

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2

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IN THE MATTER OF THE :
GOWANUS CANAL SUPERFUND SITE :
 :
Beazer East, Inc. : INDEX NO.
Brink's Inc. : CERCLA-02-2019-2010
Brooklyn Union Gas Co. d/b/a National Grid New York :
Citigroup, Inc. : ADMINISTRATIVE ORDER
City of New York : FOR REMOVAL ACTION
Consolidated Edison Co. of New York, Inc. :
Dun and Bradstreet Corp. :
ExxonMobil Oil Corp. :
Hauck Manufacturing Co. :
Hess Corp. :
Honeywell International Inc. :
Kraft Foods Global, Inc. :
MCIZ Corp. and :
 Fifteen Second Avenue LLC :
 36-2nd-J Corp. :
 107 Sixth Street LLC :
MRC Holdings, Inc. :
NL Industries, Inc. :
Northville Industries Corp. :
Phillips 66 Co. :
Puget Sound Commerce Center, Inc. :
Rexam Beverage Can Co. :
SPX Corp. :
Stauffer Management Company, LLC :
TDA Industries, Inc. :
The Brooklyn Improvement Co. :
The Union Oil Company of California :
Verizon New York Inc. :
 Respondents, :
 :
Proceeding under Section 106 of the :
Comprehensive Environmental Response, :
Compensation, and Liability Act, as amended, :
42 U.S.C. § 9606. :
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I. JURISDICTION AND GENERAL PROVISIONS

1. This administrative order (“Order”) is issued to the above-captioned Respondents by the United States Environmental Protection Agency, Region 2 (“EPA”) and requires Respondents to undertake a Removal Action to perform the tasks necessary to provide structural support for bulkheads and infrastructure in preparation for implementation of the dredging and capping remedy selected in EPA’s September 27, 2013 Record of Decision (“ROD”) for the Gowanus Canal Superfund Site (“Site”), Brooklyn, New York.

2. This Order is issued to Respondents by EPA pursuant to the authority vested in the President of the United States under Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (“CERCLA”), 42 U.S.C. § 9606(a), and delegated to the Administrator of EPA on January 23, 1987, by Executive Order No. 12580 (52 Federal Register 2926, January 29, 1987). This authority was further delegated to the EPA Regional Administrators by EPA Delegation Nos. 14-14-A and 14-14-B and to the Director of the Emergency and Remedial Response Division in Region 2 by Regional Delegation R-1200, dated January 19, 2017.

3. EPA has notified the New York State Department of Environmental Conservation (“NYSDEC”) of this Order pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

II. PARTIES BOUND

4. This Order shall apply to and be binding upon Respondents and their directors, officials, employees, agents, successors and assigns. No change in the status or control of Respondents shall alter Respondents’ responsibilities under this Order. Respondents are jointly and severally responsible for carrying out all Work required by this Order.

5. Until EPA notifies Respondents under Paragraph 101 that the Work has been completed, Respondents shall provide a copy of this Order to any successors before a controlling interest in such Respondents’ assets or property rights are transferred to any successor.

III. DEFINITIONS

6. Unless otherwise expressly provided herein, terms used in this Order that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or its implementing regulations. Whenever terms listed below are used in this Order or in the appendices attached hereto, or incorporated by reference into this Order, the following definitions shall apply:

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

- b. “Day” shall mean a calendar day. In computing any period under this Order, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day.
- c. “Effective Date” means the date specified in Paragraph 102.
- d. “Paragraph” shall mean a portion of this Order identified by an Arabic numeral.
- e. “Record of Decision” or “ROD” shall mean the EPA Record of Decision relating to the Site signed on September 27, 2013 by the Director of the Emergency Remedial Response Division, EPA Region 2, including all attachments thereto, attached as Appendix A.
- f. “Remedial Design” or “RD” shall mean those activities to be undertaken by Respondents pursuant to the two RD administrative orders, Index Number CERCLA-02-2014-2001 and CERCLA-02-2014-2019.
- g. “Respondents” shall mean:
 - 1. Beazer East, Inc.
 - 2. Brink’s Inc.
 - 3. Brooklyn Union Gas Co. d/b/a National Grid New York
 - 4. Citigroup, Inc.
 - 5. City of New York
 - 6. Consolidated Edison Co. of New York, Inc.
 - 7. Dun and Bradstreet Corp.
 - 8. ExxonMobil Oil Corp.
 - 9. Hauck Manufacturing Co.
 - 10. Hess Corp.
 - 11. Honeywell International Inc.
 - 12. Kraft Foods Global, Inc.
 - 13. MCIZ Corp. and affiliated entities:
 - a. Fifteen Second Avenue LLC
 - b. 36-2nd-J Corp.
 - c. 107 Sixth Street LLC
 - 14. MRC Holdings, Inc.
 - 15. NL Industries, Inc.
 - 16. Northville Industries Corp.
 - 17. Phillips 66 Co.
 - 18. Puget Sound Commerce Center, Inc.
 - 19. Rexam Beverage Can Co.

- 20. SPX Corp.
- 21. Stauffer Management Company, LLC
- 22. TDA Industries, Inc.
- 23. The Brooklyn Improvement Co.
- 24. The Union Oil Company of California
- 25. Verizon New York Inc.

- h. “Site” shall mean the Gowanus Canal Superfund Site, an approximately 100-foot wide, 1.8-mile-long canal located in the New York City borough of Brooklyn, Kings County, New York, and also includes any areas which are sources of contamination to the Gowanus Canal (“Canal”), including any areas where contamination has migrated from the Canal, and/or suitable areas in very close proximity to the contamination which are necessary for implementation of the Work.
- i. “United States” shall mean the United States of America.
- j. “Waste Material” shall mean (i) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (ii) any “pollutant or contaminant” under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); and (iii) any “solid waste” under Section 1004(27) of the Solid Waste Disposal Act, as amended, 42 U.S.C. § 6903(27).
- k. “Work” shall mean all activities Respondents are required to perform under this Order, except those required by Section XV (Records Retention).

IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW

7. The Gowanus Canal (“Canal”) is a brackish, tidal arm of the New York–New Jersey Harbor Estuary, extending for approximately 1.8 miles through Brooklyn, New York. The approximately 100–foot–wide Canal runs southwest from Butler Street to Gowanus Bay and Upper New York Bay. The adjacent waterfront is primarily commercial and industrial, currently including concrete plants, warehouses, and parking lots, and the Site is near several residential neighborhoods.

8. In 1849, State legislation authorized construction of the Canal by the City of Brooklyn to open the area to barge traffic, flush away sewage, receive storm water and fill the adjacent lowlands for development. Pursuant to the 1849 legislation, the City of New York (“City”), successor in interest to the City of Brooklyn, has been the owner and operator of the Canal since its construction. The Canal bottomlands are owned by the City.

9. The Canal was constructed by bulkheading and dredging a tidal creek and wetland. Additional fill was utilized to raise the grade of the surrounding land. The authorizing legislation and the initial Canal design had recognized the likelihood that the Canal would be stagnant, creating pollution problems. To prevent this, various flushing solutions were contemplated. However, none were implemented as part of its initial construction.
10. After completion of construction in the 1860s, the Canal quickly became one of the nation's busiest industrial waterways, home to heavy industry including manufactured gas plants ("MGPs"), coal yards, cement makers, soap makers, tanneries, paint and ink factories, machine shops, chemical and asphalt plants, oil refineries and shipyards.
11. A tunnel was constructed by the City (the "Flushing Tunnel") and began operating in 1911 in an effort to address the Canal's pollution problems. Designed to improve circulation and flush pollutants from the Canal, the Flushing Tunnel consists of a one mile long, 12-foot diameter tunnel stretching from New York Bay near Governors Island to the head of the Canal. Originally using a large ship propeller-type pump system, the Flushing Tunnel could pump water in either direction. The Flushing Tunnel was operated by the City with mixed results until the mid-1960s when it fell into disrepair. The Flushing Tunnel was re-started in 1999 after a partial rehabilitation, before being shut down in 2010 due to equipment problems. Following a full-scale rehabilitation by the City, the Flushing Tunnel began operating again in 2014 and continues to this day.
12. Hazardous substances, pollutants and contaminants have entered the Canal via several transport pathways or mechanisms, including spillage during product shipping and handling, direct disposal or discharge, contaminated groundwater discharge, surface water runoff, storm water discharge (including combined sewer overflow ("CSO")) and contaminated soil erosion. Because of decades of direct and indirect discharges of hazardous substances generated by industrial and other activity, the Canal became a repository for untreated industrial wastes, raw sewage, and runoff, causing it to become one of New York's most polluted waterways.
13. Much of the heavy industrial activity along the Canal has ceased, although many upland areas adjacent to the Canal remained zoned as manufacturing districts. Land uses along and near certain portions of the Canal are in the process of transitioning from heavy industrial to light industrial, commercial, and residential uses. The Canal is currently used by some for recreational purposes such as boating, diving, and catching fish for consumption. The Canal and New York City harbor are subject to New York State fishing advisories.
14. The Site was placed on the National Priorities List pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, on March 2, 2010.
15. In April 2010, EPA entered into administrative consent orders with the City and The Brooklyn Union Gas Co. d/b/a National Grid New York ("National Grid") to perform work in

support of EPA's remedial investigation/feasibility study ("RI/FS"). An RI report was completed in January 2011 and an FS report was completed in December 2011. An FS addendum report was completed in December 2012.

16. Sampling results from the RI/FS document the presence of a wide range of hazardous substances in the groundwater, soil, and Canal sediments at the Site. These include polycyclic aromatic hydrocarbons ("PAHs"), polychlorinated biphenyls ("PCBs"), pesticides (such as methoxychlor and DDT), metals (such as barium, cadmium, copper, lead, mercury, nickel and silver), as well as volatile organic compounds ("VOCs") (such as benzene, toluene, ethylbenzene, and xylene). The contamination in the sediments extends the entire length of the Canal. The contamination is present in both the sediment that has accumulated above the native sediments (referred to as "soft sediments") and in the native sediment. Some of the hazardous substances are present at high levels. The soft sediment layer ranges in thickness from approximately 1 foot to greater than 20 feet, with an average thickness of about 10 feet. For example, total PAH concentrations in surface sediment (defined as the top 6 inches of the soft sediments, where potential exposure is more likely to occur) range up to 8,001,000 micrograms per kilogram ($\mu\text{g}/\text{kg}$). PCBs in surface sediment were detected up to 3,400 $\mu\text{g}/\text{kg}$. In the subsurface (*i.e.*, deeper than 6 inches), total PAH concentrations in the soft sediment ranged up to 45,000,000 $\mu\text{g}/\text{kg}$. Total PAH concentrations in the native sediment were detected up to 47,500,000 $\mu\text{g}/\text{kg}$. In the subsurface, total PCB concentrations in the soft sediment were detected up to 50,700 $\mu\text{g}/\text{kg}$. In the native sediments, total PCBs were detected up to 2,610 $\mu\text{g}/\text{kg}$.

17. Based on the results of the RI/FS, it has been concluded that chemical contamination in the Canal sediments present an unacceptable ecological and human health risk, primarily due to exposure to PAHs, PCBs and metals (barium, cadmium, copper, lead, mercury, nickel and silver).

18. PCBs and PAHs have been demonstrated to cause a variety of adverse health effects. PCBs have been shown to cause cancer in test animals. PCBs have also been shown to cause a number of serious non-cancer health effects in animals, including effects on the immune system, reproductive system, nervous system, endocrine system and other health effects. Studies in humans provide supportive evidence for potential carcinogenic and non-carcinogenic effects of PCBs. The toxicity of PAHs can vary from being nontoxic to extremely toxic. EPA has classified seven PAH compounds as probable human carcinogens: benz[a]anthracene; benzo[a]pyrene; benzo[b]fluoranthene; benzo[k]fluoranthene; chrysene; dibenz(a,h)anthracene; and indeno(1,2,3-cd)pyrene. PAHs known for their carcinogenic, mutagenic, and teratogenic properties are benz[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[j]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, benzo[ghi]perylene, coronene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, and ovalene. High prenatal exposure to PAHs is associated with lower IQ and childhood asthma.

19. EPA's ecological risk assessment for the Site determined that PAHs, PCBs and metals in the sediment are toxic to benthic organisms. PAHs were detected in sediment at the highest concentrations relative to their ecological screening benchmarks and represent the greatest Site-related risk to the benthic community. PCBs and seven metals (barium, cadmium, copper, lead, mercury, nickel and silver) were also detected at concentrations above their ecological screening benchmarks and at concentrations significantly higher than those detected in reference area sediments and also represent a potential Site-related risk to the benthic community. PAHs were found to be a potential risk to aquatic herbivores (represented by the black duck) and mercury was found to be a potential risk to avian omnivores (represented by the heron).

20. On September 27, 2013, EPA issued a ROD for the Site that selected the following response actions: 1) Dredging of the entire column of hazardous substance-contaminated sediments which have accumulated above the native sediments in the upper and mid-reaches of the Canal (referred to as "soft sediments"); 2) in-situ stabilization ("ISS") of those native sediments in select areas in the upper and mid-reaches of the Canal contaminated with high levels of nonaqueous phase liquid ("NAPL"); 3) construction of a multilayered cap in the upper and mid-reaches of the Canal to isolate and prevent the migration of PAHs and residual NAPL from native sediments; 4) dredging of the entire soft sediment column in the lower reach of the Canal; 5) construction of a multilayer cap to isolate and prevent the migration of PAHs from native sediments in the lower reach of the Canal; 6) off-Site treatment of the NAPL-impacted sediments dredged from the upper and mid-reaches of the Canal with thermal desorption, followed by beneficial reuse off-Site (*e.g.*, landfill daily cover) if possible; 7) off-Site stabilization of the less contaminated sediments dredged from the lower reach of the Canal and the sediments in the other reaches not impacted by NAPL, followed by beneficial reuse off-Site; 8) excavation and restoration of approximately 475 feet of the filled-in former 1st Street turning basin; 9) excavation and restoration of the portion of the 5th Street turning basin beginning underneath the 3rd Avenue bridge and extending approximately 25 feet to the east and the installation of a barrier or interception system at the eastern boundary of the excavation; 10) implementation of institutional controls incorporating the existing fish consumption advisories (modified, as needed), as well as other controls to protect the integrity of the cap; 11) periodic maintenance of the cap and long-term monitoring to insure that the remedy continues to function effectively; and 12) CSOs controls to significantly reduce overall contaminated solid discharges to the Canal, which include a) construction of two retention tanks to retain discharges from outfalls RH-034 and OH-007; and b) implementation of appropriate engineering controls to ensure that hazardous substances and solids from separated stormwater, including from future upland development projects, are not discharged to the Canal.

21. On March 21, 2014, EPA issued an administrative order for remedial design ("RD"), Index Number CERCLA-02-2014-2001 (the "Dredging RD UAO"), to 31 parties requiring the performance of various pre-RD investigations and analyses, the preparation of biddable plans and specifications for the implementation of the remedy selected in EPA's September 27, 2013

ROD for the Site, other than the CSO controls, and the cleanup and restoration of the former 1st Street turning basin.

22. On May 28, 2014, EPA issued an administrative order for RD, Index Number CERCLA-02-2014-2019 (the “City RD UAO”), to the City requiring the preparation of the RD of the two CSO retention tanks and of the cleanup and restoration of the former 1st Street turning basin, as well as the City’s coordination and participation in the Dredging RD UAO.

23. To implement the dredging of the contaminated accumulated sediments in the Canal and capping of the contaminated native sediments, as required by the selected remedy, the ROD recognized that shoring of bulkheads will be necessary at the majority of parcels along the Canal to prevent bulkhead collapse during dredging and capping operations. Timber cribbing was the primary construction method for the original bulkheads that support the sides of the Canal. Many of those bulkheads have had limited, if any, upgrades. As a result, many of the bulkheads at the Canal are in poor condition.

24. The Canal’s original bulkhead system has been deemed eligible by the New York State Historic Preservation Office for listing on the National Register of Historic Places. Regarding historic preservation of the bulkheads, the ROD indicates:

Should the bulkheads be subject to adverse effects as a result of cleanup actions, a wide range of mitigating measures could be implemented as part of the remedy. As noted above, the appropriate measures would likely include additional documentation of bulkhead characteristics and the incorporation of archaeological and architectural investigations.

25. Structural support options are limited for the original timber crib bulkheads. Typical support measures involve installation of new, deeper sheet piling along the existing bulkhead face, resulting in incremental encroachment on the Canal. NYSDEC seeks to limit and mitigate such encroachment when approving such repairs and upgrades along the Canal. In an effort to mitigate such encroachment, EPA’s ROD requires the creation of a wetlands mitigation area for offsetting such encroachment when it cannot be accomplished at the parcel where the bulkhead upgrade is planned. Such a wetlands mitigation area will be primarily achieved by means of the excavation and restoration of the contaminated, filled-in former 1st Street turning basin, together with other location-specific mitigation measures.

26. The work required by the Dredging RD UAO is currently being conducted by a group of potentially responsible parties (“PRPs”) (the “Performing PRPs”). The funding and coordination of the RD work is occurring through the “Gowanus Canal Environmental Remediation Trust,” which was created by the Performing PRPs for such purposes. Geosyntec Consultants, Inc. is the EPA-approved primary consultant for the Performing PRPs.

27. For purposes of the planning and implementation of the ROD, EPA divided the Canal into three Remediation Target Areas (“RTAs”). RTA 1 extends from Butler Street to 3rd Street. RTA 1 will be the first section of full-scale dredging and capping. The RD for RTA 1 is currently scheduled to be completed in November 2019, with dredging targeted to begin in June 2020, and is expected to take approximately two years. RTA 2 extends from 3rd Street to 9th Street. RTA 3 extends from 9th Street to 22nd Street.

28. On June 9, 2016, EPA issued an Administrative Settlement Agreement and Order for Remedial Design, Removal Action and Cost Recovery, Index Number CERCLA-02-2016-2003 (the “RH-034 Tank AOC”), to the City. The RH-034 Tank AOC requires the City to, among other things, complete the RD for the RH-034 Tank, the larger of two retention tanks selected as a component of the ROD remedy, which is located in RTA 1. The RH-034 Tank AOC also provides the City with the opportunity to acquire through purchase or eminent domain, two privately-owned parcels located at 242 Nevins Street and 234 Butler Street (hereinafter, the “Canal-side Property”) for siting the RH-034 Tank on those parcels, subject to certain conditions. That acquisition was completed on October 31, 2018.

29. On May 11, 2017, EPA issued an administrative order, Index Number CERCLA-02-2017-2007 (the “Fulton Wall Design UAO”), to National Grid requiring the design of a bulkhead barrier wall (the “Fulton Wall”) on the east bank of the Canal between the northernmost part, or head end, of the Canal and the Union Street bridge, located in RTA 1. A primary purpose of the Fulton Wall Design UAO is to insure proper coordination of interrelated components of the Dredging RD UAO, the RH-034 Tank AOC and construction of the Fulton Wall.

30. On May 22, 2018, EPA issued Administrative Settlement Agreement and Order for Removal Action, Index Number CERCLA-02-2018-2003 (the “Fulton AOC”), to National Grid, requiring, among other things, the construction of the Fulton Wall in advance of the commencement of RTA 1 dredging. The design of the Fulton Wall was approved by EPA in March 2019. Pursuant to the Fulton AOC, construction of the Fulton Wall is scheduled to be completed by December 2, 2019.

31. In preparation for the RTA 1 dredging, EPA has also entered into administrative consent orders for the performance of removal actions requiring the construction of upgraded bulkheads at various upland parcels in RTA 1. The respondents for these bulkhead orders have generally been non-PRP volunteers who are in the process of redeveloping the parcels. Such bulkhead upgrades have been completed at 363 Bond Street, 365 Bond Street and 155 3rd Street. EPA has entered into another such order with the owners of 319-323-325-327 Bond Street, as well as a bulkhead upgrade design order with the owner of 322 3rd Avenue. EPA is in the process of negotiating orders with the owners of 495-498-510 Sackett Street/267 Bond Street, 450 Union Street, 420 Carroll Street and 175-225 3rd Street. Those orders, in conjunction with this Order, will provide for completion of all upgraded bulkheads in RTA 1 in advance of the scheduled start of RTA 1 dredging.

32. The New York City Department of Environmental Protection (“NYCDEP”) manages the Flushing Tunnel and Gowanus Pump Station facilities located at Bond and Butler Streets in RTA 1. These facilities are critical infrastructure for the City. The bulkheads for these facilities, which require structural support, incorporate the discharge location for the Flushing Tunnel and the RH-034 CSO outfall. Pursuant to the City RD UAO, the City is required to cooperate and coordinate with the Respondents to the Dredging RD UAO, including in the bulkhead structural support design process.

33. The New York City Department of Transportation (“NYCDOT”) manages the six bridges that cross the Canal, all of which require structural support analysis, design and, potentially, shoring or other construction support in order to implement the dredging remedy, and which are also critical infrastructure. The Union and Carroll Street bridges are located in RTA 1. Pursuant to the City RD UAO, the City is required to cooperate and coordinate with the Respondents to the Dredging RD UAO, including with respect to the bridge structural support design.

34. Pursuant to the Dredging RD UAO and City RD UAO, in 2017, EPA directed the Performing PRPs to complete, for advance implementation as a separate response action, the bulkhead and bridge structural support designs for the following locations: the privately-owned 479 Degraw Street; the City-owned street ends abutting the Canal at Douglass and Degraw Streets; the NYCDEP Flushing Tunnel/Gowanus Pump Station property; and the City-owned and NYCDOT-operated Union Street and Carroll Street bridges.

35. To provide barge access to implement the bulkhead support construction required by this Order at the RTA 1 locations listed in Paragraph 34, it is necessary to dredge approximately 10,000 cubic yards of sediment north of the Union Street bridge. Under the Dredging RD UAO, the Performing PRPs are preparing, for EPA review and approval, an access dredging design.

36. To implement the bulkhead support construction required by this Order at the NYCDEP Flushing Tunnel/Gowanus Pump Station property, EPA has concluded that it may be necessary to temporarily suspend operation of the Flushing Tunnel for a short period, or periods, of time. Consistent with the provisions of this Order, EPA will approve the Flushing Tunnel/Gowanus Pump Station property bulkhead support design and oversee the implementation of such work in a manner which will minimize impacts to current water quality in the Canal. Similarly, EPA has concluded that it may be necessary to take steps to coordinate the operation of the RH-034 outfall with the implementation of the bulkhead support work required by this Order.

37. RTA 2 dredging is projected to begin in June 2022. Pursuant to additional EPA administrative consent orders, bulkhead upgrades have been completed at several parcels in RTA 2, including 163 6th Street, 530-537 Smith Street, and 543 Smith Street. EPA is in the process of negotiating several additional similar agreements with owners of other RTA 2 parcels.

38. The City-owned New York City Department of Sanitation (“NYCDOS”) Salt Lot at 6th Street is the EPA-selected location for the OH-007 CSO Retention Tank. The bulkheads at this parcel and the adjacent 2nd Avenue street end, which is the current location of the OH-007 outfall, are severely deteriorated. Pursuant to the City RD UAO, NYCDEP is required to design a bulkhead upgrade at the Salt Lot parcel. A portion of that bulkhead design process has been commenced by NYCDEP.

39. For the RTA 2 dredging to be implemented, RTA 2 bulkhead structural support design and construction must be completed by approximately June 2022, including at the NYCDOS Salt Lot at 6th Street; the City-owned street ends, including not limited to Bond Street, Huntington Street; and 2nd Avenue; and the structural support for the 3rd Avenue Bridge; the 3rd Street bridge and the 9th Street bridge; above which is located the Culver Viaduct, part of the New York City Transit (“NYCT”) subway infrastructure. The design of such structural support is required by the Dredging RD UAO and City RD UAO.

40. Various RD pilot work has been performed at the Site for which the Performing PRPs have utilized a staging area located at 459 Smith Street. That property, currently leased by National Grid, is part of the former Citizens Gas MGP Site (“Citizens Site”), which also includes the City-owned property known as “Public Place,” identified on the Kings County Tax Map as Block 471, Lots 1 and 100. The Citizens Site is a source of contamination to the Canal, timely control of which is assumed by the ROD. NYSDEC is generally the lead for such upland cleanup work.

41. The City and National Grid are Respondents to an NYSDEC Brownfields Cleanup Program order with respect to the Citizens Site. National Grid is preparing to implement the Remedial Action (“RA”) called for in a 2007 Citizens Site ROD issued by NYSDEC under State law. 459 Smith Street, or an alternate staging area, will be needed for implementing the removal action required by this Order, and subsequent implementation of the dredging and capping portions of the selected RA. Block 471, Lot 1 currently contains a significant quantity of construction and demolition debris left by a former tenant of the City. The debris currently prevents the property’s use as a staging area and impedes implementation of a major portion of the Citizens Site RA, which is a necessary contamination source control action for protection of the Canal remedy, and the removal action required by this Order.

42. The Site includes a "facility" within the meaning of Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

43. The contamination found at the Site, as identified in these Findings of Fact above, includes hazardous substances as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

44. The conditions described in these Findings of Fact above constitute an actual or threatened “release” of a hazardous substance from a facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22). Such releases include, but are not limited to, PAHs, PCBs, pesticides, metals, and volatile organic compounds that were discharged into the soil, surface water, groundwater and sediments at the Site.

45. The Work is a response action which will be conducted entirely on-Site and is, therefore, subject to the permit exemption in Section 121(e)(1) of CERCLA, 42 U.S.C. § 9621(e)(1), and the provisions of National Oil and Hazardous Substances Pollution Contingency Plan (“NCP”), 40 C.F.R. Part 300. EPA intends to coordinate as appropriate with the regulatory authorities, which include the U.S. Army Corps of Engineers, the NYSDEC, the New York State Historic Preservation Office (“SHPO”), and the City, in order to ensure substantive compliance with the applicable regulatory requirements for the Work.

46. Respondent City of New York is a municipal corporation chartered by the State of New York and is a “person” within the meaning of Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

47. Each of the other Respondents is a corporation or a limited liability company and is a “person” within the meaning of Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

48. Each Respondent is a responsible party with respect to the Site within the meaning of Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

V. DETERMINATIONS

49. The conditions present at the Site constitute a threat to public health, welfare, or the environment based upon factors set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (“NCP”). These factors include, but are not limited to, actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants.

50. The actual or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health, welfare, or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. §9606(a).

51. The actions required by this Order are necessary to protect the public health or welfare or the environment, are in the public interest, and are consistent with CERCLA and the NCP.

VI. ORDER

52. Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, the administrative record for the Work required herein and other information available to EPA, it is hereby ordered that Respondents conduct the Work set forth in Section VIII. All activities specified below shall be initiated and completed as soon as possible, even though maximum time periods for their completion are specified herein.

VII. DESIGNATED EPA PROJECT MANAGER AND RESPONDENTS' PROJECT COORDINATOR

53. Respondents have previously designated and EPA has previously approved Respondents' Project Coordinator pursuant to the Dredging RD UAO. Respondents' approved Project Coordinator for the Work under this Order is:

Howard L. Cumberland
Senior Principal
Geosyntec Consultants
621 SW Morrison St. Suite 600
Portland, Oregon 97205
Mobile: (503) 708-8502
Office: (971) 271-5898
hcumberland@Geosyntec.com

The Project Coordinator shall be responsible, on behalf of Respondents, for the implementation of the Work being performed under this Order. The Project Coordinator shall be knowledgeable about all matters relating to the Work being performed under this Order. To the extent possible, the Project Coordinator shall be present on-Site or readily available for EPA to contact during all working days. Notice by EPA in writing to the Project Coordinator shall be deemed notice to Respondents for all matters relating to the Work under this Order and shall be effective upon receipt. Respondents shall always retain a Project Coordinator until EPA issues a Termination and Satisfaction in accordance with Paragraph 101.

54. If Respondents change their Project Coordinator, Respondents shall submit the name, address, qualifications, email address and telephone number of the new Project Coordinator to the EPA Remedial Project Manager ("RPM") specified in Paragraph 60, below. The new Project Coordinator shall not be an attorney engaged in the practice of law. He or she shall have the technical expertise sufficient to adequately oversee all aspects of the Work contemplated by this Order.

55. Selection of a new Project Coordinator shall be subject to approval by EPA in writing. If EPA disapproves a proposed Project Coordinator, Respondents shall propose a different person

and notify EPA of that person's name, address, telephone number and qualifications within seven (7) days following EPA's disapproval. Respondents may change their Project Coordinator if EPA has received written notice at least ten (10) days prior to the desired change. The initial notification may be made orally, but shall be promptly followed by a written notice. All changes of the Project Coordinator shall be subject to EPA approval.

56. Respondents have previously retained, and EPA has previously approved of, Geosyntec Consultants, Inc. as their Supervising Contractor pursuant to the Dredging RD UAO, and this contractor shall serve as Supervising Contractor for the Work hereunder. Respondents shall notify EPA of the name and qualifications of any change to the Supervising Contractor as well as any other contractor or subcontractor proposed to perform Work under this Order, at least ten (10) days prior to commencement of such Work by such entity.

57. All activities required of Respondents under the terms of this Order shall be performed only by well-qualified persons possessing all necessary permits, licenses, and other authorizations required by federal, state, and/or local governments consistent with Section 121 of CERCLA, 42 U.S.C. § 9621, and all Work conducted pursuant to this Order shall be performed in accordance with prevailing professional standards. All plans and specifications shall be prepared under the supervision of, and signed/certified by, a licensed New York professional engineer.

58. EPA retains the right to disapprove any or all of the contractors and/or subcontractors proposed by Respondents to conduct the Work. If EPA disapproves in writing any of Respondents' proposed contractors or subcontractors, Respondents shall propose a different contractor within seven (7) days of receipt of EPA's disapproval.

59. Respondents shall provide a copy of this Order to each contractor and subcontractor approved and retained to perform the Work required by this Order. Respondents shall include in all contracts or subcontracts entered into for Work required under this Order provisions stating that such contractors or subcontractors, including its agents and employees, shall perform activities required by such contracts or subcontracts in compliance with this Order and all applicable laws and regulations. Respondents shall be responsible for ensuring that its contractors and subcontractors perform the Work contemplated herein in accordance with this Order.

60. EPA has designated Christos Tsiamis of the New York Remediation Branch, Emergency and Remedial Response Division, EPA Region 2, as its RPM for the Site. Except as otherwise provided in this Order, Respondents shall direct all submissions required by this Order to the RPM via e-mail at tsiamis.christos@epa.gov and by regular mail, at U.S. EPA, Region 2, 290 Broadway, 20th Floor, New York, NY 10007.

61. EPA's RPM shall have the authority lawfully vested in an RPM by the NCP. In addition,

EPA's RPM shall have the authority, consistent with the NCP, to halt any Work required by this Order and to take any necessary response action when the RPM determines that conditions at the Site may present an immediate endangerment to public health, welfare or the environment. The absence of the RPM from the area under study pursuant to this Order shall not be cause for the stoppage or delay of Work.

VIII. WORK TO BE PERFORMED

62. Within the time frames set forth in the Work Schedule attached hereto as Appendix B, or as otherwise specified in EPA-approved plans, Respondents shall perform all actions necessary to complete the Work set forth below. Nothing in this Order is intended to replace or supersede any of the design requirements of the Dredging RD UAO and City RD UAO, but rather to provide detailed direction regarding existing obligations thereunder.

RTA 1 Access Dredging, Bulkhead Design and Construction

a. Respondents are required to complete the access dredging and bulkhead structural support designs under the Dredging RD UAO and City RD UAO for the following locations:

- i. Block 417, Lot 21 (479 Degraw Street);
- ii. the City-owned street ends abutting the Canal at Douglass and Degraw Streets;
- iii. NYCDEP's Flushing Tunnel/Gowanus Pump Station property at Bond and Butler Streets; and
- iv. the City-owned and operated Union Street and Carroll Street bridges.

b. Pursuant to Section VI.D. of the Dredging RD UAO and Section VII.D of the City RD UAO, EPA hereby directs that the City, including but not limited to NYCDEP and NYCDOT, shall coordinate and cooperate with the other Respondents to the Dredging RD UAO in the review, comment and endorsement of the bulkhead and bridge structural support designs for the City-owned street ends abutting the Canal at Douglass and Degraw Streets; NYCDEP's Flushing Tunnel/Gowanus Pump Station property at Bond and Butler Streets; and the City-owned and operated Union Street and Carroll Street bridges, such that there is no delay in the scheduled implementation of such Work.

c. Following EPA approval, pursuant to the Dredging RD UAO and City RD UAO, of the access dredging and bulkhead structural support designs referenced in Paragraph 62.a., above, Respondents shall implement such access dredging and construct such bulkhead structural supports.

- i. In lieu of Respondents' performance of the construction of the bulkhead structural support at 479 Degraw Street, Respondents may submit to EPA for review and approval a proposed PRP funding agreement with the owner of 479 Degraw Street providing for the owner's performance of such construction and consent for EPA oversight under this Order. Such agreement shall not relieve Respondents of the obligation to ensure performance of this task under this Order.
- ii. With respect to implementation of the Work at the City-owned properties as set forth in Paragraph 62.a.ii.-iv., the City shall ensure that NYCDEP and NYCDOT provide such construction support resources as are necessary and appropriate for protection of the affected critical infrastructure and to ensure the proper and prompt completion of such Work. In addition, Respondents may notify EPA that the City has elected to be the lead party in the performance of the construction of such bulkhead and/or bridge structural support designs, including contractor selection via the Performing PRP's contracting funding mechanism, provided that such Work shall be completed through such election within the applicable time period set forth in Appendix B.

d. Following EPA approval of the bulkhead structural support designs set forth in Paragraph 62.a.iii., above, and for purposes of construction of the bulkhead structural supports at NYCDEP's Flushing Tunnel/Gowanus Pump Station property at Bond and Butler Streets, the City shall ensure that NYCDEP temporarily suspends operation of the Flushing Tunnel for such period, or periods, of time as may be determined by EPA to be needed for the Work. The City shall also ensure that NYCDEP promptly facilitates the implementation of any temporary infrastructure modification(s) required for construction at or near the RH-034 CSO outfall.

e. Following EPA approval of the bulkhead structural support designs set forth in Paragraph 62.a.iv., above, and for purposes of construction of any structural supports at Union Street and Carroll Street bridges, the City shall ensure that NYCDOT modifies opening, closing and use restrictions for such bridges as may be determined by EPA to be needed for the Work.

f. Respondents are required to install the temporary support of the Canal end of the First Street turning basin, pursuant to the EPA-approved design prepared by the City pursuant to the City RD UAO, and in coordination with the owners of adjacent properties so that the support will be tied in to their bulkheads. This installation shall be performed in a timeframe such that work shall be completed prior to the EPA-approved

schedule for the start of RTA 1 dredging. The installation will be completed either as part of the First Street turning basin restoration (which EPA anticipates will be performed pursuant to a separate EPA order) or, if that will not achieve completion prior to the start of RTA 1 dredging, then Respondents shall timely install such temporary support pursuant to this Order.

Staging Area

g. Within the applicable time period set forth in Appendix B, Respondents shall secure and prepare a staging area for implementation of the Work required by Paragraph 62.c. of this Order.

h. Within the applicable time period set forth in Appendix B, Respondents shall submit to EPA a report identifying the steps necessary to prepare Block 471, Lots 1 and 100 of the Citizens Site for future cleanup activities, including but not limited to, for implementation of the Citizens Site barrier wall and soil remediation, as well as for potential use as an RTA 1 and RTA 2 dredging staging area.

RTA 2 Bulkhead Designs

i. Unless EPA notifies Respondents that EPA has entered into an agreement with any of the below-listed private property owners, within the applicable time period set forth in Appendix B, pursuant to the Section VI.D. of the Dredging RD UAO and Section VII.D of the City RD UAO, EPA hereby directs that Respondents complete the bulkhead structural support designs for the RTA 2 bulkheads, bridges and other affected structures for the following locations:

- i. Block 466, Lots 17, 19, 46 and 60; Block 471, Lot 125; Block 979, Lot 23; Block 977, Lot 1; Block 990, Lots 1, 16, 21, 50, 69, 138, 269 and 369; Block 483, Lot 1;
- ii. the City-owned street ends abutting the Canal, including but not limited to, the street ends at Bond and Huntington Streets; and
- iii. the City-owned and operated Third Street, Third Avenue, Ninth Street and Hamilton Avenue bridges.

j. Pursuant to Section VII.D of the City RD UAO, EPA hereby directs the City, including but not limited to NYCDEP and NYCDOS, to complete the bulkhead structural support designs for the NYCDOS Salt Lot at 6th Street and the end of Second Avenue where the OH-007 outfall is currently located within the applicable time period set forth in Appendix B.

k. Pursuant to Section VI.D. of the Dredging RD UAO and Section VII.D of the City RD UAO, EPA hereby directs that the City, including but not limited to NYCDEP and NYCDOT, shall coordinate and cooperate with all other Respondents to the Dredging RD UAO in the review, comment and endorsement of the bulkhead and bridge structural support designs for the City-owned street ends at Bond and Huntington Streets; and the structural support designs for the Third Street, Third Avenue, Ninth Street and Hamilton Avenue bridges such that there is no delay in the scheduled implementation of such Work.

63. Health and Safety Plan. Respondents shall submit for EPA review and comment a Health and Safety Plan (“HASP”) that ensures the protection of on-Site workers and the public during the performance of on-Site Work under this Order. This HASP shall be prepared in accordance with “OSWER Integrated Health and Safety Program Operating Practices for OSWER Field Activities,” Pub. 9285.0-OIC (Nov. 2002), available on the National Service Center for Environmental Publications database at <https://www.epa.gov/nscep>, and “EPA’s Emergency Responder Health and Safety Manual,” OSWER Directive 9285.3-12 (July 2005 and updates), available at https://www.epaosc.org/_HealthSafetyManual/manual-index.htm. In addition, the HASP shall comply with all currently applicable Occupational Safety and Health Administration (“OSHA”) regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the HASP shall also include contingency planning. Respondents shall incorporate all changes to the HASP recommended by EPA and shall implement the HASP during the pendency of the removal action. If any of the Work performed by Respondents pursuant to this Order requires alteration of the HASP, Respondents shall submit to EPA for review such amendments to the HASP prior to the performance of such work.

64. Quality Assurance, Sampling, and Data Analysis. Respondents shall use Quality Assurance/Quality Control (“QA/QC”) and other technical activities and chain of custody procedures for all samples consistent with “EPA Requirements for Quality Assurance Project Plans (QA/R5)” (EPA/240/B-01/003, March 2001, reissued May 2006), “Guidance for Quality Assurance Project Plans (QA/G-5)” (EPA/240/R-02/009, December 2002), and subsequent amendments to such guidelines. Amendments to such guidelines shall apply only to procedures conducted after such notification.

Prior to the commencement of any data collection or other monitoring under this Order, Respondents shall submit to EPA for approval a Quality Assurance Project Plan (“QAPP”) that is consistent with EPA-approved plans, the NCP, the Uniform Federal Policy for Implementing Quality Systems (“UFP-QS”), EPA-505-F-03-001, March 2005; Uniform Federal Policy for Quality Assurance Project Plans (“UFP-QAPP”), Parts 1, 2, and 3, EPA-505-B-04-900A, B, and C, March 2005 and March 2012 or newer, and other guidance documents referenced in the aforementioned guidance documents as well as <http://www2.epa.gov/fedfac/assuring-quality-federal-cleanups>. Respondents shall ensure that EPA personnel and EPA’s authorized representatives are allowed access at reasonable times to all laboratories utilized by Respondents

in implementing this Order. In addition, Respondents shall ensure that such laboratories shall analyze all samples submitted by EPA pursuant to the QAPP for quality assurance, quality control, and technical activities that will satisfy the stated performance criteria as specified in the QAPP and that sampling and field activities are conducted in accordance with “EPA QA Field Activities Procedure” (<https://www.epa.gov/irmpoli8/epa-qa-field-activities-procedures>). Respondents shall ensure that the laboratories it utilizes for the analysis of samples taken pursuant to this Order meet the competency requirements set forth in EPA’s “Policy to Assure Competency of Laboratories, Field Sampling, and Other Organizations Generating Environmental Measurement Data under Agency-Funded Acquisitions” (<http://www.epa.gov/fem/pdfs/fem-lab-competency-policy.pdf>) and that the laboratories perform all analyses according to accepted EPA methods. Accepted EPA methods consist of, but are not limited to, methods that are documented in the EPA’s Contract Laboratory Program (<http://www.epa.gov/superfund/programs/clp/>), SW 846 “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (<http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm>), “Standard Methods for the Examination of Water and Wastewater” (<http://www.standardmethods.org/>), 40 C.F.R. Part 136, “Air Toxics - Monitoring Methods” (<http://www.epa.gov/ttnamti1/airtox.html>),” and any amendments made thereto during the course of the implementation of this Order. However, upon approval by EPA, Respondents may use other appropriate analytical method(s), as long as (a) QA/QC criteria are contained in the method(s) and the method(s) are included in the QAPP, (b) the analytical method(s) are at least as stringent as the methods listed above, and (c) the method(s) have been approved for use by a nationally recognized organization responsible for verification and publication of analytical methods, *e.g.*, EPA, American Society for Testing and Materials, National Institute for Occupational Safety and Health, OSHA, etc. Respondents shall ensure that all laboratories it uses for the analysis of samples taken pursuant to this Order have a documented Quality System that complies with ANSI/ASQC E-4-2004, “Quality Systems for Environmental Data and Technology Programs: Requirements with Guidance for Use” (American National Standard, 2004, and “EPA Requirements for Quality Management Plans (QA/R-2)” (EPA/240/B-01/002, March 2001, reissued May 2006), or equivalent documentation as determined by EPA. EPA may consider Environmental Response Laboratory Network laboratories, laboratories accredited under the National Environmental Laboratory Accreditation Program, or laboratories that meet International Standardization Organization (ISO 17025) standards or other nationally recognized programs (<http://www.epa.gov/fem/accredit.htm>) as meeting the Quality System requirements. Respondents shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Order are conducted in accordance with the procedures set forth in the QAPP approved by EPA.

Upon request, Respondents shall provide split or duplicate samples to EPA or its authorized representatives. Respondents shall notify EPA not less than seven (7) days in advance of any sample collection activity unless shorter notice is agreed to by EPA. In addition, EPA has the right to collect any additional samples that EPA deems necessary. Upon request, EPA will

provide to Respondents split or duplicate samples of any samples it collects as part of EPA's oversight of Respondents' implementation of the Work.

Respondents shall submit to EPA the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondents with respect to the implementation of this Order.

65. Respondents shall assure that field personnel used by Respondents are properly trained in the use of field equipment and in chain-of-custody procedures.

66. 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>

67. Off-Site Shipments

a. Respondents may ship hazardous substances, pollutants, and contaminants from the Site to an off-Site facility only if they comply with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondents will be deemed to be in compliance with CERCLA § 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if Respondents obtain a prior determination from EPA that the proposed receiving facility for such shipment is acceptable under the criteria of 40 C.F.R. § 300.440(b).

b. Respondents may ship Waste Material from the Site to an out-of-state waste management facility only if, prior to any shipment, they provide written notice to the appropriate state environmental official in the receiving facility's state and to the OSC. This notice requirement will not apply to any off-Site shipments when the total quantity of all such shipments will not exceed ten cubic yards. The written notice must include the following information, if available: (1) the name and location of the receiving facility; (2) the type and quantity of Waste Material to be shipped; (3) the schedule for the shipment; and (4) the method of transportation. Respondents shall also notify the state environmental official referenced above and the OSC of any major changes in the shipment plan, such as a decision to ship the Waste Material to a different out-of-state facility. Respondents shall provide the notice after the award of the contract for the removal action and before the Waste Material is shipped.

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

68. As appropriate during the course of implementation of the actions required of Respondents pursuant to this Order, Respondents or their consultants or contractors, acting through the Project Coordinator, may confer with EPA concerning the required actions. Based upon new circumstances or new information not in the possession of EPA on the Effective Date of this Order, the Project Coordinator may request, in writing, EPA approval of modification(s) to the EPA-approved plans. Only modifications approved by EPA in writing shall be deemed effective. Upon approval by EPA, such modifications shall be deemed incorporated in this Order and shall be implemented by Respondents.

IX. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

69. If EPA disapproves or otherwise requires any modifications to any plan, report or other item required to be submitted to EPA for approval pursuant to this Order, Respondents shall have fourteen (14) days from the receipt of notice of such disapproval or the required modifications to correct any deficiencies and resubmit the plan, report, or other written document to EPA for approval, unless a shorter or longer period is specified in the notice. Any notice of disapproval will include an explanation of why the plan, report, or other item is being disapproved. Respondents shall address each of the comments and resubmit the plan, report, or other item with the required changes within the time stated above. At such time as EPA determines that the plan, report, or other item is acceptable, EPA will transmit to Respondents a written statement to that effect.

70. If any plan, report, or other item required to be submitted to EPA for approval pursuant to this Order is disapproved by EPA, even after being resubmitted following Respondents' receipt of EPA's comments on the initial submittal, Respondents shall be deemed to be out of compliance with this Order. If any resubmitted plan, report, or other item, or portion thereof, is disapproved by EPA, EPA may again direct Respondents to make the necessary modifications thereto, and/or EPA may amend or develop the item(s) and recover the costs of doing so from Respondents. Respondents shall implement any such item(s) as amended or developed by EPA.

71. EPA shall be the final arbiter in any dispute regarding the sufficiency or acceptability of all documents submitted and all activities performed pursuant to this Order. EPA may modify those documents and/or perform or require the performance of additional work unilaterally.

72. All plans, reports and other submittals required to be submitted to EPA pursuant to this Order, upon approval by EPA, shall be deemed to be incorporated in and an enforceable part of this Order.

X. SUBMISSION OF PLANS AND REPORTING REQUIREMENTS

73. Reporting.

a. Commencing on the thirtieth (30th) day after the Effective Date, unless there is field work at the Site, Respondents shall provide monthly, or as otherwise requested by EPA, progress reports. Whenever, during the implementation of this Order, Respondents are engaged in active field work, Respondents shall provide, via email to EPA's Project Coordinator, at least one (1) week advance notice of all field activities. During active field work, Respondents shall provide EPA with written progress reports, including photo documentation, every seven (7) days beginning from the date of commencement of field work. After active field work has been completed, Respondents shall resume monthly written progress reports, commencing thirty (30) days after the submission of the last weekly written progress report. All progress reports shall fully describe all actions and activities undertaken pursuant to this Order. Such progress reports shall, among other things: (a) describe the actions taken toward achieving compliance with this Order during the previous week; (b) include all results of sampling and tests and all other data received by Respondents after the most recent progress report submitted to EPA; (c) describe all actions which are scheduled for the next week; (d) provide other information relating to the progress of Work as is customary in the industry and (e) include information regarding percentage of completion, all delays encountered or anticipated that may affect the future schedule for completion of the Work required hereunder, and a description of all efforts made to mitigate those delays or anticipated delays. In addition to the progress reports required above, Respondents shall copy EPA on all communications by and between Respondents and Respondent City in connection with the review, comment and endorsement, or performance, of Work described in Paragraphs 62.b., 62.c.ii., 62.j. and 62.k., above.

b. Respondents shall submit copies of all plans, reports or other submissions required by this Order or any approved work plan as set forth below. 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. All deliverables shall be submitted to the following:

3 copies: Remedial Project Manager - Gowanus Canal Site
(1 bound, Emergency and Remedial Response Division
1 unbound, U.S. Environmental Protection Agency, Region 2
1 electronic) 290 Broadway, 20th Floor
New York, New York 10007-1866
tsiamis.christos@epa.gov

1 copy: Chief, New York/Caribbean Superfund Branch
(via email Office of Regional Counsel
or electronic) United States Environmental Protection Agency, Region 2
290 Broadway, 17th Floor

New York, New York 10007-1866
Attn: Gowanus Canal Superfund Site Attorney
carr.brian@epa.gov

1 copy each:
(via email)

N.Y.S. Department of Environmental Conservation
gardiner.cross@dec.ny.gov
patrick.foster@dec.ny.gov
sally.dewes@dec.ny.gov
aaron.fischer@dec.ny.gov
gerard.burke@dec.ny.gov

XI. OVERSIGHT

74. During the implementation of the requirements of this Order, Respondents and their contractor(s) and subcontractors shall be available for such conferences with EPA and inspections by EPA or its authorized representatives as EPA may determine are necessary to adequately oversee the Work being carried out or to be carried out by Respondents, including inspections at the Site and at laboratories where analytical work is being done hereunder.

75. Respondents and their employees, agents, contractor(s), and consultant(s) shall cooperate with EPA in its efforts to oversee Respondents' implementation of this Order.

XII. COMMUNITY RELATIONS

76. Respondents shall cooperate with EPA in providing information relating to the Work required hereunder to the public. As requested by EPA, Respondents shall participate in the preparation of all appropriate information disseminated to the public; participate in public meetings that may be held or sponsored by EPA to explain activities at or concerning the Property; and provide a suitable location for public meetings, as needed.

XIII. SITE ACCESS

77. EPA, NYSDEC and their designated representatives, including, but not limited to, employees, agents, contractor(s) and consultant(s) thereof, shall be permitted to observe the Work carried out pursuant to this Order. Respondents shall at all times permit EPA, NYSDEC and their designated representatives full access to and freedom of movement at the Site and any other premises where Work under this Order is to be performed for purposes of inspecting or observing Respondents' progress in implementing the requirements of this Order, verifying the information submitted to EPA by Respondents, conducting investigations relating to contamination at the Site or for any other purpose EPA determines to be reasonably related to EPA oversight of the implementation of this Order.

78. In the event that action under this Order is to be performed in areas owned by or in possession of a person other than Respondents, Respondents shall use best efforts to obtain access agreements from such persons within thirty (30) days of the Effective Date of this Order for purposes of implementing the requirements of this Order. Such agreements shall provide access not only for Respondents, but also for EPA and its designated representatives or agents, as well as NYSDEC and its designated representatives or agents. Such agreements shall specify that Respondents are not EPA's representative with respect to liability associated with Site activities. If such access agreements are not obtained by Respondents within the time period specified herein, Respondents shall immediately notify EPA of the failure to obtain access and shall include in that notification a summary of the steps Respondents have taken to attempt to obtain access. For purposes of this Paragraph, "best efforts" include the payment of reasonable sums of money in consideration of access. EPA may use its legal authorities to obtain access for Respondents, may perform those response actions with EPA contractors at the property in question or may terminate the Order if Respondents cannot obtain access agreements. If EPA performs those tasks or activities with EPA contractors and does not terminate the Order, Respondents shall perform all other activities not requiring access to that property. Respondents shall integrate the results of any such tasks undertaken by EPA into its reports and deliverables.

79. Upon request, Respondents shall provide EPA with access to all records and documentation related to the conditions at the Site, hazardous substances found at or released from the Site, and the actions conducted pursuant to this Order except for those items, if any, subject to the attorney-client or work product privilege. All data, information and records created, maintained, or received by Respondents or their contractor(s) or consultant(s) in connection with implementation of the Work under this Order, including, but not limited to, contractual documents, invoices, receipts, work orders and disposal records shall, without delay, be made available to EPA upon request, subject to the same privileges specified above in this paragraph. EPA shall be permitted to copy all such documents. Respondents shall submit to EPA upon receipt the results of all sampling or tests and all other technical data generated by Respondents or their contractor(s), or on Respondents' behalf, in connection with the implementation of this Order.

80. Notwithstanding any other provision of this Order, EPA hereby retains all its information gathering, access, and inspection authority under CERCLA, Resource Conservation and Recovery Act and any other applicable statutes or regulations.

XIV. ACCESS TO INFORMATION

81. Respondents shall preserve all documents and information relating to Work performed under this Order or relating to Waste materials found on or released from the Site, for ten (10) years after completion of the Work required by this Order. At the end of the ten (10)-year period, Respondents shall notify EPA at least thirty (30) days before any such document or

information is destroyed that such documents and information are available for inspection. Upon request, Respondents shall provide EPA with the originals or copies of such documents and information.

82. All documents submitted by Respondents to EPA during the implementation of this Order shall be available to the public unless claimed as privileged or confidential pursuant to applicable law. In addition, EPA may release all such documents to NYSDEC, and NYSDEC may make those documents available to the public unless Respondents conform to applicable New York State law and regulations regarding confidentiality. Respondents shall not assert a claim of privilege or confidentiality regarding any monitoring or hydrogeologic data, any information specified under Section 104(e)(7)(F) of CERCLA, or any other chemical, scientific or engineering data relating to the Work performed hereunder.

XV. COMPLIANCE WITH OTHER LAWS

83. Respondents shall undertake all action that this Order requires in accordance with the requirements of all applicable local, state, and federal laws and regulations, unless an exemption from such requirements is specifically provided by law or in this Order. The activities conducted pursuant to this Order, if approved by EPA, shall be considered consistent with the NCP.

84. As provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and the NCP, no permit shall be required for any portion of the Work conducted entirely on-Site, including temporary modifications to the operation of the Flushing Tunnel and RH-034 outfall. Where any portion of the Work requires a federal or state permit or approval, Respondents shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.

85. This Order is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XVI. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

86. Upon the occurrence of any event during performance of the Work required hereunder which, pursuant to Section 103 of CERCLA, 42 U.S.C. §9603, requires reporting to the National Response Center (telephone number 800-424-8802), Respondents shall immediately orally notify the Chief of the Response and Prevention Branch of the Emergency and Remedial Response Division of EPA, Region 2, at 732-321-6656 of the incident or Site conditions. Respondents shall also submit a written report to EPA within seven (7) days after the onset of such an event, setting forth the events that occurred and the measures taken or to be taken, if any, to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. The reporting requirements of this paragraph are in

addition to, not in lieu of, reporting under CERCLA Section 103, 42 U.S.C. §9603, and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. §11004.

87. In the event of any action or occurrence during Respondents' performance of the requirements of this Order that causes or threatens to cause a release of a hazardous substance or which may present an immediate threat to public health, welfare or the environment, or cause potential or actual adverse impacts to upland structures, Respondents shall immediately take all appropriate action to prevent, abate or minimize the threat and shall immediately notify EPA as provided in the preceding paragraph. Respondents shall take such action in accordance with applicable provisions of this Order. In the event that EPA determines that (a) the activities performed pursuant to this Order, (b) significant changes in conditions at the Site or (c) emergency circumstances occurring at the Site pose a threat to human health or the environment, EPA may direct Respondents to stop further implementation of any actions pursuant to this Order or to take other and further actions reasonably necessary to abate the threat.

88. Nothing in the preceding paragraph shall be deemed to limit any authority of the United States to take, direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances on, at, or from the Site.

XVII. MODIFICATIONS

89. No informal advice, guidance, suggestion or comment by EPA regarding reports, plans, specifications, schedules or any other writing submitted by Respondents shall relieve Respondents of their obligation to obtain such formal approval as may be required by this Order and to comply with all requirements of this Order.

XVIII. DELAY IN PERFORMANCE

90. Any delay in performance of the Work under this Order that, in EPA's judgment, is not properly justified by Respondents under the terms of the paragraph below, shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondents' obligations to perform all obligations fully under the terms and conditions of this Order.

91. Respondents shall notify EPA of any delay or anticipated delay in performing any requirement of this Order, including delays associated with potential or actual adverse impacts to upland structures. Such notification shall be made by telephone to EPA's Project Coordinator as soon as Respondents know that a delay might occur. Respondents shall adopt all reasonable measures to avoid or minimize any such delay. Within two (2) days after notifying EPA by telephone, Respondents shall provide written notification fully describing

the nature of the delay, any justification for the delay, any reason why Respondents should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that have been or will be taken to mitigate the effect of the delay. Increased cost or expense associated with the implementation of the activities called for in this Order is not a justification for any delay in performance.

XIX. ENFORCEMENT AND RESERVATION OF RIGHTS

92. Notwithstanding any other provision of this Order, failure of Respondents to comply with any provision of this Order may give rise to an allegation by EPA that Respondents may be subject to civil penalties of up to fifty-seven thousand three hundred seventeen dollars (\$57,317) per violation per day, as provided in Sections 109 and 122(l) of CERCLA, 42 U.S.C. §§ 9609 and 9622(l), and the Debt Collection and Improvement Act of 1996 (see Civil Monetary Penalty Inflation Adjustment Rule, 74 Fed. Reg. 626 (84 Fed. Reg. 2056 (February 6, 2019))). EPA may also allege that Respondents may be subject to punitive damages in an amount at least equal to but not more than three times the amount of any costs incurred by the United States as a result of such failure to comply with this Order, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Should Respondents violate this Order or any portion thereof, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606. Nothing herein 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 Order, from taking other legal or equitable action as it deems appropriate, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law. EPA reserves the right to bring an action against Respondents under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order or the Site.

XX. OTHER CLAIMS

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

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

95. Nothing in this Order shall affect any right, claim, interest, defense, or cause of action of any party hereto with respect to third parties.

96. Nothing in this Order shall be construed to constitute preauthorization under Section 111(a)(2) of CERCLA, 42 U.S.C. §9611(a)(2), and 40 CFR § 300.700(d).

XXI. INSURANCE

97. At least fourteen (14) days prior to commencing any on-site Work under this Order, Respondents shall secure, and shall maintain for the duration the Work being performed pursuant to this Order, commercial general liability insurance with limits of liability of \$1 million per occurrence, automobile liability insurance with limits of liability of \$1 million per accident, and umbrella liability insurance with limits of liability of \$5 million in excess of the required commercial general liability and automobile liability limits, naming EPA as an additional insured with respect to all liability arising out of the activities performed by or on behalf of Respondents pursuant to this Order. Within the same period, Respondents shall provide EPA with certificates of such insurance and, if requested, a copy of each insurance policy. Respondents shall submit such certificates and, if requested, copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Work being performed pursuant to Order, Respondents shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondents in furtherance of this Order. If Respondents demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondents need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXII. FINANCIAL ASSURANCE

98. Respondents shall demonstrate their ability to complete the Work required by this Order and to pay all claims that arise from the performance of the Work by obtaining and presenting to EPA within fourteen (14) days of the Effective Date one of the following: (1) a performance

bond; (2) a letter of credit; (3) a guarantee by a third party; or (4) internal financial information to allow EPA to determine that Respondents have sufficient assets to perform the Work. Respondents shall demonstrate financial assurance in an amount no less than \$25,000,000.00 which is EPA's current estimated cost of the Work to be performed by Respondents under this Order. If EPA determines that the financial assurances submitted by Respondents pursuant to this Paragraph are inadequate, Respondents shall, within fourteen (14) days after receipt of notice of EPA's determination, obtain and present to EPA for approval additional financial assurances meeting the requirements of this Paragraph. In addition, if at any time, EPA notifies Respondents that the anticipated cost of completing the Work has increased, then, within thirty (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 Order. Funding, oversight and coordination of the Work required under this Order may be implemented by Respondents through the "Gowanus Canal Environmental Remediation Trust," as amended.

XXIII. INTEGRATION/APPENDICES

99. In the event of a conflict between any provision of this Order and the provisions of any document attached to this Order or submitted or approved pursuant to this Order, the provisions of this Order shall control.

100. The following documents are attached to and incorporated into this Order:

Appendix A is the ROD

Appendix B is the Work Schedule

Appendix C is the Dredging RD UAO

Appendix D is the Tank RD UAO

XXIV. TERMINATION AND SATISFACTION

101. Upon a determination by EPA that the Work required pursuant to this Order has been fully carried out in accordance with this Order, EPA will so notify Respondents in writing.

XXV. OPPORTUNITY TO CONFER, EFFECTIVE DATE

102. This Order shall be effective five (5) days after receipt by Respondents, unless a conference is timely requested pursuant to Paragraph 103 below. If such a conference is timely requested, this Order shall become effective three (3) days following the date the

conference is held, unless the Effective Date is modified by EPA. All times for performance of ordered activities shall be calculated from this Effective Date.


103. Respondents may, within three (3) days after receipt of this Order, request a conference with EPA to discuss this Order. If requested, the conference shall occur within fourteen (14) days of Respondents' request for a conference. The conference may be held in person or by telephone or videoconference.

104. If a conference is held, Respondents may present any information, arguments, or comments regarding this Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondents a right to seek review of this Order or to seek resolution of potential liability, and no official stenographic record of the conference will be made. At any conference held pursuant to Respondents' request, Respondents may appear in person or by an attorney or other representative.

105. A request for a conference must be made by telephone to Brian Carr, Assistant Regional Counsel, Office of Regional Counsel, EPA Region 2, telephone (212) 637-3170, followed by written confirmation emailed that day to Mr. Carr at carr.brian@epa.gov and to Virginia Capon at capon.virginia@epa.gov.

XXVI. NOTICE OF INTENT TO COMPLY

106. Each Respondent shall provide, not later than three (3) days after the Effective Date, written notice to EPA stating whether it will comply with the terms of this Order. If a Respondent does not unequivocally commit to perform the work required by this Order, it shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Each Respondent's written notice shall describe, using facts that exist on or prior to the Effective Date, any "sufficient cause" defenses asserted by Respondent under Sections 106(b) and 107(c)(3) of CERCLA. Each Respondent's written notice shall be sent to Brian Carr, Assistant Regional Counsel, Office of Regional Counsel, EPA Region 2, 290 Broadway, 17th floor, New York, New York 10007-1866, or by email to carr.brian@epa.gov. The absence of a response by EPA to the notice required by this paragraph shall not be deemed to be an acceptance of a Respondent's assertions.

By: 
ANGELA CARPENTER
Acting Director
Emergency and Remedial Response Division
U.S. Environmental Protection Agency
Region 2

4.11.19
Date

**In the Matter of the Gowanus Canal Superfund Site, Administrative Order
Index No. CERCLA-02-2019-2010**

Appendix A – ROD (electronic)

Appendix B – Work Schedule

	Description of Deliverable/Task¹	¶ Ref.	Deadline
	Complete 100% design of access dredging and bulkhead structural supports for 479 Degraw Street; the City-owned street ends abutting the Canal at Douglass and Degraw Streets; NYCDEP’s Flushing Tunnel/Gowanus Pump Station property at Bond and Butler Streets; and the City-owned and operated Union Street and Carroll Street bridges.	61.a.	<i>Complete 100% design by July 1, 2019</i>
	Commence access dredging necessary to implement construction of the RTA 1 bulkhead structural supports pursuant to an EPA-approved access-dredging design.	61.c.	<i>Mobilize within 60 days after receipt of EPA approval of the 100% design for access dredging</i>
	Construct the RTA 1 bulkhead and bridge structural supports.	61.c.	<i>Pursuant to an EPA-approved schedule incorporated into the 100% design for bulkhead structural supports</i>
	Secure a staging area for implementation of the Work required by Paragraph 61.c.	61.g.	<i>No later than 30 days after EPA approval of the 100% design for access dredging</i>
	Submit to EPA a report identifying the steps necessary to prepare Block 471, Lots 1 and 100 of the Citizens Site for future remedial action cleanup activities	61.h.	<i>Within 120 days of the effective date of this Order</i>
	Complete the bulkhead structural support designs for the RTA 2 bulkheads, bridges and other affected structures	61.i.	<i>Complete 100% design by January 1, 2021</i>
	Complete the bulkhead structural support designs for the NYCDOS Salt Lot at 6 th Street and the end of Second Avenue	61.j.	<i>Complete 100% design by January 1, 2021</i>

¹ Work descriptions are partial summaries which are for information purposes only. Please see Work To Be Performed requirements in Paragraph 61 of this Administrative Order for full descriptions.

Appendix C- Dredging RD UAO (electronic)

Appendix D – City RD UAO (electronic)