respondent to correct the deficiencies, and/or EPA may modify or develop the plan, report or other item. Respondent shall implement any such plan, report, or item as corrected, modified or developed by EPA.

38. If upon resubmission, a plan, report, or other document is disapproved or modified by EPA due to a material defect, Respondent shall be deemed to have failed to submit such plan, report, or document timely and adequately.

39. All plans, reports, and other items submitted to EPA under this Order shall, upon approval or modification by EPA, be incorporated into and enforceable under this Order. In the event EPA approves or modifies a portion of a plan, report, or other item submitted to EPA under this Order, the approved or modified portion shall be incorporated into and enforceable under this Order.

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

XIII. ACCESS TO INFORMATION AND PROPERTY

41. Access to Information.

a. Respondent shall provide to EPA, upon request, copies of all documents and information within its possession or control or that of its contractors or agents relating to activities at the Site or to the implementation of this Order, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondent shall also make available to EPA, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work. Such persons shall be made available at reasonable times and upon reasonable request of EPA.

b. Respondent may assert business confidentiality claims covering part or all of the documents or information submitted to EPA under this Order to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when it is submitted to EPA, or if EPA has notified Respondent that the documents or information are not confidential under the standards of Section

104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Respondent. Respondent shall segregate and clearly identify all documents or information submitted under this Order for which Respondent asserts business confidentiality claims.

c. Respondent 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 Respondent asserts such a privilege in lieu of providing documents, it shall provide EPA with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the contents of the document, record, or information; and 6) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this Order shall be withheld on the grounds that they are privileged.

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

42. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA and any other applicable statutes or regulations.

43. If any portion of the Site, or any other property where access is needed to implement this Order, is owned or controlled by Respondent, Respondent shall, commencing on the Effective Date, provide EPA and the State, and their representatives, including contractors, with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to this Order.

44. Where any action under this Order is to be performed by Respondent in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements within ninety (90) days after the Effective Date, or as otherwise specified in writing by the EPA Project Coordinator. If additional areas to which access is necessary are identified after the Effective Date, Respondent shall use its best efforts to obtain access agreements within sixty (60) days after learning of the need for the additional access. Respondent shall immediately notify EPA if after using its best efforts it is unable to obtain such agreements, describing in writing its efforts to obtain access. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. If Respondent cannot obtain access agreements within the time allowed, EPA may either (i) obtain access for

Respondent or assist Respondent in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate; (ii) perform those tasks or activities with EPA contractors; or (iii) terminate the Order. If EPA performs those tasks or activities with EPA contractors and does not terminate the Order, Respondent shall perform all other activities not requiring access to that property. Respondent shall integrate the results of any such tasks undertaken by EPA into its reports and deliverables.

45. Notwithstanding any provision of this Order, EPA retains all of its access authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XIII. COMPLIANCE WITH OTHER LAWS

46. Respondent shall perform all actions required pursuant to this Order in accordance with all applicable state and federal laws and regulations except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). No local, state or federal permits shall be required for any portion of the Work conducted entirely on-Site (which means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action) if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. In accordance with 40 C.F.R. § 300.415(j), all on-Site actions required pursuant to this Order shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements under federal environmental or state environmental or facility siting laws. If any portion of the Work is to be conducted off-Site and requires a federal or state permit or approval, Respondent shall submit timely and complete applications and take all other action necessary to obtain and comply with such permits or approvals. If Respondent is experiencing difficulties obtaining permits and approvals required to conduct the Work, Respondent shall so advise EPA, and Respondent and EPA will discuss a strategy for obtaining the permits in the most expeditious and cost-effective manner.

XIV. RECORD RETENTION

47. During the pendency of this Order and for a minimum of six (6) years after Respondent's receipt of EPA's notification pursuant to Section XXIV (Notice of Completion), Respondent shall preserve and retain all non-identical copies of records and documents (including records or documents 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 corporate retention policy to the contrary. Until six (6) years after Respondent's receipt of EPA's notification pursuant to Section XXIV (Notice of Completion), Respondent shall instruct its contractors and agents to preserve all

documents, records, and information of whatever kind, nature or description relating to performance of the Work.

48. At the conclusion of this document retention period, Respondent shall notify EPA at least ninety (90) days prior to the destruction of any such records or documents, and, upon request by EPA, Respondent shall deliver any such records or documents to EPA. Respondent 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 Respondent asserts such a privilege, it shall provide EPA with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or information; and 6) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this Order shall be withheld on the grounds that they are privileged.

49. Within ninety (90) days after the Effective Date of this Order, Respondent shall submit a written certification to EPA's RPM that it has not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to its potential liability with regard to the Site since notification of potential liability by the United States or the State of New Jersey or the filing of suit against it regarding the Site. Respondent shall not dispose of any such documents without prior written approval by EPA. Respondent shall, upon EPA's request and at no cost to EPA, deliver the documents or copies of the documents to EPA.

XV. DELAY IN PERFORMANCE

50. Respondent shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to EPA's RPM within 48 hours after Respondent first knew or should have known that a delay might occur. Respondent shall adopt all reasonable measures to avoid or minimize any such delay. Within five (5) days after notifying EPA by telephone, Respondent shall provide written notification fully describing the nature of and the reasons for the delay, the duration of the delay, any justification for delay, the measures planned and taken to prevent or minimize the delay, a schedule for implementing the measures that will be taken to prevent or mitigate the effect of the delay, and any other reason why Respondent should not be held strictly accountable for failing to comply with any relevant requirements of this Order. Increased costs or expenses associated with implementation of the activities called for in this Order are not a justification for any delay in performance.

51. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondent under the terms of this Section shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondent's obligations

to fully perform all obligations under the terms and conditions of this Order.

XVI. OTHER CLAIMS

52. By issuance of this Order, or by issuance of any approvals pursuant to this Order, the United States and EPA assume no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondent, or Respondent's employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order, including Respondent's failure to perform properly or complete the requirements of this Order. The United States and EPA shall not be held out as or deemed to be a party to any contract entered into by Respondent or its employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order.

53. Nothing in this Order shall be construed to constitute preauthorization under Section 111(a)(2) of CERCLA, 42 U.S.C. § 111(a)(2), and 40 C.F.R. § 300.700(d).

54. No action or decision by EPA pursuant to this Order 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).

XVII. INSURANCE

55. At least fifteen (15) days prior to commencing any on-site Work under this Order, Respondent shall secure, and shall maintain for the duration of this Order, comprehensive general liability insurance and automobile insurance with limits of five (5) million dollars, combined single limit, naming the EPA as an additional insured. Within the same period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Order, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Order. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XVIII. FINANCIAL ASSURANCE

56. Respondent shall demonstrate its ability to complete the Work required by this Order and to pay all claims that arise from the performance of the Work by obtaining and presenting to EPA within 60 days after the Effective Date of this Order, one of the following: (1) a surety bond unconditionally guaranteeing payment and/or performance of the Work; (2)

one or more irrevocable letters of credit, payable to or at the direction of EPA; (3) a trust fund; (4) a corporate guarantee to perform the Work provided by Respondent, or one or more parent corporations or subsidiaries of Respondent, or by one or more unrelated corporations that have a substantial business relationship with Respondent; including a demonstration that any such company satisfies the financial test requirements of 40 C.F.R. § 264.143(f); or (5) a policy of insurance. Any mechanism provided by Respondent in satisfaction of this Paragraph shall be in form and substance acceptable to EPA, as determined in EPA's sole discretion. Respondent shall demonstrate financial assurance in an amount no less than five (5) million dollars. If Respondent seeks to demonstrate ability to complete the Work by means of internal financial information, or by guarantee of a third party, it shall re-submit the required financial and other information annually, on the anniversary of the Effective Date of this Order. If EPA determines that such financial information is inadequate, Respondent shall, within 30 days after receipt of EPA's notice of such determination, obtain and present to EPA for approval one of the other forms of financial assurance listed above.

XIX. ACCESS TO ADMINISTRATIVE RECORD

57. The Administrative Record supporting the removal action at RM 10.9 is available for review at the Region 2 Superfund Records Center, 290 Broadway, 18th floor, New York, NY 10007 (212) 637-4308, the Lyndhurst Public Library, 355 Valley Brook Avenue, Lyndhurst, NJ 07071, and the Newark Public Library, 5 Washington Street, Newark, NJ 07102.

XX. ENFORCEMENT AND RESERVATIONS

58. Respondent shall be subject to civil penalties under Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1), in the event that Respondent willfully violates, or fails or refuses to comply with this Order without sufficient cause. Such civil penalties shall be in an amount not greater than $37,500 per day, subject to possible further adjustments of this penalty maximum consistent with the Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19, and all amendments thereto. Respondent may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such violation, as provided in Section 107(c)(3) of CERCLA, 42 § 9607(c)(3). Should Respondent violate this Order or any portion hereof, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606.

59. EPA reserves the right to bring an action against Respondent under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order and/or for any other response costs which have been incurred or will be incurred by the United States relating to the Site. This reservation shall include but not be limited to past costs, direct costs, indirect costs, and the costs of oversight, the

costs of compiling the cost documentation to support an oversight cost demand, as well as accrued interest as provided in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

60. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional Orders, and/or additional remedial or removal actions as EPA may deem necessary, or from requiring Respondent in the future to perform additional activities pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a), or any other applicable law.

61. Notwithstanding any other provision of this Order, at any time during the response action, EPA may perform its own studies, complete the response action (or any portion of the response action) as provided in CERCLA and the NCP, and seek reimbursement from Respondent for its costs, or seek any other appropriate relief.

62. Nothing in this Order constitutes or shall be construed as a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States for injunctive relief, costs, damages and interest under Sections 106(a) and 107 of CERCLA, 42 U.S.C. §§ 9606(a) and 9607. Nothing in this Order shall constitute a finding that Respondent is the only responsible party with respect to the release or threatened release of hazardous substances at or from the Site.

63. If a court issues an order that invalidates any provision of this Order or finds that Respondent has sufficient cause not to comply with one or more provisions of this Order, Respondent shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XXI. EFFECTIVE DATE AND COMPUTATION OF TIME

64. This Order shall be effective fifteen (15) days after execution by EPA, unless a conference is timely requested pursuant to Section XXII, below. If such conference is timely requested, this Order shall become effective three (3) days following the date the conference is held, unless the Effective Date is modified by EPA. All times for performance of ordered activities shall be calculated from this Effective Date.

XXII. OPPORTUNITY TO CONFER

65. Respondent may, within five (5) days of the date that this Order is received by Respondent, request a conference with EPA to discuss this Order. If requested, the conference shall occur within five (5) days of Respondent's request for a conference.

66. The purpose and scope of the conference shall be limited to issues involving the implementation of the response actions required by this Order and the extent to which Respondent intends to comply with this Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondent a right to seek review of this Order, or to seek resolution of potential liability, and no official stenographic record of the conference will be made. At any conference held pursuant to Respondent's request, Respondent may appear in person or by an attorney or other representative.

67. Requests for a conference must be by telephone followed by written confirmation mailed that day to:

Sarah Flanagan
Assistant Regional Counsel
Office of Regional Counsel
U.S. Environmental Protection Agency
290 Broadway, 17th Floor
New York, N.Y. 10007-1866
Telephone: (212) 637-3136

XXIII. NOTICE OF INTENT TO COMPLY

68. Respondent shall provide, not later than five (5) days after the Effective Date, written notice to EPA's RPM and the Assistant Regional Counsel identified in Paragraph 67 stating whether it will comply with the terms of this Order. If Respondent does not unequivocally commit to perform the work required by this Order, it shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondent's written notice(s) shall describe, using facts that exist on or prior to the Effective Date, any "sufficient cause" defenses asserted by Respondent under Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. §§ 9606(b) and 9607(c)(3). The absence of a response by EPA to the notice required by this Paragraph shall not be deemed to be acceptance of Respondent's assertions.

XXIV. NOTICE OF COMPLETION

69. When EPA determines, after EPA's review of the Final Report, that the Work has been fully performed in accordance with this Order, EPA will provide notice to Respondent. If EPA determines that any Work has not been completed in accordance with this Order, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent correct such deficiencies. Respondent shall implement the additional removal activities and shall submit a modified Final Report in accordance with the EPA notice. Failure by Respondent to implement the approved additional removal activities shall be a violation of this Order. Such an approval by EPA, however, shall not relieve

Respondent of any remaining obligations under the Order, including those requirements set forth in Section XIV regarding record preservation.

So Ordered this 25th day of June, 2012.

By: _____
WALTER MUGDAN

Director, Emergency and Remedial Response Division
Region 2
U.S. Environmental Protection Agency

APPENDIX A

APPENDIX D
LOWER PASSAIC RIVER STUDY AREA
RM 10.9 REMOVAL ACTION

I. INTRODUCTION

A. Purpose

The purpose of this Statement of Work is to provide a framework under which the Settling Parties will develop work plans, design and other supporting documents to perform a Time Critical Removal Action (TCRA) which includes removing, capping, performing bench-scale sediment treatment and/or decontamination tests, and, potentially, pilot-scale tests, on a portion of the sediments on the eastern side of the Lower Passaic River in the vicinity of RM 10.9 where a detailed investigation was conducted as part of the Lower Passaic River Study Area (LPRSA) Remedial Investigation/Feasibility Study (RI/FS). The RM 10.9 study area extends approximately 2,380 ft, from RM 10.65 to RM 11.1, along an inside bend of the river upstream of the DeJesse-Avondale Street Bridge and includes the mudflat and point bar in the eastern half of the river channel. Sediments within this area of interest contain chemicals of potential concern (COPCs) including polychlorinated dibenzo-p-dioxins/polychlorinated dibenzofurans (PCDD/PCDFs), polychlorinated biphenyls (PCBs), mercury, polyaromatic hydrocarbons (PAHs) , pesticides and metals, as well as other contaminants.

The TCRA is being performed to reduce exposure of receptors to, and prevent potentially significant migration of contamination from, a portion of the RM 10.9 study area hereinafter referred to as the Removal Area, defined as the approximately 5-acre area delineated in Figure 1, which has been found to contain highly elevated concentrations of multiple COPCs. In addition to addressing these time-critical concerns, sediments removed from the Removal Area will be used to conduct sediment treatment and/or decontamination bench-scale tests. Based on the results of these tests and the overall timing of the work, and at the discretion of the Settling Parties, ex-situ treatment and/or decontamination pilot-scale tests may be conducted as well.

To meet the objectives of the TCRA, the Settling Parties will remove approximately 2 feet of sediment from the Removal Area and then cap this area. The volume of material to be removed is expected to be approximately 16,000 cubic yards; this number will be refined during the design. If pilot tests are not conducted, the removed sediment will be disposed of at an EPA-approved off-site facility. In the event that pilot tests are conducted, then the final disposition of the treated sediment will be determined as part of the pilot test work plans.

B. Project Description

The Settling Parties shall perform all actions necessary to remove sediment from the Removal Area, place a cap over this area, provide for the conduct of bench-scale tests on sediment from this area, and properly dispose of the removed material. The Removal Area is bounded on the west by the eastern navigational channel limits and bounded on the east by the mean high water limits. The actual lateral and vertical extent of the Removal Area may be refined based on the results of the pre-design investigation and the design needs of the cap.

The TCRA will reduce exposure to elevated COPCs present in the Removal Area. Removal and capping of the contaminated sediment will significantly decrease surface sediment COPC levels and thereby reduce exposure of human and ecological receptors contacting surface sediments, including river recreators (e.g., waders, boaters, anglers), who may incidentally ingest, or come into contact with, the surface sediments present in the Removal Area. Surface sediment COPC levels will be reduced to site-wide concentration levels, or lower, following sediment removal and subsequent capping of the Removal Area. The TCRA will also prevent migration of contamination from the Removal Area to other parts of the river.

C. Description of the Removal Action and Capping

The Settling Parties shall remove approximately 16,000 cubic yards (top two feet) of in-place contaminated sediment from the Removal Area. During the design of the removal action, the Settling Parties shall evaluate the means and methods for sediment removal, including best practices to minimize the potential release of COPCs during the removal. A protective cap will be designed, constructed, monitored, and maintained over the Removal Area. The Settling Parties shall conduct performance monitoring and Operations and Maintenance (O&M) of the cap to determine whether it continues to meet performance standards, and to insure that its integrity is maintained pending the selection of a remedial action addressing the full LPRSA, which includes the Removal Area. Data from the performance monitoring effort may also help inform future decisions and/or remedial designs in the LPRSA. The cap shall be constructed using suitably protective capping designs which may include the use of activated carbon layers or other materials to reduce bioavailability and migration of COPCs as well as cap armoring to protect portions of the Removal Area subject to higher shear stresses from potential erosion.

D. Description of Bench-Scale Tests, Pilot-Scale Tests, and Disposal of Sediment

The Settling Parties have identified sediment treatment vendors who are interested in conducting bench/pilot-scale tests on contaminated sediment from RM 10.9 with the objective of advancing technologies available for the treatment

of large quantities of contaminated sediments from maintenance or environmental dredging projects.

The Settling Parties shall contract with treatment vendors to perform bench-scale testing on representative samples of sediment, to determine the overall feasibility and economics of specific treatment technologies. The bench-scale tests shall be conducted during development of the work plans to conduct the removal. The Settling Parties shall provide to EPA a full evaluation of the findings of the bench-scale testing, including the Settling Parties' rationale and decision for conducting pilot-scale testing of specific technologies and/or directly transporting and disposing of the sediments from the Removal Area at an appropriately permitted, EPA-approved disposal facility. Should the bench-scale tests suggest that a technology is not effective or feasible, the Settling Parties' findings will document the basis for the decision to not conduct pilot-scale testing for that technology.

If the decision is made to proceed with pilot-scale tests, the Settling Parties shall transport the removed sediment to the pilot study vendor(s)' treatment locations; conduct of the pilot-scale tests shall not impact the implementation schedule of the removal and capping activities. Otherwise, the Settling Parties shall dispose of the material at an appropriately permitted, EPA-approved disposal facility. The results of the bench-scale tests and, if conducted, information obtained from pilot- scale test(s), may help inform the remedy selection process for the LPRSA and Newark Bay.

II. WORK TO BE PERFORMED

The work flow for this SOW is provided in Figure 2.

A. Removal and Capping Activities to be Completed Prior to May 30, 2012

1. RM 10.9 Quality Assurance Project Plan (QAPP) Addendum A and Data Collection Activities

   The Settling Parties shall prepare an addendum to the RM 10.9 QAPP, as defined in the Settlement Agreement, to collect additional samples to refine the delineation of the extent of the Removal Area, and collect these samples. At a minimum, additional sediment cores will be collected from the northern end of the Removal Area, as currently delineated, and sediment samples will be collected on-shore, along the edge of the Removal Area.

2. Data Gap Analysis and Data Collection QAPP

   The Settling Parties shall conduct a Data Gap Analysis of the RM 10.9 study area to identify additional data (including, but not necessarily limited to, geophysical and groundwater data) needed to support the removal and capping design needs. A Data Collection QAPP shall be prepared providing the details of the collection of these additional data.

B. Removal and Capping Activities to be Completed after Effective Date of Settlement Agreement

1. Removal and Capping Work Plan/Basis of Design Report

The Settling Parties shall submit the Removal and Capping Work Plan/Basis of Design Report (BODR) to EPA for review and approval. The Work Plan portion of this submission shall include, at a minimum, the following:

- Description of Removal and Capping activities
- Tasks necessary to prepare the Pre-Final/Final Designs as required to implement the removal and capping
- Responsibility and authority of all organizations and key personnel
- Overall management strategy for completion of the tasks
- A project schedule including all major activities and deliverables

The BODR shall be prepared based on the results of data collected pursuant to the RM 10.9 QAPP and the Capping and Removal Pre-Design activities. The BODR (30% design) submittal shall include, at a minimum, the following:

- Results of studies and additional field sampling and analysis conducted after the initial RM 10.9 study area investigation, if available
- Preliminary plans, drawings, and sketches
- Methods of sediment removal including resuspension/turbidity control, transport, offloading, stockpiling, and treatment; treated sediment disposal; process water treatment and discharge; capping; cap materials transport, and cap placement
- Design assumptions and parameters, including design constraints, capping performance criteria, and preliminary design calculations
- Outline of implementation specifications
- Proposed siting/locations of staging and processing
- Real estate and easement requirements
- River traffic control procedures
- Weather and river conditions monitoring
- Substantive requirements of ARARs
- Implementation contracting strategy
- Preliminary project schedule
- Anticipated long-term monitoring

The Settling Parties shall submit the Removal and Capping Work Plan/BODR to EPA for review and approval. Once EPA approves the Removal and Capping Work Plan/BODR, the Settling Parties shall implement the Removal and Capping Work Plan and begin work on the Pre-Final Design in accordance with the approved schedule.

2. Removal and Capping Pre-Final and Final Designs

   The Settling Parties shall submit the Pre-Final Design when the overall design effort is 90% complete. The Pre-Final Design shall fully incorporate EPA comments made to the Removal and Capping Work Plan/BODR .The Pre-Final Design shall include, at a minimum, the following:

   - Results of studies and additional field sampling and analysis, if any, completed after submittal of the 30% design
   - Design assumptions and parameters, including design constraints, capping performance criteria, and design calculations
   - Implementation plans and drawings
   - Implementation specifications
   - Implementation Quality Assurance Project Plan
   - Implementation Health and Safety Plan including community health and safety concerns
   - Sediment Dredge Plan (including resuspension/turbidity control) and Pre- and Post-Bathymetry Surveys
   - Sediment Transport Plan
   - Sediment Offloading Plan
   - Sediment Treatment Plan
   - Process Water Treatment and Discharge Plan
   - Sediment Transport and Disposal Plan
   - Sediment Capping Plan (including materials transport and staging)
   - Implementation Quality Control Plan
   - Permits and other legal requirements, unless work will occur entirely on-site, in which case the submittal shall address substantive requirements of ARARS/TBCs documentation
   - Implementation contracting strategy
   - River traffic control procedures
   - Weather and river conditions monitoring
   - Project schedule
   - Long-term Monitoring and O&M Plan

   The Settling Parties shall submit the Final Design when the design effort is 100% complete. The Final Design shall fully incorporate EPA comments. The Final Design submittals shall include those elements listed for the Pre-Final Design.

3. Removal and Capping Implementation Activities

   The Settling Parties shall acquire and/or lease property, construct facilities necessary to conduct the "in-water" work (removal/capping), and transport sediment to treatment vendor(s) and/or disposal location(s). Final disposal of the sediment shall be in an appropriately permitted, EPA-approved offsite

facility. The Settling Parties shall begin mobilization and implementation of the removal action upon approval of the Final Design. The Settling Parties shall monitor all sediment dredging, processing, and final disposal activities in accordance with the approved Implementation Quality Control Plan.

4. Removal and Capping Long-Term Monitoring and O&M

   The Settling Parties shall implement the approved Long-Term Monitoring and O&M Plan, and provide reports to EPA as determined by this Plan.

C. Bench-Scale Testing and Report

The bench-scale tests will provide information to prepare a preliminary evaluation of the potential effectiveness and implementability of each technology at the pilot scale. These bench-scale tests may include, for example, jar testing, laboratory-scale (e.g., 1/12 pilot-scale) batch unit optimization, and process validation. The bench-scale test results will also provide a basis for the vendor(s) to develop estimates of pilot-scale implementation unit costs to meet performance standards.

The Settling Parties shall provide a report with the findings of the bench-scale tests to EPA. The report shall contain the results of the bench-scale tests, including the efficacy and efficiency of treatment, and the vendor's proposal to conduct the pilot-scale test. The report shall also contain the Settling Parties rationale and resulting decision of whether the technologies will be taken to the pilot-scale.

D. Pilot-Scale Testing

If the Settling Parties decide to proceed with Pilot-Scale Tests, the Settling Parties shall, in coordination with the vendor(s) selected, submit the Pilot-Scale Tests Work Plan to EPA for review and notice to proceed. The Work Plan submittal may include the following:

- Pilot-Scale Testing Objectives/Purpose
- Pilot Scale Testing success criteria
- Permits and other legal requirements, unless work will occur entirely on-site, in which case the submittal shall address substantive requirements of ARARs
- Pilot-Scale Testing assumptions and design constraints
- Proposed siting/locations of staging areas and treatment processes
- Real estate and easement requirements
- Methods and details of the proposed Pilot-Scale Test activities including sediment offloading, stock piling, screening, sediment preparation, sediment treatment and disposal, and water treatment

- Treatment process performance criteria, treatment unit processes, representativeness of removed material, expected removal or treatment efficiencies (concentration and volume), mass balances and design calculations
- Drawings and technical specifications
- Details of measurements and observations to be conducted for the pilot-scale testing
- Details of environmental monitoring to be conducted (i.e., odor, noise and water discharge)
- Responsibility and authority of all organizations and key personnel
- Overall management strategy for completion of the tasks
- A project schedule including all major activities and deliverables

Once EPA provides notice to proceed, the Settling Parties may implement the Pilot-Scale Tests Work Plan in accordance with the Work Plan's schedule. The Settling Parties may terminate the pilot test(s) at their discretion and inform the EPA of their rationale in a written report. Final disposal of the sediment shall be in an appropriately permitted, EPA-approved offsite facility.

III. PROJECT SCHEDULE/WORK MILESTONES

A. Removal and capping activities milestones are established for the project:

Prior to the Effective Date of the Settlement Agreement, or no later than May 30, 2012, the Settling Parties shall submit to EPA a RM 10.9 QAPP Addendum A and complete the sediment collection activities outlined in this QAPP addendum.

Prior to the Effective Date of the Settlement Agreement, or no later than May 30, 2012, the Settling Parties shall submit to EPA the Data Gap Analysis and Data Collection QAPP

45 days after the Effective Date of the Settlement Agreement, the Settling Parties shall submit to EPA the Removal and Capping Work Plan/BODR

60 days after EPA approval of the Removal and Capping Work Plan/BODR, the Settling Parties shall submit to EPA the Removal and Capping Pre-Final Design

60 days after EPA approval of the Removal and Capping Pre-Final Design, the Settling Parties shall submit the Final Design

Immediately upon EPA approval of the Removal and Capping Final Design the Settling Parties shall begin Contractor mobilization to implement the Final Design.

60 days after EPA approval of the Removal and Capping Final Design, the Settling Parties shall begin implementation of the Final Design.

B. Bench-Scale Testing including QAPP, Results report

Prior to the Effective Date of the Settlement Agreement, or no later than May 30, 2012, the Settling Parties shall submit RM 10.9 QAPP Addendum A for collecting sediments for bench-scale testing and complete the sediment collection activities outlined in the QAPP addendum.

1 day after the Effective Date of the Settlement Agreement, the Settling Parties shall submit, for EPA's information, the Bench-Scale Test QAPP for each Vendor.

90 days after EPA receives the Bench-Scale Test QAPP, the Settling Parties shall submit to EPA the Bench-Scale Tests Report of Findings and Pilot-Scale Test Proposals and their decision on whether to pursue pilot test(s) or dispose of the material in an approved facility(ies).

C. Pilot-Scale Testing

Within 60 days after EPA's acknowledgement of the Settling Parties proceed/not proceed decision for Pilot-Scale Testing, if the Settling Parties have chosen to conduct Pilot-Scale Testing they shall submit the Pilot-Scale Test Work Plan.

Within 90 days after receiving EPA notice to proceed on the Pilot-Scale Test Work Plan, the Settling Parties will begin Contractor mobilization and implementation of the Pilot-Scale Test(s).

D. Final Reports

The Settling Parties shall submit a final report summarizing the removal and capping work 90 days after the completion of the activities set forth above in Section IIA and II.B(1) – (3).

If Pilot Scale Tests are performed, then the Settling Parties shall submit a summary report of this activity 90 days after the treatment and disposal of the sediment subject to Pilot-Scale Tests.

Long Term monitoring and O&M of the capping area will be described in the Long-Term Monitoring and O&M plan.

Figure 1. The RM 10.9 Sediment Deposit and Removal Area.

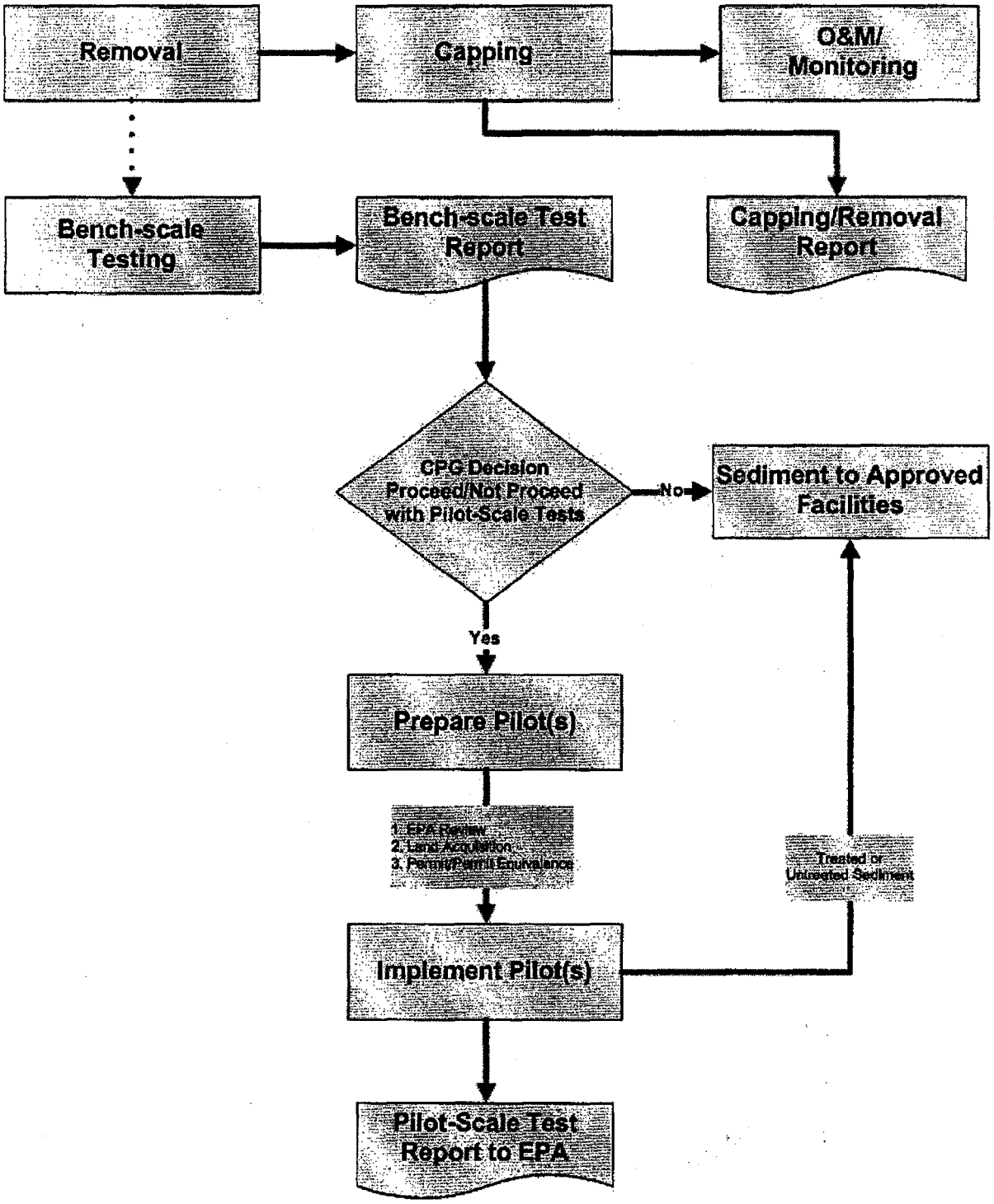


Figure 2. RM 10.9 Statement of Work flow chart.

APPENDIX B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: MAY 21 2012

SUBJECT: Action Memorandum/Enforcement: Determination of Need to Conduct a CERCLA Time-Critical Removal Action at the Diamond Alkali Superfund Site, Lower Passaic River Study Area, River Mile 10.9 Removal Area, Lyndhurst, New Jersey

FROM: Raymond Basso, Director
Lower Passaic River Project

TO: Walter E. Mugdan, Director
Emergency and Remedial Response Division

I. PURPOSE

The purpose of this Action Memorandum is to document the determination of the need to conduct a time-critical removal action within an approximately five-acre area in the Lower Passaic River Study Area (LPRSA) at River Mile (RM) 10.9 in Lyndhurst, New Jersey. Figure 1 shows the areal extent of what will be referred to herein as the RM 10.9 Removal Area. EPA anticipates that this removal action will be performed by potentially responsible parties pursuant to an administrative settlement agreement and order on consent.

The removal action will result in the removal of the surface portion of the sediments containing significantly elevated concentrations of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (collectively, PCDDs/PCDFs), polychlorinated biphenyls (PCBs), mercury, polycyclic aromatic hydrocarbons (PAHs) and other hazardous substances, which if released, could adversely impact nearby human populations, animals, and the food chain, and capping of the underlying sediments. The peak concentrations detected in the top six inches of sediment include 2,3,7,8-TCDD at 21.6 parts per billion (ppb), PCBs at 34 parts per million (ppm), mercury at 22 ppm and total high molecular weight PAHs at 510 ppm. These maxima are among the highest concentrations found in the surface sediments of the LPRSA.

Conditions at the RM 10.9 Removal Area meet the criteria for a removal action under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300.

The removal action will mitigate threats to the public health, welfare and the environment posed by the presence of the high levels of contaminants in the surface sediments in the RM 10.9 Removal Area. Since the high levels of the aforementioned contaminants present in the top six inches of sediment are currently bio-available and subject to migration or release due to weather and/or hydrologic conditions, this response will be conducted as a time-critical removal action.

The Environmental Protection Agency (EPA) Region 2 conducted briefings on the proposed removal action for citizens and local officials at public availability sessions in the Town of Lyndhurst and Citizen Advisory Group meetings in Newark, New Jersey. Coordination and consultation with local officials and the public will continue throughout the design and construction phase of the project.

The New Jersey Department of Environmental Protection (NJDEP) was involved in developing the technical scope of the project and agrees with the proposed removal action for this Site.

II. SITE CONDITIONS AND BACKGROUND

This Action Memorandum documents the proposed time-critical removal action for the Site. The Comprehensive Environmental Response, Compensation and Liability Information System ID number for the Diamond Alkali Site, of which RM 10.9 Removal Area is a part, is NJD980528996.

A. Site Description

1. Removal Site Evaluation

The Diamond Alkali Superfund Site includes the former Diamond Alkali facility located at 80 and 120 Lister Avenue in Newark, New Jersey, the LPRSA, and the Newark Bay Study Area. The LPRSA is the 17-mile, tidal portion of the Passaic River, from the Dundee Dam near Garfield, New Jersey to Newark Bay and includes the RM 10.9 Removal Area. The LPRSA is a facility as defined by Section 101(9) of CERCLA, 42 U.S.C. Section 9601(9). The contamination found at the RM 10.9 Removal Area includes "hazardous substance(s)" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), that may present an imminent and substantial endangerment pursuant to Sections 104(a)(1) and 106(a) of CERCLA, 42 U.S.C. §§ 9604(a)(1) and 9606(a).

The conditions in the sediments at the RM 10.9 Removal Area meet a number of the specific factors identified in 40 CFR Part 300.415(b)(2) for EPA to consider in determining the appropriateness of a removal action, including, but not limited to:

1. an actual or potential release of hazardous substances, including PCDDs/PCDFs, PCBs, mercury and PAHs, exposing nearby human populations, animals or the food chain (40 CFR §300.415(b)(2)(i));

2. actual or potential contamination of sensitive ecosystems due to the presence of hazardous substances, including PCDDs/PCDFs, PCBs, mercury and PAHs (40 CFR §300.415(b)(2)(ii)); and

3. high levels of hazardous substances, including PCDDs/PCDFs, PCBs, mercury and PAHs, present at or near the surface of the sediment that could migrate or be released due to weather and/or hydrologic conditions (40 CFR §300.415(b)(2)(iv)-(v)).

2. Physical location

The RM 10.9 Removal Area is an approximately five-acre area located on the eastern side of the LPRSA within a larger area (the RM 10.9 Study Area) that extends approximately 2,380 feet from RM 10.65 to RM 11.1, along an inside bend of the river upstream of the Delesse-Avondale Street Bridge, and that includes the mudflat and point bar in the eastern half of the river channel. It is bounded to the west by the navigation channel of the Passaic River and to the east by the Riverside Park complex, which is owned and operated by Bergen County and the Town of Lyndhurst. The RM 10.9 Removal Area dimensions were determined based on a review of sediment data collected at 54 locations within the RM 10.9 Study Area (Figure 2), and will be further refined during a pre-design investigation.

The area surrounding the RM 10.9 Removal Area consists predominately of recreational facilities such as parkland and numerous ball fields. A number of public boat launches are also located in the vicinity and use of the river for recreational boating is ongoing and significant.

3. Site characteristics

In 2004, EPA commenced a remedial investigation and feasibility study (RI/FS) of the 17-mile LPRSA, funded by a group of potentially responsible parties known as the Lower Passaic River Cooperating Parties Group (CPG) under a Settlement Agreement pursuant to CERCLA Section 122(h), 42 U.S.C. § 9622(h). The RI/FS represented EPA's portion of work being undertaken by a partnership of federal and State of New Jersey agencies under CERCLA and the federal Water Resources Development Act (WRDA). In May 2007, EPA entered into another settlement agreement with the CPG, under which the CPG agreed to complete the RI/FS for the LPRSA (the RI/FS Agreement). The RI/FS is proceeding under the direction and oversight of EPA.

Sediment samples collected in the RM 10.9 Study Area as part of the RI/FS suggested that significantly elevated concentrations of PCDDs/PCDFs, PCBs, mercury, PAHs and other contaminants might be present in this area. In April 2011, the CPG proposed and EPA agreed that the CPG would undertake additional sampling and analysis, and perform bathymetry and hydrodynamic survey work, to characterize and develop information about the extent of contamination in the RM 10.9 Study Area. The data from the samples collected by the CPG confirmed that portions of the sediment located in the RM 10.9 Study Area, which includes a mudflat on the eastern shore of the Passaic River that is exposed at low tide, contains significantly elevated concentrations of PCDDs/PCDFs, PCBs, mercury, PAHs and other hazardous substances. In the first six inches of sediment, peak concentrations detected include 2,3,7,8-TCDD at 21.6 ppb, PCBs at 34 ppm, mercury at 22 ppm and total high molecular weight PAHs at 510 ppm. These maxima are among the highest found in the LPRSA. Elevated concentrations of PCDDs/PCDFs, PCBs and mercury are generally co-located in surface and subsurface sediments.

Riverside County Park, which is owned by Bergen County, is located on the eastern shore of the River adjacent to the RM 10.9 Removal Area. Immediately adjacent to the north end of Riverside County Park are baseball fields owned by the Town of Lyndhurst that are adjacent to the RM 10.9 Removal Area as well. Individuals utilizing the River, including boaters, waders

and anglers, could be exposed to the sediments. The sediment at the surface of the RM 10.9 Removal Area also acts as a low-level, ongoing source of contamination to other parts of the river through erosion, and may act as a significant, event-driven source of contamination during high-flow events, when elevated shear stresses created by higher flows could lead to significant erosion.

EPA conducted additional soil sampling in the parks located adjacent to the RM 10.9 Study Area. Concentrations detected in the parks were below levels of concern and no additional action is contemplated at this time.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant

The sediments of the LPRSA contain concentrations of numerous hazardous substances, including, but not limited to PCDDs/PCDFs, PCBs, PAHs, dichlorodiphenyl-trichloroethate (DDT), dieldrin, chlordane, mercury, cadmium, copper, and lead. The discovery of widespread contamination in the LPRSA and Newark Bay led the State of New Jersey to issue a number of fish consumption advisories in 1983 and 1984, which prohibited the sale or consumption of all fish, shellfish, and crustaceans from the LPRSA. These State fish advisories and prohibitions are still in effect.

The chemical data from the investigation of the RM 10.9 Removal Area indicate some of the highest contaminant levels reported within the biologically active zone in the entire LPRSA. These sediments pose a serious threat, because surface sediment contaminant concentrations are among the highest found in the LPRSA and they exceed the levels that can produce toxic effects to human health and biota.

The contamination found at the RM 10.9 Removal Area includes "hazardous substance(s)" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), that may present an imminent and substantial endangerment pursuant to Sections 104(a)(1) and 106(a) of CERCLA, 42 U.S.C. §§ 9604(a)(1) and 9606(a). The above data are only a summary of the more pertinent analytical information. The remainder of the analytical data is available in the Administrative Record for this removal action.

5. NPL status

EPA placed the Diamond Alkali Superfund Site on the National Priorities List (NPL) by publication in the Federal Register on September 21, 1984. 49 Fed. Reg. 37070. The Site includes the former pesticides manufacturing facility located at 80 Lister Avenue and surrounding property located at 120 Lister Avenue in Newark, New Jersey (known as Operable Unit 1 or "OU1"), the LPRSA, which is defined as the 17-mile stretch of the Lower Passaic River from Dundee Dam to Newark Bay. the Newark Bay Study Area, consisting of Newark Bay and portions of the Hackensack River, Arthur Kill and Kill van Kull, and the areal extent of contamination.

6. Maps, pictures, and other graphic representation

Attached to this memorandum are figures depicting:

- the extent of the RM 10.9 Removal Area
- the sampling that was conducted in the RM 10.9 Study Area and on the adjacent parks,
- the concentrations of 2,3,7,8-TCDD, PCBs, and mercury detected in the surface sediment of the RM 10.9 Study Area.

B. Other Actions to Date

1. Previous actions

In the mid-1980s, in response to the releases of hazardous substances at the former Diamond Alkali facility, the Diamond Shamrock Chemicals Company (Diamond) entered into two separate administrative consent orders with NJDEP to conduct a RI/FS for 80 and 120 Lister Avenue. Since the Lister Avenue properties are adjacent to the Passaic River, the remedial investigation included the sampling and assessment of sediment contamination in the Passaic River. Sampling and assessment of the Passaic River conducted by Diamond in 1984-1986 indicated that contaminants from OU1, including 2,3,7,8-TCDD, DDT, 2,4-dichlorophenoxyacetic acid, 2,4,5-trichlorophenoxyacetic acid and 2,4,5-trichlorophenol had migrated into the Lower Passaic River Study Area. Further, sampling has shown that the LPRSA is contaminated with many other hazardous substances, including, but not limited to, cadmium, copper, lead, mercury, nickel, zinc, PAHs, and PCBs.

During the 1980s, removal activities were performed by NJDEP, EPA and Diamond. These removal activities included the excavation of soils contaminated with hazardous substances, and placement of a geotextile fabric on 80 Lister Avenue. Hazardous substances were vacuumed from the streets in the vicinity of 80 Lister Avenue. The soils and debris vacuumed from the streets, along with excavated soils that were also contaminated with hazardous substances, were later secured on the 120 Lister Avenue property. The removal activities were completed in 1986.

Based on the results of the RI/FS, EPA issued a Record of Decision (ROD) on September 30, 1987. The ROD selected an interim remedial action plan for cleanup of OU1, consisting of (1) construction of a slurry wall and flood wall around the properties, (2) installation of a cap over the properties, and (3) the pumping and treatment of groundwater to reduce the migration of contaminated groundwater to the river. On October 20, 1988, EPA issued a notice letter to Occidental Chemical Corporation (OCC) regarding its liability for the Site. Pursuant to a judicial Consent Decree with EPA entered by the Court in 1990, OCC and Chemical Land Holdings, Inc. (now known as Tierra Solutions, Inc. (TSI) agreed to implement the ROD for OU1. Remedial construction has been completed and groundwater treatment is ongoing. Under the Consent Decree, re-evaluations of the OU1 remedy will be performed every two years, subsequent to approval of the construction completion, to determine if a more protective remedy can be implemented.

On April 20, 1994, OCC and EPA entered into AOC, Index No. II-CERCLA-0117, pursuant to which OCC agreed to perform a RI/FS with respect to a six-mile portion of the Passaic River from an abandoned ConRail Railroad bridge at the downriver boundary located at the U.S. Army Corps of Engineers (USACE) station designation of 40+00 to a transect six miles upriver located at the USACE station designation of 356+80. The sampling results from the investigation in the six mile area and other environmental studies demonstrated that evaluation of a larger area was necessary, in that sediments contaminated with hazardous substances and other potential sources of hazardous substances are present along at least the entire LPRSA. Furthermore, the tidal nature of the Lower Passaic River has resulted in greater dispersion of hazardous substances than originally expected, thus promoting the distribution of hazardous substances into and out of the six mile stretch of the Passaic River. In January 2001, EPA instructed TSI to complete a few remaining remedial investigation tasks, but halt further work while EPA expanded the investigation from six miles to seventeen miles.

2. Current actions

As described above, in 2004, EPA commenced a RI/FS of the 17-mile LPRSA, funded by the CPG under a Settlement Agreement pursuant to CERCLA Section 122(h), 42 U.S.C. § 9622(h). In May 2007, EPA entered into the RI/FS agreement with the CPG, under which the CPG agreed to complete the RI/FS for the LPRSA. The RI/FS is proceeding under the direction and oversight of EPA. Concurrently, EPA is performing a Focused Feasibility Study ("FFS") with respect to an eight-mile portion of the LPRSA and expects to select an early (interim) action for the eight-mile area when the FFS is complete.

On June 23, 2008 EPA entered into an AOC with OCC and Tierra Solutions for the removal and off-site disposal of approximately 40,000 cubic yards of contaminated sediment from within a predetermined area in the LPRSA called the Phase I work area. The same order also provided for the removal and disposal of an additional 160,000 cubic yards in a yet to be sited Confined Disposal Area (CDF). The Phase 1 Removal Action is ongoing and expected to be complete before the end of 2012. Work on Phase 2 has not started.

C. State and Local Authorities' Roles

State and local authorities' roles are described in the previous sections.

III. THREATS TO PUBLIC HEALTH, OR WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions present at the RM 10.9 Removal Area constitute an actual or threatened "release" of a hazardous substance from a facility as defined by Section 101(22) of CERCLA, 42 U.S.C.§ 9601(22), that may present an imminent and substantial endangerment pursuant to Sections 104(a)(1) and 106(a) of CERCLA, 42 U.S.C. §§ 9604(a)(1) and 9606(a). These conditions constitute a threat to public health, welfare, or the environment. EPA has identified conditions in the surface sediment of the RM 10.9 Removal Area that correspond to factors identified in Section 300.415(b)(2) of the NCP, which indicate that a removal action is necessary. Conditions

that correspond to factors that provide a basis for a removal action under Section 300.415 (b)(2) of the NCP include:

(i) **Actual or potential exposure to nearby human populations or animals or the food chain from hazardous substances or pollutants or contaminants;**

High concentrations of 2,3,7,8-TCDD, PCBs, mercury, PAHs and other hazardous substances are present in the sediments of the RM 10.9 Removal Area that could adversely impact nearby human populations, animals or the food chain if released. Surface sediment in the RM 10.9 Removal Area contains 2,3,7,8-TCDD in concentrations up to 21.6 ppb, PCBs at 34 ppm, mercury at 22 ppm and total high molecular weight PAHs at 510 ppm. Exposure to these high concentrations in the surface sediment could pose significant risk to human health or the environment.

Potential human exposures to chemical contaminants include receptors such as anglers and crabbers potentially catching and consuming fish/shellfish (e.g., crabs) from this area as well as boaters and workers in the area. These exposures are primarily through ingestion of contaminated fish or shellfish from the River, dermal contact and/or incidental ingestion of sediment and/or water. Inhalation of volatile or semi-volatile organic compounds from sediment or water is another potential exposure pathway, but not as significant as the ingestion and direct contact pathways. These contaminants have been associated with a variety of adverse health effects including a significantly increased risk of cancer.

Based on the results of monitoring and research undertaken since the mid-1970s, the State of New Jersey has taken a number of steps, in the form of consumption advisories, closures, and sales bans, of fish and crabs to limit the exposure of the fish- and crab-eating public to toxic contaminants in the Lower Passaic River, Newark Bay, Hackensack River, Arthur Kill and Kill Van Kull. Recent studies by NJDEP have determined that, despite warnings currently in place, anglers and crabbers do consume their catch. The initial measures prohibited the sale, and advised against the consumption, of several species of fish and eel and were based on the presence of PCB contamination in the seafood. The discovery of widespread dioxin contamination in the Newark Bay Complex led the State of New Jersey to issue a number of fish consumption advisories in 1983 and 1984, which prohibited the sale or consumption of all fish, shellfish and crustaceans from the LPRSA. These State fish advisories and prohibitions are still in effect.

(ii) **Actual or potential contamination of drinking water supplies or sensitive ecosystems;**

Sampling results from the RM 10.9 Removal Area, as well as data from other earlier sampling events within the LPRSA, show concentrations of contaminants that significantly exceed the levels that can produce toxic effects to biota. Recent studies have shown that 2,3,7,8-TCDD and PCBs bio-accumulate in fish, to levels rendering the fish unfit for human consumption, from sediment with much lower levels of 2,3,7,8-TCDD and PCBs than found in RM 10.9 Removal Area sediments.

The RM 10.9 Removal Area is located in the Hudson Raritan Estuary. Ecological receptors in the RM 10.9 Removal Area include a range of invertebrate and vertebrate organisms that inhabit or utilize the River either year round or on a migratory basis. These primarily include benthic invertebrates, shellfish (primarily blue crabs), fish, birds (both shorebirds and passerines) and mammals. Exposures for all of these groups can include both direct contact with sediment and water, as well as indirect uptake of bioaccumulative chemical constituents through food web (i.e., feeding) interactions. The interaction between the ecological receptors and high levels of 2,3,7,8-TCDD, PCBs and other contaminants in the surface sediment of the RM 10.9 Removal Area is adversely impacting the estuary.

(iv) High levels of hazardous substances or pollutants or contaminants at or near the surface that may migrate;

As previously discussed, high levels of contamination are present in the surface sediment within the RM 10.9 Removal Area. These sediments are in contact with the waters of the Passaic River, and are susceptible to erosion and scouring or other disturbances on an ongoing and continuous basis. During high-flow events, elevated shear stresses created by higher flows could lead to significant erosion, increasing the threat of further releases of hazardous substances. Analysis of recent surface sediment data shows that the average surface sediment concentrations for 2,3,7,8-TCDD, PCBs and Mercury in the RM 10.9 Removal Area are among the highest in the LPRSA.

(v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

The potential for significant contaminant migration from storm events and tidal action continues to be a major concern. Without a removal action to isolate the highly contaminated surface sediments in the RM 10.9 Removal Area, weather and hydrologic events will continue to erode and suspend these contaminated sediments and facilitate their migration throughout the LPRSA and Newark Bay, impacting human health and the environment.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from the RM 10.9 Removal Area, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The time critical removal action is being performed to reduce exposure of receptors to, and

prevent potentially significant migration of contamination from, the RM 10.9 Removal Area. In addition to addressing these time-critical concerns, sediments removed from the RM 10.9 Removal Area will be used to conduct sediment treatment and/or decontamination bench-scale tests (Section 3, Description of alternative technologies).

Between 15,000 and 20,000 cubic yards (top two feet) of in-place contaminated sediment will be removed from the RM 10.9 Removal Area; the exact amount will be refined during the design. During the design of the removal action, the means and methods for sediment removal, including best practices to minimize the resuspension of contaminated sediment during the removal will be determined. A protective cap will be designed, constructed, monitored, and maintained over the RM 10.9 Removal Area. Operation and Maintenance (O&M) and performance monitoring of the cap will be conducted to determine whether it continues to meet performance standards, and to insure that its integrity is maintained pending the selection of a remedial action addressing the full LPRSA, which includes the RM 10.9 Removal Area. Data from the performance monitoring effort may also help inform future decisions and/or remedial designs in the LPRSA. The cap shall be constructed using suitably protective capping designs which may include the use of activated carbon layers or other materials to reduce bioavailability and migration of contamination as well as cap armoring to protect portions of the RM 10.9 Removal Area subject to higher shear stresses from potential erosion.

2. Contribution to remedial performance

The Diamond Alkali Site was place on the NPL in 1984. As described previously, a FFS for an early action on the sediments of the lower eight miles of the River and an RI/FS for the 17-mile tidal portion of the River are underway to address the remediation of the overall LPRSA. The removal action will assist in any long-term remediation of sediment contamination in the River by removing the most highly contaminated surface sediments that are contributing contaminants to the LPRSA. This removal action will help protect public health, welfare, and the environment until a permanent remedy can be selected and implemented.

The proposed removal action at the RM 10.9 is consistent with the requirement of Section 104(a)(2) of CERCLA, 42 U.S.C. §104(a) (2) which states that "any removal action undertaken ...should, to the extent ...practicable, contribute to the efficient performance of any long term remedial action with respect to the release or threatened release concerned." Since any remedial action undertaken at the Site would benefit from the work items in this removal action, the cleanup effort is consistent with any future remedial work.

3. Description of alternative technologies

Sediment treatment/decontamination vendors have been identified who are interested in conducting bench and/or pilot-scale tests on contaminated sediment from the RM 10.9 Removal Area with the objective of advancing technologies available for the treatment of large quantities of contaminated sediments from maintenance or environmental dredging projects. Vendors will perform bench-scale testing on representative samples of sediment, to determine the overall feasibility and economics of specific treatment technologies. The bench-scale tests to determine the feasibility of proceeding to full scale pilot demonstration projects are to be conducted during

development of the work plans to conduct the removal. Should the bench-scale tests suggest that a technology is not effective or feasible, the sediments from the Removal Area will be disposed of at an appropriately permitted EPA-approved disposal facility.

If the decision is made to proceed with pilot-scale tests, the removed sediment will be transported to the pilot study vendor(s)' treatment locations. Conduct of the pilot-scale tests will not impact the implementation schedule of the removal and capping activities.

4. **EE/CA**

Due to the time critical nature of the proposed removal action an EE/CA was not conducted.

5. **Applicable or relevant and appropriate requirements (ARARs)**

Applicable or Relevant and Appropriate Requirements (ARARs) that are within the scope of this removal action will be complied with to the extent practicable, considering the exigencies of the situation. Potential federal and state ARARs for this removal action are listed below. Additional ARARs may be identified as details of the project are developed.

Federal Requirements

- Section 112 of the Clean Air Act (CAA)
- Section 401 and 404 of the Clean Water Act (CWA) – Water Quality Certification and Dredge and Fill Requirements
- Section 10 of the Rivers and Harbors Appropriations Act
- Section 7 of the Endangered Species Act
- The Fish and Wildlife Coordination Act
- Section 307 of the Federal Coastal Zone Management Act
- The Magnuson-Stevens Fishery Conservation and Management Act, as amended and reauthorized by the Sustainable Fisheries Act
- Resource Conservation and Recovery Act (RCRA) (Subtitle D) Nonhazardous Solid Waste Program and Regulations RCRA (Subtitle C) Hazardous Waste Program and Regulation
- Toxic Substances Control Act – (40 CFR Part 761, Subpart D requirements for storage and disposal of PCB wastes)
- RCRA Land Disposal Restrictions (40 CFR Part 268)

State (substantive requirements only)

- New Jersey Surface Water Quality Standards developed pursuant to the CWA, New Jersey Water Pollution Control Act and New Jersey Water Quality Planning Act
- New Jersey Soil Erosion and Sediment Control Act
- Tidelands Act (Riparian Lands Leases, Grants and Conveyances)
- Waterfront Development Law
- Flood Hazard Area Control Act
- New Jersey Solid Waste Management Act
- New Jersey Water Pollution Control Act – NJPDES Rules

- New Jersey Technical Requirements for Site Remediation

6. Project schedule

Field activities under this removal action are anticipated to begin in the spring 2013 and be completed in approximately six months.

B. Estimated Costs

The total estimated cost for the removal action is $20,000,000. In accordance with the EPA cost-estimating guidance, the costs are intended to be estimates within a -30 to +50 percent range. It is estimated that EPA oversight costs for the removal action will be approximately $1.5 million.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Should the response action be delayed or not taken, high levels of 2,3,7,8-TCDD, PCBs, mercury, PAHs and other contaminants present in surface sediments of the RM 10.9 Removal Area will continue to be released during weather and hydrologic events and migrate throughout the LPRSA and Newark Bay further endangering public health and the environment.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

It is currently anticipated that some or all of the CPG members will enter into an Administrative Settlement Agreement and Order on Consent (Removal AOC) to perform the removal action described in this Action Memorandum. In order to guarantee performance of the work, the Removal AOC calls for the settling parties to establish a trust account to fund the removal action, for the benefit of EPA. Should the parties default on the work, EPA will have immediate access to the monies in this account.

IX. RECOMMENDATION

Conditions at the Site meet the NCP Section 300.415(b)(2) criteria for a removal action.

This decision document, which selects the time-critical removal action for the RM 10.9 Removal Area in Lyndhurst, New Jersey was developed in accordance with CERCLA, and is not inconsistent with the NCP. The decision documented in this Action Memorandum is based on the Administrative Record for the removal action.

The NJDEP was consulted and agrees with the selected removal action for the Site.

Please indicate your approval of the proposed response action by signing below.

Approve: _____ **Date:** May 21, 2012
Walter E. Mugdan, Director
Emergency and Remedial Response Division

Disapprove: _____ **Date:** _____
Walter E. Mugdan, Director
Emergency and Remedial Response Division

cc: (after approval is obtained)
J. Rotola, ERRD-RAB
B. Grealish, ERRD-RAB
R. Basso, ERRD
S. Vaughn, ERRD
D. Karlen, ORC
S. Flanagan, ORC
P. Hick, ORC
D. Kluesner, PAD
D. Pace, OPM-FMB
P. McKechnie, OIG
I. Kropp, NJDEP
T. Cozzi, NJDEP
J. Macgregor, NJDEP
A. Raddant, USDOI
R. Mehran, NOAA
L. Baron, USACE
T. Kubiak, FWS

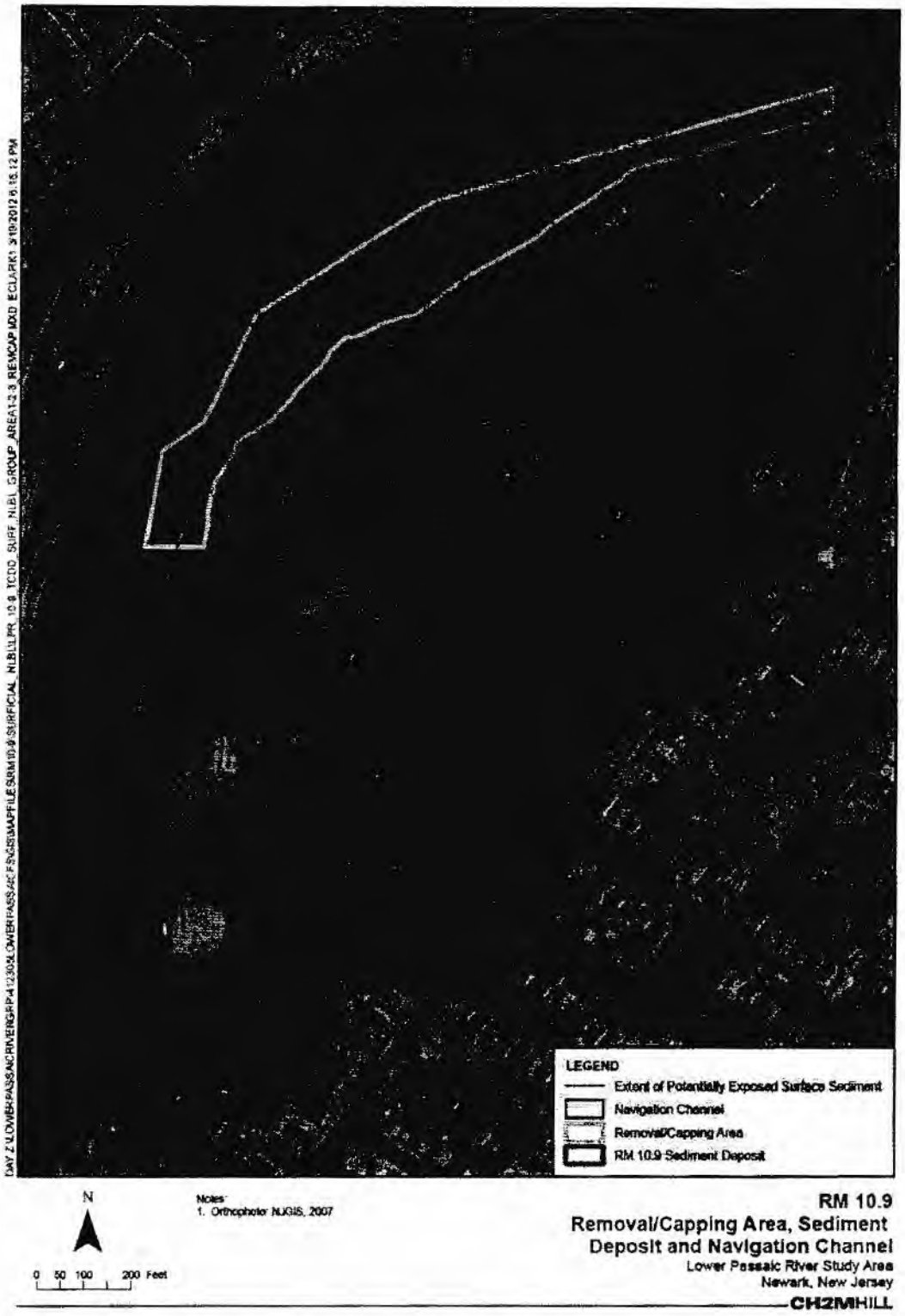

LEGEND
Extent of Potentially Exposed Surface Sediment
Navigation Channel
Removal/Capping Area
RM 10.9 Sediment Deposit
N
Notes:
1. Orthophoto NJGIS, 2007
0 50 100 200 Feet
RM 10.9
Removal/Capping Area, Sediment Deposit and Navigation Channel
Lower Passaic River Study Area
Newark, New Jersey
CH2MHILL

Figure 1

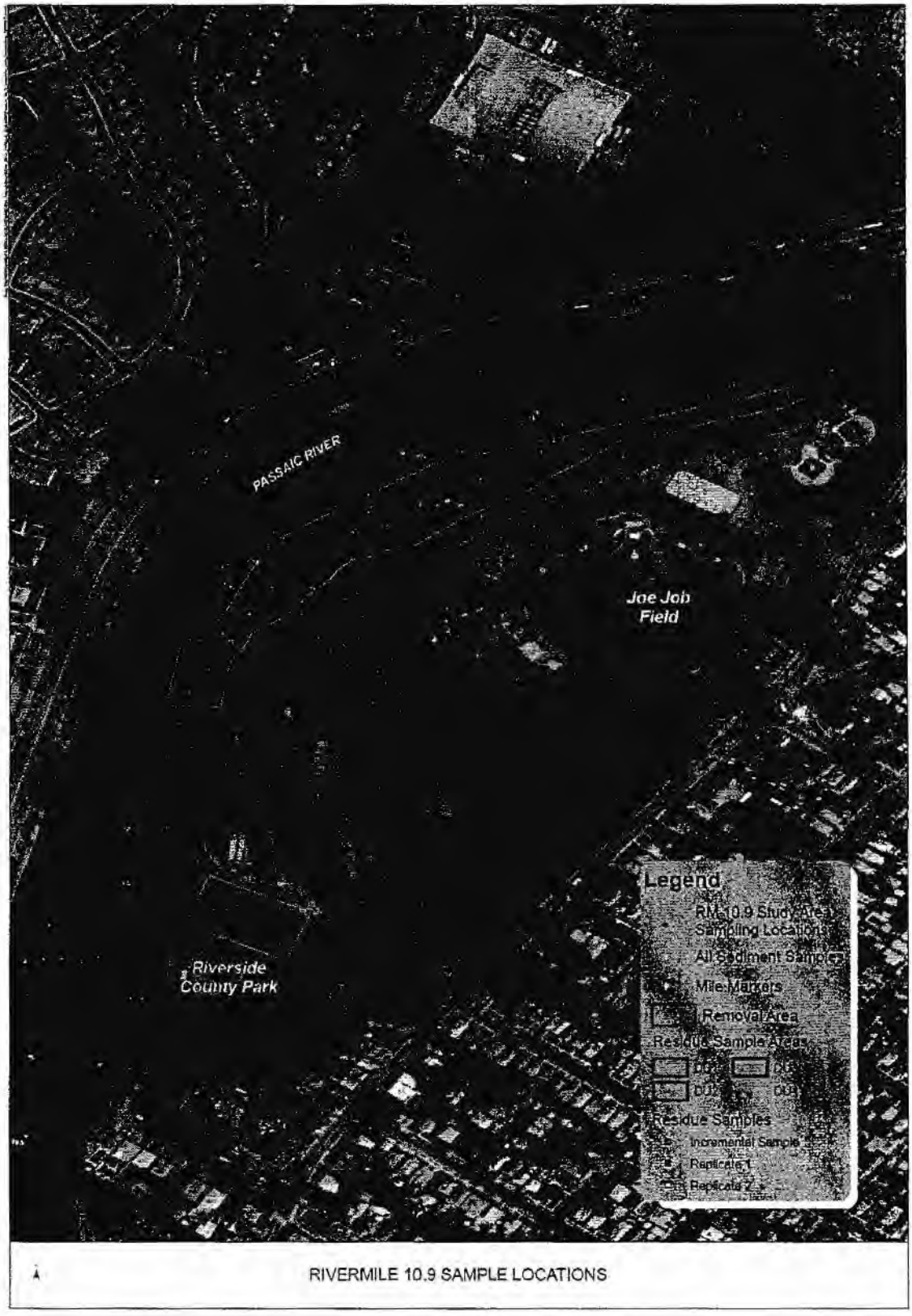
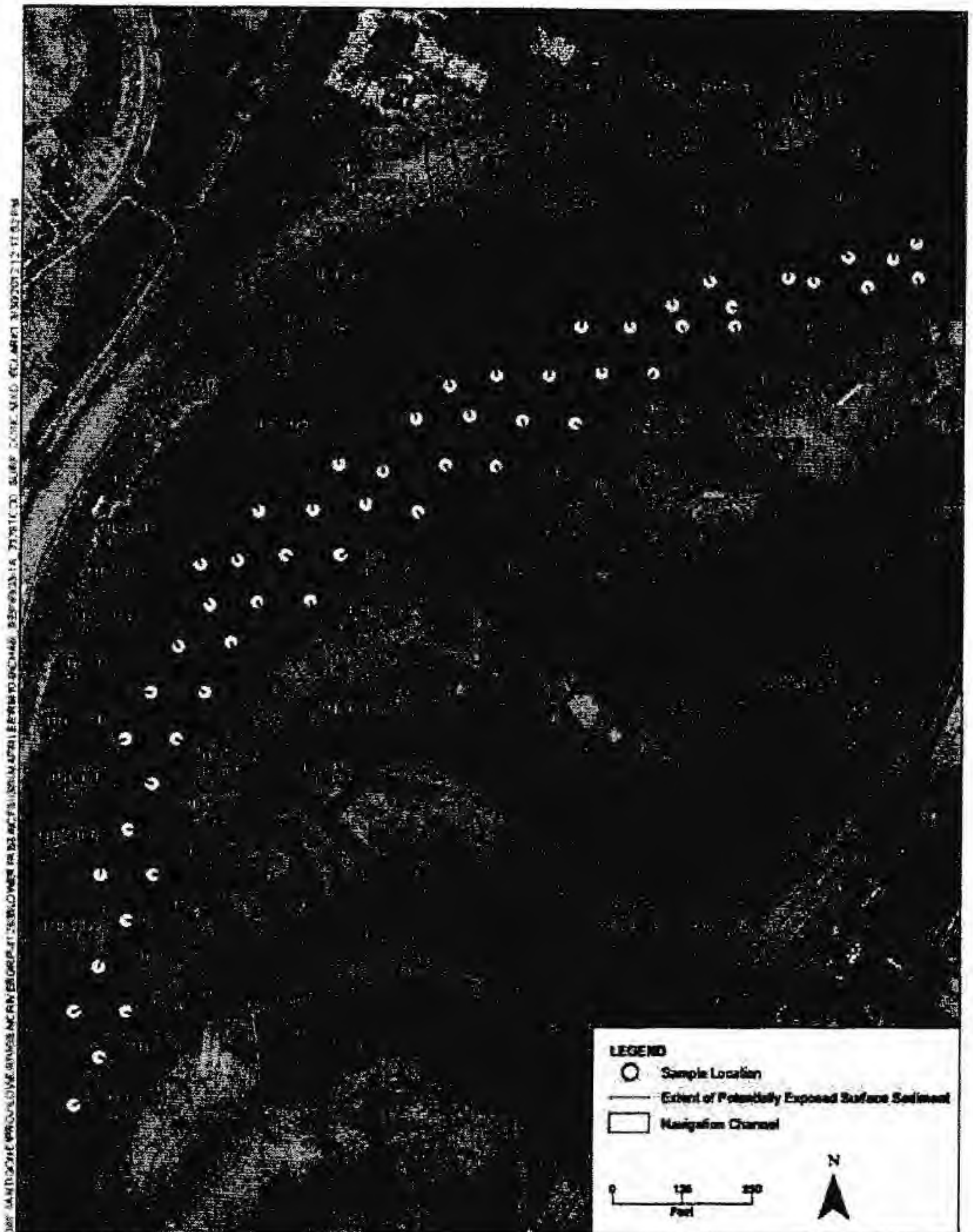

PASSAIC RIVER
Joe Job
Field
Riverside
County Park
Legend
RM 10.9 Study Area
Sampling Locations
All Sediment Samples
Mile Markers
Removal Area
Residue Sample Areas
Residue Samples
Incremental Sample
Replicate 1
Replicate 2
RIVERMILE 10.9 SAMPLE LOCATIONS

Figure 2

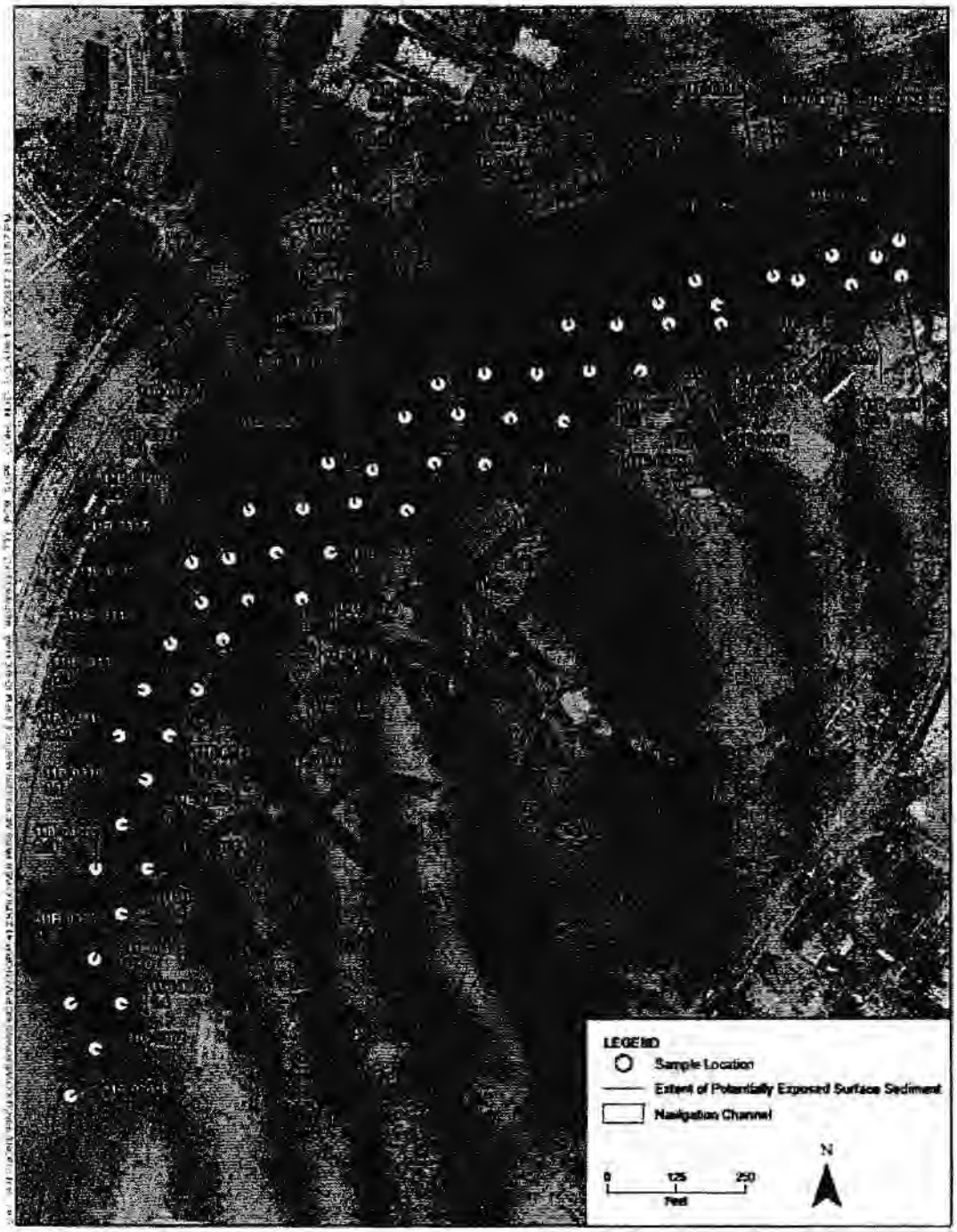


1. Orthophoto: NJGIS, 2007
2. Surficial – sample collected from 0.0 – 0.5 feet below sediment surface.
3. Sample locations shown in this figure are the primary core locations listed in Table 2-6.
4. Sample locations shown are identified as 11B-03XX, where XX is a value specific to each location.
5. Data below sample location presented as Result Qualifier (when present)
6. All values are shown in nanograms per kilogram (ng/kg)
7. TCDD – tetrachlorodibenzo-p-dioxin
8. The Extent of Potentially Exposed Surface Sediment was generated from the -2ft (NGVD29) elevation, which represents the Mean Low Water for this part of the River. The data source was the July 2011 Bathymetry Survey conducted as part of the RM 10.9 Characterization Program.
9. J – the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

FIGURE 3-1.a
2,3,7,8-TCDD
Surficial Concentration
RM 10.9 Characterization Program Summary
Lower Passaic River Study Area, New Jersey

AECOM — CH2MHILL.

Figure 3

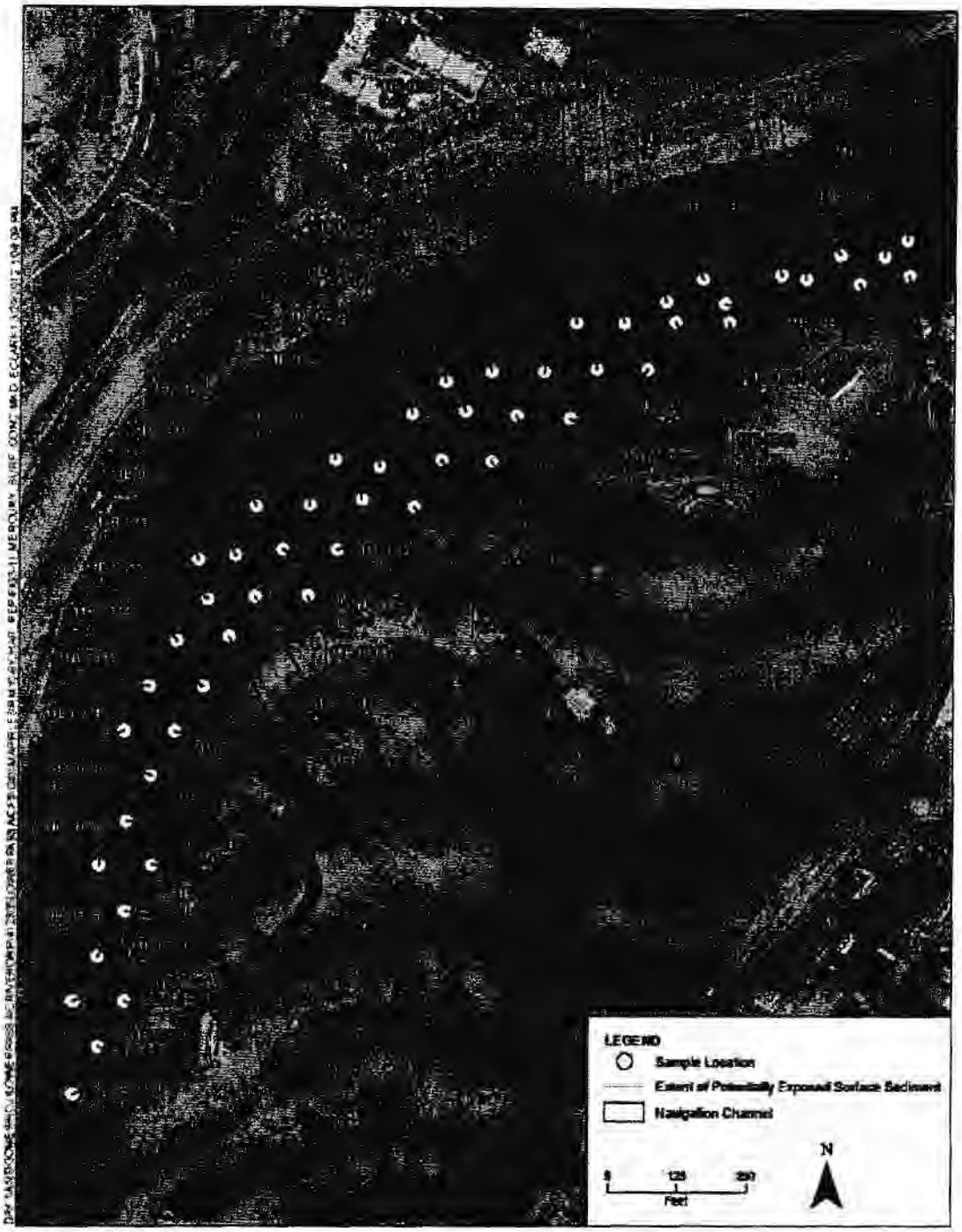


1. Orthophoto: NJGIS, 2007
2. Surficial = sample collected from 0.0 – 0.5 feet below sediment surface
3. Sample locations shown in this figure are the primary core locations listed in Table 3-5.
4. Sample locations shown are identified as 11B-0XXX, where XX is a code specific to each location.
5. Data below sample location presented as Result Condition (when present)
6. All values are shown in nanograms per kilogram (ng/kg)
7. PCB = polychlorinated biphenyl
8. Total PCB Congeners = the sum of all PCB congeners.
9. The Extent of Potentially Exposed Surface Sediment was generated from the -21 (NGVD29) elevation, which represents the Mean Low Water for this part of the river. The data source was the July 2011 Bathymetry survey conducted as part of the RM 10.9 Characterization Program.

AECOM — CH2MHILL

FIGURE 3-1.c
Total PCB Congeners
Surficial Concentration
RM 10.9 Characterization Program Summary
Lower Passaic River Study Area, New Jersey

Figure 4



1. Orthophoto: NJDEP, 2007
2. Surface = sample collected from 0.0 - 0.5 foot below sediment surface
3. Sample locations shown in this figure are the primary core locations listed in Table 2-5.
4. Sample locations shown are identified as 108-02XX, where XX is a code specific to each location.
5. Data below sample location presented as Result Qualifier (when present)
6. All values are shown in milligrams per kilogram (mg/kg)
7. The Extent of Potentially Exposed Surface Sediment was generated from the -26 (NAVD88) elevation, which represents the Mean Low Water for this part of the river. The data source was the July 2011 Bathymetry Survey conducted as part of the RM 10.9 Characterization Program.
8. J - the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

FIGURE 3-1.1
Mercury
Surficial Concentration
RM 10.9 Characterization Program Summary
Lower Passaic River Study Area, New Jersey

AECOM CH2MHILL

Figure 5

APPENDIX C

Appendix C
The RM 10.9 Sediment Deposit and Removal Area

APPENDIX D

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 2

IN THE MATTER OF:

Lower Passaic River Study Area portion of the Diamond Alkali Superfund Site

In and About Essex, Hudson, Bergen and Passaic Counties, New Jersey

Arkema Inc.; Ashland Inc.; Atlantic Richfield Company; BASF Corporation, on its own behalf and on behalf of BASF Catalysts LLC; Belleville Industrial Center; Benjamin Moore & Co.; CBS Corporation, a Delaware corporation, f/k/a Viacom Inc., successor by merger to CBS Corporation, a Pennsylvania corporation, f/k/a Westinghouse Electric Corporation; Chevron Environmental Management Company, for itself and on behalf of Texaco, Inc. and TRMI-H LLC; CNA Holdings LLC; Coats & Clark, Inc.; Coltec Industries; Conopco, Inc. d/b/a Unilever (as successor to CPC/Bestfoods, former parent of the Penick Corporation (facility located at 540 New York Avenue, Lyndhurst, NJ)); Cooper Industries, LLC; Covanta Essex Company; Croda Inc.; DII Industries, LLC; DiLorenzo Properties Company on behalf of itself and the Goldman /Goldman/DiLorenzo Properties Partnerships; E. I. du Pont de Nemours and Company; Eden Wood Corporation; Elan Chemical Company; EPEC Polymers, Inc. on behalf of itself and EPEC Oil Company Liquidating Trust; Essex Chemical Corporation; Exelis Inc. for itself and for ITT Corporation; Flexon Industries Corp.; Franklin-Burlington Plastics, Inc.; Garfield Molding Co., Inc.; General Electric Company; Givaudan

ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR REMOVAL ACTION

U.S. EPA Region 2
CERCLA Docket No. 02-2012-2015

Proceeding Under Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622

Fragrances Corporation (Fragrances North America); Goodrich Corporation on behalf of itself and Kalama Specialty Chemicals, Inc.; Hess Corporation, on its own behalf and on behalf of Atlantic Richfield Company; Hexcel Corporation; Hoffmann-La Roche Inc. on its own behalf, and on behalf of its affiliate Roche Diagnostics; Honeywell International Inc.; ISP Chemicals LLC; Kao USA Inc.; Leemilt's Petroleum, Inc. (successor to Power Test of New Jersey, Inc.), on its behalf and on behalf of Power Test Realty Company Limited Partnership and Getty Properties Corp., the General Partner of Power Test Realty Company Limited Partnership; Legacy Vulcan Corp.; Linde LLC on behalf of The BOC Group, Inc.; Lucent Technologies Inc. now known as Alcatel-Lucent USA Inc.; Mallinckrodt Inc.; National-Standard LLC; Newell Rubbermaid Inc., on behalf of itself and its wholly-owned subsidiaries Goody Products, Inc. and Berol Corporation (as successor by merger to Faber-Castell Corporation); News Publishing Australia Ltd. (successor to Chris-Craft Industries); Novelis Corporation (f/k/a Alcan Aluminum Corporation); Otis Elevator Company; Pfizer, Inc.; Pharmacia Corporation (f/k/a Monsanto Company); PPG Industries, Inc.; Public Service Electric and Gas Company; Purdue Pharma Technologies, Inc.; Quality Carriers, Inc. as successor to Chemical Leaman Tank Lines, Inc. and Quality Carriers, Inc.'s corporate affiliates and parents; Reichhold, Inc.; Revere Smelting and Refining Corporation; Safety-Kleen Envirosystems Company by McKesson, and McKesson Corporation for itself; Sequa Corporation; Seton Tanning; STWB Inc.; Sun Chemical Corporation; Tate & Lyle Ingredients Americas LLC (f/k/a A.E. Staley Manufacturing Company, including its former division Staley Chemical Company); Teva Pharmaceuticals USA, Inc. (f/k/a Biocraft Laboratories, Inc.); Teval Corporation; Textron Inc.; The Hartz Consumer Group, Inc., on behalf of The Hartz Mountain Corporation; The Newark Group; The Sherwin-Williams Company; Stanley Black & Decker, Inc.; Three County Volkswagen; Tiffany and Company; Vertellus Specialties Inc. f/k/a Reilly Industries, Inc.; Wyeth, on behalf of Shulton, Inc.

TABLE OF CONTENTS

I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and the Settling Parties whose names are set forth in Appendix A ("Settling Parties"). This Settlement Agreement provides for the performance of a removal action, including removal of sediments, capping, bench-scale tests of sediment treatment and/or decontamination technologies, and, potentially, pilot-scale tests of sediment treatment and/or decontamination technologies, by Settling Parties, and Settling Parties' reimbursement of Future Response Costs incurred by EPA at or in connection with the Work to be performed under this Settlement Agreement in the Lower Passaic River Study Area ("LPRSA") portion of the Diamond Alkali Superfund Site (the "Site") generally located in and about Essex, Hudson, Bergen and Passaic Counties, New Jersey.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622, as amended ("CERCLA").

3. EPA has notified the State of New Jersey (the "State") of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

4. EPA and Settling Parties acknowledge that the Work required by this Settlement Agreement is an important step in addressing contamination of the Passaic River, and that any other response actions for the LPRSA and Newark Bay may be the subject of separate settlement agreements. EPA and Settling Parties retain any rights that they may have with respect to such response actions. The remedy selection process for any additional response actions for the LPRSA and Newark Bay will take into consideration the Work to be performed under this Settlement Agreement.

5. EPA and Settling Parties recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Settling Parties in accordance with this Settlement Agreement do not constitute an admission of any liability. Settling Parties do not admit, and retain the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the EPA findings of fact, conclusions of law, and determinations in Sections IV and V of this Settlement Agreement. Settling Parties agree to comply with and be bound by the terms of this Settlement Agreement and further agree that they will not contest the basis or validity of this Settlement Agreement or its terms.

II. PARTIES BOUND

6. This Settlement Agreement applies to and is binding upon EPA and upon each of Settling Parties and their heirs, successors and assigns. Any change in ownership or corporate status of a Settling Party including, but not limited to, any transfer of assets or real or personal property shall not alter such Settling Party's responsibilities under this Settlement Agreement.

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

8. Settling Parties shall ensure that their contractors, subcontractors, and representatives receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Settling Parties shall be responsible for any noncompliance with this Settlement Agreement.

9. Each undersigned representative of EPA and the Settling Parties 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 EPA or Settling Parties, as the case may be, to this Settlement Agreement.

III. DEFINITIONS

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

a. "Action Memorandum/Enforcement" shall mean the EPA Action Memorandum relating to the Site signed on May 21, 2012, by the Regional Administrator, EPA Region 2, or his/her delegate, and all attachments thereto. The Action Memorandum/Enforcement is attached as Appendix B.

b. "Administrative Record" shall mean the administrative record established by EPA pursuant to Section 113(k) of CERCLA, 42 U.S.C. § 9613(k) supporting the response action that is the subject of this Settlement Agreement.

c. "Bench-Scale Tests" shall mean, individually and collectively, the bench-scale tests described in the SOW. The Bench-Scale Tests are intended to provide sufficient information for the Settling Parties to determine whether to undertake Pilot-Scale Tests.

d. "Bench-Scale Test Report" shall mean the report submitted to EPA by the Settling Parties upon completion of the Bench-Scale Tests.

e. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, *et seq.*

f. "CPG" shall mean the Lower Passaic River Study Area Cooperating Parties Group. The Settling Parties are members of the CPG.

g. "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 holiday, the period shall run until the close of business of the next working day.

h. "Effective Date" shall be the effective date of this Settlement Agreement as provided in Section XXXII.

i. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

j. "Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs on or after the Effective Date 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 costs, the costs incurred pursuant to Paragraph 32 (costs and attorneys fees and any monies paid to secure access, including the amount of just compensation), Paragraph 42 (emergency response), and Paragraph 67 (work takeover). Future Response Costs shall not include costs incurred by EPA in considering or implementing any response actions other than the Work. Further, any costs incurred by EPA in implementing, overseeing, or enforcing this Settlement Agreement in excess of $1,500,000, are not included within the definition of Future Response Costs; however, this shall not limit in any way the costs that the United States may incur implementing, overseeing, or enforcing this Settlement Agreement, and recover pursuant to any separate agreement, order, judicial proceeding, or other such mechanism.

k. "Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

l. "Lower Passaic River Study Area" or "LPRSA" shall mean that portion of the Passaic River encompassing the 17-mile stretch of the Passaic River and its tributaries from Dundee Dam to Newark Bay located in and about Essex, Hudson, Bergen and Passaic Counties, New Jersey. The LPRSA is part of the Site, as hereinafter defined.

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

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

o. "OSC" shall mean the On-Scene Coordinator designated by EPA pursuant to Paragraph 16 of this Settlement Agreement.

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

q. "Parties" shall mean EPA and Settling Parties.

r. "Pilot-Scale Tests" shall mean, individually and collectively, the pilot-scale tests that Settling Parties decide to undertake as described in the SOW.

s. "RI/FS Settlement Agreement" shall mean the Administrative Settlement Agreement and Order on Consent for Remedial Investigation and Feasibility Study, U.S. EPA Region 2, CERCLA Docket No. 02-2007-2009, effective May 8, 2007.

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

u. "RM 10.9 QAPP" shall mean the Quality Assurance Project Plan, RM 10.9 Characterization, Lower Passaic River Restoration Project, Revision 3, October 2011 (AECOM, 2011).

v. "RM 10.9 Removal Area" shall mean the approximately 5-acre area in the LPRSA within the RM 10.9 Study Area that is the subject of the Work to be performed under this Settlement Agreement. A figure showing the RM 10.9 Removal Area is attached as Appendix C.

w. "RM 10.9 Study Area" shall mean the area of sediments on the eastern side of the LPRSA that extends approximately 2,380 feet from RM 10.65 to RM 11.1, along an inside bend of the river upstream of the Delesse-Avondale Street Bridge and that includes the mudflat and point bar in the eastern half of the river channel.

x. "RPM" shall mean the Remedial Project Manager currently designated by EPA under Paragraph 34 of the RI/FS Settlement Agreement, or his or her successor or successors.

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

z. "Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent and all appendices attached hereto (listed in Section XXXI). In the event of conflict between this Settlement Agreement and any appendix, this Settlement Agreement shall control.

aa. "Settling Parties" shall mean those Parties identified in Appendix A, as amended from time to time, and their heirs, successors and assigns. Settling Parties are also signatories to the RI/FS Settlement Agreement.

bb. "Site" shall have the meaning provided for in Paragraph 14(ff) of the RI/FS Settlement Agreement.

cc. "State" shall mean the State of New Jersey.

dd. "Statement of Work" or "SOW" shall mean the statement of work for implementation of the removal action in the RM 10.9 Removal Area, as set forth in Appendix D to

this Settlement Agreement, and any modifications made thereto in accordance with this Settlement Agreement.

ee. "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); and 3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

ff. "Work" shall mean all activities Settling Parties are required to perform under this Settlement Agreement, except those required by Section XI (Record Retention).

IV. EPA FINDINGS OF FACT

11. EPA makes the following findings of fact:

a. Since at least the early 1800s, the LPRSA has been a highly industrialized waterway, receiving direct and indirect discharges from numerous industrial facilities, as well as discharges and bypasses from sewage treatment facilities and surface water runoff.

b. In 1983, hazardous substances were detected at various locations in Newark, New Jersey, including the Diamond Alkali facility located at 80 Lister Avenue.

c. EPA, pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, placed the Diamond Alkali Superfund Site on the National Priorities List, which is set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on September 21, 1984, 49 Fed. Reg. 37070. EPA has issued a General Notice Letter to each of the Settling Parties, as well as other persons who are not Settling Parties, identifying them as being potentially liable under CERCLA for the Site.

d. Pursuant to Administrative Orders on Consent with NJDEP, Diamond Shamrock Chemicals Company conducted investigations and response work for the 80 and 120 Lister Avenue portion of the Diamond Alkali Superfund Site. The investigation included the sampling and assessment of sediment contamination within the Passaic River.

e. Sampling and assessment of sediments in the lower reaches of the Passaic River revealed the presence of many hazardous substances including, but not limited to, polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (collectively, "PCDDs/PCDFs"), polychlorinated biphenyls ("PCBs"), polyaromatic hydrocarbons ("PAHs"), dichlorodiphenyl-trichloroethate ("DDT"), dieldrin, chlordane, mercury, cadmium, copper, and lead.

f. EPA issued a Record of Decision ("ROD") that set forth an interim remedy for the 80 and 120 Lister Avenue portion of the Diamond Alkali Superfund Site on September 30, 1987. Pursuant to a judicial Consent Decree with EPA and NJDEP, Occidental Chemical Corporation and Chemical Land Holdings, Inc. (now known as Tierra Solutions, Inc.), which had acquired the property shortly before the 1986 stock transaction and was a party to the Consent Decree for specific, limited purposes, agreed to implement the 1987 ROD. The interim remedy was completed in 2004.

g. Occidental Chemical Corporation, as successor to Diamond Shamrock Chemicals Company, executed an Administrative Order on Consent ("AOC"), Index No. II-CERCLA-0117 with EPA to investigate a six-mile stretch of the Passaic River whose southern boundary was the abandoned Conrail Railroad bridge located at the U.S. Army Corps of Engineers ("USACE") station designation of 40+00 to a transect six miles upriver located at the USACE station designation of 356+80. The primary objectives of the investigation were to determine: (1) the spatial distribution and concentration of hazardous substances, both horizontally and vertically in the sediments; (2) the primary human and ecological receptors of contaminated sediments; and (3) the transport of contaminated sediment.

h. The sampling results from the investigation of the six-mile area and other environmental studies demonstrated that evaluation of a larger area was necessary because sediments contaminated with hazardous substances and other potential sources of hazardous substances are present along at least the entire LPRSA. Further, the tidal nature of the Lower Passaic River has resulted in greater dispersion of hazardous substances.

i. Sampling results show concentrations of PCDDs/PCDFs, PCBs, mercury, and other substances that in some areas significantly exceed the levels that can produce toxic effects to biota. Based on the results of monitoring and research undertaken since the mid-1970s, the State of New Jersey has taken a number of steps, in the form of consumption advisories, closures, and sales bans, to limit the exposure of the fish-eating public to toxic contaminants in the lower Passaic River, Newark Bay, the Hackensack River, the Arthur Kill and the Kill Van Kull. The initial measures prohibited the sale, and advised against the consumption, of several species of fish and eel and were based on the presence of PCB contamination in the seafood. The discovery of widespread dioxin contamination in the LPRSA and Newark Bay led the State of New Jersey to issue a number of fish consumption advisories in 1983 and 1984 which prohibited the sale or consumption of all fish, shellfish, and crustaceans from the LPRSA. These State fish advisories and prohibitions are still in effect.

j. EPA commenced a remedial investigation and feasibility study ("RI/FS") encompassing the 17-mile LPRSA. In May 2007, the CPG entered into the RI/FS Settlement Agreement, under which it agreed to complete the RI/FS for the LPRSA. The work pursuant to the RI/FS Settlement Agreement is ongoing under the direction and oversight of EPA. The RI/FS is being performed under CERCLA and has been coordinated with the USACE and the New Jersey Department of Transportation, its local sponsor until 2009, and NJDEP under the authority of the Water Resources Development Act ("WRDA") in order to identify and address water quality improvement, remediation, and restoration opportunities in the LPRSA. Further, the federal and State Natural Resource Trustees (the Fish and Wildlife Service of the U.S. Department of the Interior, the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce, and NJDEP) have provided input to the process. Concurrently, EPA is performing a Focused Feasibility Study with respect to an eight-mile portion of the LPRSA.

k. Although the LPRSA ends at the mouth of Passaic River, because of the tidal nature of the Passaic River, there is reason to believe that the areal extent of contamination extends beyond that boundary. Consequently, in order to determine more accurately the boundaries of

contamination from the area studied originally under the AOC, in February 2004, EPA and Occidental Chemical Corporation entered into an AOC to perform an RI/FS for Newark Bay. This RI/FS is also ongoing.

l. As part of the RI/FS for the LPRSA, EPA and the Settling Parties have collected and analyzed sediment samples throughout the LPRSA.

m. Sediment samples collected in the RM 10.9 Study Area suggested that significantly elevated concentrations of PCDDs/PCDFs, PCBs, mercury, PAHs and other contaminants might be present in this area. In April 2011, Settling Parties proposed and EPA agreed that Settling Parties would undertake additional sampling and analysis, and perform bathymetry and hydrodynamic survey work, to characterize and develop information about the extent of contamination in the RM 10.9 Study Area. The data from the samples collected by Settling Parties confirmed that portions of the sediment located in the RM 10.9 Study Area, which includes a mudflat on the eastern shore of the Passaic River that is exposed at low tide, contains significantly elevated concentrations of PCDDs/PCDFs, PCBs, mercury, PAHs and other hazardous substances. In the first six inches of sediment, peak concentrations detected include 2,3,7,8-TCDD at 21.6 parts per billion ("ppb"), PCBs at 34 parts per million ("ppm"), mercury at 22 ppm and high molecular weight PAHs at 510 ppm. These concentrations represent some of the highest surface concentrations observed in the Passaic River. Elevated concentrations of PCDDs/PCDFs, PCBs and mercury are generally co-located in surface and subsurface sediments.

n. A park owned by Bergen County is located on the eastern shore of the River at the RM 10.9 Study Area, directly adjacent to the mudflat that forms part of the highly contaminated area of sediment. Individuals utilizing the River, including boaters, waders and anglers, could be exposed to the sediments. The sediment at the surface is also exposed to erosion and resuspension and thus may act as a source of contamination to other parts of the river, including the lower eight miles.

V. EPA CONCLUSIONS OF LAW AND DETERMINATIONS

12. Based on the EPA Findings of Fact set forth above, and the Administrative Record supporting the response action to which this settlement applies, EPA has determined that:

a. The LPRSA is a "facility" as defined in Section 101(9) of CERCLA, § 9601(9).

b. The contamination found at the RM 10.9 Study Area includes "hazardous substance(s)" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), that may present an imminent and substantial endangerment pursuant to Sections 104(a)(1) and 106(a) of CERCLA, 42 U.S.C. §§ 9604(a)(1) and 9606(a).

c. The conditions in the sediments at the RM 10.9 Study Area meet a number of the specific factors identified in 40 CFR Part 300.415(b)(2) for EPA to consider in determining the appropriateness of a removal action, including, but not limited to:

i. an actual or potential release of hazardous substances, including PCDDs/PCDFs, PCBs, mercury and PAHs, exposing nearby human populations, animals or the food chain (40 CFR §300.415(b)(2)(i));

ii. actual or potential contamination of sensitive ecosystems due to the presence of hazardous substances, including PCDDs/PCDFs, PCBs, mercury and PAHs (40 CFR §300.415(b)(2)(ii)); and

iii. high levels of hazardous substances, including PCDDs/PCDFs, PCBs, mercury and PAHs, present at or near the surface of the sediment that could migrate or be released due to weather and/or hydrologic conditions (40 CFR §300.415(b)(2)(iv)-(v)).

d. The response action to be performed pursuant to this Settlement Agreement is a removal action, pursuant to Section 101(23) of CERCLA, 42 U.S.C. 9601(23).

e. Due to the time-critical nature of this removal action an Engineering Evaluation/Cost Analysis will not be prepared.

f. The implementation of the removal action will contribute to the efficient performance of any anticipated long-term remedial action, by reducing the inventory of contaminated sediments in the Passaic River, reducing the resuspension of contaminated sediments, and providing an opportunity for Bench-Scale Tests and Pilot-Scale Tests. Data obtained from the monitoring of the protective cap, the Bench-Scale Tests of treatment and/or decontamination technologies, and if conducted, the Pilot-Scale Tests of treatment and/or decontamination technologies, may help inform the remedy selection process for the LPRSA and Newark Bay.

g. Each Settling Party is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

h. Each Settling Party is a responsible party under one or more subsections of Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

i. The conditions described in the Findings of Fact above constitute an actual or threatened "release" of a hazardous substance from a facility as defined by Section 101(22) of CERCLA, 42 U.S.C.§ 9601(22), that may present an imminent and substantial endangerment pursuant to Sections 104(a)(1) and 106(a) of CERCLA, 42 U.S.C. §§ 9604(a)(1) and 9606(a).

j. The removal action required by this Settlement Agreement is necessary to protect the public health, welfare, or the environment and, if carried out in compliance with the terms of this Settlement Agreement, will be consistent with the NCP, as provided in Section 300.700(c)(3)(ii) of the NCP. EPA has determined that the removal action will be done properly by Settling Parties and that it is in the public interest pursuant to Sections 104(a)(1) and 122(a) of CERCLA, 42 U.S.C. §§ 9401(a)(1) and 9622(a).

k. The removal and capping activities required by this Settlement Agreement are determined to be on-site for purposes of Section 121(e)(1) of CERCLA, 42 U.S.C. § 9621(e)(1).

l. Settling Parties have agreed to perform the Work and pay Future Response Costs as set forth in this Settlement Agreement and the SOW.

VI. SETTLEMENT AGREEMENT AND ORDER

13. Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the Administrative Record for this response action, it is hereby Ordered by EPA and Agreed between Settling Parties and EPA that Settling Parties shall comply with all provisions of this Settlement Agreement, including, but not limited to, all attachments to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VII. DESIGNATION OF CONTRACTOR, PROJECT COORDINATOR, AND ON-SCENE COORDINATOR

14. Settling Parties shall retain one or more contractors to perform the Work and shall notify EPA of the name(s) and qualifications of such contractor(s) within ten (10) days of the Effective Date. Settling Parties shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work at least 21 days prior to commencement of such Work. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by Settling Parties. If EPA disapproves in writing of any selected contractor, Settling Parties shall retain a different contractor and shall notify EPA of that contractor's name and qualifications within 14 days of EPA's disapproval. Any proposed contractor must demonstrate compliance 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), by submitting a copy of the proposed contractor's Quality Management Plan (QMP). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01-002, March 2001) or equivalent documentation as determined by EPA.

15. Within 10 days after the Effective Date, Settling Parties shall designate a Project Coordinator who shall be responsible for administration of all actions by Settling Parties required by this Settlement Agreement and shall submit to EPA the designated Project Coordinator's name, address, telephone number, and qualifications. To the greatest extent practicable, the Project Coordinator shall be present on Site or readily available during the conduct of the work at RM 10.9 Removal Area. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Settling Parties shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within 10 days following EPA's disapproval. Receipt by Settling Parties' Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by all Settling Parties.

16. After the Effective Date of the Settlement Agreement, EPA may designate an On-Scene Coordinator ("OSC") from the Removal Action Branch in the Emergency and Remedial Response

Division, Region 2 to oversee the Work. At EPA's discretion, the OSC will work collaboratively with the Remedial Project Manager ("RPM") to provide field oversight of the Work and review plans, reports and other documents submitted by Settling Parties.

17. EPA and Settling Parties shall have the right, subject to Paragraph 15, to change their respective designated OSC, RPM or Project Coordinator. Settling Parties shall notify EPA 10 days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notice. EPA will notify Settling Parties in writing of a change of its designated OSC or RPM, if possible 10 days before such a change.

VIII. WORK TO BE PERFORMED

18. Settling Parties shall perform all actions necessary to implement the SOW. The actions to be implemented generally include, but are not limited to, the removal and capping of sediments at the RM 10.9 Removal Area, the Bench-Scale Tests, and potentially the Pilot-Scale Tests. The Work shall be implemented as set forth in the SOW, which is attached as Appendix D.

19. Work Plan and Implementation. Within 45 days after the Effective Date Settling Parties shall submit to EPA a work plan for the performance of the sediment removal and capping, combined with a basis of design report ("Removal/Capping Work Plan/BODR"). Once approved, or approved with modifications, the Removal/Capping Work Plan/BODR, the schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Settlement Agreement.

a. The Removal/Capping Work Plan/BODR shall include plans and an expeditious schedule for implementation of all removal and capping tasks identified in the SOW.

b. Upon approval of the Removal/Capping Work Plan/BODR by EPA, Settling Parties shall implement the activities required under such Work Plan. Settling Parties shall submit to EPA all plans, submittals, or other deliverables required under each such approved Removal/Capping Work Plan/BODR in accordance with the approved schedule for EPA's review and approval. Settling Parties shall not commence any Work except in conformance with the terms of this Settlement Agreement. Settling Parties shall not commence implementation of any Work Plan developed hereunder until receiving written EPA approval.

20. Bench-Scale Testing. Within 1 day after the Effective Date, Settling Parties shall submit the Bench-Scale Test Quality Assurance Project Plan ("QAPP") for each sediment treatment vendor that will conduct Bench-Scale Tests as described in the SOW. Within 90 days after EPA has received the Bench-Scale Test QAPPs, Settling Parties shall submit to EPA the Bench-Scale Test Report, as set forth in the SOW.

21. Health and Safety Plan. Within 30 days after the Effective Date, Settling Parties shall submit for EPA review and comment a plan that ensures the protection of the public health and safety during performance of Work under this Settlement Agreement. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June

1992). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. Settling Parties shall incorporate all changes to the plan recommended by EPA and shall implement the plan during the pendency of the removal action. Settling Parties may submit an amendment to the Health and Safety Plan submitted pursuant to the RI/FS Settlement Agreement to satisfy this requirement.

22. Quality Assurance and Sampling.

a. Settling Parties shall use quality assurance, quality control, and chain of custody procedures for all Bench-Scale Test, design, compliance, and monitoring samples in accordance with "EPA Requirements for Quality Assurance Project Plans (QA/R5)" (EPA/240/B-01/003, March 2001, reissued May 2006), "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), and subsequent amendments to such guidelines upon notification by EPA to Settling Parties of such amendment. Amended guidelines shall apply only to procedures conducted after such notification.

b. Prior to the commencement of any sampling or monitoring project under this Settlement Agreement, Settling Parties shall submit to EPA for approval a QAPP that is consistent with the SOW and the NCP. Any such QAPP may take the form of an addendum to the RM 10.9 QAPP, or other approved QAPP for LPRSA sampling. Settling Parties shall ensure that EPA personnel and its authorized representatives are allowed access at reasonable times to all laboratories utilized by Settling Parties in implementing this Settlement Agreement. Settling Parties shall ensure that the laboratories they utilize for the analysis of samples taken pursuant to this Settlement Agreement perform all analyses according to accepted EPA methods. Accepted EPA methods consist of those methods that are documented in the "USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, ILM05.4," and the "USEPA Contract Laboratory Program Statement of Work for Organic Analysis, SOM01.2," and any amendments made thereto during the course of the implementation of this Settlement Agreement; however, upon approval by EPA, Settling Parties may use other analytical methods that are as stringent as or more stringent than the CLP-approved methods. Settling Parties shall ensure that all laboratories they use for analysis of samples taken pursuant to this Settlement Agreement participate in an EPA or EPA-equivalent quality assurance/quality control ("QA/QC") program. Settling Parties shall use only laboratories that have a documented Quality System that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001, reissued May 2006) or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP") as meeting the Quality System requirements. Settling Parties shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Settlement Agreement are conducted in accordance with the procedures set forth in the QAPP approved by EPA.

23. Upon request, Settling Parties shall allow split or duplicate samples to be taken by EPA or its authorized representatives. Settling Parties shall notify EPA not less than 14 days in advance of any sample collection activity unless shorter notice is agreed to by EPA. EPA shall have the right to collect additional samples, in which case EPA will notify Settling Parties and upon request, allow split or duplicate samples to be taken by Settling Parties if the Settling Parties are able to do so in a timely manner.

24. Settling Parties shall submit to EPA copies of the results of all sampling and/or tests or other data obtained or generated by or on behalf of Settling Parties with respect to the Site and/or the implementation of this Settlement Agreement unless EPA agrees otherwise.

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

26. Community Involvement. EPA will conduct community involvement activities in accordance with the Lower Passaic River Restoration Project and Newark Bay Study Final Community Involvement Plan (June 2006) ("CIP"). Although implementation of the CIP is the responsibility of EPA, Settling Parties shall assist by providing information for dissemination to the public and participating in public meetings. The extent of Settling Parties' involvement in community involvement activities is left to the discretion of EPA. All Settling Parties-conducted community involvement activities pursuant to the CIP will be subject to oversight by EPA.

27. Removal and Capping Monitoring and Operation and Maintenance Plan. In accordance with the Removal/Capping Work Plan schedule, or as otherwise directed by EPA, Settling Parties shall submit a Long-Term Monitoring and Operation and Maintenance Plan, which shall meet the requirements for post-removal site control consistent with Section 300.415(*l*) of the NCP and OSWER Directive No. 9360.2-02. Upon EPA approval, Settling Parties shall implement such Plan and shall provide EPA with documentation of all post-removal site control arrangements.

28. Reporting.

a. Settling Parties shall submit a monthly written progress report to EPA concerning actions undertaken pursuant to this Settlement Agreement by the 15th day of the following month, commencing after the date of receipt of EPA's approval of the Work Plan until termination of this Settlement Agreement, unless otherwise directed in writing by the RPM. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

b. Settling Parties shall submit copies of all plans, reports or other submissions required by this Settlement Agreement, the Statement of Work, or any approved work plan, in electronic form or, upon request, in paper form. One copy of each report shall be submitted to the following:

U.S. Environmental Protection Agency
2890 Woodbridge Avenue
Edison, New Jersey 08837
Attn: Lower Passaic River Study Area On-Scene Coordinator

Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region 2
290 Broadway, 19th Floor
New York, New York 10007-1866
Attn: Lower Passaic River Study Area Remedial Project Manager

Office of Regional Counsel
U.S. Environmental Protection Agency, Region 2
290 Broadway, 17th Floor
New York, New York 10007-1866
Attn: Lower Passaic River Study Area Site Attorney

New Jersey Department of Environmental Protection
Site Remediation Program
401 E. State Street
P.O. Box 028
Trenton, New Jersey 08265-0028
Attn: Lower Passaic River Study Area Project Manager

29. Final Report. Within 90 days after completion of all Work required by this Settlement Agreement, Settling Parties shall submit for EPA review and approval a final report summarizing the actions taken to comply with this Settlement Agreement. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports." The final report shall include a good faith estimate of total costs or a statement of actual costs incurred in complying with the Settlement Agreement, a listing of quantities and types of materials removed off-Site or handled on-Site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the removal action (*e.g.*, manifests, invoices, bills, contracts, and permits). The final report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

"Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

30. Off-Site Shipments.

a. Settling Parties 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 the OSC and RPM. 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.

i. Settling Parties 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. Settling Parties 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.

ii. The identity of the receiving facility and state will be determined by Settling Parties following the award of any contract for the removal and off-Site disposal of Waste Material. Settling Parties shall provide the information required by Paragraph 30(a) and 30(b) as soon as practicable after the award of any such contract and before the Waste Material is actually shipped.

b. Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-Site location, Settling Parties shall obtain 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. Settling Parties 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.

IX. SITE ACCESS

31. If any portion of the Site, or any other property where access is needed to implement this Settlement Agreement, is owned or controlled by any of the Settling Parties, such Settling Parties shall, commencing on the Effective Date, provide EPA and the State, and their representatives, including contractors, with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to this Settlement Agreement.

32. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Settling Parties, Settling Parties shall use their best efforts to obtain all necessary access agreements within 30 days after the Effective Date, or as otherwise specified in writing by the RPM. Settling Parties shall immediately notify EPA if after using their best efforts they are unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Settling Parties shall describe in writing their efforts to obtain access. If Settling Parties cannot obtain access agreements, EPA may either obtain access for Settling Parties, or assist Settling Parties in gaining access, to the extent necessary to effectuate the response actions described in this Settlement Agreement, using such means as EPA deems appropriate. Settling Parties shall reimburse EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XV (Payment of Response Costs).

33. Notwithstanding any provision of this Settlement Agreement, EPA retains all of its access authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

X. ACCESS TO INFORMATION

34. Settling Parties shall provide to EPA, upon request, copies of all non-privileged documents and information within their possession or control or that of their contractors or agents relating to the Work 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. Settling Parties shall also make available to EPA, at reasonable times and places, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

35. Settling Parties may assert business confidentiality claims covering part or all of the documents or information submitted to EPA under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when they are submitted to EPA, or if EPA has notified Settling Parties that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Settling Parties. Settling Parties shall segregate and clearly identify all documents and information submitted under this Settlement Agreement for which Settling Parties assert confidentiality claims.

36. Settling Parties 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 Settling Parties assert such a privilege in lieu of providing documents, they shall provide EPA with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the contents of the document, record, or information; and 6) the privilege asserted by Settling Parties. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

37. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site.

XI. RECORD RETENTION

38. Until 6 years after Settling Parties' receipt of EPA's notification pursuant to Section XXIX (Notice of Completion of Work), each Settling Party shall preserve and retain at least one copy of all non-identical copies of records and documents (including records or documents 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 corporate retention policy to the contrary. Until 6 years after Settling Parties' receipt of EPA's notification pursuant to Section XXIX (Notice of Completion of Work),

Settling Parties shall also instruct their contractors and agents to preserve all documents, records, and information of whatever kind, nature or description relating to performance of the Work.

39. At the conclusion of this document retention period, Settling Parties shall notify EPA at least 90 days prior to the destruction of any such records or documents, and, upon request by EPA, Settling Parties shall deliver any such records or documents to EPA. Settling Parties 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 Settling Parties assert such a privilege, they shall provide EPA with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or information; and 6) the privilege asserted by Settling Parties. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

40. Each Settling Party hereby certifies individually that to the best of its knowledge and belief, after thorough inquiry, and except for the documents listed on Appendix F, 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 since notification of potential liability by EPA or the State or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA requests for information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

XII. COMPLIANCE WITH OTHER LAWS

41. Settling Parties shall perform all actions required pursuant to this Settlement Agreement in accordance with all applicable state and federal laws and regulations except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). No local, state or federal permits shall be required for any portion of the Work conducted entirely on-Site (which means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action) if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. If any portion of the Work is to be conducted off-Site and requires a federal or state permit or approval, Settling Parties shall submit timely and complete applications and take all other action necessary to obtain and comply with such permits or approvals. In accordance with 40 C.F.R. § 300.415(j), all on-Site actions required pursuant to this Settlement Agreement shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state environmental or facility siting laws. Settling Parties shall identify ARARs in the Removal and Capping Work Plan/BODR subject to EPA approval.

XIII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

42. In the event of any action or occurrence during performance of the Work which causes or threatens a release of Waste Material from the RM 10.9 Study Area that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Settling

Parties shall immediately take all appropriate action. Settling Parties 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. Settling Parties shall also immediately notify the OSC, or, in the event of his/her unavailability, the EPA Regional Emergency 24-hour telephone number 732-548-8730 of the incident or RM 10.9 Study Area conditions. In the event that Settling Parties fail to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Settling Parties shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XV (Payment of Response Costs).

43. In addition, in the event of any release of a hazardous substance from the RM 10.9 Study Area, Settling Parties shall immediately notify the OSC at 732-548-8730 and the National Response Center at (800) 424-8802. Settling Parties shall submit a written report to EPA 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.*

XIV. AUTHORITY OF ON-SCENE COORDINATOR

44. The OSC shall be responsible for overseeing Settling Parties' implementation of this Settlement Agreement, assisted by the RPM. The OSC shall have the authority vested in an OSC by the NCP, including the authority to halt, conduct, or direct any Work required by this Settlement Agreement, or to direct any other removal action undertaken at the RM 10.9 Removal Area. Absence of the OSC from the RM 10.9 Removal Area shall not be cause for stoppage of work unless specifically directed by the OSC. If EPA does not designate an OSC pursuant to Paragraph 16, the RPM shall have the authority lawfully vested in an OSC by the NCP, and this Settlement Agreement.

XV. PAYMENT OF RESPONSE COSTS

45. Payments for Future Response Costs.

a. Settling Parties shall pay EPA all Future Response Costs not inconsistent with the NCP. On a periodic basis, EPA will send Settling Parties a bill requiring payment that includes a Regionally-prepared cost summary, which includes direct and indirect costs incurred by EPA and its contractors. Settling Parties shall make all payments within 30 days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 47 of this Settlement Agreement.

b. Settling Parties shall make all payments required by this Paragraph by wire transfer directed to the Federal Reserve Bank of New York with the following information:

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

c. At the time of payment, Settling Parties shall send notice that payment has been made, referencing the name and address of the party making payment, Docket No. CERCLA-02-2012-2015 and EPA Site/Spill ID number 02-96 to:

Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region 2
290 Broadway, 19th Floor
New York, New York 10007-1866
Attn: Lower Passaic River Study Area Remedial Project Manager

Office of Regional Counsel
U.S. Environmental Protection Agency, Region 2
290 Broadway, 17th Floor
New York, New York 10007-1866
Attn: Lower Passaic River Study Area Site Attorney

U.S. Environmental Protection Agency
Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268
Attn: Finance (Richard Rice)
acctsreceivable.cinwd@epa.gov

d. The total amount to be paid by Settling Parties pursuant to Paragraph 45(a) shall be deposited by EPA in the Diamond Alkali Site/Lower Passaic River Study Area Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

46. In the event that payments for Future Response Costs are not made within 30 days of Settling Parties' receipt of a bill, Settling Parties shall pay Interest on the unpaid balance. The Interest on Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Settling Parties' failure to make timely payments under this Section, including but not limited to, payment of stipulated penalties pursuant to Section XVIII.

47. Settling Parties may contest payment of any Future Response Costs billed under Paragraph 45 if they determine that EPA has made a mathematical error or has allocated the costs to the wrong Operable Unit account, or if they believe EPA incurred excess costs as a direct result of an EPA action that was inconsistent with the NCP or outside the definition of Future Response Costs. Such objection shall be made in writing within 30 days of receipt of the bill and must be sent to the RPM and the Site attorney. Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, Settling Parties shall within the 30-day period pay all uncontested Future Response Costs to EPA in the manner described in Paragraph 45. Simultaneously, Settling Parties shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the State of New Jersey and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. Settling Parties shall send to the RPM and the Site attorney 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, Settling Parties shall initiate the Dispute Resolution procedures in Section XVI (Dispute Resolution). If EPA prevails in the dispute, within 5 days of the resolution of the dispute, Settling Parties shall pay the sums due (with accrued interest) to EPA in the manner described in Paragraph 45. If Settling Parties prevail concerning any aspect of the contested costs, Settling Parties shall pay that portion of the costs (plus associated accrued interest) for which it did not prevail to EPA in the manner described in Paragraph 45. Settling Parties 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 XVI (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Settling Parties' obligation to reimburse EPA for its Future Response Costs.

XVI. DISPUTE RESOLUTION

48. 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.

49. If Settling Parties object to any EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs, they shall notify EPA in writing of their objection(s) within 14 days of such action, unless the objection(s) has/have been resolved informally. EPA and Settling Parties shall have 30 days from EPA's receipt of Settling Parties' written objection(s) to resolve the dispute through formal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA. Such extension may be granted orally but must be confirmed in writing.

50. Any agreement reached by the parties pursuant to this Section shall be in writing and shall, upon signature by both 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 Director, Emergency and Remedial Response Division, will issue a written decision on the dispute to Settling Parties. EPA's decision shall be incorporated into and become an enforceable

part of this Settlement Agreement. Settling Parties' 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, Settling Parties shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs.

XVII. FORCE MAJEURE

51. Settling Parties agree to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed or prevented by a *force majeure*. For purposes of this Settlement Agreement, a *force majeure* is defined as any event arising from causes beyond the control of Settling Parties, or of any entity controlled by Settling Parties, including but not limited to their contractors and subcontractors, which delays or prevents performance of any obligation under this Settlement Agreement despite Settling Parties' best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work, increased cost of performance, or a failure to attain performance standards/action levels set forth in the Action Memorandum/Enforcement.

52. 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, Settling Parties shall notify EPA orally within 48 hours of when Settling Parties first knew that the event might cause a delay in or prevent performance. Within five (5) days thereafter, Settling Parties shall provide to EPA in writing an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Settling Parties' 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 Settling Parties, 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 Settling Parties 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.

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

XVIII. STIPULATED PENALTIES

54. Settling Parties shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 55 and 56 for failure to comply with the requirements of this Settlement Agreement

specified below, unless excused under Section XVII (*Force Majeure*). "Compliance" by Settling Parties shall include completion of the activities under this Settlement Agreement or any work plan or other plan approved under this Settlement Agreement identified below in accordance with all applicable requirements of law, this Settlement Agreement, the SOW, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement.

55. Stipulated Penalty Amounts - Work.

a. The following stipulated penalties shall accrue per violation per day for any noncompliance identified in Paragraph 55(b):

Penalty Per Violation Per Day	Period of Noncompliance
$1,500.00	1st through 14th day
$2,500.00	15th through 30th day
$5,000.00	31st day and beyond

b. Compliance Milestones

•Submittal of Removal and Capping Work Plan (Paragraph 19)
•Submittal of Removal and Capping Monitoring and Operation and Maintenance Plan (Paragraph 27)
•Compliance with Work Milestones as Identified in the SOW

56. Stipulated Penalty Amounts - Reports. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports or other written documents pursuant to Paragraphs 28 and 29:

Penalty Per Violation Per Day	Period of Noncompliance
$500.00	1st through 14th day
$1,500.00	15th through 30th day
$2,500.00	31st day and beyond

57. In the event that EPA assumes performance of a substantial portion or all of the Work pursuant to Paragraph 67 of Section XX, Settling Parties shall be liable for a stipulated penalty in the amount of $5,000,000. EPA agrees that any penalty assessed against Settling Parties under this Paragraph shall be reduced, if appropriate, by the percentage of Work completed by Settling Parties. This paragraph shall not apply to circumstances described in Paragraph 32 of the Settlement Agreement in which EPA performs Work because Settling Parties are unable to obtain access.

58. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: 1) with respect to a deficient submission under Section VIII (Work to be Performed), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Settling Parties of any deficiency; and 2) with respect to a decision by the Director,

Emergency and Remedial Response Division, under Paragraph 50 of Section XVI (Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the Director, Emergency and Remedial Response Division issues a final decision regarding such dispute. Nothing in this Settlement Agreement shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

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

60. All penalties accruing under this Section shall be due and payable to EPA within 30 days of Settling Parties' receipt from EPA of a demand for payment of the penalties, unless Settling Parties invoke the dispute resolution procedures under Section XVI (Dispute Resolution). All payments to EPA under this Section shall be paid in accordance with the procedures set forth in Paragraph 45, and shall indicate that the payment is for stipulated penalties. At the time of payment, Settling Parties shall send notice that payment has been made to the EPA Project Coordinator, Site Attorney and Cincinnati Finance Center in accordance with Paragraph 45(b).

61. The payment of penalties shall not alter in any way Settling Parties' obligation to complete performance of the Work required under this Settlement Agreement.

62. Penalties shall continue to accrue during any dispute resolution period, but need not be paid until 15 days after the dispute is resolved by agreement or by receipt of EPA's decision.

63. If Settling Parties fail to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Settling Parties shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 60. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Settling Parties' 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) and 122(*l*) of CERCLA, 42 U.S.C. §§ 9606(b) and 9622(*l*), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 106(b) or 122(*l*) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided in this Section, except in the case of a willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX, Paragraph 67. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XIX. COVENANT NOT TO SUE BY EPA

64. In consideration of the actions that will be performed and the payments that will be made by Settling Parties under the terms of this Settlement Agreement, and except as otherwise specifically

provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Settling Parties pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work and Future Response Costs. This covenant not to sue shall take effect upon the Effective Date and is conditioned upon the complete and satisfactory performance by Settling Parties of all obligations under this Settlement Agreement, including, but not limited to, payment of Future Response Costs pursuant to Section XV. This covenant not to sue extends only to Settling Parties and does not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

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

66. The covenant not to sue set forth in Section XIX above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement Agreement is without prejudice to, all rights against Settling Parties with respect to all other matters, including, but not limited to:

a. claims based on a failure by Settling Parties to meet a requirement of this Settlement Agreement;

b. liability for costs not included within the definition of Future Response Costs;

c. liability for performance of response action other than the Work;

d. criminal liability;

e. liability for 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 LPRSA; and

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

67. Work Takeover.

a. In the event EPA determines that Settling Parties have (i) ceased implementation of any portion of the Work, or (ii) are seriously or repeatedly deficient or late in the performance of the Work, or (iii) are implementing the Work in a manner which may cause an endangerment to human health or the environment, EPA may issue a written notice ("Work Takeover Notice") to Settling Parties. Any Work Takeover Notice issued by EPA will specify the grounds upon which such notice was issued and will provide Settling Parties a period of 10 days within which to remedy the circumstances giving rise to EPA's issuance of such notice.

b. If, after expiration of the 10-day notice period specified in Paragraph 67(a), Settling Parties have not remedied to EPA's satisfaction the circumstances giving rise to EPA's issuance of the relevant Work Takeover Notice, EPA may at any time thereafter assume the performance of all or any portions of the Work as EPA deems necessary ("Work Takeover"). EPA shall notify Settling Parties in writing (which writing may be electronic) if EPA determines that implementation of a Work Takeover is warranted under this Paragraph.

c. Settling Parties may invoke the procedures set forth in Section XVI (Dispute Resolution), to dispute EPA's implementation of a Work Takeover under Paragraph 67(b). However, notwithstanding Settling Parties' invocation of such dispute resolution procedures and during the pendency of any such dispute, EPA may in its sole discretion commence and continue a Work Takeover under Paragraph 67(b) until the earlier of (i) the date that Settling Parties remedy, to EPA's satisfaction, the circumstances giving rise to EPA's issuance of the relevant Work Takeover Notice or (ii) the date that a final decision is rendered in accordance with Section XVI (Dispute Resolution), requiring EPA to terminate such Work Takeover.

d. After commencement and for the duration of any Work Takeover, EPA shall have immediate access to and benefit of any performance guarantee(s) in an amount sufficient to fund the estimated cost of the remaining Work pursuant to Section XXVI of this Settlement Agreement, in accordance with the provisions of Paragraph 85 of that Section. If and to the extent that EPA is unable to secure the resources guaranteed under any such performance guarantee(s) and Settling Parties fail to remit a cash amount up to but not exceeding the amount needed to fund the estimated cost of the remaining Work, all in accordance with the provisions of Paragraph 85, any unreimbursed costs incurred by EPA in performing Work under the Work Takeover shall be considered Future Response Costs that Settling Parties shall pay pursuant to Section XVI (Payment of Response Costs).

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

XXI. COVENANT NOT TO SUE BY SETTLING PARTIES

69. Except as specifically set forth in Paragraph 69(d) below, Settling Parties covenant not to sue and agree not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, Future Response Costs, or this Settlement Agreement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of the Work, including any claim under the United States Constitution, the State Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Work or Future Response Costs.

d. These covenants not to sue shall not extend to, and Settling Parties specifically reserve, (1) any claims or causes of action in contribution pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, against the United States as a "covered person" (within the meaning of Section 107(a) of CERCLA, 42 U.S.C. § 9607(a)) with respect to this Settlement Agreement, based solely on actions by the United States other than the exercise of the government's authority under CERCLA or WRDA; and (2) any claims or causes of action pursuant to the Tucker Act, 28 U.S.C. § 1491, against the United States with respect to this Settlement Agreement based solely on contracts that do not address or relate to the exercise of the government's authority under CERCLA or WRDA.

e. These covenants not to sue shall not apply in the event the United States brings a cause of action or issues an order pursuant to the reservations set forth in Paragraphs 66(b), (c), (e), (f) and (g) but only to the extent that Settling Parties' claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

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

XXII. OTHER CLAIMS

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

72. Except as expressly provided in Section XIX (Covenant Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Settling Parties or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

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

XXIII. CONTRIBUTION

74.a. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and that Settling Parties are entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), or as may be otherwise provided by law for "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement Agreement are the Work and Future Response Costs.

b. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which Settling Parties have, as of the Effective Date, resolved their liability to the United States for the Work and Future Response Costs.

c. Nothing in this Settlement Agreement precludes the United States or Settling Parties 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 in this Settlement Agreement diminishes the right of the United States, pursuant to Section 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

XXIV. INDEMNIFICATION

75. Settling Parties shall indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Settling Parties, their officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Settling Parties agree to pay the United States all costs incurred by the United States, including but not limited to attorneys fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Settling Parties, their officers, directors, employees, agents, contractors, subcontractors and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Settling Parties in carrying out activities pursuant to this Settlement Agreement. Neither Settling Parties nor any such contractor shall be considered an agent of the United States.

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

77. Settling Parties waive all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between any one or more of Settling Parties and any person

for performance of Work on or relating to the LPRSA, including, but not limited to, claims on account of construction delays. In addition, Settling Parties shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between any one or more of Settling Parties and any person for performance of Work on or relating to the LPRSA, including, but not limited to, claims on account of construction delays.

XXV. INSURANCE

78. At least 7 days prior to commencing any on-Site work under this Settlement Agreement, Settling Parties shall secure, and shall maintain for the duration of this Settlement Agreement, comprehensive general liability insurance and automobile insurance with limits of $5 million dollars, combined single limit, naming EPA as an additional insured. The insurance required by this paragraph may be provided under the policies of insurance obtained by Settling Parties under the RI/FS Settlement Agreement. Within the same time period, Settling Parties shall provide EPA with certificates of such insurance and a copy of each insurance policy. Settling Parties 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, Settling Parties 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 Settling Parties in furtherance of this Settlement Agreement. If Settling Parties demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Settling Parties need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXVI. FINANCIAL ASSURANCE

79. Within 30 days of the Effective Date, Settling Parties shall establish and maintain financial security for the benefit of EPA in the amount of $20 million in one or more of the following forms, in order to secure the full and final completion of Work by Settling Parties:

a. a surety bond unconditionally guaranteeing payment and/or performance of the Work;

b. one or more irrevocable letters of credit, payable to or at the direction of EPA, issued by financial institution(s) acceptable in all respects to EPA;

c. a trust fund administered by a trustee that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency;

d. a policy of insurance issued by an insurance carrier acceptable in all respects to EPA, which ensures the payment and/or performance of the Work;

e. a written guarantee to pay for or perform the Work provided by one or more parent companies of Settling Parties, or by one or more unrelated companies that have a substantial business

relationship with at least one of Settling Parties; including a demonstration that any such guarantor company satisfies the financial test requirements of 40 C.F.R. Part 264.143(f); and/or

f. a demonstration of sufficient financial resources to pay for the Work made by one or more of Settling Parties, which shall consist of a demonstration that any such Setting Party satisfies the requirements of 40 C.F.R. Part 264.143(f).

80. Any and all financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section (including, without limitation, the instrument(s) evidencing such assurances) are inadequate, Settling Parties shall, within 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 79, above. In addition, if at any time EPA notifies Settling Parties that the anticipated cost of completing the Work has increased, then, within 30 days of such notification, Settling Parties shall obtain and present to EPA for approval a revised form of financial assurance (otherwise acceptable under this Section) that reflects such cost increase. Settling Parties' inability to demonstrate financial ability to complete the Work shall in no way excuse performance of any activities required under this Settlement Agreement.

81. If Settling Parties seek to ensure completion of the Work through a guarantee pursuant to Subparagraph 79(e) or 79(f) of this Settlement Agreement, Settling Parties shall (i) demonstrate to EPA's satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f); and (ii) resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the Effective Date or such other date as agreed by EPA, to EPA. For the purposes of this Settlement Agreement, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the dollar amount to be used in the relevant financial test calculations shall be the current cost estimate of $20 million for the Work at the Site plus any other RCRA, CERCLA, TSCA, or other federal environmental obligations financially assured by the relevant Settling Party or guarantor to EPA by means of passing a financial test.

82. If, after the Effective Date, Settling Parties can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 79 of this Section, Settling Parties may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining Work to be performed. Settling Parties shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security after receiving written approval from EPA. In the event of a dispute, Settling Parties may seek dispute resolution pursuant to Section XVI (Dispute Resolution). Settling Parties may reduce the amount of security in accordance with EPA's written decision resolving the dispute.

83. Settling Parties may change the form of financial assurance provided under this Section at any time, upon notice to and prior written approval by EPA, provided that EPA determines that the new form of assurance meets the requirements of this Section. In the event of a dispute, Settling Parties may change the form of the financial assurance only in accordance with the written decision resolving the dispute.

84. Settling Parties have selected, and EPA has approved, as an initial financial assurance, a trust fund pursuant to a Trust Agreement attached hereto as Appendix E. Within 20 days of the Effective Date of this Settlement Agreement, Settling Parties shall execute or otherwise finalize all instruments or other documents required in order to make the selected financial assurance legally binding in a form substantially identical to the documents attached hereto as Appendix E, and the Trust Agreement shall thereupon be fully effective. Within 60 days of the Effective Date of this Settlement Agreement, Settling Parties shall submit all executed and/or otherwise finalized instruments or other documents required in order to make the selected Trust Agreement legally binding to the RPM with a copy to the Diamond Alkali Superfund Site/Lower Passaic River Study Area Attorney.

85. The commencement of any Work Takeover pursuant to Paragraph 67 of this Settlement Agreement shall trigger EPA's right to receive the benefit of any financial assurance provided pursuant to Paragraph 79(a), (b), (c), (d), or (e), in accordance with Paragraph 67(d) and at such time EPA shall have immediate access to resources guaranteed under any such financial assurance, whether in cash or in kind, as needed to continue and complete the Work assumed by EPA under the Work Takeover. If for any reason EPA is unable to promptly secure the resources guaranteed under any such financial assurance, whether in cash or in kind, necessary to continue and complete the Work assumed by EPA under the Work Takeover, or in the event that the financial assurance involves a demonstration of satisfaction of the financial test criteria pursuant to Paragraph 79(f), Settling Parties shall immediately upon written demand from EPA deposit into an account specified by EPA, in immediately available funds and without setoff, counterclaim, or condition of any kind, a cash amount up to but not exceeding the estimated cost of the remaining Work to be performed as of such date, as determined by EPA.

XXVII. MODIFICATIONS

86. The OSC, in consultation with the RPM, may make modifications to any plan or schedule or Statement of Work that will not materially expand or alter the scope of the Work in writing or by oral direction. Any oral modification will be memorialized in writing by EPA promptly, but shall have as its effective date the date of the OSC's oral direction. Any other requirements of this Settlement Agreement may be modified in writing by mutual agreement of the parties.

87. If Settling Parties seek permission to deviate from any approved work plan or schedule or Statement of Work, Settling Parties' Project Coordinator shall submit a written request to EPA for approval outlining the proposed modification and its basis. Settling Parties may not proceed with the requested deviation until receiving oral or written approval from the OSC pursuant to Paragraph 86. Settling Parties may request minor field modifications within the scope of the SOW without submission of a formal amendment to the Work Plan, and the OSC may authorize minor field modifications to the approved Work Plan provided that any such modifications are consistent with the SOW, and the modifications are memorialized in writing.

88. No informal advice, guidance, suggestion, or comment by the OSC or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Settling Parties shall relieve Settling Parties of their obligation to obtain any formal approval required

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

XXVIII. ADDITIONAL WORK

89. If EPA determines that additional removal activities not included in an approved plan, but that will not materially expand or alter the scope of the Work described in Paragraph 19 or the SOW, are necessary with respect to the RM 10.9 Removal Area to protect public health, welfare, or the environment, EPA will notify Settling Parties of that determination. Unless otherwise stated by EPA, within 30 days of receipt of notice from EPA that additional removal activities are necessary to protect public health, welfare, or the environment, Settling Parties shall submit for approval by EPA a Work Plan for the additional Work. The plan shall conform to the applicable requirements of Section VIII (Work to Be Performed) of this Settlement Agreement. Upon EPA's approval of the plan pursuant to Section VIII, Settling Parties shall implement the plan for additional removal actions in accordance with the provisions and schedule contained therein. If Settling Parties object to the additional Work, Settling Parties may seek dispute resolution pursuant to Section XVI. This Section does not alter or diminish the OSC's authority to make oral modifications to any plan or schedule pursuant to Section XXVII (Modifications). Notwithstanding the above, EPA and Settling Parties may agree to use or adapt this form of Settlement Agreement, including some or all of the Appendices, in connection with future work that EPA and Settling Parties may agree to undertake in the LPRSA.

XXIX. NOTICE OF COMPLETION OF WORK

90. When EPA determines, after EPA's review of the Final Report, that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including post-removal site controls, payment of Future Response Costs, and record retention, EPA will provide written notice to Settling Parties. If EPA determines that any such Work has not been completed in accordance with this Settlement Agreement, EPA will notify Settling Parties, provide a list of the deficiencies, and require that Settling Parties modify the Work Plan if appropriate in order to correct such deficiencies. Settling Parties shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the EPA notice. Failure by Settling Parties to implement the approved modified Work Plan shall be a violation of this Settlement Agreement.

XXXI. INTEGRATION/APPENDICES

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

Appendix A is the list of Settling Parties.
Appendix B is the Action Memorandum/Enforcement
Appendix C is the map showing the RM 10.9 Removal Area.
Appendix D is the Statement of Work.
Appendix E is the Trust Agreement.
Appendix F is the List of Documents.

XXXII. EFFECTIVE DATE

92. This Settlement Agreement shall be effective on the day that it is signed by the Regional Administrator or her delegatee. The undersigned representatives of Settling Parties certify that they are fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind the parties they represent to this document.

It is so ORDERED and Agreed this 18th day of June, 2012.

BY: _____ DATE: June 18, 2012
Walter Mugdan, Director
Emergency and Remedial Response Division
Region 2
U.S. Environmental Protection Agency

EFFECTIVE DATE: 6/18/2012