SITE OBSERVATION REPORT

PROJECT No.:	170381202	**CLIENT:** 250 Seaport District, LLC c/o The Howard Hughes Corporation	**DATE:**	Friday, October 14, 2022
PROJECT:	250 Water Street		**WEATHER:**	Clear, 54.5 – 68.3 ˚F Wind: E @ 0.6 – 4.7 mph
LOCATION:	New York, NY		**TIME:**	6:00 AM – 4:15 PM
BCP SITE ID:	C231127		**MONITOR:**	Elsah Boak, Caitlyn Dempsey

EQUIPMENT:
MiniRAE 3000 PID
DustTrak II
Jerome J405®
Jerome J505®
Hand tools
CAT 374F
Komatsu 969
Komatsu 228
Takeuchi TB290
JCB 110W Hydradig
Wacker Neuson RTSC3
Wacker Neuson OPU6555

PRESENT AT SITE: **Day 129**
Langan (Environmental/Geotechnical) – Elsah Boak, Caitlyn Dempsey
Civetta Cousins JV, LLC (CCJV) (Foundation Contractor) – Jack Dettra
Lendlease (General Contractor) – Marty Cohen
New York State Department of Environmental Conservation (NYSDEC) – Michael Sollecito

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

- CCJV excavated an about 45-foot-long by 10-foot-wide area to a depth of about 15 feet below grade surface (bgs) for removal and off-site disposal of non-hazardous soil/fill in the north-central part of site (waste characterization cells WC04 and WC05). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at the Clean Earth of Carteret (CEC) facility, located in Carteret, NJ. The trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.
    - Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapor using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. Slight odors and staining were observed during screening of excavated material.
    - Atmos® AC-645 dust/vapor suppressing foam was actively applied to exposed soil/fill during excavation and loading for off-site disposal.
- CCJV used imported general fill to backfill an about 60-foot-long by 30-foot-wide area within over-excavated areas in the east-central part of the site to match the surrounding grade (about elevation [el] 1).
- CCJV used imported 1.5-inch clean bluestone to backfill and grade the northwestern part of the site for maintenance of the tracking pad.
- CCJV covered exposed soil/fill that has not been confirmed to meet Track 2 remediation criteria and construction and demolition (C&D) debris with Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover.

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Material Tracking

- CCJV exported 13 truckloads (about 260 cubic yards [CY]) of non-hazardous soil/fill from waste characterization cells WC04 and WC05 for off-site disposal at the CEC facility, located in Carteret, NJ.
- CCJV exported two truckloads (about 40 CY) of C&D debris for off-site disposal at the Impact Reuse & Recovery Center (IRRC) facility, located in Lyndhurst, NJ.
- CCJV imported ten truckloads (about 235.27 tons) of general fill from the IRRC facility, in Lyndhurst, NJ.
- CCJV imported one truckload (about 25.07 tons) of 1.5-inch clean bluestone from the IRRC facility, located in Lyndhurst, NJ.

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	1	25.07	10	235.27
Project Total	8	184.42	0	0	13	289.08	243	5,955.02
NYSDEC Approved:	1,800 tons*				720 tons*		7,500 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 5,000 CY and a conversion factor of 1.5 is applied.

Material Export Summary (1 of 2)

Facility Name Location Type of Material	**Allocco Recycling Brooklyn, NY Construction & Demolition (C&D) Debris**		**IRRC Lyndhurst, NJ Construction & Demolition (C&D) Debris**		**Clean Earth of North Jersey Kearny, NJ Hazardous Lead-Impacted Soil/Fill**		**Clean Earth of North Jersey Kearny, NJ Non-hazardous 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	2	40	0	0	0	0
Project Total	5	85	39	780	89	1,780	216	4,320

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Material Export Summary (2 of 2)						
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	13	260
Project Total	261	5,220	267	5,340	66	1,320

Sampling Activities

- Langan collected one confirmation endpoint soil sample (EP25_EL_-2.0) and associated quality assurance/quality control (QA/QC) samples for laboratory analysis of NYSDEC Part 375/target compound list (TCL) VOCs, semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, herbicides, target analyte list (TAL) metals (including hexavalent/trivalent chromium and total cyanide), per- and polyfluoroalkyl substances (PFAS), and/or 1,4-dioxane.
- Samples were relinquished to Alpha Analytical, Inc., an Environmental Laboratory Accredited Program (ELAP)-certified laboratory under standard chain-of-custody protocols.
- Confirmation endpoint soil sample locations and elevations were surveyed by a professional surveyor.

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CAMP Activities

Langan performed air monitoring at the perimeter of the site and at work zones at nine total locations for mercury vapor, VOCs and particulate matter less than 10 microns in diameter (PM10), during ground-intrusive activities. 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, and 0.100 mg/m^3 respectively).

Background Concentrations

Prior to implementation of ground-intrusive work each day, 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 ranged from 0.0 ppm to 0.1 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	0.013	0.0	0.01
PM-2	0.019	0.0	0.00
PM-3	0.014	0.0	0.00
PM-4	0.005	0.0	0.00
PM-5	0.004	0.3	0.02
PM-6	0.013	0.0	0.01
WZ-1	0.012	0.0	0.01
WZ-2	0.011	0.0	0.01
WZ-3	0.009	0.0	0.01

Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m^3)	Organic Vapor (ppm)	Mercury Vapor (µg/m^3)
Action Level	**0.100 mg/m^3**	**5.0 ppm**	**1.00 µg/m^3**
PM-1	0.024	0.0	0.02
PM-2	0.038	0.0	0.02
PM-3	0.037	0.0	0.02
PM-4	0.017	0.0	0.01
PM-5	0.011	0.3	0.03
PM-6	0.020	0.0	0.02
WZ-1	0.018	0.0	0.02
WZ-2	0.014	0.1	0.03
WZ-3	0.026	0.0	0.02

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

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Equipment Troubleshooting

- PM10 concentrations were not recorded at perimeter CAMP station PM-4 from 10:02am to 10:32am (31 minutes), due to a low battery causing the DustTrak unit to shut down. Data logging for PM10 resumed at 10:33am after replacement of the battery. Fugitive dust was not observed migrating from the site and PM10 concentrations at off-site CAMP station WZ-2 were not recorded above background conditions during this time.
- PM10 concentrations were not recorded at off-site CAMP station WZ-1 from 11:45am to 12:23pm (39 minutes), and from 2:08pm to 2:33pm (26 minutes) due to a loose connection between the battery and CAMP station. Data logging resumed at 12:24pm and 2:34pm, respectively, after reconnection of the wire followed by replacement of the battery. Fugitive dust was not observed migrating from the site during either of these times. Additionally, PM10 concentrations at perimeter CAMP station PM-5, which was located between the work area and off-site CAMP station WZ-1, were not recorded above background conditions during these times.

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 0.10 µg/m^3.
- The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations were at or below background concentrations throughout the work day.

CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 7:03am to 3:01pm during excavation activities in the northern part of the site.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 7:43am to 3:01pm due to exposed soil/fill located within 20 feet of the eastern site boundary.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 7:05am to 3:01pm due to exposed soil/fill located within 20 feet of the southern site boundary.

Prior to CAMP Shutdown

Prior to discontinuing CAMP, air quality at each CAMP station was verified using the handheld PID and handheld Jerome® J505 mercury vapor analyzer and no readings above background concentrations were recorded. Additionally, areas of exposed soil/fill were covered with polyethylene sheeting and/or Atmos® AC-645 dust/vapor suppressing foam. CAMP stations were discontinued at 3:01pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station were recorded at 0.00 µg/m^3.
- VOC concentrations at each CAMP station were recorded at 0.0 ppm.

Anticipated Activities

- CCJV will continue excavation and off-site disposal of soil/fill in the central and southern parts of the site.
- Langan will continue collection of confirmation endpoint soil samples across the site.

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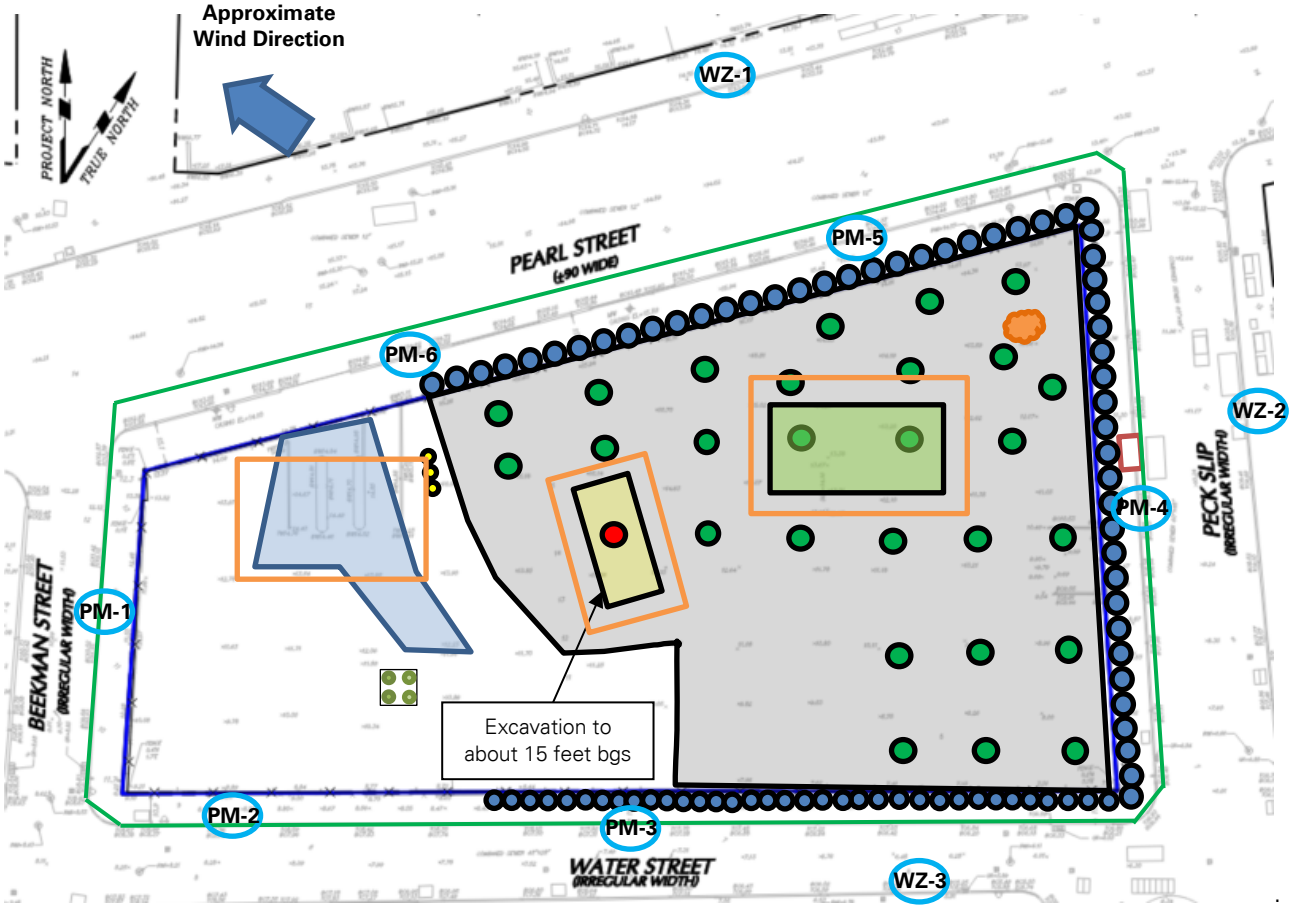
Site Map



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

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 C&D Stockpile
- Approximate Location of General Fill Stockpile
- Approximate Location of Stockpiled Virgin Stone
- Approximate Excavated Soil/Fill Stockpile
- Approximate Location of 55-gallon drum
- Approximate Location of Soldier Pile
- Approximate Perimeter Construction Fence Location
- Previous Excavation Area
- Approximate Excavation Area
- Approximate Backfill Area
- Approximate Location of Endpoint Sample
- Approximate Location of Previously Collected Endpoint Sample

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Select Site Photographs:

Photo 1: CCJV applying Atmos® AC-645 dust/vapor suppressing foam during excavation and live-loading of non-hazardous soil/fill (facing south)

Photo 2: CCJV importing 1.5-inch clean bluestone for tracking pad maintenance (facing northeast)

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