

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 2

IN THE MATTER OF:

The Newtown Creek Superfund Site
Kings County and Queens County,
New York City, New York

Phelps Dodge Refining Corporation,
Texaco, Inc.,
BP Products North America Inc.,
The Brooklyn Union Gas Company
d/b/a National Grid NY, and
ExxonMobil Oil Corporation,

Respondents.

**ADMINISTRATIVE SETTLEMENT
AGREEMENT AND ORDER ON CONSENT
FOR FOCUSED FEASIBILITY STUDY**

U.S. EPA Region 2
CERCLA Docket No. CERCLA-02-2019-2011
Proceeding Under Sections 104, 107 and 122 of the
Comprehensive Environmental Response,
Compensation, and Liability Act, as amended, 42
U.S.C. § § 9604, 9607 and 9622.

576176



TABLE OF CONTENTS

I.	JURISDICTION AND GENERAL PROVISIONS	3
II.	PARTIES BOUND	4
III.	STATEMENT OF PURPOSE	4
IV.	DEFINITIONS	5
V.	FINDINGS OF FACT	8
VI.	CONCLUSIONS OF LAW AND DETERMINATIONS	11
VII.	SETTLEMENT AGREEMENT AND ORDER	11
VIII.	DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS	11
IX.	WORK TO BE PERFORMED	14
X.	EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS	19
XI.	QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION	21
XII.	SITE ACCESS	23
XIII.	COMPLIANCE WITH OTHER LAWS	24
XIV.	RETENTION OF RECORDS	24
XV.	DISPUTE RESOLUTION	25
XVI.	STIPULATED PENALTIES	25
XVII.	FORCE MAJEURE	27
XVIII.	PAYMENT OF FUTURE RESPONSE COSTS	28
XIX.	COVENANT NOT TO SUE BY EPA	30
XX.	RESERVATIONS OF RIGHTS BY EPA	30
XXI.	RESERVATION OF RIGHTS BY RESPONDENTS	32
XXII.	COVENANT NOT TO SUE BY RESPONDENTS	32
XXIII.	OTHER CLAIMS	33
XXIV.	CONTRIBUTION PROTECTION	33
XXV.	INDEMNIFICATION	34
XXVI.	INSURANCE	35
XXVII.	FINANCIAL ASSURANCE	35
XXVIII.	INTEGRATION/APPENDICES	36
XXIX.	ADMINISTRATIVE RECORD	37
XXX.	EFFECTIVE DATE AND SUBSEQUENT MODIFICATION	37
XXXI.	NOTICE OF COMPLETION OF WORK	37

ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR FOCUSED FEASIBILITY STUDY

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 Phelps Dodge Refining Corporation, Texaco, Inc., BP Products North America Inc., The Brooklyn Union Gas Company d/b/a National Grid NY, and ExxonMobil Oil Corporation ("Respondents"). This Settlement Agreement concerns the preparation and performance of a focused feasibility study ("FFS") by Respondents for operable unit number 3 ("OU3") at the Newtown Creek Superfund site, which effort consists of performing, pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), a focused feasibility study for OU3 of the Newtown Creek Study Area (Creek Miles 0-2). In the FFS, Respondents will evaluate the potential for an early, interim response action and, if such an early action is determined to be appropriate, remedial alternatives for such a response action will be developed. The performance of the FFS will include development of action-specific performance metrics to evaluate the effectiveness of any such early response action and help inform whether any further response action is warranted for OU3. The Study Area, as further defined below, includes a facility encompassing the body of water known as Newtown Creek which is situated at the border of the boroughs of Brooklyn (Kings County) and Queens (Queens County) in the City of New York, State of New York. This Settlement Agreement also concerns the payment by Respondents of Future Response Costs, as defined herein.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. § § 9604, 9607 and 9622 ("CERCLA"). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (Jan. 29, 1987), and further delegated to Regional Administrators on May 11, 1994, by EPA Delegation Nos. 14 14 C and 14-14-D. These authorities were further redelegated by the Regional Administrator of EPA Region 2 to the Director of the Emergency and Remedial Response Division in Region 2, which Division was recently renamed the Superfund and Emergency Management Division in a Regional realignment, and the relevant authorities were redelegated accordingly on March 27, 2019.

3. Other than implementing the OU3 Focused Feasibility Study Work Plan ("FFS Work Plan") activities that are required to be performed by Respondents pursuant to this Settlement Agreement, and except to the extent otherwise provided in Paragraphs 39 or 44 of this Settlement Agreement, Respondents are not required by the terms of this Settlement Agreement to fund or perform any remedial or removal actions selected by EPA for OU3, any other portion of the Study Area, or the Site. Any remedial or removal actions selected for OU3, any other portion of the Study Area, or the Site may be the subject of a future settlement between EPA, Respondents, and/or other persons not a party to this Settlement Agreement or may otherwise be the subject of separate enforcement actions by EPA.

4. EPA and Respondents recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondents in accordance with this

Settlement Agreement do not constitute an admission of any liability. Respondents do not admit, and they retain the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of fact, conclusions of law and determinations in Sections V and VI of this Settlement Agreement. Respondents 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 in any action to enforce its provisions.

II. PARTIES BOUND

5. This Settlement Agreement applies to and is binding upon EPA and upon Respondents and their successors and assigns. Any change in status of a Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter Respondents' responsibilities under this Settlement Agreement.

6. Respondents 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 of the Respondents to implement the requirements of this Settlement Agreement, the remaining Respondents shall complete all such requirements.

7. Respondents shall ensure that their contractors, subcontractors, and representatives receive a copy of and comply with this Settlement Agreement. Respondents shall be responsible for any noncompliance with this Settlement Agreement by Respondents, their contractors, subcontractors, or representatives.

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

III. STATEMENT OF PURPOSE

9. In entering into this Settlement Agreement, the objectives of EPA and Respondents are as follows:

a. Determine whether an EA remedy for CM 0-2 is appropriate as an interim action or whether the selection of a remedy for this portion of the creek should be deferred pending completion of the OU1 RI/FS and Record of Decision (ROD).

b. Develop and evaluate potential remedial alternatives for OU3 through the FFS process, if determined to be appropriate. The FFS Report will form the basis for the U.S. Environmental Protection Agency (EPA) to document selection of an EA remedy for CM 0-2 in an OU3 ROD.

c. Develop action-specific performance metrics for use, post-implementation of any OU3 remedy, in a performance monitoring plan designed to evaluate the impact/performance of any such EA remedy.

The Parties acknowledge that, notwithstanding any early action that may be selected as a result of the Work under this Settlement Agreement, additional work in CM 0-2 may be necessary in the future should additional response actions be selected regarding OU3, any other portion of the Study Area, or the Site.

10. The Work conducted under this Settlement Agreement is subject to approval by EPA and shall provide all appropriate and necessary information to assess conditions affecting OU3 as against certain positions of Respondents, set forth in the Statement of Work attached as Appendix A to this Settlement Agreement, regarding the conditions in CM 0-2 of the Study Area, and to evaluate alternatives, to the extent it is determined to be necessary and appropriate, to select a remedy that will be consistent with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 (“NCP”). Respondents shall conduct all Work under this Settlement Agreement in compliance with CERCLA, the NCP, and all applicable EPA guidances, policies, and procedures, including, without limitation, EPA Region 2’s “Clean and Green Policy” which may be found at:

<https://www.epa.gov/greenercleanups/epa-region-2-clean-and-green-policy>.

IV. DEFINITIONS

11. 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. “2011 AOC” shall mean the Administrative Settlement Agreement and Order on Consent for Remedial Investigation and Feasibility Study (U.S. EPA Region 2 CERCLA Docket No. CERCLA-02-2011-2011) issued by EPA in July 2011 to Phelps Dodge Refining Corporation, Texaco, Inc., BP Products North America Inc., The Brooklyn Union Gas Company d/b/a National Grid NY, ExxonMobil Oil Corporation, and the City of New York, and requiring the respondents to that order to perform, under EPA oversight, a remedial investigation and feasibility study for the Study Area.

b. “CERCLA” shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § § 9601-9675.

c. “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.

d. “Effective Date” shall be the effective date of this Settlement Agreement as provided in Section XXX.

e. “EPA” shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

f. “FFS Work Plan” shall mean the EPA-approved OU3 Focused Feasibility Study Work Plan to be developed pursuant to this Settlement Agreement and consistent with the Statement of Work, which will result in the creation and submission of a focused feasibility study report (“FFS Report”), for EPA approval. The FFS Work Plan may be modified in a manner consistent with the FFS Work Plan and/or this Settlement Agreement. Upon EPA approval thereof, the FFS Work Plan shall be deemed incorporated as an enforceable part of this Settlement Agreement.

g. “Future Response Costs” shall mean all costs not inconsistent with the NCP, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other deliverables pursuant to this Settlement Agreement, in overseeing implementation of the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including, but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, Agency for Toxic Substances and Disease Registry (“ATSDR”) costs if any, the costs incurred pursuant to Paragraph 59.a (including, but not limited to, costs and attorney’s fees and any monies paid to secure access, including, but not limited to, the amount of just compensation), Paragraph 44.a (emergency response), and Paragraph 87 (Work Takeover).

h. “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.

i. “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.

j. “Newtown Creek” shall mean Newtown Creek proper and its five branches (or tributaries) known as Dutch Kills, Maspeth Creek, Whale Creek, East Branch and English Kills, as well as the sediments below the water, and the water column above the sediments.

k. “Newtown Creek Superfund Site Special Account” shall mean the special account within the EPA Hazardous Substance Superfund, established for the Site by EPA pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3), and the 2011 AOC.

l. “Newtown Creek Superfund Site” or “Site” shall mean the Study Area and the areal extent of the contamination associated with the Study Area including facilities upland of the Study Area that are sources of contamination to the Study Area.

m. “NYSDEC” shall mean the New York State Department of Environmental Conservation and any successor departments or agencies of the State.

n. “Operable Unit 3” or “OU3” shall mean the portion of the OU 1 Study Area defined as being from the mouth of Newtown Creek at the East River (referred to as Creek Mile 0) to two miles up, or into, Newtown Creek (Creek Mile 2), excluding the Whale

Creek and Dutch Kills tributaries of Newtown Creek. The OU3 portion of the Newtown Creek Study Area is depicted generally on the map attached as Appendix B.

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

p. “Parties” shall mean EPA and Respondents.

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

r. “Respondents” shall mean those signatories to this Settlement Agreement who are listed in the caption, as may be amended from time to time.

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

t. “Settlement Agreement” shall mean this Administrative Settlement Agreement and Order on Consent including, the Statement of Work and any other appendix attached hereto, and all documents incorporated by reference into this document including, without limitation, EPA-approved submissions. EPA-approved submissions (other than progress reports) are incorporated into and become a part of the Settlement Agreement upon approval by EPA. In the event of conflict between this Administrative Settlement Agreement and Order on Consent and any appendix or other incorporated documents, this Administrative Settlement Agreement and Order on Consent shall control.

u. “Statement of Work” or “SOW” shall mean the document describing the activities Respondents must perform to develop the FFS Work Plan for OU3 for the Site, as set forth in the SOW attached as Appendix A to this Settlement Agreement. The Statement of Work is incorporated into this Settlement Agreement and is an enforceable part of this Settlement Agreement, as are any modifications made thereto in accordance with this Settlement Agreement.

v. “Study Area” shall mean the portion of the Newtown Creek Superfund Site that encompasses the body of water known as Newtown Creek, situated at the border of the boroughs of Brooklyn (Kings County) and Queens (Queens County) in the City of New York and the State of New York, roughly centered at the geographic coordinates of 40° 42’ 54.69” north latitude (40.715192°) and 73° 55’ 50.74” west longitude (-73.930762°), having an approximate 3.8-mile reach, including Newtown Creek proper and its five branches (or tributaries) known respectively as Dutch Kills, Maspeth Creek, Whale Creek, East Branch and English Kills, as well as the sediments below the water, and the water column above the sediments, up to and including the landward edge of the shoreline, and including also any bulkheads or riprap containing the water body, except where no bulkhead or riprap exists, then the Study Area shall extend to the ordinary high water mark, as defined in 33 C.F.R. § 328.3(e), of Newtown Creek, and the areal extent of the contamination from such area, but not including upland areas beyond the landward edge of the shoreline (notwithstanding that such upland areas may subsequently be identified as sources of contamination to the water body and its sediments or that such upland areas may

be included within the scope of the Newtown Creek Superfund Site as listed pursuant to Section 105(a)(8) of CERCLA). The Study Area is depicted generally on the map attached as Appendix C.

w. “State” shall mean the State of New York.

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

y. “Waste Material” shall mean (1) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); and (3) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

z. “Work” shall mean all activities Respondents are required to perform under this Settlement Agreement, except those required by Section XIV (Retention of Records).

aa. “Working Day” shall mean any day of the week excluding Saturdays, Sundays and federal holidays as defined at 5 U.S.C. § 6103.

V. FINDINGS OF FACT

12. The Site includes Newtown Creek, a body of water located in Kings County and Queens County in the City of New York. Newtown Creek is a tributary of the East River and it itself includes five branches (or tributaries) along a 3.8-mile reach. Historically, Newtown Creek drained the uplands of western Long Island and flowed through wetlands and marshes. However, due to heavy industrial development and governmental activities dating from the 1800’s, formerly wet areas have been filled, Newtown Creek has been channelized, and its banks have been stabilized with bulkheads and rip rap. The historic development has resulted in changes in the nature of Newtown Creek from a natural drainage condition to one that is governed largely by engineered and institutional systems.

13. The area around Newtown Creek has a history of extensive industrial development dating back to the 1800’s. By the 1850’s, the area surrounding and adjacent to Newtown Creek had become highly industrialized. By 1870, more than 50 petroleum refineries were located along its banks, and by the close of the 19th century, the Creek was lined with oil refineries and petrochemical plants, fertilizer and glue factories, copper-smelting and fat-rendering plants, shipbuilders, sugar refineries, hide tanning plants, canneries, governmental facilities, sawmills, paint works, and lumber and coal yards. During its industrial past, Newtown Creek was crowded with commercial vessels, including large boats bringing in raw materials and fuel and taking out oil, fat, varnish, chemicals, and metals.

14. The majority of the shoreline area of Newtown Creek is currently zoned for heavy manufacturing and industrial use. A portion, near the mouth of the Creek, is zoned for residential use. Currently, the predominant land use around Newtown Creek (with the exception of a small area near the mouth which is zoned for residential use), includes light industrial facilities, petroleum bulk storage facilities, recycling facilities including for asphalt, metals and construction and demolition waste, manufacturing facilities, warehouses, transportation and transportation

infrastructure including rail and highways, utility facilities, and municipal facilities which include a large municipal Water Pollution Control Plant. The majority of the upland area bordering Newtown Creek is within one of three Industrial Business Zones of the City of New York, and the majority of Newtown Creek has also been designated by the City of New York as one of the City's six Significant Maritime and Industrial Areas.

15. The exodus of heavy industry from New York City, the enactment and enforcement of the CWA (including the required development and implementation under administrative orders issued by NYSDEC to the City of New York, of ten watershed-based long term control plans, including one such long term control plan for Newtown Creek, and an additional long term control plan for the open waters of New York City, including the East River), and other federal, State and City environmental laws and regulations, have led to a reduction in discharges of hazardous substances, pollutants, and contaminants into the waters of New York City, including the Study Area. Despite those reductions, it is anticipated that the Study area will be impacted by ongoing contributions of hazardous substances from various sources.

16. Numerous upland facilities within the Newtown Creek watershed have been identified by NYSDEC for inclusion under various New York State programs, including the Brownfield Cleanup Program, the Environmental Restoration Program, the State Superfund Program, and the Voluntary Cleanup Program. In addition, there are 15 facilities within the Newtown Creek watershed that are listed as RCRA Large Quantity Generator facilities including landfills, solid waste and hazardous waste facilities and facilities with underground storage tanks holding chemicals or petroleum products.

17. EPA conducted an Expanded Site Investigation of Newtown Creek in 2009 as part of CERCLA's Hazard Ranking System scoring process. Based on this investigation, which was focused on Newtown Creek itself and not its tributaries, EPA concluded that metals, volatile organic compounds, and semi-volatile organic compounds (including PCBs and PAHs) were present in Creek sediments at concentrations above levels in nearby locations in the Atlantic basin. The variety and distribution of the detected constituents suggests that they originated from a variety of sources.

18. Potential sources of hazardous substances to Newtown Creek include a wide range of current and historical industrial and municipal discharges, including the following: (a) historic and ongoing industrial discharges from industries along the banks and within the Newtown Creek watershed from among other routes, overland flow, permitted and unpermitted point sources, groundwater, gas ebullition, and shoreline erosion; (b) incidental releases or other discharges during loading or unloading of barges servicing Creekside industrial or governmental facilities, (c) historic placement of fill by both industry and municipalities along the banks of Newtown Creek for disposal or for filling marshland or swamps, (d) historic placement of dredge material during dredging and channelization activities, (e) historic discharge of sanitary sewage and industrial wastes, (f) historic and ongoing releases of combined storm, sanitary, and industrial discharges through combined sewage overflow systems into Newtown Creek, and (g) releases from navigational shipping and maritime traffic. It is anticipated that Newtown Creek will continue to be impacted by ongoing contributions of hazardous substances, from a combination of the aforementioned sources.

19. The water in Newtown Creek is currently classified by the NYSDEC as Class SD saline surface water with a protected use of fish survival only. The Creek does not presently meet parameters for that protected use, e.g., dissolved oxygen. NYSDEC defines class SD as, "...water that, because of natural or manmade conditions, cannot meet the requirements for primary and secondary contact recreation and fish propagation." As such, the waters of Newtown Creek are not suitable for primary (e.g., swimming) or secondary (e.g., boating or fishing) direct contact recreation. However, current recreational uses of the Newtown Creek include kayaking and there are existing and planned waterfront access points. Human exposure to contaminated sediments and waters of Newtown Creek through recreational use, use of the shoreline areas by workers, residents, recreationists or trespassers or through consumption of fish or other biota impacted by contamination associated with Newtown Creek, could cause adverse health effects that were evaluated in the site-wide remedial investigation being performed pursuant to the 2011 AOC, and effects of exposure of contaminated sediments and water to flora and fauna were also evaluated. The Baseline Human Health Risk Assessment has resulted in a determination that consuming fish and crabs from Newtown Creek may cause adverse human health effects in excess of EPA's acceptable risk range. A Baseline Ecological Risk Assessment was also developed pursuant to the 2011 AOC to evaluate the effects of exposure to site-related contaminants on flora and fauna at the Study Area. That assessment indicates that contaminants present in the Study Area are toxic to and/or may cause adverse effects to ecological receptors, including benthic invertebrates, benthic macroinvertebrates, fish, crab, bivalves, and wildlife, such as birds, that eat benthic invertebrates and fish. The remedial investigation evaluated the full range of CERCLA hazardous substances, and those contaminants that were determined to pose risks to human health and the environment are defined as contaminants of concern.

20. Each Respondent currently owns or operates, or, at the time of disposal of hazardous substances, owned or operated a facility or facilities adjacent or in close proximity to the Study Area from which there was a release or there is a threat of release of hazardous substances to OU3 or to the Study Area. Hazardous substances of the type released from such facilities have been identified in the sediments of Newtown Creek.

21. EPA has evaluated information obtained in connection with the Site and has determined on the basis of such information that hazardous substances were released and/or there is a threat of release from facilities that are currently owned or operated or that were, at the time of disposal of hazardous substances owned or operated by each of the Respondents or by predecessor companies, or that a Respondent is a person who arranged for disposal of hazardous substances at the Site from which hazardous substances were released or threaten to be released into the Study Area, or is a person who transported hazardous substances to a facility selected by such person within the Site from which hazardous substances were released or threaten to be released into the Study Area. Hazardous substances of the type released from such facilities have been identified in the sediments of Newtown Creek.

22. The Site (which includes the Study Area, including OU3) was proposed for inclusion on the National Priorities List pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, on September 23, 2009, by publication in the Federal Register at 74 Federal Register 48511, and the Site was added to the List by rule published in the Federal Register on September 29, 2010, at 75 Federal Register 59983.

VI. CONCLUSIONS OF LAW AND DETERMINATIONS

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

24. 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 in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

25. The contamination found at the Study Area, as identified in the Findings of Fact, above, includes “hazardous substances” as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

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

27. Each Respondent is a person who currently, or at the time of disposal of hazardous substances, owned or operated facilities within the Site, or is a person who arranged for disposal of hazardous substances at the Site. Each Respondent therefore may be liable under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

28. Each Respondent is a responsible party for the purposes of Sections 104, 107 and 122 of CERCLA, 42 U.S.C. § § 9604, 9607 and 9622.

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

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

VII. SETTLEMENT AGREEMENT AND ORDER

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

VIII. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS

32. Selection of Contractors, Personnel. All Work performed under this Settlement Agreement shall be under the direction and supervision of qualified personnel. Respondents have identified, and EPA approves, Anchor QEA as its contractor for the performance of the Work. If Respondents wish to change their designated contractor during the performance of the Work, they shall submit to EPA for approval the name and qualifications of a new, proposed designated

contractor and of the key personnel, including subcontractors, consultants, and laboratories, to be used in carrying out such Work prior to dismissing the designated contractor. With respect to any new proposed contractor, Respondents shall demonstrate that that proposed contractor has a quality system which complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995, or most recent version), by submitting a copy of 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 (Reissued May 2006)) or equivalent documentation as determined by EPA. The qualifications of the key personnel undertaking the Work for Respondents shall be subject to EPA's review, for verification that such persons meet minimum technical background and experience requirements. If EPA disapproves in writing of any key person's technical qualifications, Respondents shall notify EPA of the identity and qualifications of the replacements) within 14 days of the written notice. If EPA subsequently disapproves of the replacement, EPA reserves the right to terminate this Settlement Agreement and to conduct a complete FFS, and to seek reimbursement for costs and penalties from Respondents. During the course of the FFS, Respondents shall notify EPA in writing of any changes or additions to the key personnel used to carry out such Work, providing their names, titles, and qualifications. EPA shall have the same right to disapprove changes and additions to personnel as it has hereunder regarding the initial notification of identified personnel by Respondents.

33. Respondents' Project Coordinator and Alternate Project Coordinator. Respondents have identified and EPA approves Tom Schadt as its Project Coordinator. Respondents have identified, and EPA approves David Haury as its Alternate Project Coordinator (for instances when the Project Coordinator is unavailable). The Project Coordinator shall be responsible for administration of all actions by Respondents required under this Settlement Agreement. If Respondents wish to change their Project Coordinator or Alternate Project Coordinator, they shall submit to EPA the name, address, telephone number, and qualifications of a new, proposed Project Coordinator and/or Alternate Project Coordinator for approval prior to dismissing the Project Coordinator and/or Alternate Project Coordinator. The proposed Project Coordinator and Alternate Project Coordinator shall not be an attorney for Respondents. EPA retains the right to disapprove of the proposed Project Coordinator or Alternate Project Coordinator. If EPA disapproves of a proposed Project Coordinator or Alternate Project Coordinator, Respondents shall submit to EPA for approval a different proposed Project Coordinator or Alternate Project Coordinator and shall notify EPA of that person's name, address, telephone number and qualifications within 14 days following EPA's disapproval. After approval, receipt by Respondents' Project Coordinator or Alternate Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by Respondent.

34. EPA has designated the following individuals as its Project Coordinators for the Site:

Caroline Kwan
Remedial Project Manager
Special Projects Branch
Superfund and Emergency Management Division
United States Environmental Protection Agency, Region 2
290 Broadway, 20th Floor
New York, NY 10007-1866
212-637-4275
kwan.caroline@epa.gov

Mark Schmidt
Remedial Project Manager
Special Projects Branch
Superfund and Emergency Management Division
United States Environmental Protection Agency, Region 2
290 Broadway, 20th Floor
New York, NY 10007-1866
212-637-3886
schmidt.mark@epa.gov

Anne Rosenblatt
Remedial Project Manager
Special Projects Branch
Superfund and Emergency Management Division
United States Environmental Protection Agency, Region 2
290 Broadway, 20th Floor
New York, NY 10007-1866
212-637-4347
rosenblatt.anne@epa.gov

EPA will notify Respondents of changes of its designated Project Coordinators.

35. EPA's Project Coordinators shall have the authority lawfully vested in a Remedial Project Manager ("RPM") and On-Scene Coordinator ("OSC") by the NCP. In addition, EPA's Project Coordinators shall have the authority, consistent with the NCP, to halt any Work required by this Settlement Agreement, and to take any necessary response action when she/he determines that conditions at the Study Area may present an immediate endangerment to public health or welfare or the environment. The absence of the EPA Project Coordinators from the area under study pursuant to this Settlement Agreement shall not be cause for the stoppage or delay of Work.

36. EPA shall arrange for a qualified person to assist in its oversight and review of the conduct of the FFS, 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 not to modify the FFS Work Plan.

IX. WORK TO BE PERFORMED

37. Respondents shall conduct the FFS in accordance with the provisions of this Settlement Agreement, the attached Statement of Work, the FFS Workplan when approved by EPA and incorporated into this Settlement Agreement, CERCLA, the NCP, and EPA guidance, including, to the extent applicable, “Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA” (OSWER Directive # 9355.3 01, October 1988 or subsequently issued guidance), “Guidance for Data Usability in Risk Assessment” (OSWER Directive #9285.7-05, October 1990, or subsequently issued guidance), “EPA Contaminated Sediment Guidance” (OSWER Directive #9355.0-85, December 2005, or subsequently issued guidance), and guidance referenced therein, and guidance referenced in the Statement of Work or FFS Workplan. During the FFS, Respondents shall identify and evaluate (based on treatability testing, where appropriate) potential alternatives for remedial action, as necessary, to prevent, mitigate, or otherwise respond to or remedy the release or threatened release of hazardous substances, pollutants, or contaminants at or from the Study Area. The alternatives evaluated must include, but shall not be limited to, the range of alternatives described in the NCP and the SOW, and shall include remedial actions that utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In evaluating any alternatives, Respondents shall address the factors required to be taken into account by Section 121 of CERCLA, 42 U.S.C. § 9621, and Section 300.430(e) of the NCP, 40 C.F.R. § 300.430(e).

38. All written documents prepared by Respondents pursuant to this Settlement shall be submitted by Respondents in accordance with Section X (EPA Approval of Plans and Other Submissions) with the exception of progress reports and the Health and Safety Plan. All such submittals will be reviewed and approved by EPA in accordance with Section X (EPA Approval of Plans and Other Submissions). Respondents shall implement all EPA-approved, conditionally-approved, or modified deliverables.

39. Submission and Modification of the FFS Work Plan.

a. Within 60 days after the Effective Date, Respondents shall submit to EPA, for review and approval, a draft FFS Work Plan substantively consistent with the SOW.

b. If at any time during the FFS process, Respondents identify a need for modifications to the EPA-approved FFS Work Plan, Respondents shall submit a memorandum documenting the need for proposed modifications to an EPA Project Coordinator within ten days of identification. In addition, if at any time during the FFS process, Respondents identify a need for additional data, Respondents shall submit a memorandum documenting the basis for a need for additional data to an EPA Project Coordinator within ten days of identification. EPA in its discretion will determine whether the additional data is necessary to be collected by Respondents for this FFS and whether such data will be incorporated into plans, reports and other deliverables for this FFS. Notwithstanding the foregoing, Respondents retain the right to collect and submit data for any other purpose.

c. In the event of significant, unanticipated or changed circumstances at OU3 or at the Study Area affecting the Work, Respondents shall notify an EPA Project Coordinator by telephone within 24 hours of discovery of the unanticipated or changed circumstances. In the event that EPA determines that the unanticipated or changed circumstances warrant changes in the FFS Work Plan, EPA will notify Respondents in writing of the need to modify or amend the FFS Work Plan. Respondents shall perform the FFS Work Plan as modified or amended.

d. EPA may determine that in addition to tasks defined in the initially approved FFS Work Plan, other additional Work may be necessary to accomplish the objectives of the FFS as set forth in Paragraph 9, above, and the SOW, consistent with CERCLA and the NCP, and EPA will provide Respondents with an explanation of any such determination in writing. Subject to an objection as set forth below in Paragraph 39(e), Respondents agree to perform these Work activities related to the FFS in addition to those required by the initially approved FFS Work Plan, including any modifications approved by EPA, if EPA determines that such actions are necessary for a complete FFS.

e. Respondents shall confirm their willingness to perform the additional Work in writing to EPA within 15 days of receipt of the EPA request. If Respondents object to any modification determined by EPA to be necessary pursuant to this Paragraph, Respondents may seek dispute resolution pursuant to Section XV (Dispute Resolution). The FFS Work Plan shall be modified in accordance with the final resolution of the dispute.

f. Respondents shall complete the additional Work according to the standards, specifications, and schedule set forth or approved by EPA in a written modification to the FFS Work Plan or written FFS Work Plan supplement, consistent with the outcome of any dispute raised pursuant to Section XV. EPA reserves the right to conduct the Work itself at any point, to seek reimbursement from Respondents, and/or to seek any other appropriate relief.

g. Nothing in this Paragraph shall be construed to limit EPA's authority, in separate enforcement actions, to require performance of further response actions at OU3, other portions of the Study Area, or the Site.

40. Off-Site Shipment of Waste Material. Respondents shall, prior to any off site shipment of any Waste Material from the Study Area 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 an EPA designated Project Coordinator. However, this notification requirement shall not apply to any off site shipments when the total volume of all such shipments does not exceed 10 cubic yards.

a. Respondents 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. Respondents shall notify the state in which the planned receiving facility is located of major

changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state or to a facility in another state.

b. The identity of the receiving facility and state will be determined by Respondents following the award of the contract for the FFS. Respondents shall provide the information required by Paragraphs 40.a and 40.c as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

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

41. Meetings. Respondents shall make presentations at, and participate in, meetings as requested by EPA during the initiation, conduct, and completion of the FFS. In addition to discussion of the technical aspects of and substantive issues relating to the FFS, topics may include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion and provide Respondents with reasonable notice of such scheduled meetings. Respondents may also request such meetings.

42. Progress Reports. In addition to the other deliverables set forth in this Settlement Agreement, the Respondents shall provide written monthly progress reports to EPA with respect to actions and activities undertaken pursuant to this Settlement Agreement. The progress reports shall be submitted on or before the tenth day of each month following the effective date of this Settlement Agreement. The Respondents' obligation to submit progress reports continues until EPA gives the Respondents written notice that it may cease submitting the progress reports as set forth under this Settlement Agreement. At a minimum, these progress reports shall include the following:

a. A description of all actions which have been taken toward achieving compliance with this Settlement Agreement during the prior month

b. A description of any violations of this Settlement Agreement and other problems encountered during the month;

c. A description of all corrective actions taken in response to any violations or problems which occurred during the prior month;

d. A description of all activities and submittals planned for the following two months;

e. Identification of all data collected or received by Respondents during the prior month;

f. A description of all plans, actions, and data scheduled;

g. An estimate of percentage of the Work required by this Settlement Agreement that has been completed as of the date of the progress report;

h. An identification of all delays encountered or anticipated that may affect the future schedule for performance of the Work, and all efforts made by Respondents to mitigate delays or anticipated delays; and

i. A description of all communications that the Respondents have had with state, or federal authorities related to the Work.

43. Respondents shall submit copies of all plans, reports, or other submissions required pursuant to this Settlement Agreement as set forth below. Upon request by EPA, Respondents shall submit in electronic form all portions of any plan, report or other deliverable Respondents are required to submit pursuant to the provisions of this Settlement Agreement. Any electronic submissions must be in a format that is compatible with EPA software and in database files and sizes to be specified by EPA. Reports should be submitted to the following:

a. Four copies (2 bound, 1 unbound and 1 electronic) to:

United States Environmental Protection Agency, Region 2
Superfund and Emergency Management Division
Special Projects Branch: Newtown Creek Superfund Site
290 Broadway, 20th Floor
New York, NY 10007-1866

Attention: Newtown Creek Superfund Site Remedial Project Manager

b. One copy (bound), to:

Chief, New York/Caribbean Superfund Branch
Office of Regional Counsel
United States Environmental Protection Agency, Region 2
290 Broadway, 17th Floor
New York, New York 10007-1866

Attention: Newtown Creek Superfund Site Attorney

c. Three copies (2 unbound, 1 electronic), to:

Director, Division of Environmental Remediation
N.Y. State Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, New York 12233-7011

Attention: Newtown Creek Superfund Site Project Manager

44. Emergency Response and Notification of Releases.

a. In the event of any action or occurrence caused by or otherwise resulting from the performance of Work by Respondents that results in a release or threat of release of Waste Material from the Study Area that constitutes an emergency situation, or which may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action. Respondents 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. Respondents shall also immediately notify the Chief of the Response and Prevention Branch of the Superfund and Emergency Management Division of EPA, Region 2, at (732) 321-6656 of the incident or Site conditions. In the event that Respondents fail to take appropriate response action as required by this Paragraph, and EPA takes such action instead, then EPA's costs of such action shall constitute Future Response Costs and Respondents shall reimburse EPA pursuant to Section XVIII (Payment of Response Costs) for the costs of the response action which are not inconsistent with the NCP.

b. In addition, in the event of any release of a hazardous substance from the Study Area, Respondents shall immediately notify the National Response Center at (800) 424-8802 as well as any one or more of the EPA Project Coordinators or, in the event of his/her unavailability, the Chief of the Special Projects Branch currently at 212-637-4404. Respondents shall submit a written report to EPA within seven days after any such 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.

c. This foregoing 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.*

45. If, at any point during implementation of the FFS, EPA determines, on the basis of the Work that has been performed to such point, that an early, interim response action for OU3 would not be consistent with the rationale supporting the appropriateness of the early action, as detailed throughout the SOW, then EPA may terminate the FFS and this Settlement Agreement by notice stating the basis for termination by EPA, and the date, not less than 15 days following such notice, on which date such termination shall take effect. Respondents may, prior to the date specified by EPA for such termination, submit a Memorandum to EPA expressing Respondents' view of the appropriateness of the early action, and may meet with EPA concerning termination of the FFS and this Settlement Agreement. EPA may, on or prior to the date specified in the Notice of Termination, extend the date for such termination or withdraw its Notice of Termination. If the Notice of Termination is not withdrawn by EPA, the FFS and this Settlement Agreement would terminate on the date, or extended date, specified by EPA. Upon termination, Respondents shall cease performance of the Work and pay to EPA all unpaid Future Response Costs, with Respondents having no further obligation for performance of Work under this Settlement Agreement. Any action by EPA to terminate this Settlement Agreement or not to terminate this

Settlement Agreement shall be made by EPA in its unreviewable discretion and shall not be subject to dispute resolution hereunder.

X. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

46. After review of any plan, report, or other item that is required to be submitted for approval pursuant to this Settlement Agreement, EPA shall notify Respondents in writing that it either: (a) approves, in whole or in part, the submission; (b) approves the submission with specified conditions; (c) modifies the submission to cure the deficiencies; (d) disapproves, in whole or in part, the submission, directing that Respondents modify the submission; or (e) any combination of the above. However, EPA shall not modify a submission without first providing Respondents at least one written notice of deficiency and an opportunity to cure within 21 days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved because of material defects. EPA may, in its sole discretion, grant greater than 21 days to cure if Respondents request additional time or if EPA determines that more time is necessary for Respondents to cure the deficiencies.

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

48. Resubmission.

a. Upon receipt of a notice of disapproval, Respondents shall, within 21-days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. Any stipulated penalties applicable to the submission, as provided in Section XVI (Stipulated Penalties), shall accrue during the 21-day or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified because of a material defect as provided in Paragraphs 49 and 50.

b. Notwithstanding the receipt of a notice of disapproval, Respondents shall proceed to take any action required by any non-deficient portion of the submission to the extent that to do so would not create inconsistencies related to the deficiency or unless otherwise directed by EPA. Implementation of any non-deficient portion of a submission shall not relieve Respondents of any liability for stipulated penalties under Section XVI (Stipulated Penalties).

c. Respondents shall not proceed further with subsequent activities or tasks until receiving EPA approval, approval on condition, or modification of the FFS Work

Plan. While awaiting EPA approval, approval on condition, or modification of such deliverables, Respondents shall proceed with all other tasks and activities that may be conducted independently of these deliverables, in accordance with the schedule set forth in the FFS Work Plan or as otherwise approved by EPA.

d. For all remaining deliverables not coming under Paragraph 48.c., above, Respondents shall proceed with all subsequent tasks, activities, and deliverables without awaiting EPA approval on a submitted deliverable. EPA reserves its right to stop Respondents from proceeding further, either temporarily or permanently, on any task, activity, or deliverable at any point during the FFS, and Respondents agree to cease any task, activity or deliverable if so directed by EPA.

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

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

51. In the event that EPA takes over some of the tasks, but not the preparation of FFS Report, Respondents shall incorporate and integrate information supplied by EPA into the FFS Report.

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

53. Neither failure of EPA to expressly approve or disapprove of Respondents' submissions within a specified time period nor the absence of comments shall be construed as approval by EPA. Respondents are responsible for preparing deliverables acceptable to EPA.

XI. QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION

54. Quality Assurance. Respondents shall assure that Work performed, samples taken, if needed, and analyses conducted conform to the requirements of the FFS Work Plan, the EPA-approved Quality Assurance Project Plan (“QAPP”) approved under the 2011 AOC, and guidance identified therein. Respondents shall assure that field personnel retained by Respondents are properly trained in the use of field equipment and in chain of custody procedures. Respondents shall only use laboratories that have a documented quality system that complies with “EPA Requirements for Quality Management Plans (QA/R-2)” (EPA/240/B-01/002, March 2001, reissued May 2006) or equivalent documentation as determined by EPA.

55. Sampling if Needed for Performance of the Work.

a. All results of sampling, tests, modeling, or other data (including raw data) generated by Respondents, or on Respondents’ behalf, during the performance of the Work required under this Settlement Agreement shall be submitted to EPA in the next monthly progress report after they are generated as described in Paragraph 42 of this Settlement Agreement. EPA will make available to Respondents any validated data generated by EPA, as well as all QA/QC data, unless it is exempt from disclosure by any federal or state law or regulation.

b. Respondents shall verbally notify EPA at least 14 days prior to conducting significant field events as described in the FFS Work Plan or, if sampling is needed for the FFS, the Sampling and Analysis Plan, provided, however, for any sampling events during wet weather/storm flows or tides, Respondents shall verbally notify EPA as soon as practicable, but not less than one Working Day prior to such sampling event. At EPA’s verbal or written request, or the request of EPA’s oversight assistant, Respondents shall allow split or duplicate samples to be taken by EPA (and its authorized representatives) of any samples collected in implementing the Work under this Settlement Agreement. All split samples analyzed by EPA shall be analyzed by the methods identified in the QAPP.

c. Circumstances permitting, EPA shall verbally notify Respondents at least 14 days prior to conducting significant field events relating to the Work under this Settlement agreement in the Study Area, other than emergency response actions, activities conducted pursuant to Paragraph 87 (Work Takeover), or any enforcement-related events that require confidentiality. At Respondents’ verbal or written request, EPA shall allow split or duplicate samples to be taken by Respondents (and its authorized representatives) of any samples collected in overseeing this Settlement Agreement or otherwise investigating the Site. All split samples shall be analyzed by the methods identified in the QAPP.

d. If Respondents have an obligation under any other regulatory program or otherwise independently compiles information that results in (i) any reports relating to Waste Materials in the Study Area, (ii) any reports relating to Waste Materials from direct or indirect discharges into the Study Area, or (iii) any other reports relating to the Study

Area or related to direct or indirect discharges into the Study Area, it shall provide a copy to EPA upon request of such reports.

56. Access to Information.

a. Respondents 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 implementing the FFS Work Plan or additional Work as required hereunder at the Site or to the implementation of the Work under 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. Respondents shall also, to the extent allowed by law, make available to EPA, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

b. Respondents may assert business confidentiality claims covering all or part 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 it is submitted to EPA, or if EPA has notified Respondents 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 Respondents. Respondents shall segregate and clearly identify all documents or information submitted under this Settlement Agreement for which Respondents assert business confidentiality claims.

c. Respondents 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 Respondents assert 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 Respondents. However, no documents, reports, or other information required to be created or generated by this Settlement Agreement shall be withheld on the grounds that they are privileged, provided that Respondents may assert such privileges with respect to internal draft documents that have not been disclosed to persons other than Respondents, its counsel, contractors, or agents.

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 to the extent that EPA or Respondents believe that such data relates to the Study Area.

57. In entering into this Settlement Agreement, Respondents agree not to object to incorporating existing, pertinent data in the FFS generated under EPA-approved work plans and QAPPs under this Settlement Agreement or the 2011 AOC, if so directed by EPA. If Respondents object to any other data relating to the FFS, Respondents shall submit to EPA a report that specifically identifies and explains their objections, describes the acceptable uses of the data, if any, and identifies any limitations to the use of the data. For data collected as part of the Work, such report must be submitted to EPA within fifteen days of the monthly progress report containing the data.

XII. SITE ACCESS

58. If any portion of the Study Area or Site, or any other property where access is needed to implement this Settlement Agreement, is owned or controlled by any of the Respondents, such Respondent shall, commencing on the Effective Date, provide EPA and the State, and their representatives, including contractors, with access at all reasonable times to such property, including without limitation, any vessels, where Respondents are conducting any Work, for the purpose of conducting or overseeing any activity related to this Settlement Agreement.

59. Access to Areas Not Owned by Respondents.

a. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than a Respondent, Respondents shall use their best efforts to obtain all necessary access agreements from the present owners within 45 days of the later of (i) the Effective Date of this Settlement Agreement, or (ii) the date as it is determined by an EPA Project Manager that access to such other properties is needed for performance of Work. Respondents shall immediately notify EPA if, after using best efforts, it is unable to obtain such agreements. For purposes of this Paragraph, “best efforts” includes the payment of reasonable sums of money in consideration of access, unless EPA has identified the property owner as a PRP under CERCLA in connection with the Study Area. Respondents shall describe in writing its efforts to obtain access. If Respondents cannot obtain access agreements, EPA may either (i) obtain access for Respondents or assist Respondents in gaining access, to the extent necessary to implement the Work described in this Settlement Agreement, using such means as EPA deems appropriate; or (ii) perform those tasks or activities with EPA contractors. Respondents shall reimburse EPA for all costs and attorney’s fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XVIII (Payment of Response Costs). If EPA performs those tasks or activities with EPA contractors and does not terminate this Settlement Agreement, Respondents shall perform all other tasks or activities not requiring access to that property, and Respondents shall reimburse EPA for all costs incurred in performing such tasks or activities. Respondents shall integrate the results of any such tasks or activities undertaken by EPA into its plans, reports and other deliverables.

60. 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.

XIII. COMPLIANCE WITH OTHER LAWS

61. Respondents shall comply with all applicable local, state, and federal laws and regulations when performing the FFS. No local, state, or federal permit shall be required for any portion of any action conducted entirely on site if the action is selected and carried out in compliance with CERCLA and the NCP, provided that Respondents shall comply with the substantive requirements that would otherwise be included in such permits. Where any portion of the Work is to be conducted off-site and requires a federal, state, or local permit or approval, Respondents shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. Respondents may seek relief under the provisions of Section XVII (*Force majeure*) of this Settlement Agreement for any delay in performing the Work because of a failure to obtain, or a delay in obtaining, any permit required for the Work, provided that Respondents have made proper, timely, and complete application for such permit and has taken all other actions necessary to obtain and to comply with all such permits or approvals. This Settlement Agreement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XIV. RETENTION OF RECORDS

62. During the performance of the Work required under this Settlement Agreement and for a minimum of 10 years after the FFS is approved by EPA, Respondents shall preserve and retain all non-identical copies of documents, records, and other information (including documents, records, or other information in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Study Area, regardless of any corporate or governmental retention policy to the contrary. Respondents shall also instruct its contractors and agents to preserve all documents, records, and other information of whatever kind, nature, or description relating to performance of the Work until 10 years after approval of the FFS by EPA.

63. At the conclusion of this document retention period, Respondents shall notify EPA at least 90 days prior to the destruction of any such documents, records, or other information, and, upon request by EPA, Respondents shall deliver any such documents, records, or other information to EPA. Respondents 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 Respondents asserts such a privilege, it shall provide EPA with the information set forth in Paragraph 56.c (1)-(6). Except as otherwise provided in Paragraph 56.c., no documents, records, or other information required to be created or generated pursuant to this Settlement Agreement shall be withheld on the grounds that they are privileged.

64. Respondents hereby certifies that, to the best of its knowledge and belief and, after thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any records, documents, or other information (other than identical copies) relating to its potential liability regarding the Study Area since its notification of potential liability by EPA regarding the Site, and it further certifies 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.

XV. DISPUTE RESOLUTION

65. 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.

66. If Respondents object to any EPA action taken pursuant to this Settlement Agreement, unless specifically otherwise agreed to hereunder, 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 Respondents shall have 30 days from EPA's receipt of Respondents' written objection(s) to resolve the dispute (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA. Such extension may be granted verbally but must be confirmed in writing.

67. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by the Parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, the Chief of the Special Projects Branch of the Superfund and Emergency Management Division, EPA Region 2, will issue a written decision. When feasible, Respondents shall be given an opportunity to meet with the Chief of the Special Projects Branch of the Superfund and Emergency Management Division, EPA Region 2, before the decision on the dispute is made. The administrative record of the dispute shall be maintained by EPA and will include all correspondence and material exchanged between EPA and Respondents during the dispute resolution process. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondents' 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, Respondents shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs, and regardless of whether Respondents agree with the decision.

XVI. STIPULATED PENALTIES

68. Respondents shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 69.a and 69.b for failure to comply with any of the requirements of this Settlement Agreement as specified below unless excused by EPA under Section XVII (*Force majeure*) or otherwise. "Compliance" by Respondents shall, unless this Settlement Agreement is terminated by EPA pursuant to Paragraph 45 include completion of the Work required under this Settlement Agreement including any activities contemplated under any FFS Work Plan or other plan approved under this Settlement Agreement, in accordance with all applicable requirements of law, this Settlement Agreement, the FFS Work Plan, 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.

69. Stipulated Penalty Amounts

a. The following stipulated penalties shall accrue per day for any non-compliance identified in this Paragraph 69.a:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$1,500	1st through 14th day
\$3,000	15th through 30th day
\$6,000	31st day and beyond

Stipulated penalties as specified in this Paragraph 69.a shall accrue per violation per day if Respondents fail to timely submit the following major deliverables: The FFS Work Plan, each additional work plan to be developed pursuant to the FFS Work Plan, and the FFS Report.

b. These major deliverables shall be completed and submitted by Respondents in accordance with the FFS Work Plan and any schedules approved by EPA for delivery of submittals.

c. For all other violations of this Settlement Agreement, including, without limitation, Respondents' failure to provide timely or adequate certificates of insurance pursuant to Paragraph 101, failure to submit periodic progress reports required under Paragraph 42; or failure to timely pay Future Response Costs in accordance with Section XVIII, stipulated penalties shall accrue per violation per day as follows:

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

70. In the event that EPA assumes performance of all or a substantial portion of the Work pursuant to Paragraph 87 of Section XX (Reservation of Rights by EPA), Respondents shall be liable for a stipulated penalty in the amount of \$2,700,000.00. EPA agrees that any such penalty assessed against Respondents under this Paragraph shall be reduced by the percentage of Work completed by Respondents as of the time of the assessment. This Paragraph shall not apply to circumstances described in Paragraph 59 in which EPA performs work because Respondents are unable to obtain access.

71. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and they 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 X (EPA Approval of Plans and Other Submissions), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondents of any deficiency; and (2) with respect to a decision by the Chief of the Special Projects Branch as provided by Paragraph 67 of Section XV (Dispute Resolution), during the period, if any, beginning on the 31st day after the Negotiation Period begins until the date that the Chief of the Special Projects Branch issues a final

decision regarding such dispute. Nothing in this Settlement Agreement shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

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

73. All penalties accruing under this Section shall be due and payable to EPA within 30 days of Respondent's receipt from EPA of a demand for payment of the penalties, unless Respondents invoke the dispute resolution procedures under Section XV (Dispute Resolution). All payments to EPA under this Paragraph shall be identified as "stipulated penalties" and shall be made by Fedwire Electronic Funds Transfer in the manner set forth in Paragraph 81.b, below.

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

75. Penalties shall continue to accrue as provided in Paragraph 71 during any dispute resolution period, but if Respondents are unsuccessful in the dispute, any penalties need not be paid until 15 days after the dispute is resolved by agreement or by receipt of EPA's decision.

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

77. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondent's violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA, 42 U.S.C. § 9622(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). However, EPA shall not seek civil penalties pursuant to Section 122(l) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided in this Settlement Agreement, except in the case of willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX (Reservation of Rights by EPA), Paragraph 87. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XVII. FORCE MAJEURE

78. Respondents agree to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure* event. For purposes of this Settlement Agreement, a *force majeure* event is defined as any event arising from causes beyond the control of Respondents or of any entity controlled by Respondents, including but not limited to its contractors and subcontractors, that delays or prevents performance of any obligation under this Settlement Agreement despite Respondents' best efforts

to fulfill the obligation. A *Force majeure* event does not include financial inability to complete the Work or increased cost of performance.

79. 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, Respondents shall notify an EPA Project Coordinator (or, in the absence of the EPA Project Coordinators, the Chief of the Special Projects Branch of the Superfund and Emergency Management Division of EPA Region 2 currently at (212) 637-4404) within two Working Days of when Respondents or its agents, contractors, or representatives knew or should have known that the event might cause a delay. Within ten Working Days thereafter, Respondents shall provide to EPA in writing the following: an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondents' rationale for attributing such delay to a *force majeure* event if it intends to assert such a claim; and a statement as to whether, in the opinion of Respondents, 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 Respondents from asserting any claim of a *force majeure* event for that event for the period of time of such failure to comply and for any additional delay caused by such failure.

80. 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. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondents in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event. 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 or attributable to a *force majeure* event, EPA will notify Respondents in writing of its decision.

XVIII. PAYMENT OF FUTURE RESPONSE COSTS

81. Payments of Future Response Costs.

a. Respondents shall pay EPA all Future Response Costs. On a periodic basis, EPA will send Respondents a bill requiring payment that includes a SCORPIOS Report, which includes direct and indirect costs incurred by EPA and its contractors, and, as applicable, a DOJ Cost Report, which includes costs incurred by DOJ and its contractors. Respondents shall make all payments within 30 days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 81 of this Settlement Agreement, and payment shall be made in the manner set forth in Paragraph 81.b.

b. Payments shall be made to EPA by Fedwire Electronic Funds Transfer to:

Federal Reserve Bank of New York

ABA: 021030004
Account: 68010727
SWIFT address: FRNYUS33
Street Address: 33 Liberty Street, New York NY 10045
Field Tag 4200 of the Fedwire message should read AD 68010727 Environmental Protection Agency@
Amount: [Specify the amount of the payment]
Respondents' Names: [Specify Respondent's Name]
EPA Index Number: CERCLA-02-2019-2011
Site/spill identifier: A206

c. At the time of payment, Respondents shall send notice that such payment has been made by email to EPA's accounts receivable office and to EPA's Project Coordinators and Site Attorney currently at the following email addresses:

cinwd_acctsreceivable@epa.gov
chalifoux.jessica@epa.gov
kwan.caroline@epa.gov
schmidt.mark@epa.gov
rosenblatt.anne@epa.gov
mintzer.michael@epa.gov

d. The total amount to be paid by Respondents pursuant to Paragraph 81.a. and Paragraph 82 shall be deposited in the Newtown Creek Superfund Site 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

82. If Respondents fail to pay Future Response Costs within 30 days of Respondent's receipt of a bill, Respondents shall pay Interest on the unpaid balance of Future Response Costs. The Interest on unpaid Future Response Costs shall begin to accrue on the date of the bill, as applicable, and shall continue to accrue until the date of payment. If EPA receives a partial payment, Interest shall accrue on any unpaid balance. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondents' failure to make timely payments under this Section, including but not limited to payments of stipulated penalties pursuant to Section XVI. Respondents shall make all payments required under this Paragraph in the manner described in Paragraph 81.b.

83. Respondents may contest payment of any Future Response Costs under Paragraph 81 if it asserts that EPA has made a mathematical error or included a cost item that is not within the definition of Future Response Costs, or if it believes EPA incurred excess costs as a direct result of an EPA action that was inconsistent with a specific provision of this Settlement Agreement or specific provisions of the NCP. Such objection shall be made in writing within 60 days of receipt of the bill and must be sent to the EPA Project Coordinators. Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, Respondents shall within the 30-day period pay all uncontested Future Response Costs to EPA in the manner described in Paragraph 81. Simultaneously, Respondents shall establish, through the Office of the Comptroller of the City of New York, an interest-bearing Trust and Agency Account in a duly chartered bank or trust company that is insured by the Federal Deposit Insurance Corporation, and it shall remit to that account funds equivalent to the amount of the contested Future Response Costs. Respondents shall send to the EPA Project Coordinators a copy of the transmittal letter and check paying the uncontested Future Response Costs and a copy of the correspondence that establishes and funds and documents the deposit into the account, including, but not limited to, information containing the identity of the bank and bank account under which the account is established as well as a bank statement showing the initial balance of the account. In such an instance, simultaneously with establishment of the account, Respondents shall initiate the Dispute Resolution procedures in Section XV (Dispute Resolution). If EPA prevails in the dispute, within five days of the resolution of the dispute, Respondents shall pay the sums due (with accrued interest) to EPA in the manner described in Paragraph 81. If Respondents prevail concerning any aspect of the contested costs, Respondents 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 81. Respondents shall be disbursed any balance of the account remaining thereafter. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XV (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondent's obligation to pay EPA for its Future Response Costs.

XIX. COVENANT NOT TO SUE BY EPA

84. In consideration of the actions that will be performed and the payments that will be made by Respondents under this Settlement Agreement, and except as provided in Section XX (Reservations of Rights by EPA), EPA covenants not to sue or to take administrative action against Respondents pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. § § 9606 and 9607(a), for the Work and Future Response Costs. These covenants shall take effect upon the Effective Date. These covenants are conditioned upon the complete and satisfactory performance by Respondents of their obligations under this Settlement Agreement. These covenants extend only to Respondents and do not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

85. 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 herein 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 Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law.

86. 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 Respondents with respect to all other matters, including, but not limited to:

- a. liability for failure by Respondents to meet a requirement of this Settlement Agreement;
- b. liability of Respondents for unpaid Future Response Costs in the event that EPA terminates this Settlement Agreement pursuant to Paragraph 45 hereof;
- c. liability for response costs not included within the definition of Future Response Costs;
- d. liability for performance of response activities other than the Work;
- e. criminal liability;
- f. liability for violations of federal or state law that occur during or after implementation of the Work;
- g. liability for damages for injury to, destruction of, or loss of natural resources, and for the cost of any natural resource damage assessments;
- h. liability arising from the past, present, or future disposal, release, or threat of release of Waste Materials outside of the Study Area;
- i. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Study Area not paid as Future Response Costs under this Settlement Agreement.

87. Work Takeover.

a. In the event that EPA determines that Respondents have (i) ceased implementation of any portion of the Work, (ii) is seriously or repeatedly deficient or late in its performance of the Work, or (iii) is 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 Respondents. Any Work Takeover Notice issued by EPA will specify the grounds upon which such notice was issued and will provide Respondents a period of 21 days within which to remedy the circumstances giving rise to EPA's issuance of such notice.

b. If, after expiration of the 21-day notice period specified in Paragraph.87a, Respondents have not remedied to EPA's satisfaction the circumstances giving rise to

EPA's issuance of the relevant Work Takeover Notice, EPA may at any time thereafter assume the performance of all or any portions of the Work as EPA deems necessary ("Work Takeover"). EPA shall notify Respondents in writing if EPA determines that implementation of a Work Takeover is warranted under this Paragraph 87.b.

c. Respondents may invoke the procedures set forth in Section XV (Dispute Resolution) to dispute EPA's implementation of a Work Takeover under Paragraph 87.b. However, notwithstanding Respondents' invocation of such dispute resolution procedures, and during the pendency of any such dispute, EPA may in its sole discretion commence and continue a Work Takeover under Paragraph 87.b until the earlier of (i) the date that Respondents 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 XV (Dispute Resolution) that requires EPA to terminate such Work Takeover.

XXI. RESERVATION OF RIGHTS BY RESPONDENTS

88. Except as otherwise provided in this Settlement Agreement, Respondents expressly reserve all rights and affirmative defenses under statute, including CERCLA, or common law.

XXII. COVENANT NOT TO SUE BY RESPONDENTS

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

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

b. any claim arising out of the Work or arising out of the response actions for which the Future Response Costs have been or will be incurred, respectively, including any claim under the United States Constitution, the New York 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 payment of Future Response Costs provided, however, that this Settlement Agreement shall not have any effect on claims or causes of action in contribution that Respondents have or may have pursuant to CERCLA against the United States or any of its agencies or departments, other than EPA, as a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), relating to the Site.

90. Except as expressly provided in Paragraph 92 (De Minimis/Ability to Pay Waivers) of this Section XXII (Covenant Not to Sue by Respondents), these covenants not to sue shall not apply in the event the United States brings a cause of action or issues an order pursuant to the

reservations set forth in Section XX (Reservations of Rights by EPA), other than in Paragraph 86.a (claims for failure to meet a requirement of this Settlement Agreement) or 86.e (criminal liability), but only to the extent that Respondents' claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the above-referenced applicable reservation.

91. 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. Section 300.700(d).

92. De Minimis/Ability to Pay Waivers. Respondents agree not to assert any claims and agrees to waive all claims or causes of action (including but not limited to claims or causes of action under Sections 107(a) or 113 of CERCLA) that it may have for all matters relating to the Site against any person who has settled with EPA, or who hereafter settles with EPA with respect to the Site, in a final Section 122(g) de minimis settlement or a final settlement based on such person's limited ability to pay, as of the Effective Date. This waiver shall not apply with respect to any defense, claim, or cause of action that Respondents may have against any person if such person asserts a claim or cause of action relating to the Site against Respondents.

XXIII. OTHER CLAIMS

93. 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 Respondents.

94. Except as expressly provided in Section XXII (Covenant Not to Sue by Respondents), Paragraph 92 (De Minimis/Ability to Pay Waivers), and Section XIX (Covenants by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondents or any other person not a Party to this Settlement Agreement for any liability such other 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.

95. 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).

XXIV. CONTRIBUTION PROTECTION

96. Contribution Protection.

a. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. § § 9613(f)(2) and 9622(h)(4), and that Respondents 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. Notwithstanding such protections against contribution actions or claims by non-parties to this Settlement Agreement, Respondents may allocate or reallocate any and all response costs incurred in connection with this Settlement Agreement among any person not a Party to this Settlement Agreement.

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 Respondents have, as of the Effective Date, resolved its liability to the United States for the Work and Future Response Costs.

c. Except as provided in Section XXII (Covenant Not to Sue by Respondents), Paragraph 92 (De Minimis/Ability to Pay Waivers), nothing in this Settlement Agreement shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Settlement Agreement. Except as provided in Paragraph 92 (De Minimis/Ability to Pay Waivers), Respondents and EPA expressly reserve any and all rights (including, but not limited to, pursuant to Section 113 of CERCLA, 42 U.S.C. § 9613), defenses, claims, demands, and causes of action that each may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party 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) and (3), to pursue any such other 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).

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

XXV. INDEMNIFICATION

98. Respondents 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 Respondents, their officers, directors, employees, agents, contractors, or subcontractors in carrying out actions pursuant to this Settlement Agreement. In addition, Respondents 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 Respondents, its municipal officers, directors, employees, agents, contractors, subcontractors, and any persons acting on its behalf or under its control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondents in carrying out activities pursuant to this

Settlement Agreement. Neither Respondents nor any such contractor shall be considered an agent of the United States.

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

100. Respondents 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 Respondents and any person for performance of Work. In addition, Respondents shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondents and any person for performance of Work at or relating to the Study Area.

XXVI. INSURANCE

101. Respondents are self-insured and represent that they have and shall maintain adequate insurance coverage or indemnification for liabilities for injuries or damages to persons or property that may result from the activities to be conducted by or on behalf of Respondents pursuant to this Settlement Agreement. For the duration of the performance of the Work under this Settlement Agreement, Respondents 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 Respondents under this Settlement Agreement.

XXVII. FINANCIAL ASSURANCE

102. Financial Security Mechanism and Documents.

a. Within 30 days of the Effective Date, or such other date as agreed to by EPA, Respondents shall establish and maintain financial security for the benefit of EPA in the amount of \$2,700,000.00 in the following form in order to secure the full and final completion of Work by Respondents: a demonstration of sufficient financial resources to pay for the Work made by Respondents, which shall consist of a demonstration that Respondents satisfy the requirements of 40 C.F.R. Part 258.74(f).

b. The financial security mechanism or other documents consistent with the requirements in Paragraph 102.a, and each annual resubmission required by Paragraph 104 of this Settlement Agreement shall be sent to Chief, Resource Management/Cost Recovery Section, Superfund and Emergency Management Division, U.S. EPA Region 2, 290 Broadway, 18th Floor, New York, NY 10007-1866. Respondents shall send copies by email to Chief, Resource Management/Cost Recovery Section, Superfund and Emergency Management Division, currently at Keating.Robert@epa.gov, and additional copies by email to EPA's Project Coordinators and Site Attorney, currently at: kwan.caroline@epa.gov; schmidt.mark@epa.gov; rosenblatt.anne@epa.gov; and mintzer.michael@epa.gov.

103. Any financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In addition, if at any time EPA notifies Respondents that the anticipated cost of completing the Work has increased, then, within 30 days of such notification, Respondents shall obtain and present to EPA for approval a revised form of financial assurance (otherwise acceptable under this Section) that reflects such cost increase. Respondents inability to demonstrate financial ability to complete the Work shall in no way excuse performance of any activities required under this Settlement Agreement.

104. Respondents shall resubmit to EPA the demonstration by 40 C.F.R. Part 258.74 (f) annually, on the anniversary of the Effective Date, or such other date as agreed to by 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 \$2,700,000.00 for the Work at OU3 plus any other RCRA, CERCLA, TSCA, or other federal environmental obligations financially assured by the relevant Respondent or guarantor to EPA by means of passing a financial test.

105. If, after the Effective Date, Respondents can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 102 of this Section, Respondents may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, request that the amount of the financial security provided under this Section be reduced to the estimated cost of the remaining Work to be performed. Respondents 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, Respondents may seek dispute resolution pursuant to Section XV (Dispute Resolution). Respondents may reduce the amount of security by agreement among the Parties resolving the dispute or, failing such agreement, by EPA's written decision resolving the dispute.

106. Respondents 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, Respondents may change the form of the financial assurance only in accordance with an agreement among the Parties resolving the dispute or, failing such agreement, EPA's written decision resolving the dispute.

XXVIII. INTEGRATION/APPENDICES

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

“Appendix A” is the Statement of Work

“Appendix B” is a map generally depicting the OU3 portion of the Newtown Creek Study Area.

“Appendix C” is a map generally depicting the Study Area.

XXIX. ADMINISTRATIVE RECORD

108. EPA will, pursuant to CERCLA and the NCP, determine the contents of the administrative record file for selection of any remedial action. Respondents shall submit to EPA documents developed during the course of the FFS upon which selection of a response action may be based. Upon request of EPA, Respondents shall provide copies of documents necessary to support a decision regarding any future response necessary at the Study Area, including but not limited to plans, task memoranda for further action, quality assurance memoranda and audits, laboratory analytical reports, and other reports. Upon request of EPA, Respondents shall additionally submit any previous studies conducted under state, local or other federal authorities relating to selection of a response action as well as all communications between Respondents and state, local or other federal authorities concerning selection of a response action. At EPA’s discretion, Respondents shall establish a community information repository at or near the Study Area to house one copy of the administrative record.

XXX. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

109. This Settlement Agreement shall be effective upon receipt by Respondents after it has been executed by the duly designated representatives of the Parties.

110. This Settlement Agreement may be amended by mutual agreement of EPA and the Respondents to add additional respondents or as otherwise may be agreed to by the Parties. Amendments shall be in writing and shall be effective when signed by Respondents and by EPA.

111. No informal advice, guidance, suggestion, or comment by the EPA Project Coordinator or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondents shall relieve Respondents of their obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless the relevant document is formally modified. The EPA Project Coordinator may extend any deadline under this Settlement Agreement, provided that any such extension shall be in writing (which may include electronic mail).

XXXI. NOTICE OF COMPLETION OF WORK

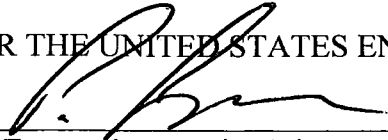
112. If Respondents believes that all Work and all other activities have been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations such as Respondents’ obligation to retain records pursuant to Section XIV of this Settlement Agreement, Respondents may request that EPA provide it with written notice of completion of the Work. Upon receipt of such a request, EPA will either provide written notice of completion to Respondents indicating that the Work required pursuant to this Settlement Agreement has been completed and Respondents’ obligations hereunder have been satisfied,

subject to any continuing obligations, or, if EPA determines that any Work has not been completed in accordance with this Settlement Agreement, EPA will so notify Respondents, provide a list of the deficiencies, and require that Respondents correct such deficiencies. Failure by Respondents to correct such deficiencies shall be a violation of this Settlement Agreement.

It is so ORDERED AND AGREED this 24th day of JULY, 2019.

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

BY:



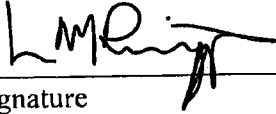
Pat Evangelista, Acting Director
Superfund and Emergency Management Division
United States Environmental Protection Agency
Region 2

Date: 7/24/19

In the Matter of the Newtown Creek Superfund Site

Administrative Settlement Agreement and Order on Consent for Focused Feasibility Study,
CERCLA Docket No. CERCLA-02-2019-2011

FOR RESPONDENT ExxonMobil Oil Corporation



Signature

8 July 2019

Date

Len M Racioppi
Printed Name

Agent and Attorney in Fact
Title

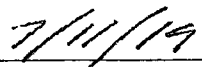
In the Matter of the Newtown Creek Superfund Site

Administrative Settlement Agreement and Order on Consent for Focused Feasibility Study,
CERCLA Docket No. CERCLA-02-2019-2011

FOR RESPONDENT Phelps Dodge Refining Corporation



Signature



Date

K. Scott Statham

Printed Name

Deputy General Counsel


Title

In the Matter of the Newtown Creek Superfund Site

Administrative Settlement Agreement and Order on Consent for Focused Feasibility Study,
CERCLA Docket No. CERCLA-02-2019-2011

FOR RESPONDENT The Brooklyn Union Gas Company d/b/a National Grid NY




Signature

6/25/2019
Date

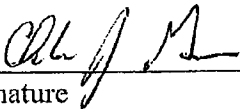
Charles Willard
Printed Name

Authorized Representative
Title

In the Matter of the Newtown Creek Superfund Site

Administrative Settlement Agreement and Order on Consent for Focused Feasibility Study,
CERCLA Docket No. CERCLA-02-2019-2011

FOR RESPONDENT BP Products North America, Inc.



Signature

June 27, 2019
Date

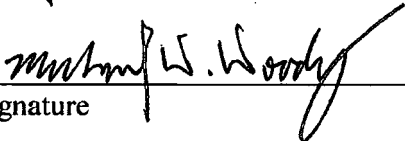
Christopher Greco
Printed Name

Vice President
Title

In the Matter of the Newtown Creek Superfund Site

Administrative Settlement Agreement and Order on Consent for Focused Feasibility Study,
CERCLA Docket No. CERCLA-02-2019-2011

FOR RESPONDENT Texaco Inc., a Delaware corporation



Signature

June 26, 2019

Date

Michael W. Woody

Printed Name

Assistant Secretary

Title

Appendix A
To Administrative Settlement Agreement and Order on Consent for Focused Feasibility Study,
CERCLA Docket No. CERCLA-02-2019-2011

Statement of Work

Appendix A
Administrative Settlement Agreement and Order on Consent
CERCLA Docket No. CERCLA-02-2019-2011
Newtown Creek Superfund Site, New York, New York

Statement of Work
OU3 Focused Feasibility Study

ABBREVIATIONS

AOC	Administrative Settlement Agreement and Order on Consent
ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cm	centimeter
CM	creek mile
COC	contaminant of concern
CSM	conceptual site model
CSO	combined sewer overflow
Cu	copper
EA	Early Action
EPA	U.S. Environmental Protection Agency
FFS	Focused Feasibility Study
FS	Feasibility Study
GRA	General Response Action
mg/kg	milligrams per kilogram
MS4	municipal separate storm sewer systems
NAPL	nonaqueous phase liquid
NCP	National Contingency Plan
OU	Operable Unit
OU3	Operable Unit 3
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
RAL	remedial action level
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RI Report	Remedial Investigation Report
ROD	Record of Decision
SCS	Sediment Characterization Study
SCS Work Plan	Sediment Characterization Study Work Plan
Site	Newtown Creek Superfund Site
SOW	Statement of Work
SWAC	surface-weighted average concentration
Target Area	area targeted for potential active remediation

1 Introduction

This Statement of Work (SOW) shall mean the statement of work for the preparation of a Focused Feasibility Study (FFS), and related documentation and field work, including an FFS Work Plan to be developed consistent with this SOW, for Operable Unit 3 (OU3) of the Newtown Creek Superfund Site (Site), located in Kings County and Queens County, New York City, New York. OU3 relates specifically to the evaluation of a potential interim Early Action (EA) in creek mile (CM) 0–2 of the Newtown Creek Study Area. The definition of OU3 does not include the Dutch Kills and Whale Creek tributaries. The terms “Site” and “Study Area” are defined in the Administrative Settlement Agreement and Order on Consent (AOC), Index Number CERCLA-02-2019-2011, for OU3 of the Site (2019 AOC) to which this SOW is appended as Appendix A.

This SOW is incorporated into and is an enforceable part of the 2019 AOC. The Respondents to the 2019 AOC—Phelps Dodge Refining Corporation; Texaco, Inc.; BP Products North America Inc.; The Brooklyn Union Gas Company d/b/a National Grid NY; and ExxonMobil Oil Corporation (hereinafter, Respondents)—shall perform the Work as defined in the 2019 AOC in accordance with the 2019 AOC and this SOW, including all terms, conditions and schedules set forth herein or developed and approved hereunder. All definitions in the 2019 AOC are incorporated by reference into this SOW. For clarity in this SOW, OU1 refers to the Remedial Investigation/Feasibility Study (RI/FS) for the entire Study Area, currently being conducted as per a previously executed AOC (U.S. EPA Region II, CERCLA Docket No. CERCLA 02-2011-2011). In addition to Operable Units (OUs) 1 and 3, OU2 has been established to evaluate current and reasonably anticipated future releases of CERCLA hazardous substances (hazardous substances) from combined sewer overflow (CSO) discharges to the Study Area. Pursuant to a separate AOC, an FFS for OU2 is underway to consider those issues.

The objectives of the OU3 Work are to:

1. Determine whether an EA remedy for CM 0–2 is appropriate as an interim action or whether the selection of a remedy for this portion of the creek should be deferred pending completion of the OU1 RI/FS and an OU1 Record of Decision (ROD).
2. Develop and evaluate potential remedial alternatives for OU3 through the FFS process, if determined to be appropriate. The FFS Report will form the basis for the U.S. Environmental Protection Agency (EPA) to document selection of an EA remedy for CM 0–2 in an OU3 ROD.
3. Develop action-specific performance metrics for use, post-implementation of any OU3 remedy, in a performance monitoring plan designed to evaluate the impact/performance of any such EA remedy.

Development of Objective 2 may help inform Objective 1, and both objectives may need to be considered on an iterative basis. A subsequent enforcement agreement between EPA and the future performing parties would be needed to govern final remedial design and implementation of any EA

remedy selected by EPA in an OU3 ROD. Regardless of whether any EA remedy is selected, the entire Study Area will still be evaluated as part of the OU1 RI/FS process. As part of OU1, a determination will be made as to whether any EA remedy, as implemented, adequately addresses CM 0–2 or whether additional response actions are necessary as part of the OU1 remedy.

1.1 Rationale for Conducting an Early Action Evaluation for CM 0–2

As part of the OU1 RI/FS process completed to date, extensive characterization of the Study Area has occurred as documented in the draft *Remedial Investigation Report* (RI Report; Anchor QEA 2016), which was recently re-submitted to EPA for review in April 2019. The discussions of data and assumptions described in this SOW are based on the draft RI Report, which is still pending EPA approval.

1.1.1 Context

Newtown Creek is a heavily industrialized dead-end tidal tributary of the East River. Since the mid-1800s, Newtown Creek and its surrounding upland area has been one of the busiest industrial areas of New York City. At various times, industrial activities along the banks of the creek have included oil refineries, manufactured gas plants, petrochemical plants, fertilizer and glue factories, copper-smelting and more. Today, factories, warehouses, petroleum bulk storage facilities, municipal and utility infrastructure, and other industrial and commercial facilities still operate along the creek. Over the years, these activities have contributed hazardous substances to the creek. Various other sources of hazardous substances to the Study Area include, but are not necessarily limited to, CSOs, municipal separate storm sewer systems (MS4s), industrial outfalls, overland flows, other stormwater inputs, and groundwater. In addition, there are in-creek sources of contamination to the Study Area through processes such as ebullition, nonaqueous phase liquid (NAPL) mobility, eroding shorelines, and sediment transport. These inputs and activities will continue to contribute hazardous substances to the creek in the future. Due to general improvements in source control best management practices and changes in industrial uses along the creek, as well as the implementation of a Combined Sewer Overflow Long Term Control Plan for Newtown Creek by the New York City Department of Environmental Protection, it is expected that the loading of hazardous substances from these inputs will decrease over time. Still, these inputs, coupled with the interaction of the system with the East River, will be significant in establishing the long-term, site-specific cleanup goals for Newtown Creek.

The draft OU1 RI Report, the EPA-approved OU1 *Baseline Ecological Risk Assessment* (Anchor QEA 2018) and the EPA-approved OU1 *Baseline Human Health Risk Assessment* (Anchor QEA 2017) were used to establish polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and copper (Cu) as the primary contaminants of concern (COCs) for the FFS described herein; a full list of COCs contributing to unacceptable risk to the OU1 Study Area is shown in Table 1.

1.1.2 Conceptual Site Model for CM 0–2

The conceptual site model (CSM) being developed as part of the OU1 RI/FS is considered a working document and will be refined as the OU1 RI/FS progresses. At this time the Respondents have developed the following positions regarding the CSM, based on their evaluation and interpretation of the data collected and analyses conducted thus far as part of the OU1 RI/FS process:

- Respondents' Position 1: Tidal flow from the East River is currently the dominant source of solids to the surface water and sediment in CM 0–2.
- Respondents' Position 2: The lower 2 miles of Newtown Creek are net depositional, and natural recovery toward urban reference conditions is expected to continue over time via deposition of solids from the East River.
- Respondents' Position 3: The creek bed is physically stable as evidenced by minimal or no net erosion of the sediment bed (supported by pre- and post-Hurricane Sandy bathymetric evaluation) and lower concentrations of COCs observed in surface (0 to 15 centimeters [cm]) sediment versus subsurface (deeper than 15 cm) sediment.
- Respondents' Position 4: Ongoing sources of hazardous substances will not negatively impact EA remedy success. These potential sources include, but are not necessarily limited to:
 - In-creek potential sources, such as NAPL transport, ebullition, shoreline erosion, groundwater, propeller scour, sediment transport, and tidal inputs
 - Out-of-creek potential sources, such as overland flow, point source inputs, industrial outfalls, other stormwater inputs, CSOs, and MS4s

The assumptions that form the basis of these positions will be evaluated in the OU3 FFS using existing data collected as part of the OU1 RI/FS process, coupled as appropriate with the new data collected during the Sediment Characterization Study (SCS).

1.1.3 Role of Background and Reference Areas at Newtown Creek

As part of the typical Superfund process, risk-based interim cleanup goals would be determined for CM 0–2. These risk-based goals would be considered in conjunction with information related to background and other sources of hazardous substances that may influence the long-term ability of achieving risk-based goals. Consistent with EPA policy, where risk-based concentrations may not be achievable due to the influence of background conditions, appropriate background concentrations should be determined and factored into the remedial decision-making process. As part of the OU1 RI/FS, various background contributions to the creek were sampled, including CSO discharges, MS4s, Wastewater Treatment Plant effluent, overland flow, groundwater seepage, and other point and non-point sources. In addition, various in-creek potential sources of hazardous substances to the rest of the creek (e.g., NAPL) and transport mechanisms (e.g., ebullition, shoreline erosion, and sediment resuspension) were assessed. These data will be used to help determine appropriate action-specific

interim performance metrics for CM 0–2. Note that these data will also be used to evaluate the Respondents' positions listed in Section 1.1.2 and the efficacy of conducting an EA for CM 0–2.

In addition, and consistent with EPA guidance, it is often useful to identify reference areas for a site, which are generally defined as areas (in this case, other waterbodies) that have similar characteristics as the site but are not directly influenced by the releases of hazardous substances to the site and that are not directly connected to the site. Reference areas are used to put the chemical concentrations, toxicity levels, and ecological community structures at a site into context, and to help determine what reasonable expectations for future conditions at a site may be. A total of 14 reference areas have been sampled as part of the OU1 RI/FS. These reference areas cover a range of characteristics and include waterbodies that are heavily influenced by industry and/or CSOs, other dead-end tidal tributaries to the East River, and waterbodies that are less influenced by CSOs and/or industry than Newtown Creek.

As part of the FFS evaluation process, reference area information will be used to determine appropriate Target Areas of CM 0–2 for potential active remediation. The Target Areas would be defined by areas where concentrations of the primary COCs in surface (0 to 15 cm) sediment for this FFS exceed what will be called remedial action levels (RALs). As explained further in Section 2.3, the FFS will evaluate whether the remediation of sediment in the Target Areas will reduce the surface-weighted average concentrations (SWACs) of all risk-based COCs, as identified in Table 1, throughout CM 0–2 to appropriate action-specific interim performance metrics for CM 0–2. While the RALs will be developed based on reference area information collected during the OU1 RI/FS process, coupled as appropriate with the new data collected during the SCS, the action-specific interim performance metrics will be developed using a combination of risk-based, background-based, and reference area-based information. The FFS process will be used to develop the appropriate performance metrics for use in the OU3 remedy evaluation. RALs are not the same as cleanup goals, and the RALs may be higher than the action-specific performance metrics that are developed.

The EA will be followed by implementation of a performance monitoring program to determine whether the action-specific interim performance metrics are achieved.

2 Early Action Evaluation for CM 0–2

2.1 FFS Sediment Characterization Study

The first step to be conducted as part of the OU3 FFS is an SCS. The primary goal of the SCS is to collect data to refine the Target Areas, which will be based on a range of potential RALs. This step will focus on the three primary COCs (PCBs, PAHs, and Cu), and the appropriate RAL to use for each COC will be further evaluated for use in the FFS Report. The FFS Report will evaluate the appropriateness of conducting an EA for all the risk-based COCs for the Study Area, using existing data and modeling outputs.

An FFS *Sediment Characterization Study Work Plan* (SCS Work Plan) deliverable will be prepared subject to EPA review and approval (draft and final as per the schedule detailed in Section 3) that will contain but not necessarily be limited to the following elements:

- A description of existing surface sediment data, as well as data gaps for Target Area delineation based on a pre-approved range of RALs (see Section 2.2.2 of this SOW for more detail on the range of RALs)
- A project-specific *Field Sampling and Analysis Plan*, including details of the media to be sampled, contaminants and other physical properties for which samples will be analyzed, locations and depths, numbers of samples, and project schedule
- A project-specific *Quality Assurance Project Plan* consistent with the existing OU1 RI/FS process
- A project-specific *Data Management Plan* summarizing the management of data resulting from field investigations during the FFS SCS
- A project-specific *Health and Safety Plan* consistent with the existing OU1 RI/FS process
- A project-specific description of transportation and off-site disposal plan for investigation-derived waste

The FFS SCS is targeted to be implemented in 2019 (consistent with the schedule detailed in Section 3), and the results will be integrated into the FFS Report.

2.2 Focused Feasibility Study

The FFS approach will consider the following primary EPA sediment guidance documents: “Principles of Managing Contaminated Sediment Risks at Hazardous Waste Sites” (EPA 2002), *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites* (EPA 2005) and *Remediating Contaminated Sediment Sites – Clarification of Several Key Remedial Investigation/Feasibility Study and Risk Management Recommendations, and Updated Contaminated Sediment Technical Advisory Group Operating Procedures* (EPA 2017), as well as additional guidance documents, as appropriate. The FFS will be conducted in accordance with EPA’s *Guidance for Conducting Remedial Investigations*

and Feasibility Studies Under CERCLA (EPA/540/G-89/004, OSWER Directive 9355.3-01, 1988), and subsequently issued guidance. Additional guidance documents and resources may also be considered. The details of the FFS evaluation will be provided in a draft FFS Work Plan for EPA review and approval. The evaluations completed in the FFS will be based on the existing OU1 RI data, coupled as appropriate with the new data collected during the SCS.

2.2.1 Objectives

The objectives of the FFS are to confirm the appropriateness of an interim EA remedy for OU3 and to develop and evaluate a focused range of remedial alternatives for this OU. The scope of the EA will generally be confined to the Target Areas determined by RALs, to be refined based on the surface sediment chemistry results and physical properties from the FFS SCS. The remedial alternatives to be evaluated will include no action and a focused range of remedial measures that represent permutations of removal of sediment to depths of approximately 2 to 4 feet and placement of appropriate cover material over the areas addressed; the details will be provided in the FFS. Additional limited evaluations may be included in the FFS to address potential sediment remedies adjacent to bulkhead areas, including by factoring in the condition of bulkheads adjacent to EA areas.

The FFS Report will be a deliverable subject to EPA review and approval, and will contain, at a minimum, the following information and analyses:

1. Description of Current Conditions in CM 0–2 and Evaluation of CSM
2. Description of RALs and Target Areas for EA
3. Early Action Threshold Decision Considerations
4. Identification of General Response Actions (GRAs) for CM 0–2
5. Development of Alternatives for EA
6. Detailed Analysis of EA Remedial Alternatives
7. Comparative Analysis of EA Alternatives for CM 0–2
8. Supporting Appendices

2.2.2 Description of Focused Feasibility Study Tasks

1. Description of Current Conditions in CM 0–2 and Evaluation of CSM

Data from the draft OU1 RI, with a focus on CM 0–2, and the results of the FFS SCS, will be summarized in the FFS Report. The FFS Report will also present an updated version of the existing CSM for CM 0–2 (based on the OU1 RI/FS field program data and associated modeling studies to date) to provide a complete description of CM 0–2 relevant to the development of the FFS Report. The updated CSM will set a foundation for the FFS to evaluate remedial alternatives for CM 0–2 and will include discussion of potential in-creek and out-of-creek ongoing sources of hazardous substances and transport mechanisms. This initial portion of the FFS will lay out the Respondents'

positions, and the assumptions upon which they are based, that will be evaluated through the FFS process. The evaluation will be based on existing data and analyses included in the draft OU1 RI, as well as additional evaluation and modeling to be conducted as part of the OU3 FFS evaluation. The components of the OU3 evaluation will be described in the FFS Work Plan. Note that some aspects of the OU1 RI/FS process, including the contaminant fate and transport and bioaccumulation modeling, are still under development and thus will not be able to be fully accounted for in the OU3 FFS.

2. Description of RALs and Target Areas for EA

As described in Section 1.1.3, one approach to remediating sediment contamination is to address portions of the affected area that exceed certain threshold concentrations (RALs) with the expectation that the entire affected area will then meet, over time, action-specific performance metrics. For CM 0–2, a range of possible RALs was developed for the primary COCs for this FFS, PCBs, Total PAHs, and Cu, based on analysis of data obtained as part of the OU1 RI/FS from the various reference areas. The ranges of RALs considered were generally based on the upper end of the range of concentrations found in the reference areas, and the exact ranges were selected based on best professional judgment. The ranges of RALs to be evaluated in the OU3 FFS process for each of the primary COCs are:

- PCBs: 1.2 to 1.4 milligrams per kilogram (mg/kg)
- Total PAHs: 65 to 85 mg/kg
- Cu: 400 to 500 mg/kg

The Respondents assert that applying these ranges of RALs to the existing surface sediment chemistry data results in the identification of 12 to 24 surface sediment samples that exceed the upper or lower range of the RALs, respectively, for one or more of the primary COCs. Based on these exceedances, the Respondents have developed preliminary Target Areas using Thiessen polygons (see Figure 1) that address these RAL exceedances; based on this analysis, the Respondents assert that these 12 to 24 areas represent an 8- to 17.4-acre footprint. These preliminary Target Areas will be refined through surface sediment samples collected during the FFS SCS and will be used to support the analysis for each of the FFS alternatives evaluated.

A final RAL, for this OU3 action only, for each of the three primary COCs that fall within the ranges identified in the preceding list, will be developed through the FFS process. The final RALs will be based on the additional data obtained during the SCS, as well as the modeling and other analyses conducted as part of the FFS. These final RALs for this action will be used to delineate the Target Areas within CM 0–2 for this action only.

As described earlier, and if the Respondents' positions described in Section 1.1.2 are valid, the Respondents assert that when the areas in CM 0–2 containing surface sediments that exceed the

RALs are remediated, the resulting SWACs in CM 0–2 will be similar to the range of SWACs represented by the reference areas and will meet the action-specific interim performance metrics for OU3 over time. Alternatively, if the Respondents' positions described in Section 1.1.2 are not supported by the FFS, then the efficacy of conducting an EA remedy for CM 0–2 may be called into question.

3. Early Action Threshold Decision Considerations

The primary purpose of the OU3 FFS is to determine whether an EA remedy is appropriate for CM 0–2 or whether the selection of a remedy for this portion of the creek should be deferred pending completion of the OU1 RI/FS. EPA will make this decision based on the evaluation of at least four primary Respondents' positions, as discussed in Section 1.1.2 of this SOW. The Respondents have asserted that the work performed to date through the OU1 RI/FS indicates that the surface sediment concentrations in CM 0–2 are influenced by sediment deposition from the East River and other background sources and that contamination in deeper sediments or ongoing sources will not negatively impact EA remedy success. The Respondents further assert that targeted removal of an estimated 2- to 4-foot depth of sediment followed by backfilling or capping would likely result in overall average surface sediment chemical concentrations in CM 0–2 that are consistent over time with appropriate reference area surface sediment chemical concentrations and meet appropriate action-specific interim performance metrics.

The Respondents assert that the current CSM for CM 0–2 suggests it is a good candidate area for an adaptive management approach, consistent with recent recommendations from the Superfund Task Force and other relevant guidance, and that an interim EA may possibly serve as a final remedy for this portion of the OU1 Study Area. However, if the Respondents' positions that form the basis of the SOW are not supported by the FFS evaluation process, then the efficacy of the EA could be called into question. The FFS could conclude that the lower 2 miles require more study and should continue to be addressed as part of the OU1 RI/FS and remedy. Findings that may support continuation of the EA to be considered as part of the FFS evaluation include, but are not necessarily limited to:

- A remedy footprint that is reasonably confined and can be designed and implemented in a relatively short timeframe, in advance of the OU1 ROD;
 - Analysis to date suggests a targeted remedy involving removal and replacement of up to approximately 50,000 to 100,000 cubic yards of sediment across approximately 8 to 17.4 acres could reasonably be implemented before an OU1 ROD, while a substantially larger remedy would likely require consideration in the OU1 FS.
 - Performance monitoring would be required after implementation of the interim remedy and would likely extend until the OU1 remedy is implemented, when it would be superseded by an OU1 performance monitoring plan.

- An evaluation outcome that supports the Respondents' position that ongoing sources will not negatively impact remedy success in the lower 2 miles;
- An evaluation outcome that supports the Respondents' position that long-term SWACs that are determined to be appropriate through the FFS process are sustainable in CM 0–2.

The timing for EPA's determination about the suitability of an EA remedy for CM 0–2 could be as early as when the FFS SCS data are available or as late as the completion of the FFS Report.

4. Identification of GRAs for CM 0–2

GRAs for CM 0–2 will be identified consistent with EPA's general RI/FS guidance (1988) and will be consistent with specific contaminated sediment remediation guidance (EPA 2005). It is anticipated that GRAs evaluated in this FFS will be limited to various depths of sediment removal and backfill/cover coupled with monitoring.

5. Development of Alternatives for EA

It is anticipated that the alternatives to be evaluated will include no action and permutations that will consider sediment removal depths of 2 to 4 feet and different cover materials (e.g., clean sand and/or cover amended with organic carbon if determined to be necessary in FFS evaluation) to be placed over the dredged surface within the Target Areas. Specific conditions at the individual Target Areas will be considered to establish aerial extent and remedy sediment removal depths. Following removal of sediment within the Target Areas, concentrations of COCs in surface sediment of CM 0–2 will be monitored.

Remedial alternatives will be compiled using technologies and process options identified and described in Task 4, above. An FFS does not require screening of alternatives, but rather by default is limited to a reduced number of alternatives that are consistent with the CSM, determined through the GRA process, and carried through for detailed and comparative analysis.

6. Detailed Analysis of EA Remedial Alternatives

Remedial alternatives for the EA will be evaluated in accordance with the National Contingency Plan (NCP). Remedial alternatives will be assessed in detail in the FFS using the first seven of the nine CERCLA FS evaluation criteria (two threshold and five balancing). In addition, two modifying criteria, state and community acceptance, will be evaluated by EPA prior to issuing any ROD. These nine criteria were established and defined by EPA (1988, 2005) to address the overall requirements of CERCLA and the NCP:

- Threshold criteria:
 1. Overall protection of human health and the environment
 2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) as they pertain to the FFS and the identified alternatives
- Balancing criteria:
 3. Long-term effectiveness and permanence
 4. Reduction of toxicity, mobility, or volume through treatment
 5. Short-term effectiveness
 6. Implementability
 7. Cost
- Modifying criteria (considered after the FFS):
 8. State acceptance
 9. Community acceptance

7. Comparative Analysis of EA Alternatives for CM 0–2

Following the detailed analysis of each alternative for CM 0–2 on an individual basis, the alternatives will be evaluated on a comparative basis using the criteria listed in Task 6. Consistent with EPA guidance (1988, 2005), the advantages and disadvantages of each alternative will be weighed against those of the other alternatives to aid in the selection of an interim remedy for CM 0–2.

8. Supporting Appendices

Technical evaluations used to support the Detailed Analysis of EA Remedial Alternatives will be provided in appendices, as appropriate.

2.3 Early Action Performance Monitoring Plan

An *EA Performance Monitoring Plan* will be prepared consistent with EPA guidance (EPA 2005).

The *EA Performance Monitoring Plan* will provide the specifics of both the short-term and long-term post-action monitoring approaches to be used, as well as the types of evaluations that will be completed using the monitoring data. This plan is a critical part of the EA evaluation process, should the EA move forward, for it will form the basis for determining if the assumptions used in the FFS evaluation are accurate.

The EA remedy success and effectiveness will be evaluated both during and shortly after implementation (short term) and over the longer term. Short-term (1 to 5 years) metrics will focus on remedy implementation success and confirmation of the CSM through collection and analysis of data such as bathymetry, sediment profile imagery, and sediment traps. Long-term (5 plus years) metrics will be informed by the results from short-term evaluations, with a focus on surface sediment chemistry comparisons and other metrics similar to the short-term data collection efforts that take

into account long-term conditions sustainable in Newtown Creek. It is anticipated that long-term monitoring for OU3 will continue at least until an OU1 remedy is fully implemented and performance monitoring for that action is initiated.

The FFS evaluation will determine which of the risk-based COCs listed in Table 1 in addition to PCBs, Total PAHs, and Cu are of concern in CM 0–2. SWACs for each of the risk-based COCs that are of concern in CM 0–2 will be developed as part of, or in accordance with, the performance monitoring plan. These SWACs will be compared to action-specific interim performance metrics, which will also be developed during and/or in accordance with the performance monitoring plan. As discussed in Section 1.1.3, the action-specific interim performance metrics will be developed using a combination of risk-based, background-based and reference area-based information. Determination and/or application of the performance metrics should factor in any ongoing inputs to the creek that will persist long term and influence CM 0–2 over time. The performance metrics will also be used to determine whether over time the SWACs in CM 0–2 are consistent with reasonable expectations for remediating CM 0–2 and are sustainable over time.

3 Project Deliverables

Deliverables and tasks required under this SOW will be submitted or completed by the deadlines or within the time durations listed in the following schedule. Respondents may submit proposed revised schedules, including, as appropriate, elimination or consolidation of deliverables, for EPA approval. Upon EPA's approval, the revised schedules (and, as appropriate, list of deliverables) supersede the following schedule and any previously approved schedule.

Number	Task Description of Deliverable	Deadline
1	Draft FFS SCS Work Plan	Due on Effective Date of the 2019 AOC
2	Final FFS SCS Work Plan	30 days after EPA's comments on the Draft FFS SCS Work Plan
3	Draft FFS Work Plan	60 days after Effective Date of 2019 AOC
4	Final FFS Work Plan	30 days after EPA's comments on the Draft FFS Work Plan
5	Draft FFS Report	60 days after receipt of validated FFS data and/or approval of FFS Work Plan whichever is later
6	Final FFS Report	30 days after EPA's comments on the Draft FFS Report
7	Draft EA Performance Monitoring Plan	60 days after the Draft FFS is submitted
8	Final EA Performance Monitoring Plan	TBD days after EPA's comments on the Draft EA Performance Monitoring Plan

4 Completion of Work

If Respondents think that all Work and all other activities have been fully performed in accordance with the 2019 AOC with the exception of any continuing obligations such as Respondents' obligation to retain records pursuant to Section XIV of the 2019 AOC, Respondents may request that EPA provide it with written notice of completion of the Work. Upon receipt of such a request, EPA will either provide written notice of completion to Respondents indicating that the Work required pursuant to this Settlement Agreement has been completed and Respondents' obligations under the 2019 AOC have been satisfied, subject to any continuing obligations, or, if EPA determines that any Work has not been completed in accordance with the 2019 AOC, EPA will so notify Respondents, provide a list of the deficiencies, and require that Respondents correct such deficiencies. Failure by Respondents to correct such deficiencies shall be a violation of the 2019 AOC.

**Table 1
Newtown Creek (Operable Unit 1) Risk-Based COCs**

Risk Assessment	COC
Human Health	PCBs
	Total non-dioxin-like PCB congeners
	Total PCB TEQs
	Dioxins/Furans
	Total Dioxin/Furan TEQ
Ecological	Total PCBs
	Total PAHs
	Dioxins/Furans
	2,3,7,8-TCDD
	Total Dioxin/Furan TEQ
	Copper
	Lead

Notes:

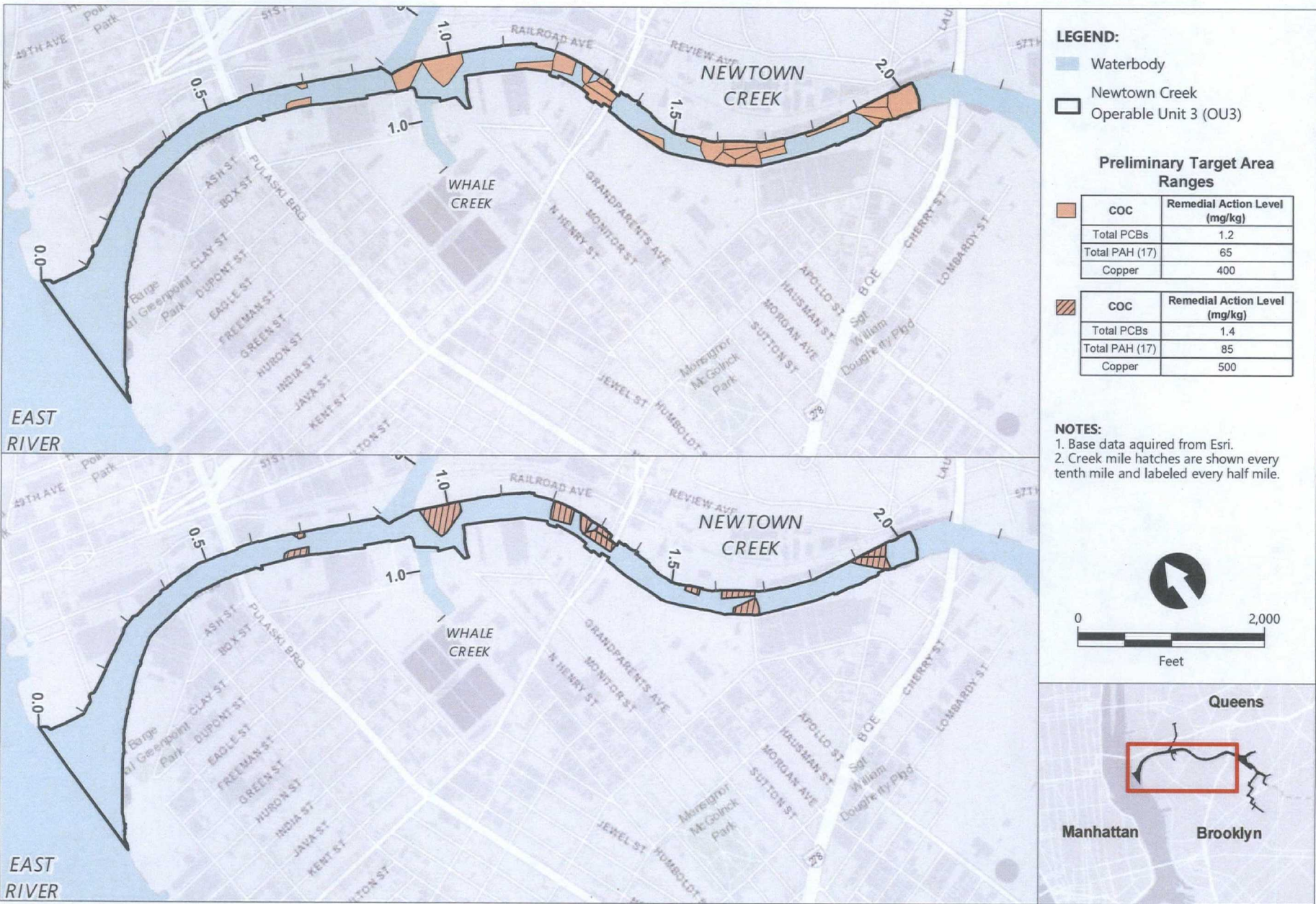
COC: contaminant of concern

PAH: polycyclic aromatic hydrocarbon

PCB: polychlorinated biphenyl

TCDD: 2,3,7,8-tetrachlorodibenzo-p-dioxin

TEQ: toxic equivalence quotient



Publish Date: 2019/06/18, 1:56 PM | User: joliver
 Filepath: \\orcas\gis\Jobs\NewtownCreek\NewtownCreek_EarlyAction\Maps\SOW_OU3\AQ_SOWOU3_Fig1_ActionAreas_Split_8x11.mxd



Figure 1
Preliminary Target Areas
 Focused Feasibility Study Statement of Work
 Newtown Creek OU3

Appendix B

To Administrative Settlement Agreement and Order on Consent for Focused Feasibility Study,
CERCLA Docket No. CERCLA-02-2019-2011

Map Generally Depicting the OU3 Portion of the Newtown Creek Study Area

DRAFT



Publish Date: 2019/06/18, 1:54 PM | User: jalliver
Filepath: \\orca\gis\jobs\NewtownCreek\NewtownCreek_EarlyAction\Maps\SOW_OU3\AQ_SOWOU3_App8_OU3.mxd

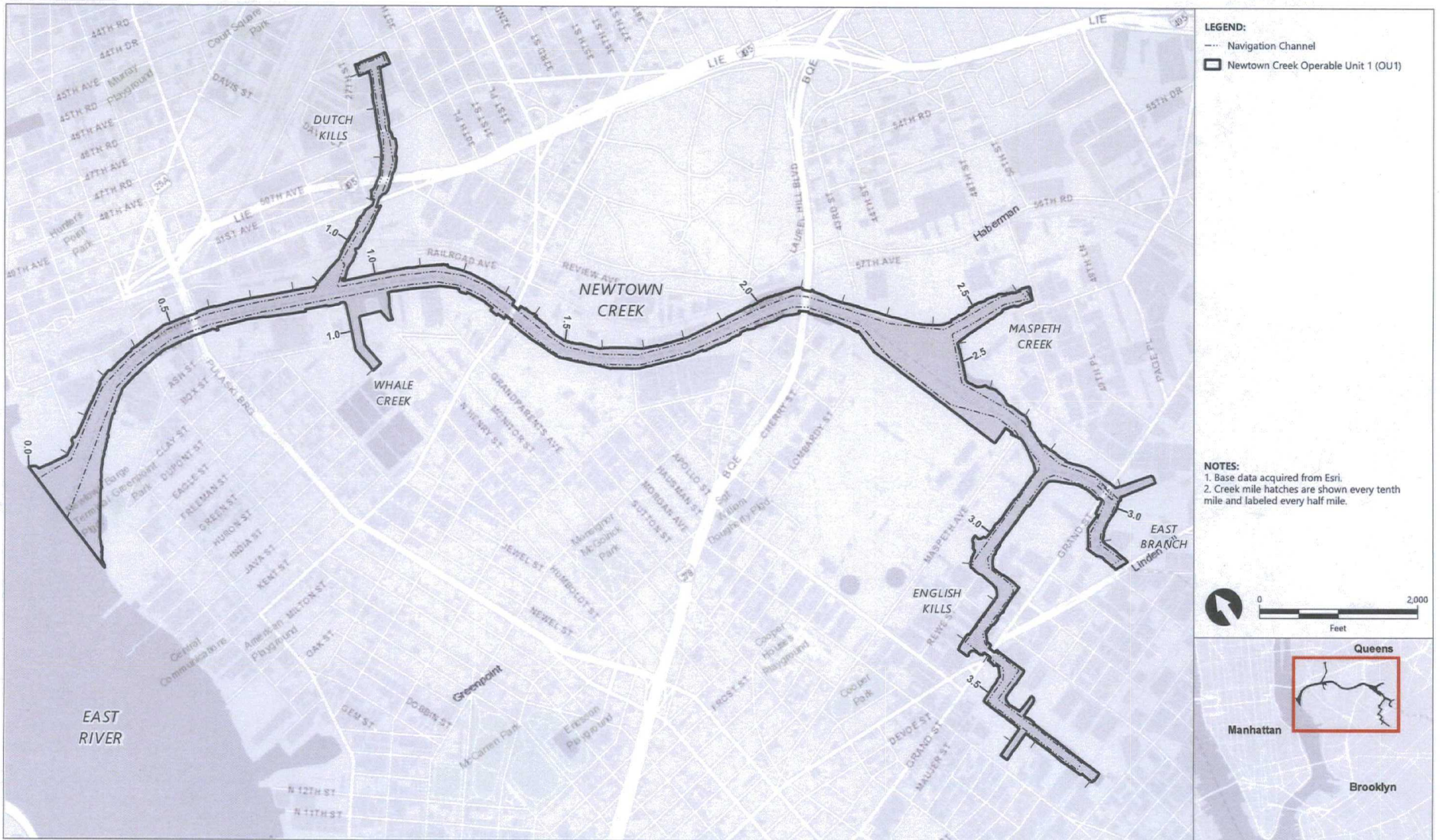


Appendix C

To Administrative Settlement Agreement and Order on Consent for Focused Feasibility Study,
CERCLA Docket No. CERCLA-02-2019-2011

Map Generally Depicting the Newtown Creek Study Area

DRAFT



Publish Date: 2019/06/18, 1:53 PM | User: joliver
Filepath: \\corcas\gis\Jobs\NewtownCreek\NewtownCreek_EarlyAction\Maps\SOW_OU3\AQ_SOWOU3_Appx_C_OU1.mxd

