SITE OBSERVATION REPORT

PROJECT No.: 170381202	**CLIENT:** 250 Seaport District, LLC c/o The Howard Hughes Corporation	**DATE:**	Tuesday, August 2, 2022
PROJECT: 250 Water Street		**WEATHER:**	Sunny, 72.0 – 90.0 ˚F Wind: N @ 0.0 – 10.4 mph
LOCATION: New York, NY		**TIME:**	5:45 AM – 7:00 PM
BCP SITE ID: C231127		**MONITOR:**	Elsah Boak, Brian Kenneally, Eddie Cai, Lisa Cristiano

EQUIPMENT:
MiniRAE 3000 PID
DustTrak II
Jerome J405®
Jerome J505®
Hand tools
CAT 374F
Komatsu 969
Komatsu 228
Takeuchi TB290

PRESENT AT SITE: **Day 56**
Langan (Environmental/Geotechnical) – Elsah Boak, Brian Kenneally, Eddie Cai, Lisa Cristiano, Kevin Leong
LendLease (Construction Manager) – Marty Cohen
Civetta Cousins JV, LLC (CCJV) (Foundation Contractor) – Mark Dulberg
New York State Department of Environmental Conservation (NYSDEC) – Aaron Fisher
AKRF Inc. (AKRF) (Archaeologist) – Elizabeth Meade
UBS (Fence Contractor)

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 a ~45-foot-long by 45-foot-wide area to a maximum depth of about 10 feet below grade surface (bgs) for removal and off-site disposal of non-hazardous soil/fill in the eastern part of site (waste characterization cells WC07 and WC08). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at the Middlesex County Landfill in East Brunswick, NJ. Trucks were covered with tight-fitting covers and inspected and washed before leaving the site.
    - Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapor using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors, staining, or instrumental evidence (PID or handheld Jerome® J505) of contamination was recorded.
- CCJV welded T-brackets along the edges of previously installed support-of-excavation (SOE) soldier piles in preparation for timber lagging installation along the eastern site boundary (Peck Slip).
- CCJV welded brackets and steel walers along the edges of previously installed SOE soldier piles in preparation for tie-back installation along the northern site boundary (Pearl Street).
- CCJV installed timber lagging between SOE soldier piles SP45 through SP49 to a depth of about 5 feet bgs for SOE system installation along the eastern site boundary (Peck Slip).
- CCJV installed timber lagging between SOE soldier piles SP42 through SP45 to a depth of about 10 feet bgs for SOE system installation along the eastern site boundary (Peck Slip).
- CCJV placed concrete in previously installed SOE soldier piles along the northern boundary of the site (Pearl Street).

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak **LANGAN**

SITE OBSERVATION REPORT

- CCJV used imported general fill to backfill the space between previously installed timber lagging and the Peck Slip sidewalk along the eastern site boundary. Import of general fill was approved by NYSDEC on July 14, 2022.
- CCJV excavated five test pits along the southern boundary of the site to identify potential subsurface utilities and/or obstructions prior to installation of SOE soldier piles. Each test pit was about 5feet long by 3 feet wide and was excavated to a maximum depth of about 6 feet bgs.
    - Excavated soil/fill was temporarily stockpiled on and covered with polyethylene sheeting adjacent to each excavation area and was screened for odors, staining, organic vapors, and mercury vapor using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors, staining, or instrumental evidence (PID or Jerome® J505) of contamination was recorded. The excavated soil/fill will be temporarily backfilled into each respective test pit following installation of soldier piles.
- UBS continued installation of perimeter construction fencing, consisting of concrete jersey barriers and plywood panels, along the eastern sidewalk (Beekman Street).
- CCJV covered all exposed soil/fill and construction and demolition (C&D) debris with polyethylene sheeting and/or Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover at the end of each work day.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
			LANGAN

SITE OBSERVATION REPORT

Material Tracking

- CCJV exported 2 truckloads (about 40 cubic yards [CY]) of construction and demolition (C&D) debris, consisting of demolished concrete, for off-site disposal at the Impact Reuse and Recovery Center (IRRC) facility, located in Lyndhurst, NJ.
- CCJV exported 40 truckloads (about 800 CY) of non-hazardous soil/fill from waste characterization cells WC07 and WC08 for off-site disposal at the Middlesex County Landfill, located in East Brunswick, NJ.
- CCJV imported 2 truckloads (about 47.03 tons) of general fill 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	0	0	2	47.03
Project Total	7	161.51	0	0	2	90.02	8	197.04
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

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**		**Middlesex County Landfill East Brunswick, 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)	No, of Loads	Approx. Volume (CY)
July	0	0	2	40	0	0	0	0	40	800
Project Total	5	85	18	400	14	280	117	2,340	133	2,660

Sampling Activities

- No samples were collected from the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
			LANGAN

SITE OBSERVATION REPORT

CAMP Activities

Langan performed air monitoring at the perimeter of the site and at work zones at nine total locations for mercury vapor, volatile organic compounds (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 or VOCs that approached or exceeded the action level established by the CAMP (1.00 µg/m^3 and 5.0 ppm, 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 ranged from 0.00 to 0.01 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	0.038	0.0	0.00
PM-2	0.061	0.0	0.01
PM-3	0.043	0.1	0.01
PM-4	0.041	0.0	0.00
PM-5	0.040	0.8	0.02
PM-6	0.037	0.1	0.02
WZ-1	0.054	0.0	0.01
WZ-2	0.033	0.2	0.01
WZ-3	0.039	0.2	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	0.079	0.2	0.01
PM-2	** 0.110 @ 8:50am	0.2	0.02
PM-3	0.094	0.4	0.22
PM-4	* 0.128 @ 7:34am	0.1	0.00
PM-5	0.075	1.8	0.05
PM-6	0.072	0.3	0.05
WZ-1	0.077	0.0	0.02
WZ-2	0.048	0.4	0.04
WZ-3	0.049	0.6	0.02

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

* PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m^3) from 7:32am to 8:03am (32 minutes) and from 11:21am to 11:24am (4 minutes). The exceedances were caused by welding activities along the eastern boundary of the site (Peck Slip)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
			LANGAN

SITE OBSERVATION REPORT

adjacent to perimeter CAMP station PM-4 and were not the result of ground-intrusive activities associated with soil/fill at the site. The CAMP station was not able to be moved due to limited space along the eastern site boundary. Fugitive dust was not observed migrating from the site during these times.

** PM10 concentrations at perimeter CAMP station PM-2 exceeded the action level established in the CAMP (0.100 mg/m^3) intermittently from 8:49am to 9:21am (18 minutes in total). The exceedances were caused by fence construction activities in the southwestern part of the site in proximity to perimeter CAMP station PM-2 and were not the result of ground-intrusive activities associated with soil/fill at the site. Fugitive dust was not observed migrating from the site 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 0.13 µg/m^3.
- The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. VOC concentrations were at or below background concentrations throughout the work day.

Off-Site CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 6:54am to 5:53pm due to exposed soil/fill within 20 feet of the northern fence line.
- CAMP station WZ-2 was relocated to the southern sidewalk of Water Street from 6:54am to 5:47pm during excavation of test pits along the southern boundary of the site.
- CAMP station WZ-3 was relocated to the eastern sidewalk of Peck Slip from 6:54am to 5:37pm during excavation activities in the eastern part of the site.

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:

- Mercury vapor concentrations at each CAMP station ranged from 0.00 µg/m^3 to 0.05 µg/m^3.
- VOC concentrations at each CAMP station were recorded at 0.0 ppm.

Additionally, areas of exposed soil/fill were covered with polyethylene sheeting and/or Atmos® AC-645 dust/vapor suppressing foam. CAMP stations were discontinued between 5:37pm and 6:23pm at the conclusion of ground-intrusive activities.

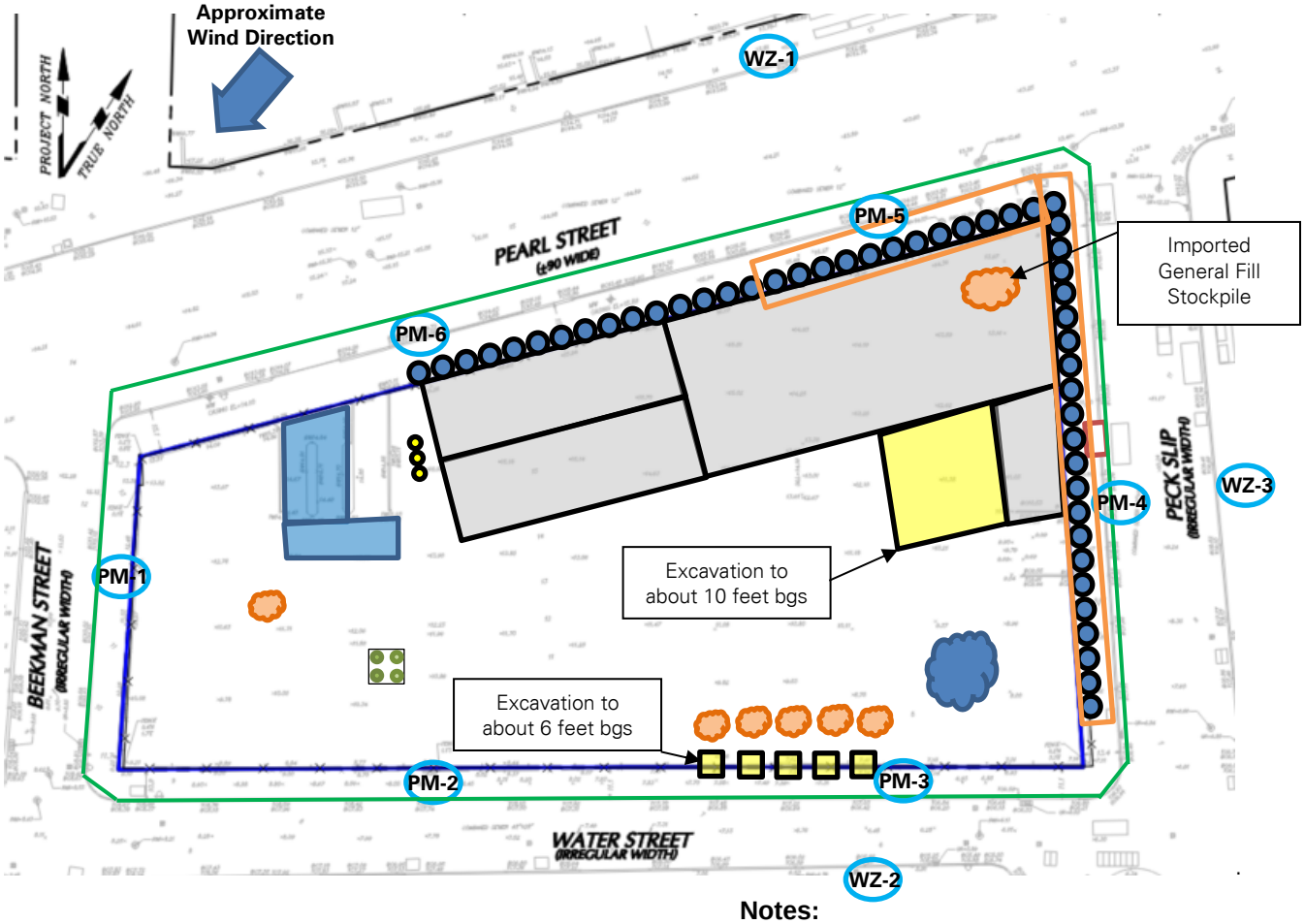
Anticipated Activities

- CCJV will continue installation of SOE soldier piles along the eastern and southern boundaries of the site (Peck Slip and Water Street, respectively).
- CCJV will continue excavation of test pits along the southern boundary of the site (Water Street).
- CCJV will continue installation of T-brackets along the edges of soldier piles to accommodate timber lagging installation.
- CCJV will continue installation of timber lagging between soldier piles.
- CCJV will continue excavation and off-site disposal of soil/fill in the central and eastern parts of the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
			LANGAN

SITE OBSERVATION REPORT

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 C&D Stockpile
- Approximate Location of Soil/Fill Container
- Approximate Location of Soil/Fill Stockpile
- Approximate location of USTs

Notes:

1) Locations of air monitoring stations are approximate.

- Approximate Location of Stockpiled Virgin Stone
- Approximate Location of 55-gallon drum
- Approximate Location of Soldier Pile
- Approximate Perimeter Construction Fence Location
- Previous Excavation Area
- Approximate Excavation Area

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
			LANGAN

SITE OBSERVATION REPORT

Select Site Photographs:

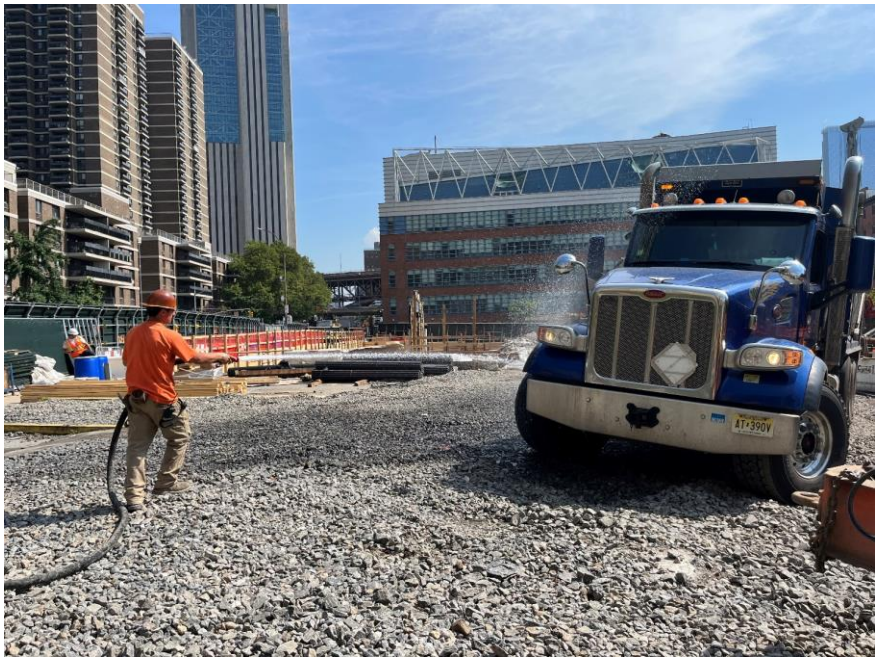


Photo 1: CCJV washing a dump truck prior to exiting the site (facing east)

Photo 2: Exposed soil/fill covered with polyethylene sheeting along the southern site boundary (facing southeast)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
			LANGAN

SITE OBSERVATION REPORT

Photo 3: CCJV securing a tight-fitting cover to a loaded dump truck prior to exiting the site (facing west)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
			LANGAN