SITE OBSERVATION REPORT

PROJECT No.:	170381202	**CLIENT:** 250 Seaport District, LLC c/o The Howard Hughes Corporation	**DATE:**	Saturday, November 11, 2023
PROJECT:	250 Water Street		**WEATHER:**	Overcast, 45 – 55 °F Wind: SE @ 0.2 – 2.1 mph
LOCATION:	New York, NY		**TIME:**	7:45 am – 2:30 pm
BCP SITE ID:	C231127		**MONITOR**	Padmanabhan Krishnaswamy

EQUIPMENT:
CAT 335 Excavator
CAT 328 Excavator
Komatsu PC210 Excavator
Delmag Drill Rig
Bauer RTG RG 27S
Bauer BG 36H Drill Rig
Bauer BG45 Drill Rig
Casagrande M6A-1 Tieback Drill Rig
Jerome J505 Mercury Vapor Analyzer
RKI GX-6000 Photoionization Detector (PID)
Aeroqual ASQ1 Air Monitoring Station

PRESENT AT SITE: **Day 247**
Langan (Environmental/Geotechnical) Padmanabhan Krishnaswamy, Aron Farber, Junggeun Hwang
Suffolk Construction (Suffolk) (General Contractor) Anthony Galu, Wyatt Favia
East Coast Drilling, Inc. (ECD) (Foundation Contractor) Daniel Rogers, Mike Brosnan
New York State Department of Environmental Conservation (NYSDEC) Jared Donaldson
Earth Efficient Henry R. Garcia-Torres

OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:

Langan was present to document remediation activities in accordance with the NYSDEC-approved November 2021 Remedial Action Work Plan (RAWP) at the 250 Water Street site (NYSDEC Brownfield Cleanup Program [BCP] Site No C231127).

Site Activities

- ECD used a Bauer RTG RG 27S drill rig to pre-drill one borehole in the southwest part of the site (along Water Street) and one borehole in the northern part of the site (along Pearl Street) to loosen the underlying soil in preparation for soil mix column installation.
- ECD used a Bauer BG45 drill rig to install one deep soil mix column for the support-of-excavation (SOE) system installation in the northern part of site (along Pearl Street). ECD's drill rig advanced a steel rod with two cutter blades at the bottom of the rod, while concurrently injecting grout through the cutting head and spinning and advancing the blades downward to a depth of about 108 feet below grade surface (bgs).
    - No drilling spoils were generated during installation of the soil mix columns.
    - Excess grout was contained within a temporary containment area in the southern part of the site and will be managed as construction and demolition (C&D) debris at a later date.
- ECD graded soil/fill in one about 70-foot-long by 60-foot-wide area in the northern part of the site to stabilize the surface for SOE system installation.
    - Graded soil/fill was screened for odors, staining, organic vapors, and mercury vapor using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. Evidence of impacts was not observed.

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- ECD graded soil/fill in one about 30-foot-long by 40-foot-wide area in the eastern part of the to stabilize the surface for SOE system installation.
    - Graded soil/fill was screened for odors, staining, organic vapors, and mercury vapor using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. Evidence of impacts was not observed. Excess soil/fill generated from grading was stockpiled in southeastern part of site pending future off-site disposal.
- ECD relocated previously stockpiled soil/fill in the southeast part of the site to the northeast part of the site in preparation for future off-site disposal.

Material Tracking

- ECD exported 19 truckloads (about 380 cubic yards [CY]) of non-hazardous soil/fill for off-site disposal at the Harmony Foul Rift (HFR) facility located in Belvidere, NJ.
- No material was imported to site.

Material Import Summary

Facility Name Location Type of Material	Stone Industries, Inc. Haledon, NJ 1.5/2.5-inch Virgin Stone		Stone Industries, Inc. Haledon, NJ 0.75-inch Virgin Stone		Impact Reuse & Recovery Center or Impact Materials Jersey City, Lyndhurst/Jersey City, NJ 1.5-inch Clean Bluestone		Impact Reuse & Recovery Center, Lyndhurst, NJ General Fill	
Quantities	No. of Loads	Approx. Volume (Tons)	No. of Loads	Approx. Volume (Tons)	No. of Loads	Approx. Volume (Tons)	No. of Loads	Approx. Volume (Tons)
Today	0	0	0	0	0	0	0	0
Project Total	16	382.13	0	0	15	339.65	374	9,157.85
NYSDEC Approved:	1,800 tons*				720 tons*		19,500 tons*	

*0.75-inch, 1.5-inch, and 2.5-inch virgin stone from the Stone Industries, Inc. facility and 1.5-inch clean bluestone from the Impact Reuse & Recovery Center (IRRC) facility were approved for import of 1,000 cubic yards (CY) and 400 CY, respectively. Assuming a conversion factor of 1.8, each quantity was converted to tons in order to accurately compare with import weight tickets. General fill from the IRRC facility was approved for import of 13,000 CY and a conversion factor of 1.5 is applied.

Material Export Summary (1 of 3)

Facility Name Location Type of Material	Allocco Recycling Brooklyn, NY Construction & Demolition (C&D) Debris		IRRC Lyndhurst, NJ C&D Debris		Earth Efficient MSM East Stroudsburg, PA C&D Debris		Clean Earth of North Jersey Kearny, NJ Hazardous Lead-Impacted Soil/Fill	
Quantities	No. of Loads	Approx. Volume (CY)	No. of Loads	Approx. Volume (CY)	No. of Loads	Approx. Volume (CY)	No. of Loads	Approx. Volume (CY)
Today	0	0	0	0	0	0	0	0
Project Total	5	85	42	840	298	5,940	142	2,840

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Material Export Summary (2 of 3)						
Facility Name Location Type of Material	**Middlesex County Landfill East Brunswick, NJ Non-hazardous Soil/Fill**		**Bayshore Soil Management Keasbey, NJ Petroleum-Impacted Soil/Fill**		**Clean Earth of Carteret, NJ Carteret, NJ Non-hazardous Soil/Fill**	
Quantities	No. of Loads	Approx. Volume (CY)	No. of Loads	Approx. Volume (CY)	No. of Loads	Approx. Volume (CY)
Today	0	-	0	0	0	0
Project Total	368	7,360	267	5,340	66	1,320

Material Export Summary (3 of 3)						
Facility Name Location Type of Material	**Clean Earth of North Jersey Kearny, NJ Non-hazardous Soil/Fill**		**Cycle Chem, Inc. Elizabeth, NJ Hazardous Lead-Impacted Soil/Fill**		**Harmony Foul Rift (HFR) Belvidere, NJ Non-hazardous Soil/Fill**	
Quantities	No. of Loads	Approx. Volume (CY)	No. of Loads	Approx. Volume (CY)	No. of Loads	Approx. Volume (CY)
Today	0	0	0	0	19	380
Project Total	201	4,020	17	340	50	1000

Sampling

- No samples were collected.

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CAMP Activities

Langan performed air monitoring at the perimeter of the site, at the northern sidewalk of Pearl Street, at the western sidewalk of Beekman Street, at the eastern sidewalk of Peck Slip, and at the southern sidewalk of Water Street at eight total locations for mercury vapor, volatile organic compounds (VOCs), and particulate matter less than 10 microns in diameter (PM10) from about 8:48am to 1:33pm. There were no fifteen-minute average concentrations for mercury vapor, VOCs or PM10 that approached or exceeded the action levels established by the CAMP (1.00 µg/m^3, 5.0 ppm, or 0.100 mg/m^3, respectively).

Background Concentrations

Prior to implementation of CAMP, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome® J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station were recorded at 0.00 µg/m^3.
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

Perimeter and Work Zone Concentrations

Daily Average Concentrations

Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor (µg/m^3)
PM-1	0.004	0.00	0.01
PM-2	0.003	0.00	0.01
PM-3	0.003	0.00	0.00
PM-4	0.004	0.01	0.01
WZ-1	0.003	0.00	0.00
WZ-2	0.002	0.00	0.00
WZ-3	0.002	0.00	0.01
WZ-4	0.003	0.00	0.02

Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor (µg/m^3)
PM-1	0.006	0.01	0.04
PM-2	0.006	0.05	0.05
PM-3	0.006	0.01	0.00
PM-4	0.006	0.09	0.03
WZ-1	0.005	0.00	0.01
WZ-2	0.006	0.00	0.00
WZ-3	0.004	0.01	0.02
WZ-4	0.005	0.03	0.24

●mg/m^3 = milligrams per cubic meter ●ppm = parts per million ●µg/m^3 = micrograms per cubic meter

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Ambient Air (Handheld Jerome® J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome® J505 mercury vapor analyzer to monitor ambient air conditions at various heights throughout the site. Instantaneous mercury vapor concentrations throughout the site ranged from 0.00 µg/m^3 to 0.08 µg/m^3.
- The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations were not detected above background concentrations throughout the workday.

Off-site CAMP Stations

- CAMP station WZ-1 was placed on the western sidewalk of Beekman Street from about 8:21am to 2:02pm.
- CAMP station WZ-2 was placed on the southern sidewalk of Water Street from about 8:26am to 2:07pm.
- CAMP station WZ-3 was placed on the eastern sidewalk of Peck Slip from about 8:29am to 2:15pm.
- CAMP station WZ-4 was placed on the northern sidewalk of Pearl Street from about 8:33am to 1:58pm.

Prior to CAMP Shutdown

Prior to discontinuing CAMP, mercury vapor and VOC concentrations were confirmed to return to background conditions at each perimeter station using the handheld Jerome® J505 mercury vapor analyzer and handheld PID, respectively. Perimeter CAMP stations were discontinued sequentially between 1:33pm and 1:41pm.

- Background concentrations of mercury vapor at each CAMP station were recorded at 0.00 µg/m^3.
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

Anticipated Activities

- ECD will continue exporting soil/fill across the site for off-site disposal.
- ECD will continue installing soil mix columns and/or secant piles for SOE system installation along Beekman, Pearl and Water Streets.
- ECD will continue installing tiebacks for the SOE system along Beekman and Pearl Streets.

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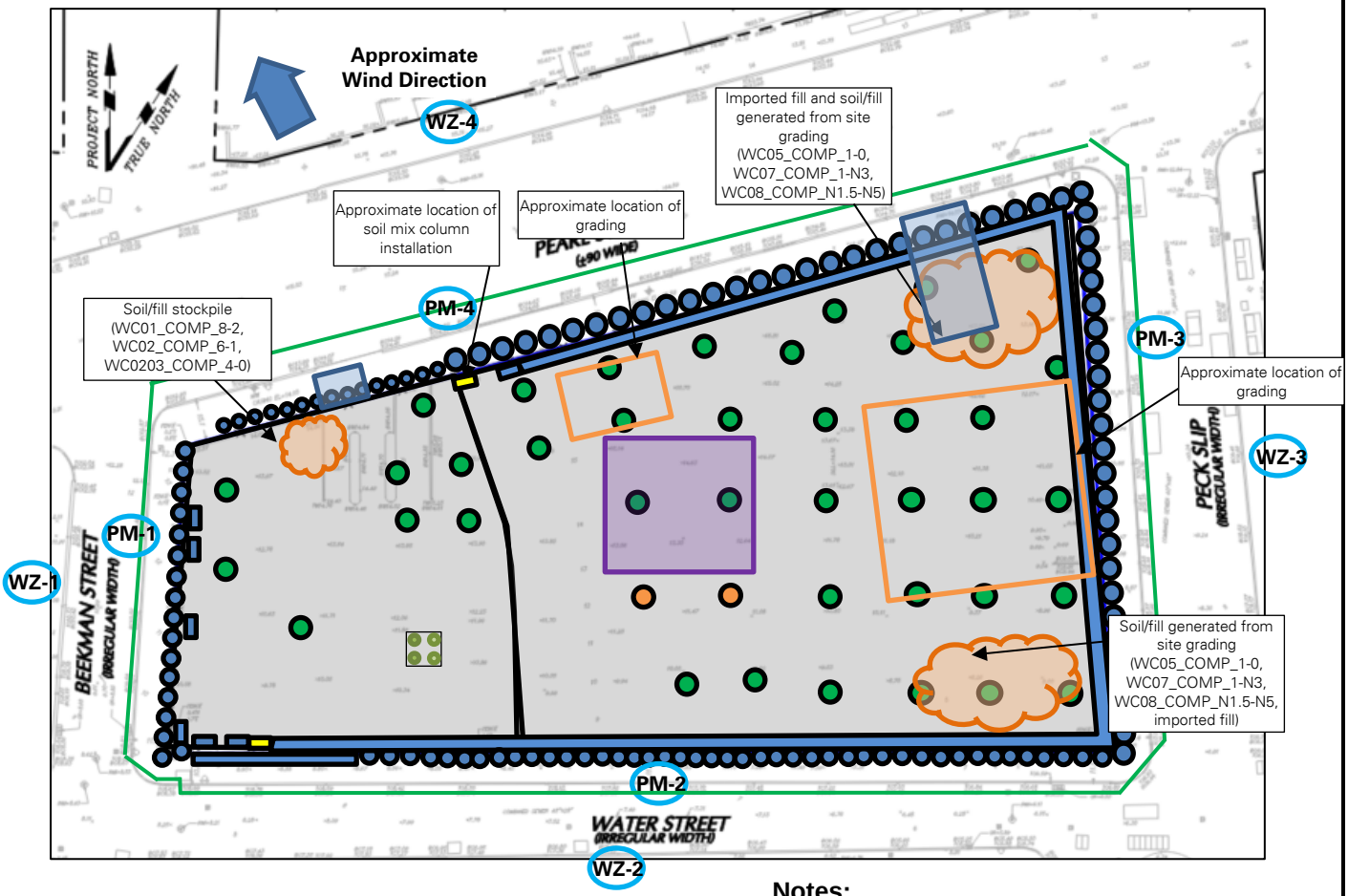
Site Map



Legend:

- PM-1 Approximate Location of Air Monitoring Station
- Approximate Work Area
- Approximate Location of Installed Pile Cap
- Approximate Location of Foundation Piles Completed
- Approximate Location of Truck Tracking Pad
- Approximate Location of Underground Storage Tank
- Approximate Location of C&D Stockpile
- Approximate Location of Soil/Fill Stockpile
- Approximate Perimeter Construction Fence Location
- Approximate Location of Soldier Pile
- Approximate Location of Soil Mix Column Installed Today
- Approximate Location of Soil Mix Column Installed Previously
- Approximate Previous Excavation Area
- Approximate Excavation Area
- Approximate Location of Documentation Sample
- Approximate Location of Confirmation Endpoint Sample
- Approximate Location of Imported Fill/Stone

Notes:
1) Locations of air monitoring stations are approximate.

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Select Site Photographs:

Photo 1: ECD loading a truck with non-hazardous soil/fill for off-site disposal (facing southeast)

Photo 2: ECD installing a soil mix column in the northern part of the site (facing northwest)

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