

## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Thursday, August 4, 2022  <b>WEATHER:</b> Sunny, 78.0 – 94.0 °F Wind: N @ 0.0 – 8.1 mph  <b>TIME:</b> 5:45 AM – 7:00 PM  <b>MONITOR:</b> Brian Kenneally, Maitland Robinson, Eddie Cai	
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 58</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Maitland Robinson, Eddie Cai, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Aaron Fisher <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Elizabeth Meade <b>UBS</b> (Fence Contractor)		
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 60-foot-long by 25-foot-wide area to a maximum depth of about 12 feet below grade surface (bgs) for removal and off-site disposal of non-hazardous soil/fill in the central and eastern parts 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 Middlesex County Landfill in East Brunswick, NJ and the Clean Earth of North Jersey (CENJ) facility in Kearny, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>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.</li> </ul> </li> <li>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).</li> <li>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).</li> <li>CCJV placed grout behind previously installed walers in preparation for tie-back installation along the northern boundary of the site (Pearl Street).</li> <li>CCJV installed four tie-back rods along the northern boundary (Pearl Street).</li> <li>CCJV installed silt fencing along the northern site boundary (Pearl Street) to mitigate off-site migration of water.</li> </ul>			
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsayh Boak  <b>LANGAN</b>

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- CCJV removed and replaced the catch basin, consisting of hay sock and mesh fabric for sediment reduction, along the northwestern boundary of the site (Pearl Street).
- CCJV installed additional odor-neutralizing socks along the eastern boundary of the site (Peck Slip).
- CCJV excavated two 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 4-feet-long by 4-feet-wide and was excavated to a maximum depth of about 4 feet bgs.
  - 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. No odors, staining, or instrumental evidence (PID or Jerome® J505) of contamination was recorded. The excavated soil/fill was temporarily backfilled into each respective test pit of origin.
- CCJV demolished previously stockpiled concrete using an excavator with a hydraulic hammer attachment in the eastern part of the site in preparation for off-site disposal.
- 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.

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By: Maitland Robinson

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## SITE OBSERVATION REPORT

### Material Tracking

- CCJV exported 20 truckloads (about 400 cubic yards [CY]) of non-hazardous soil/fill from waste characterization cells WC05 and WC04 for off-site disposal at the Middlesex County Landfill, located in East Brunswick, NJ.
- CCJV exported 18 truckloads (about 360 CY) of non-hazardous soil/fill from waste characterization cells WC05, WC05, and WC04 for off-site disposal at the Clean Earth of North Jersey (CENJ) facility, located in Kearny, NJ.
- CCJV exported 2 truckloads (about 40 CY) of concrete and demolition debris (C&D) for off-site disposal at the Impact Reuse and Recovery Center, located in Lyndhurst, NJ.
- No material was imported to the 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	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)
Today	0	0	2	40	0	0	18	360	20	400
Project Total	5	85	20	440	14	280	153	3,060	173	3,460

### Sampling Activities

- No samples were collected from the site.

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## 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 that approached or exceeded the action level established by the CAMP (1.00  $\mu\text{g}/\text{m}^3$ ).

### 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  $\mu\text{g}/\text{m}^3$ .
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.034	0.0	0.00
PM-2	0.054	0.0	0.02
PM-3	0.053	0.4	0.00
PM-4	0.042	0.2	0.00
PM-5	0.045	0.2	0.01
PM-6	0.043	0.0	0.02
WZ-1	0.055	0.0	0.02
WZ-2	0.034	0.1	0.03
WZ-3	0.054	0.2	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.048	0.9	0.00
PM-2	0.093	0.0	0.04
PM-3	0.088	1.4	0.01
PM-4	*0.115 @ 8:52am	0.6	0.02
PM-5	0.069	1.2	0.03
PM-6	0.069	0.0	0.09
WZ-1	0.082	0.0	0.04
WZ-2	0.048	0.4	0.12
WZ-3	0.093	**6.4 @ 4:31pm	0.03

●  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    ● ppm = parts per million    ●  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

- \* PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100  $\text{mg}/\text{m}^3$ ) from 8:45am to 8:57am (12 minutes). The exceedance was caused by welding activities adjacent to perimeter CAMP station PM-4 along the eastern boundary of the site and were not the result

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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 this time.

\*\* VOC concentrations at off-site CAMP station WZ-3 exceeded the action level established in the CAMP (5.0 ppm) from 4:28pm to 4:38pm (10 minutes). The exceedance was caused by an idling motorcycle adjacent to work zone CAMP station WZ-3 along the southern boundary of the site and was not the result of ground-intrusive activities associated with soil/fill at the site. Work was temporarily paused while readings were collected with a hand-held PID unit. All perimeter CAMP stations remained at background concentrations, including PM-3, and the reading was determined to be not a cause of intrusive work. VOC readings fell below action levels and work resumed.

### Equipment Troubleshooting

- PM10 concentrations at off-site CAMP station WZ-3 was not recorded during recalibration following a VOC exceedance due to an idling motorcycle from 4:41pm to 4:42pm (2 minutes).
- Work was halted while the DustTrak unit was recalibrated. Fugitive dust was not observed migrating from the site during this time. Additionally, corresponding perimeter CAMP station PM-3 (located along the southern border of the site) did not record concentrations of VOC above background conditions.

### 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/m³ to 0.15 µg/m³.
- 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 6:51am to 6:04pm due to exposed soil/fill within 20 feet of the northern fence line.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:51am to 5:12pm during excavation activities in the eastern part of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 7:03am to 6:04pm during excavation of test pits along the southern boundary 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. 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 6:01pm and 6:50pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 µg/m³ to 0.02 µg/m³.
- VOC concentrations at each CAMP station were recorded at 0.0 ppm.

### Anticipated Activities

- CCJV will continue installation of silt fencing along the southern boundary of the site.
- CCJV will continue excavation of test pits along the southern boundary of the site.

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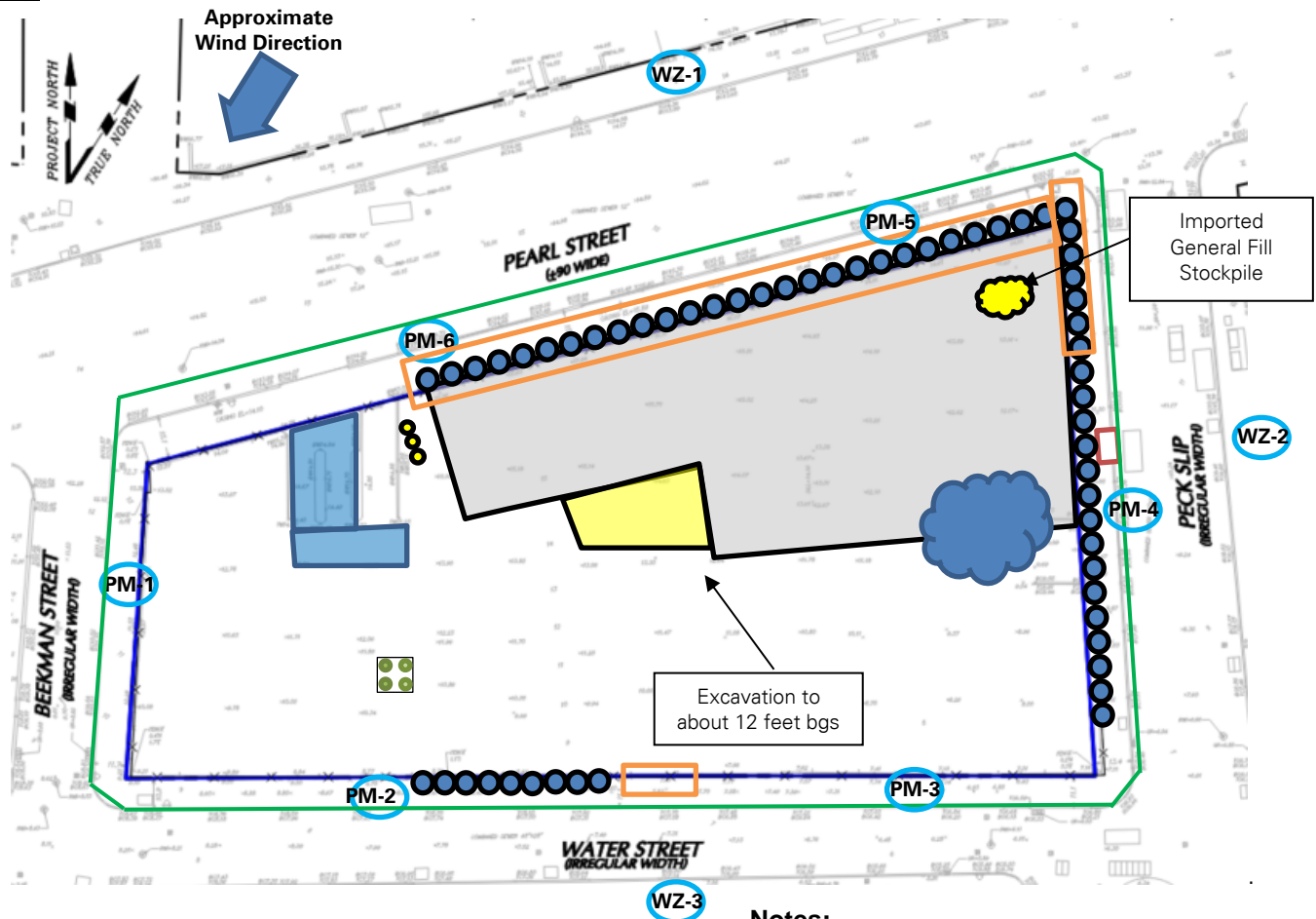
## SITE OBSERVATION REPORT

- 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 part of the site.

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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 C&D Stockpile
- 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

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### Select Site Photographs:



**Photo 1:** CCJV applying Mercon-X® during excavation activities in the east-central part of the site (facing southeast)



**Photo 2:** Atmos® AC-645 dust/vapor suppressing foam applied to exposed soil/fill in the northeastern part of the site (facing east)

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<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Friday, August 5, 2022  <b>WEATHER:</b> Sunny, 79.0 – 89.0 °F Wind: N @ 0.0 – 6.9 mph  <b>TIME:</b> 5:45 AM – 6:30 PM  <b>MONITOR:</b> Brian Kenneally, Maitland Robinson, Eddie Cai
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 59</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Maitland Robinson, Eddie Cai, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Aaron Fisher <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Elizabeth Meade <b>UBS</b> (Fence Contractor)	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 45-foot-long by 30-foot-wide area to a maximum depth of about 12 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 Clean Earth of North Jersey (CENJ) facility in Kearny, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>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. A petroleum-like odor and staining were observed, and a maximum PID reading of 23.4 ppm was detected when direct screening soil at about 10 to 12 feet bgs in the northeastern part of the site.</li> </ul> </li> <li>CCJV excavated an about 30-foot-long by 10-foot-wide area to a maximum depth of about 12 feet bgs for removal and off-site disposal for non-hazardous soil/fill in the central part of the site (waste characterization cells WC04 and WC05). Excavated material consisting of non-hazardous soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at the CENJ facility in Kearny, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>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. No odors, staining, or instrumental evidence of contaminants were observed.</li> </ul> </li> <li>CCJV installed additional odor-neutralizing socks along the eastern boundary of the site (Peck Slip).</li> </ul>		
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- CCJV welded brackets and steel walers along the edges of previously installed SOE soldier piles in preparation for tie-back installation along the northern and eastern site boundaries (Pearl Street, and Peck Slip, respectively).
- CCJV installed 6 tie-back rods along the northern site boundary (Pearl Street).
- CCJV demolished previously stockpiled concrete using an excavator with a hydraulic hammer attachment in the eastern part of the site in preparation for off-site disposal.
- CCJV installed 8 new soldier piles (SP68, SP69, SP70, SP71, SP72, SP73, SP74, and SP75) along the southern site boundary (Water 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.

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### Material Tracking

- CCJV exported 16 truckloads (about 320 cubic yards [CY]) of non-hazardous mercury impacted soil/fill from waste characterization cells WC04, WC05, WC07, and WC08 for off-site disposal at the CENJ facility, located in Kearny, NJ.
- CCJV exported 2 truckloads (about 40 CY) of C&D for off-site disposal at the Impact Reuse and Recovery Center, located in Lyndhurst, NJ.
- CCJV imported 2 truckloads (about 40 CY) of general fill to use as backfill behind lagging along the eastern site boundary from the Impact Reuse and Recovery Center, 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	48.84
Project Total	7	161.51	0	0	2	90.02	10	245.88
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)
Today	0	0	2	40	0	0	16	320	0	0
Project Total	5	85	22	480	14	280	169	3,380	173	3,460

### Sampling Activities

- No samples were collected from the site.

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## 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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00  $\mu\text{g}/\text{m}^3$ , 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 ranged from 0.00 to 0.01  $\mu\text{g}/\text{m}^3$ .
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.031	0.0	0.01
PM-2	0.051	0.0	0.01
PM-3	0.039	0.0	0.00
PM-4	0.036	0.1	0.00
PM-5	0.040	0.3	0.00
PM-6	0.038	0.0	0.01
WZ-1	0.048	0.0	0.01
WZ-2	0.026	0.5	0.01
WZ-3	0.031	0.0	0.00

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.042	0.0	0.02
PM-2	<sup>1</sup> *0.126 @ 11:46am	0.0	0.03
PM-3	0.073	0.2	0.01
PM-4	<sup>2</sup> *0.128 @ 2:37pm	0.5	0.00
PM-5	0.062	0.9	0.01
PM-6	<sup>3</sup> *0.111 @ 11:46am	0.0	0.02
WZ-1	<sup>4</sup> *0.109 @ 1:01pm	0.0	0.02
WZ-2	0.033	1.0	0.03
WZ-3	0.045	0.1	0.01

●  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    ● ppm = parts per million    ●  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

- <sup>1</sup>\* PM10 concentrations at perimeter CAMP station PM-2 exceeded the action level established in the CAMP (0.100  $\text{mg}/\text{m}^3$ ) intermittently from 11:19am to 11:51am (25 minutes in total). The exceedances were caused by wood saw-cutting associated with fence construction activities in the southwestern part of the

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site in proximity to perimeter CAMP station PM-2 and were not result of ground-intrusive activities associated with soil/fill at the site. Perimeter CAMP station PM-2 was relocated about 10 feet to the east, and PM10 concentrations returned to background levels. Fugitive dust was not observed migrating from the site during these times.

- <sup>2\*</sup> PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) intermittently from 2:31pm to 2:45pm (13 minutes in total). The exceedances were caused by welding activities adjacent to perimeter CAMP station PM-4 along the eastern boundary of the site 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.
- <sup>3\*</sup> PM10 concentrations at perimeter CAMP station PM-6 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 11:41am to 11:47am (7 minutes). The exceedance was caused by grout-mixing activities for tieback installation, 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. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-1) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.
- <sup>4\*</sup> PM10 concentrations at off-site CAMP station WZ-1 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 12:59pm to 1:01pm (3 minutes). The exceedance was a result of off-site activities, and was not the result of ground-intrusive activities associated with soil/fill at the site. PM10 concentrations at the closest perimeter CAMP stations (PM-5 and PM-6) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### 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<sup>3</sup> to 0.36 µg/m<sup>3</sup>.
- 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 6:56am to 5:31pm 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 6:56am to 5:10pm 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 6:56am to 5:21pm 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. 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 5:10pm and 5:51pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 µg/m<sup>3</sup> to 0.05 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station ranged from 0.0 ppm to 0.1 ppm.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

### Anticipated Activities

- CCJV will continue installation of silt fencing along the southern boundary of the site.
- CCJV will continue excavation of test pits along the southern boundary of the site.
- 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 part of the site.

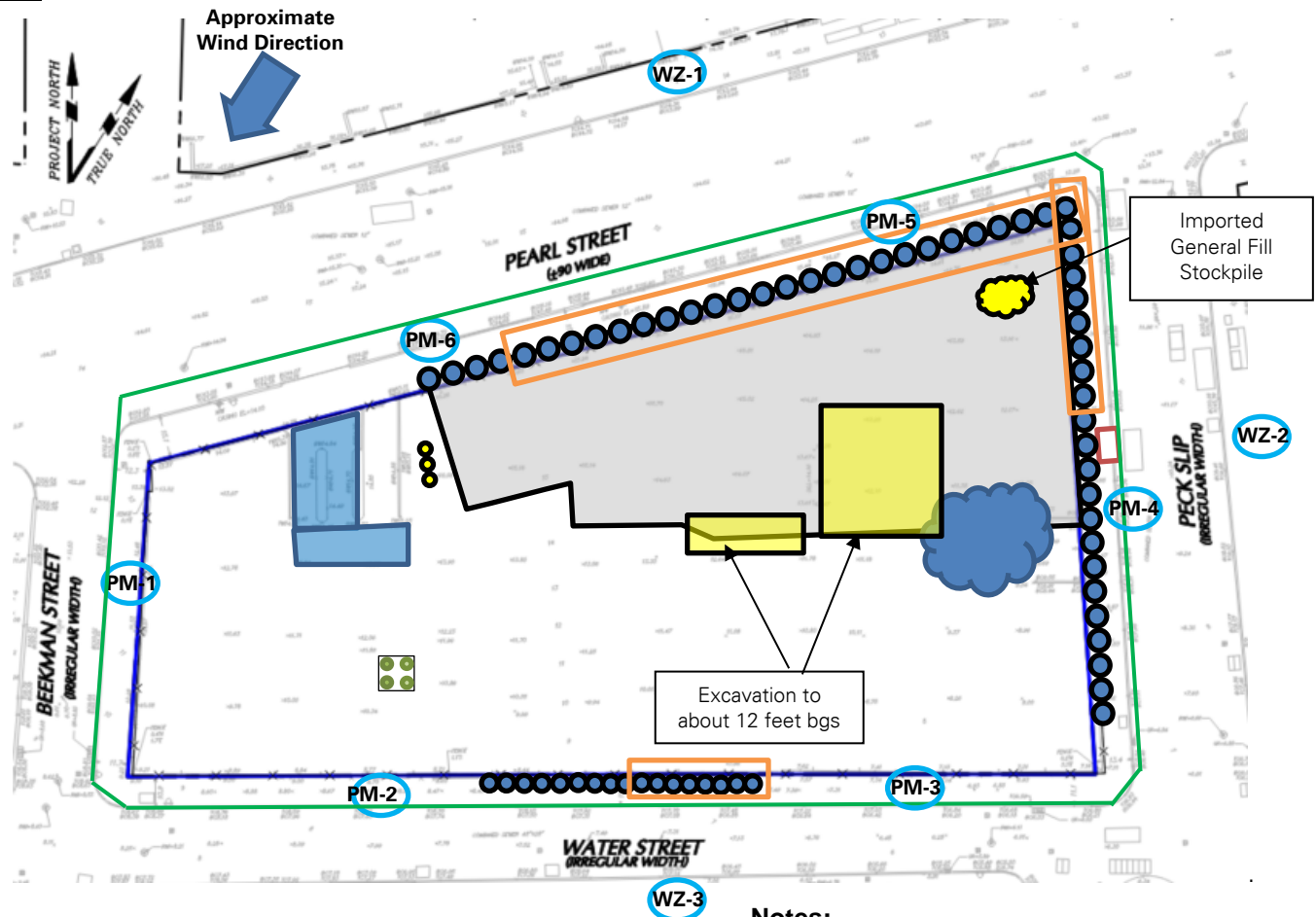
Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Brian Kenneally

**LANGAN**

## SITE OBSERVATION REPORT

### Site Map



### Notes:

1) Locations of air monitoring stations are approximate.

### Legend:

- |      |  |  |   |
|------|--|--|---|
| PM-1 | Approximate Location of Air Monitoring Station     |  | Approximate Location of Stockpiled Virgin Stone   |
|      | Approximate Work Area                              |  | Approximate Location of 55-gallon drum            |
|      | Approximate Location of Installed Pile Cap         |  | Approximate Location of Soldier Pile              |
|      | Approximate Location of Foundation Piles Completed |  | Approximate Perimeter Construction Fence Location |
|      | Approximate Location of Truck Tracking Pad         |  | Previous Excavation Area                          |
|      | Approximate Location of C&D Stockpile              |  | Approximate Excavation Area                       |
|      | Approximate Location of Soil/Fill Stockpile        |  |   |
|      | Approximate location of USTs                       |  |   |

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Brian Kenneally

**LANGAN**

## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV installing tiebacks along the north perimeter of the site (facing east)



**Photo 2:** CCJV excavating in the eastern portion of the site (facing southeast)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Saturday, August 6, 2022  <b>WEATHER:</b> Sunny, 80.0 – 90.0 °F Wind: S @ 2.0 – 6.0 mph  <b>TIME:</b> 8:45 AM – 11:15 AM  <b>MONITOR:</b> Deirdre Casey
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <b>Day 60</b> <b>Langan</b> (Environmental) – Deirdre Casey <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor)	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"><li>CCJV covered all exposed soil/fill and construction and demolition (C&amp;D) debris with polyethylene sheeting and/or Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover prior to resuming work on Monday, August 8, 2022.</li></ul>		
<b>Cc:</b>	M. Raygorodetsky, P. McMahon, M. Au	<b>By:</b> Deirdre Casey  <b>LANGAN</b>

## SITE OBSERVATION REPORT

### Material Tracking

- No Material was imported to the site.
- No material was exported from the 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	7	161.51	0	0	2	90.02	10	245.88
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)
Today	0	0	0	0	0	0	0	0	0	0
Project Total	5	85	22	480	14	280	169	3,380	173	3,460

### Sampling Activities

- No samples were collected from the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Deirdre Casey
			LANGAN

## SITE OBSERVATION REPORT

### CAMP Activities

The community air monitoring plan (CAMP) was not implemented, as there were no ground-intrusive activities ongoing at the site. Langan performed ambient air monitoring across the site using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer during reinstallation of the temporary overnight cover.

#### 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<sup>3</sup> to 0.19 µg/m<sup>3</sup>. The average recorded Jerome® J505 was 0.03 µg/m<sup>3</sup>.
- The dedicated mobile monitor (Langan) used a handheld PID to monitor volatile organic compound (VOC) concentrations throughout the site. VOC concentrations were at or below background concentrations throughout the work day.

### Anticipated Activities

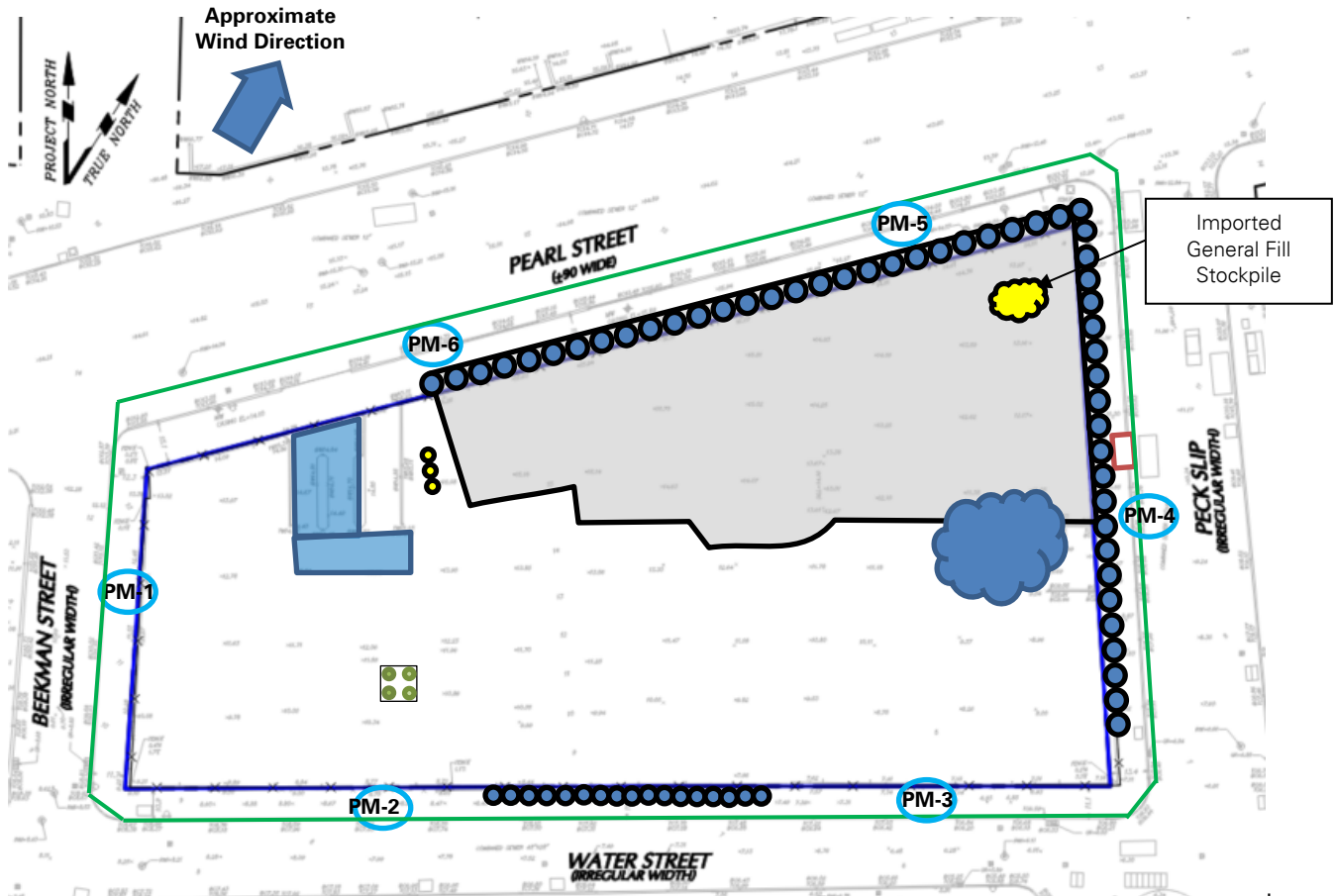
- CCJV will continue installation of silt fencing along the southern boundary of the site.
- CCJV will continue excavation of test pits along the southern boundary of the site.
- CCJV will continue installation of T-brackets along the edges of soldier piles to accommodate timber lagging installation.
- CCJV will continue installation of timber lagging between soldier piles.
- CCJV will continue excavation and off-site disposal of soil/fill in the central part of the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Deirdre Casey <b>LANGAN</b>
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## SITE OBSERVATION REPORT

### 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 Soil/Fill Stockpile
- Approximate location of USTs

- 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: Deirdre Casey

**LANGAN**



## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** Atmos® AC-645 dust/vapor suppressing foam re-applied to exposed soil/fill in the eastern part of the site (facing northeast)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Deirdre Casey <b>LANGAN</b>
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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Sunday, August 7, 2022  <b>WEATHER:</b> Sunny, 80.0 – 85.0 °F Wind: SW @ 0.0 – 7.0 mph  <b>TIME:</b> 8:45 AM – 11:05 AM  <b>MONITOR:</b> Mat Frankel
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <b>Day 61</b> <b>Langan</b> (Environmental) – Mat Frankel <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor)	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"><li>CCJV covered all exposed soil/fill and construction and demolition (C&amp;D) debris with polyethylene sheeting and/or Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover prior to resuming work on Monday, August 8, 2022.</li></ul>		
<b>Cc:</b>	M. Raygorodetsky, P. McMahon, M. Au	<b>By:</b> Mat Frankel  <b>LANGAN</b>

## SITE OBSERVATION REPORT

### Material Tracking

- No Material was imported to the site.
- No material was exported from the 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	7	161.51	0	0	2	90.02	10	245.88
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)
Today	0	0	0	0	0	0	0	0	0	0
Project Total	5	85	22	480	14	280	169	3,380	173	3,460

### Sampling Activities

- No samples were collected from the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Mat Frankel
			LANGAN

## SITE OBSERVATION REPORT

### CAMP Activities

The community air monitoring plan (CAMP) was not implemented, as there were no ground-intrusive activities ongoing at the site. Langan performed ambient air monitoring across the site using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer during reinstallation of the temporary overnight cover.

#### 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<sup>3</sup> to 0.19 µg/m<sup>3</sup>. The average recorded Jerome® J505 was 0.02 µg/m<sup>3</sup>.
- The dedicated mobile monitor (Langan) used a handheld PID to monitor volatile organic compound (VOC) concentrations throughout the site. VOC concentrations were at or below background concentrations throughout the work day.

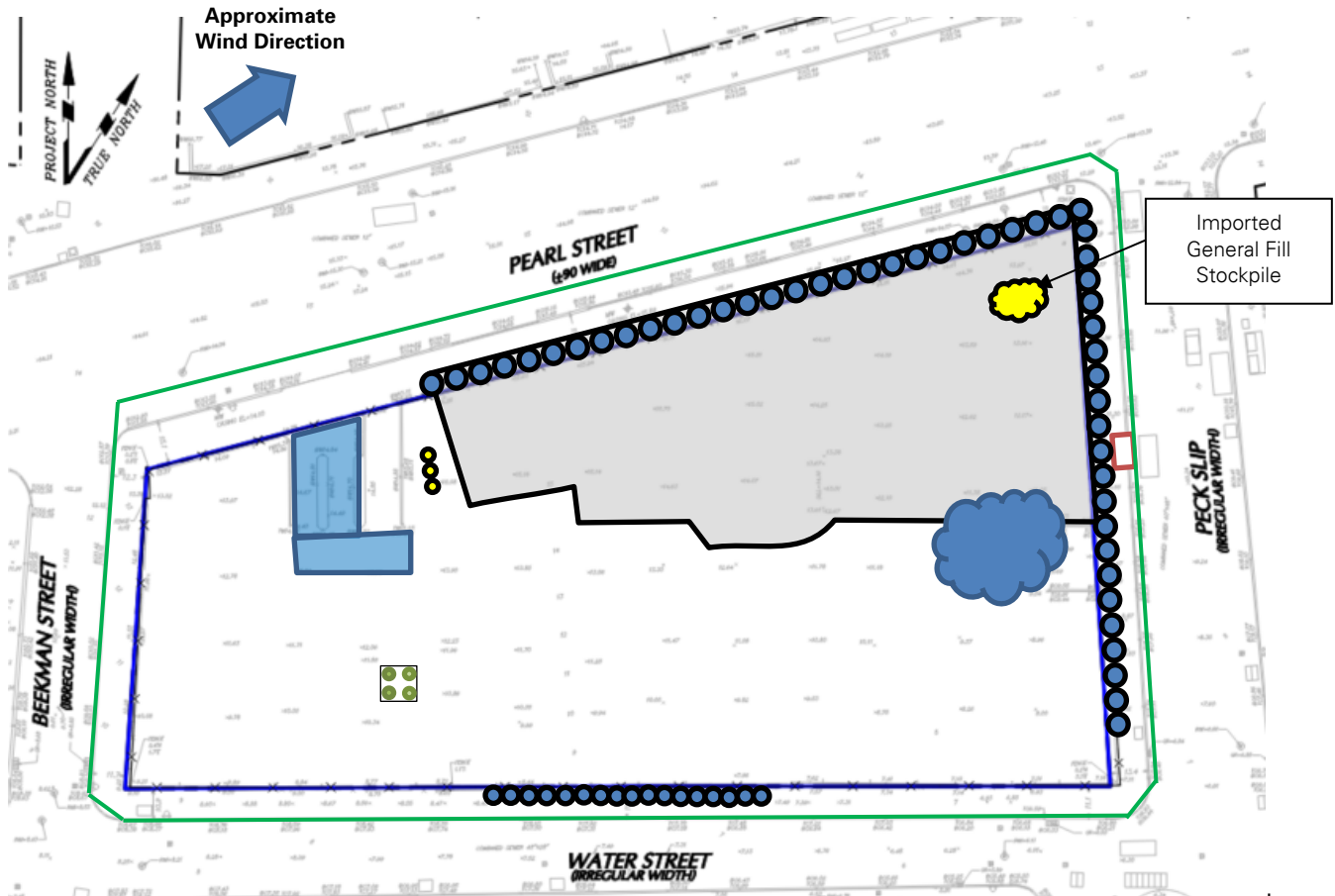
### Anticipated Activities

- CCJV will continue installation of silt fencing along the southern boundary of the site.
- CCJV will continue excavation of test pits along the southern boundary of the site.
- 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 part of the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Mat Frankel <b>LANGAN</b>
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## SITE OBSERVATION REPORT

### 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 Soil/Fill Stockpile
- Approximate location of USTs

- 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: Mat Frankel

**LANGAN**

## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** Atmos® AC-645 dust/vapor suppressing foam re-applied to exposed soil/fill in the eastern part of the site (facing north)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Mat Frankel <b>LANGAN</b>
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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Monday, August 8, 2022  <b>WEATHER:</b> Sunny, 80.0 °F Wind: N @ 5.8 – 8.1 mph  <b>TIME:</b> 5:45 AM – 6:00 PM  <b>MONITOR:</b> Brian Kenneally, Elsayh Boak, Eddie Cai
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 62</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Elsayh Boak, Eddie Cai, Ava Saan, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Aaron Fisher <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Elizabeth Meade <b>UBS</b> (Fence Contractor)	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 35-foot-long by 10-foot-wide area to a maximum depth ranging from about 6 feet to 10 feet below grade surface (bgs) for removal and off-site disposal of petroleum-contaminated soils/fill in the eastern part of site (waste characterization cells WC09 and WC10). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at Bayshore Soil Management facility in Keasbey, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>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 or staining, were observed. A maximum instantaneous PID reading of 5.3 ppm was recorded in the area of the excavation.</li> </ul> </li> <li>CCJV excavated an about 10-foot-long by 5-foot-wide area to a maximum depth ranging from about 6 feet to 12 feet 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 Clean Earth of North Jersey (CENJ) facility in Kearny, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>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. No odors or staining, or instrumental evidence of contamination was observed.</li> </ul> </li> <li>CCJV excavated test pits along the south boundary of the site to locate utilities prior to support of excavation (SOE) soldier pile installation. Test pit excavations were approximately 3-foot-long by 3-foot-wide at to a maximum depth of about 4 feet deep. Excavations were backfilled with soil from the same grid.</li> </ul>		
<b>Cc:</b> M. Raygorodetsky, P. McMahon, M. Au	<b>By:</b> Brian Kenneally  <b>LANGAN</b>	

## SITE OBSERVATION REPORT

- 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. No odors or staining, or instrumental evidence of contamination was observed.
- CCJV welded brackets and steel walers along the edges of previously installed SOE soldier piles in preparation for tie-back installation along the northern and eastern site boundaries (Pearl Street, and Peck Slip, respectively).
- CCJV installed 2 tie-back rods along the northern site boundary (Pearl Street).
- CCJV installed 10 new soldier piles (SP67, SP66, SP65, SP64, SP63, SP62, SP61, SP60, SP59 and SP8) along the southern site boundary (Water 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: Brian Kenneally

**LANGAN**



## SITE OBSERVATION REPORT

### Material Tracking

- CCJV exported 4 truckloads (about 80 cubic yards [CY]) of non-hazardous soil/fill from waste characterization cells WC07 and WC08 for off-site disposal at the CENJ facility, located in Kearny, NJ.
- CCJV exported 12 truckloads (about 240 cubic yards [CY]) of petroleum contaminated soils/urban fill from waste characterization cells WC09 and WC10 for off-site disposal at the Bayshore Soil Management facility in Keasbey, NJ
- No material was imported to the 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	7	161.51	0	0	2	90.02	10	245.88
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		Bayshore Soil Management Keasbey, NJ Petroleum Contaminated Soils/Urban 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)	No. of Loads	Approx. Volume (CY)
Today	0	0	0	0	0	0	4	80	0	0	12	240
Project Total	5	85	22	480	14	280	173	3,460	173	3,460	12	240

### Sampling Activities

- No samples were collected from the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00 µg/m<sup>3</sup>, 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 0.00µg/m<sup>3</sup>.
- 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 <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
PM-1	0.019	0.2	0.01
PM-2	0.040	0.0	0.01
PM-3	0.038	0.2	0.00
PM-4	0.078	0.0	0.02
PM-5	0.039	0.5	0.01
PM-6	0.026	0.0	0.01
WZ-1	0.035	0.0	0.01
WZ-2	0.016	0.1	0.01
WZ-3	0.015	0.8	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
<b>Action Level</b>	<b>0.100 mg/m<sup>3</sup></b>	<b>5.0 ppm</b>	<b>1.00 µg/m<sup>3</sup></b>
PM-1	0.055	0.4	0.03
PM-2	***0.105 @ 11:15am	0.0	0.03
PM-3	*0.123 @ 9:01am	0.4	0.00
PM-4	**0.724 @ 10:46am	0.1	0.05
PM-5	0.079	0.7	0.10
PM-6	0.044	0.2	0.05
WZ-1	0.051	0.0	0.06
WZ-2	0.033	0.4	0.03
WZ-3	0.038	2.8	0.10

● mg/m<sup>3</sup> = milligrams per cubic meter    ● ppm = parts per million    ● µg/m<sup>3</sup> = micrograms per cubic meter

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By: Brian Kenneally

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## SITE OBSERVATION REPORT

- \*PM10 concentrations at perimeter CAMP station PM-3 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) intermittently from 9:01am to 9:05am, 9:08am to 9:15am, and 9:18am to 9:21am (14 minutes in total). The exceedances were caused by wood saw-cutting associated with fence construction activities in the southeastern part of the site in proximity to perimeter CAMP station PM-3 and were not result of ground-intrusive activities associated with soil/fill at the site. Fugitive dust was not observed migrating from the site during these times. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-3) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.
- \*\*PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) intermittently from 10:15am to 11:00am, 11:42am to 11:59am, 1:07pm to 1:31pm, (86 minutes in total). The exceedances were caused by welding activities adjacent to perimeter CAMP station PM-4 along the eastern boundary of the site 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. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-2) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.
- \*\*\*PM10 concentrations at perimeter CAMP station PM-2 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 11:12am to 11:16am (4 minutes). The exceedance was caused by wood saw-cutting associated with fence construction activities in the southwestern part of the site in proximity to perimeter CAMP station PM-2 and were not result of ground-intrusive activities associated with soil/fill at the site. Fugitive dust was not observed migrating from the site during this time. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-3) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### Equipment Troubleshooting

- VOC concentrations at off-site CAMP station WZ-3 were not recorded during recalibration from 4:08pm to 4:10pm (2 minutes).

### 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<sup>3</sup> to 0.46 µg/m<sup>3</sup>.
- 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 7:35am to 5:05pm due to exposed soil/fill within 20 feet of the northern fence line.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:53am to 5:05pm during excavation activities in the eastern part of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:53am to 5:05pm during soldier pile advancement along the southern boundary 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. Additionally,

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## SITE OBSERVATION REPORT

areas of exposed soil/fill were covered with polyethylene sheeting and/or Atmos® AC-645 dust/vapor suppressing foam. CAMP stations were discontinued between 4:58pm and 5:10pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 µg/m<sup>3</sup> to 0.02 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station were recorded at 0.0 ppm.

### Anticipated Activities

- CCJV will continue installation of silt fencing along the southern boundary of the site.
- CCJV will continue excavation of test pits along the southern boundary of the site.
- CCJV will continue to install soldier piles along the south boundary of the site
- 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 part of the site.

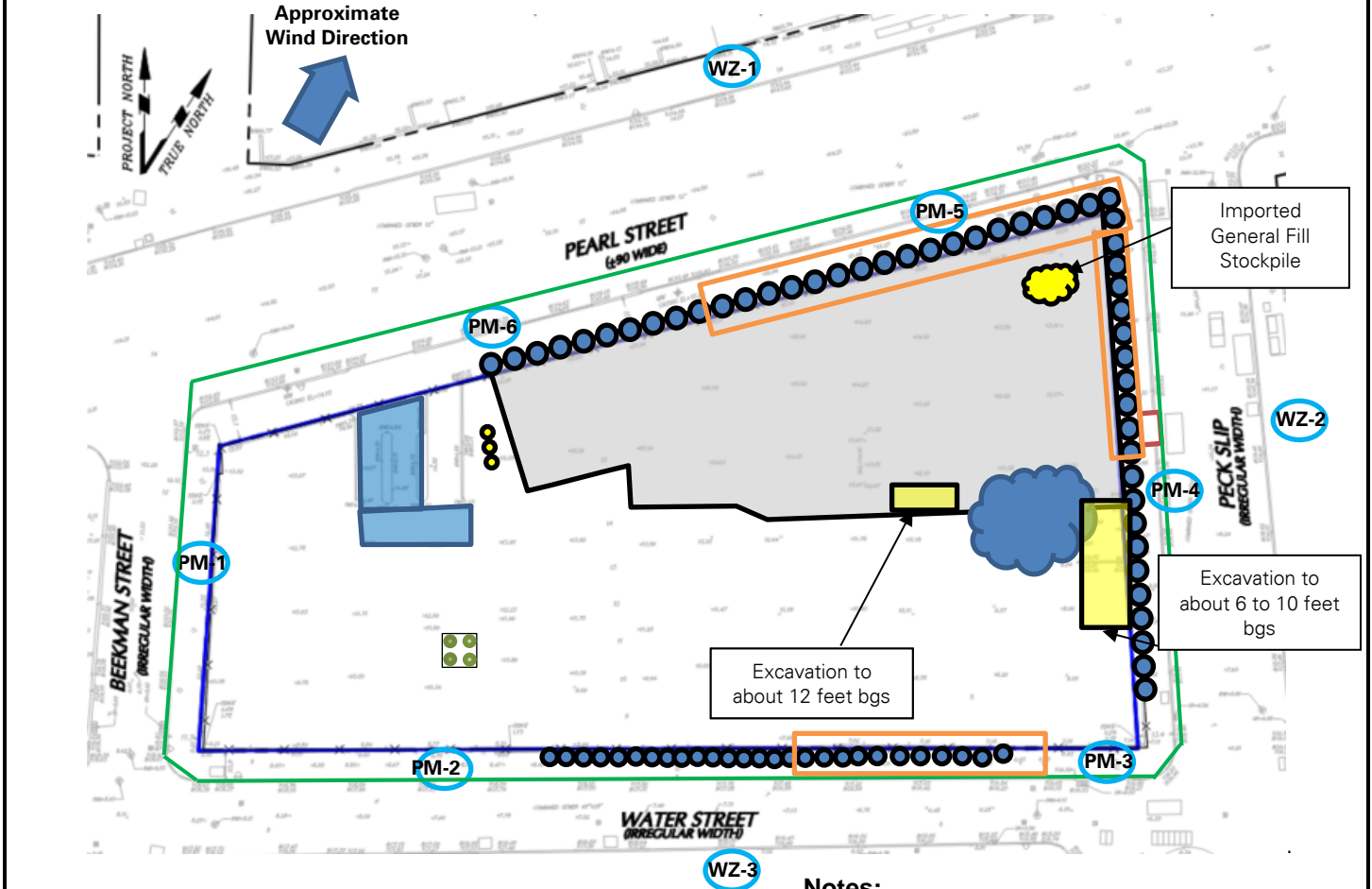
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By: Brian Kenneally

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## 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 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

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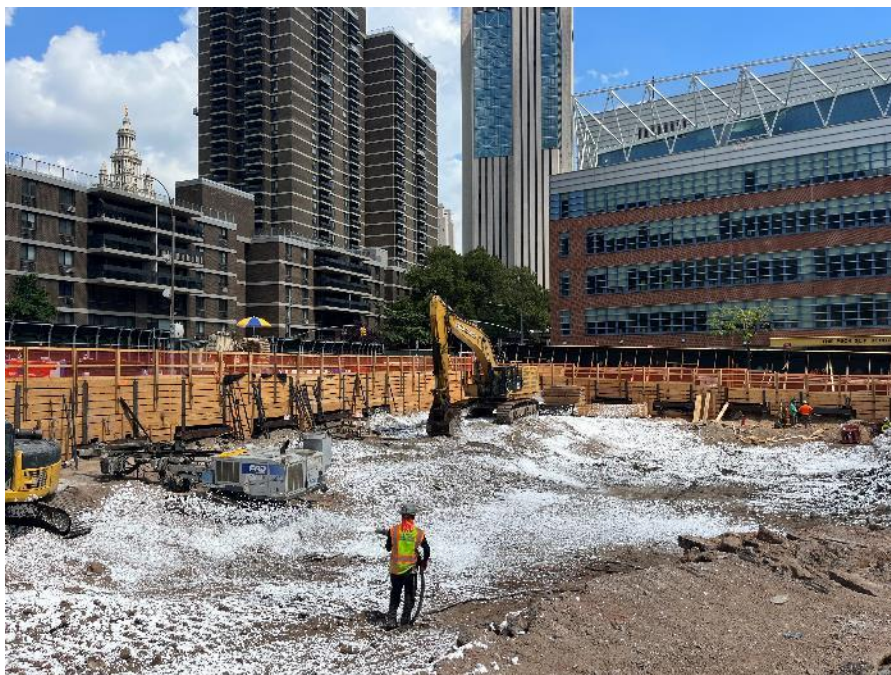


## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV installing SOE soldier piles along the south perimeter of the site (facing east)



**Photo 2:** CCJV covering exposed soil with ATMOS foam at the end of the day (facing northeast)

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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Tuesday, August 9, 2022  <b>WEATHER:</b> Sunny, 81 - 97 °F Wind: WSW @ 3.5 – 11.9 mph  <b>TIME:</b> 5:45 AM – 6:00 PM  <b>MONITOR:</b> Brian Kenneally, Elsayh Boak, Eddie Cai, Lisa Cristiano
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 63</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Elsayh Boak, Eddie Cai, Lisa Cristiano, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Aaron Fisher <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Elizabeth Meade <b>Excel</b> (Environmental Consultant) – Abby Lodge <b>UBS</b> (Fence Contractor)	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>• CCJV excavated an about 50-foot-long by 40-foot-wide area to a maximum depth ranging from about 8 feet to 10 feet below grade surface (bgs) for removal and off-site disposal of petroleum contaminated soils/ fill in the eastern part of site (waste characterization cells WC09 and WC10). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at Bayshore Soil Management facility in Keasbey, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>○ 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.                 <ul style="list-style-type: none"> <li>▪ Petroleum-like odors were observed and a maximum instantaneous PID reading of 327 parts per million (ppm) was recorded while screening ambient air within the excavation area. Work was halted and the area was covered up with foam and the odor/PID readings dissipated. The perimeter CAMP station had a maximum instantaneous reading of 9.8 ppm.</li> <li>▪ There was no 15-minute average exceedance of the action level (5.0 ppm). There were no PID readings above background at the off-site CAMP stations along Peck Slip and Water Street. Atmos® AC-645 dust/vapor suppressing foam was actively sprayed on the exposed soil during and after excavation.</li> </ul> </li> </ul> </li> <li>• CCJV excavated an about 20-foot-long by 4-foot-wide test pit to a maximum depth of 12 feet bgs for soil delineation sample collection.             <ul style="list-style-type: none"> <li>○ 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. No odors or staining, were observed. A maximum instantaneous reading of 1.13 µg/m³ was recorded using a Jerome® J505</li> </ul> </li> </ul>		
<b>Cc:</b> M. Raygorodetsky, P. McMahon, M. Au	<b>By:</b> Brian Kenneally <div style="text-align: center;"><b>LANGAN</b></div>	

## SITE OBSERVATION REPORT

mercury vapor analyzer to screen excavated soil. Following sample collection, the area was backfilled using soil excavated from the same location. There were no mercury vapor readings above background at the off-site CAMP stations along Peck Slip and Water Street. Atmos® AC-645 dust/vapor suppressing foam was actively sprayed on the exposed after backfill.

- CCJV excavated test pits along the south boundary of the site to locate utilities prior to support of excavation (SOE) soldier pile installation. Test pit excavations were approximately 3-foot-long by 3-foot-wide at to a maximum depth of about 4 feet bgs. Excavations were backfilled with soil from the same grid.
  - 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. No odors or staining, or instrumental evidence of contamination was observed.
- CCJV welded brackets and steel walers along the edges of previously installed SOE soldier piles in preparation for tie-back installation along the northern and eastern site boundaries (Pearl Street, and Peck Slip, respectively).
- CCJV installed 2 tie-back rods along the eastern site boundary (Peck Slip).
- 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.

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By: Brian Kenneally

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## SITE OBSERVATION REPORT

### Material Tracking

- CCJV exported 36 truckloads (about 720 cubic yards [CY]) of petroleum contaminated soil/fill from waste characterization cells WC09 and WC10 for off-site disposal at the Bayshore Soil Management facility in Keasbey, NJ.
- CCJV exported 3 truckloads (about 60 CY) of construction and demolition material (C&D) for off-site disposal at the Impact Reuse and Recovery Center (IRRC) in Lyndhurst, NJ.
- CCJV imported 2 truckloads (about 40 CY) of general fill from IRRC 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	50.16
Project Total	7	161.51	0	0	2	90.02	12	296.04
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		Bayshore Soil Management Keasbey, NJ Petroleum Contaminated 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)	No. of Loads	Approx. Volume (CY)
Today	0	0	3	60	0	0	0	0	0	0	36	720
Project Total	5	85	25	540	14	280	173	3,460	173	3,460	48	960

### Sampling Activities

- Langan collected composite soil samples SB28NW4\_4-12 and SB28NW4A\_4-12 for laboratory analysis of toxicity characteristic leaching procedure (TCLP) lead and total lead.
- Samples were relinquished to Alpha Analytical, Inc., an Environmental Laboratory Accredited Program (ELAP)-certified laboratory under standard chain-of-custody protocols.

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## 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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00  $\mu\text{g}/\text{m}^3$ , 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 ranged from 0.00 $\mu\text{g}/\text{m}^3$  to 0.06 $\mu\text{g}/\text{m}^3$
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.028	0.0	0.01
PM-2	0.047	0.0	0.02
PM-3	0.044	0.4	0.00
PM-4	0.040	0.6	0.02
PM-5	0.048	0.2	0.00
PM-6	0.033	0.0	0.01
WZ-1	0.043	0.0	0.02
WZ-2	0.016	0.1	0.01
WZ-3	0.038	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.044	0.0	0.03
PM-2	0.081	0.1	0.26
PM-3	0.083	1.6	0.01
PM-4	0.082	3.7	0.06
PM-5	*0.105 @ 12:52pm	0.5	0.02
PM-6	0.059	0.0	0.03
WZ-1	0.056	0.0	0.03
WZ-2	0.025	0.4	0.03
WZ-3	0.065	0.0	0.02

●  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    ● ppm = parts per million    ●  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

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## SITE OBSERVATION REPORT

- \*PM10 concentrations at perimeter CAMP station PM-5 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 12:48pm to 12:52pm (4 minutes). The exceedances were caused by welding activities adjacent to perimeter CAMP station PM-5 along the northeastern boundary of the site 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. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-1) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### 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<sup>3</sup> to 0.27 µg/m<sup>3</sup>.
- 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 6:49am to 5:06pm due to exposed soil/fill within 20 feet of the northern fence line.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:49am to 5:06pm during excavation activities in the eastern part of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:49am to 5:06pm during soldier pile advancement along the southern boundary 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. 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 4:35pm and 4:46pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 µg/m<sup>3</sup> to 0.06 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station were recorded at 0.0 ppm.

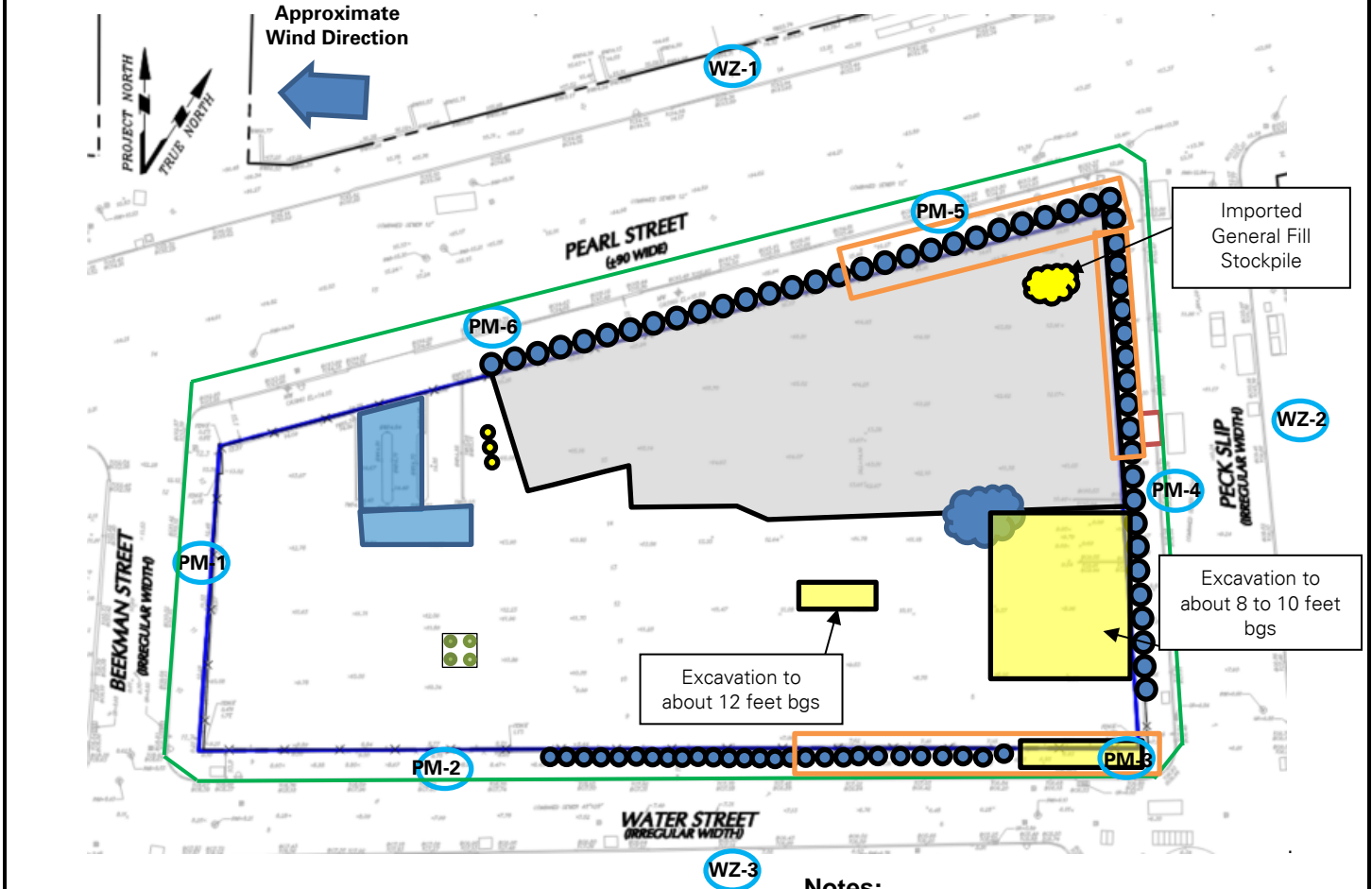
### Anticipated Activities

- CCJV will continue installation of silt fencing along the southern boundary of the site.
- CCJV will continue excavation of test pits along the southern boundary of the site.
- CCJV will continue to install soldier piles along the south boundary of the site
- 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 part of the site.

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## 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 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

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By: Brian Kenneally

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## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** View of ATMOS foam at applied to a petroleum contaminated soil/fill excavation (facing northwest)



**Photo 2:** CCJV live-loading petroleum contaminated soil/fill into permitted tri-axial trucks in the southeastern part of the site (facing east)

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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Wednesday, August 10, 2022  <b>WEATHER:</b> Sunny, 76 - 87 °F Wind: N @ 0 – 6.9 mph  <b>TIME:</b> 6:00 AM – 7:00 PM  <b>MONITOR:</b> Brian Kenneally, Elsayh Boak, Yaskira Mota Diaz, Camille Quick
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 64</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Elsayh Boak, Yaskira Mota Diaz, Camille Quick, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Aaron Fisher <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Elizabeth Meade <b>UBS</b> (Fence Contractor)	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 45-foot-long by 10-foot-wide area to about 6 feet below grade surface (bgs) in preparation for lagging installation along the southern (Water Street) boundary of the site. Following lagging installation, the area was backfilled using soil excavated from the same location.             <ul style="list-style-type: none"> <li>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. Petroleum-like odors were observed. Maximum instantaneous readings of 1.0 parts per million (ppm), and 0.83 µg/m³ were recorded while screening the excavation area with a PID, and Jerome® J505 mercury vapor analyzer, respectively.</li> </ul> </li> <li>CCJV excavated test pits along the southeastern boundary of the site to locate utilities prior to support of excavation (SOE) soldier pile installation. Test pit excavations were approximately 3-foot-long by 3-foot-wide at to a maximum depth of about 4 feet bgs. Excavations were backfilled with soil from the same grid.             <ul style="list-style-type: none"> <li>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. No odors or staining, or instrumental evidence of contamination was observed.</li> </ul> </li> <li>CCJV welded brackets and steel walers along the edges of previously installed SOE soldier piles in preparation for tie-back installation along the eastern site boundary (Peck Slip).</li> <li>CCJV installed two tie-back rods along the eastern site boundary (Peck Slip).</li> <li>CCJV placed grout behind previously installed walers in preparation for tie-back installation along the eastern boundary of the site (Peck Slip).</li> </ul>		
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## SITE OBSERVATION REPORT

- CCJV installed timber lagging between the SOE soldier piles along the southern boundary of the site (Water Street).
- CCJV installed 6 new soldier piles (SP51, SP52, SP53, SP54, SP55, and SP56) along the southern site boundary.
- 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 <b>LANGAN</b>
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## SITE OBSERVATION REPORT

### Material Tracking

- No material was imported to the site.
- No material was exported from the 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	7	161.51	0	0	2	90.02	12	296.04
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		Bayshore Soil Management Keasbey, NJ Petroleum Contaminated 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)	No. of Loads	Approx. Volume (CY)
Today	0	0	0	0	0	0	0	0	0	0	0	0
Project Total	5	85	25	540	14	280	173	3,460	173	3,460	48	960

### Sampling Activities

- No samples were collected.

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Elsayh 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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00  $\mu\text{g}/\text{m}^3$ , 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 ranged from 0.00  $\mu\text{g}/\text{m}^3$  to 0.07  $\mu\text{g}/\text{m}^3$
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.001	0.0	0.01
PM-2	0.032	0.0	0.01
PM-3	0.042	0.1	0.00
PM-4	0.026	0.0	0.01
PM-5	0.031	0.5	0.01
PM-6	0.015	0.0	0.02
WZ-1	0.021	0.0	0.01
WZ-2	0.013	0.0	0.02
WZ-3	0.019	0.0	0.00

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.003	0.0	0.03
PM-2	**0.121 @ 10:20am	0.0	0.02
PM-3	*0.227 @ 1:32pm	0.3	0.01
PM-4	0.059	0.1	0.04
PM-5	0.047	2.6	0.02
PM-6	0.024	0.0	0.06
WZ-1	0.039	0.0	0.03
WZ-2	0.026	0.1	0.05
WZ-3	0.058	0.0	0.02

●  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    ● ppm = parts per million    ●  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

- \*PM10 concentrations at perimeter CAMP station PM-3 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 9:08am to 9:22am, 13:19pm to 13:46pm, and 15:50pm to 15:59pm (50 minutes in total). The exceedances were caused by wood cutting for timber lagging adjacent to perimeter CAMP station PM-3 along the southern boundary of the site and were not the result of ground-intrusive activities associated with soil/fill at the site. The station was relocated 15 feet east and PM10 concentrations fell below action levels. Fugitive dust was not observed migrating from the site during these times. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-3) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.
- \*\*PM10 concentrations at perimeter CAMP station PM-2 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 10:13am to 10:26am, and 10:48am to 10:59am (24 minutes in total). The exceedances were caused by welding activities adjacent to perimeter CAMP station PM-2 along the southern boundary of the site 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. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-3) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### 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<sup>3</sup> to 0.31 µg/m<sup>3</sup> (a maximum instantaneous reading of 0.83 µg/m<sup>3</sup> was recorded during soil screening).
- 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 6:48am to 5:32pm due to exposed soil/fill within 20 feet of the northern fence line.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:48am to 5:32pm during excavation activities in the eastern part of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:48am to 5:32pm during soldier pile advancement along the southern boundary 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. 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 5:17pm and 5:20pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station were recorded at 0.00 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station ranged from 0.0 ppm to 0.2 ppm.

### Anticipated Activities

- CCJV will continue installation of silt fencing along the southern boundary of the site.
- CCJV will continue excavation of test pits along the southern boundary of the site.
- CCJV will continue to install soldier piles along the south boundary of the site

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
			<b>LANGAN</b>

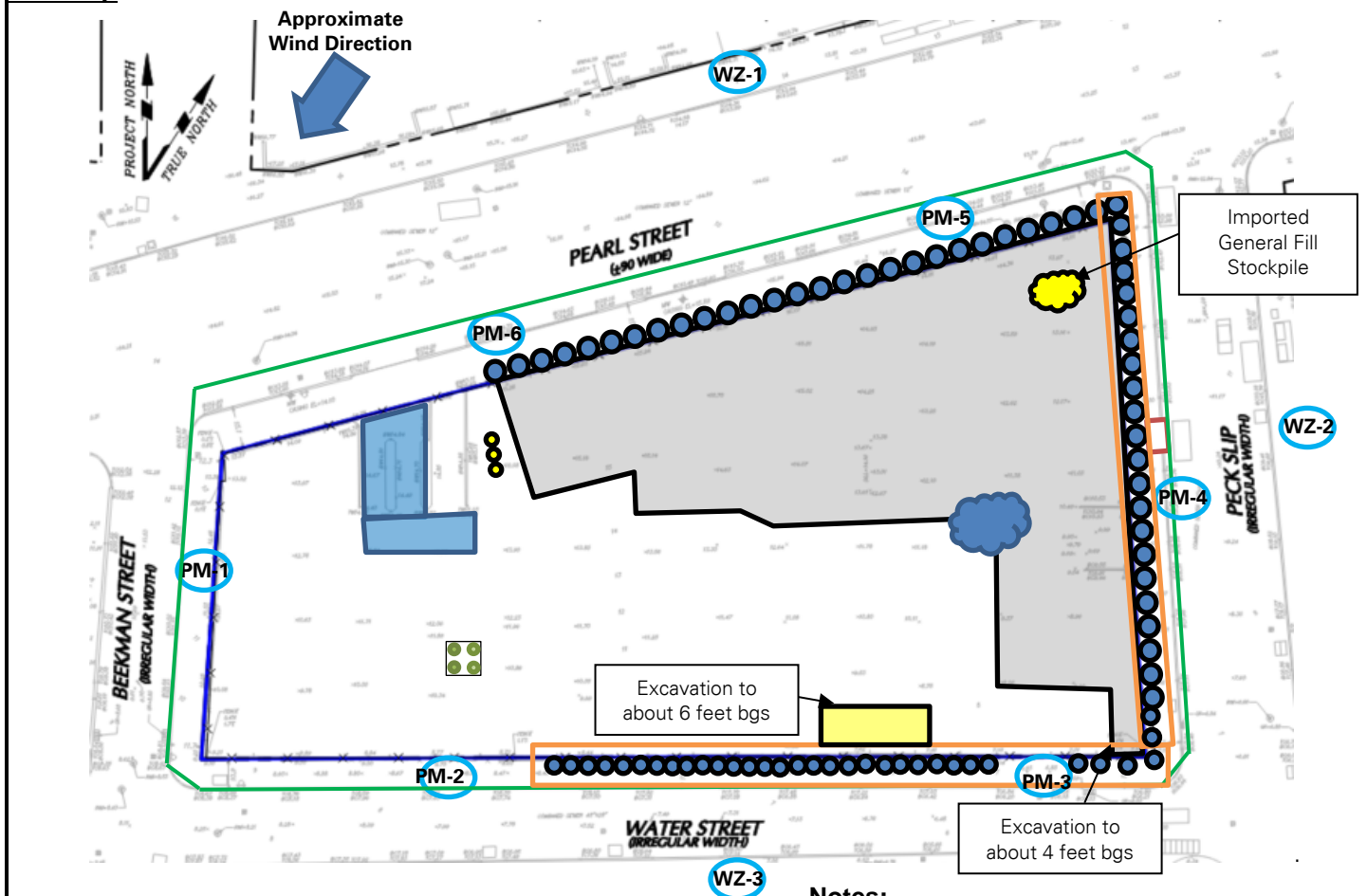
## SITE OBSERVATION REPORT

- 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 part of the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak <b>LANGAN</b>
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## SITE OBSERVATION REPORT

### Site Map



### Notes:

1) Locations of air monitoring stations are approximate.

### Legend:

- |      |  |  |   |
|------|--|--|---|
| PM-1 | Approximate Location of Air Monitoring Station     |  | Approximate Location of Stockpiled Virgin Stone   |
|      | Approximate Work Area                              |  | Approximate Location of 55-gallon drum            |
|      | Approximate Location of Installed Pile Cap         |  | Approximate Location of Soldier Pile              |
|      | Approximate Location of Foundation Piles Completed |  | Approximate Perimeter Construction Fence Location |
|      | Approximate Location of Truck Tracking Pad         |  | Previous Excavation Area                          |
|      | Approximate Location of C&D Stockpile              |  | Approximate Excavation Area                       |
|      | Approximate Location of Soil/Fill Stockpile        |  |   |
|      | Approximate location of USTs                       |  |   |

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Elisah Boak

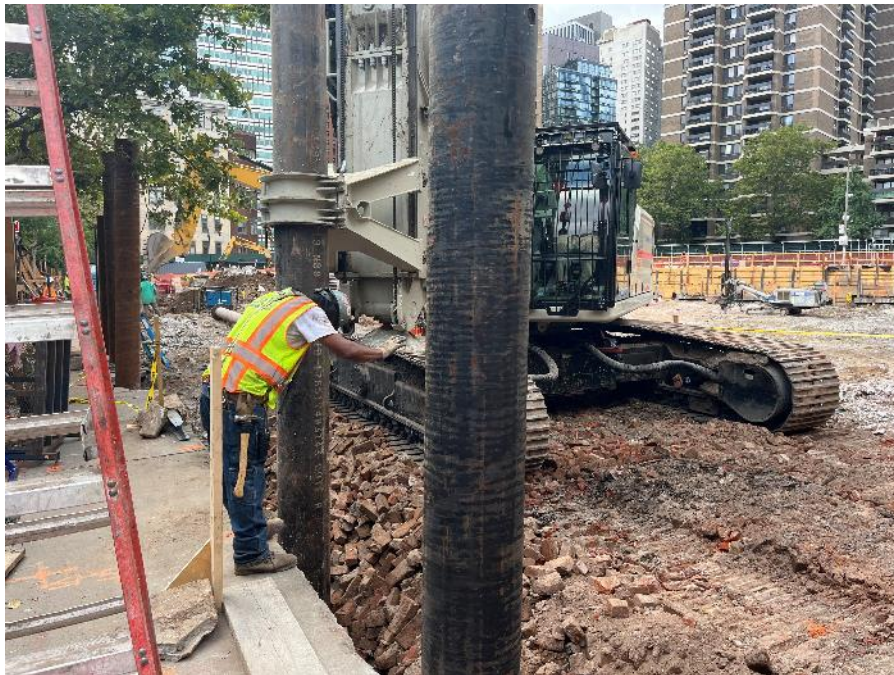
**LANGAN**

## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** View of Atmos foam on top of polyethylene sheeting applied to previously excavated hazardous-lead soil/fill (facing southeast)



**Photo 2:** CCJV installing SOE soldier piles in the southeastern part of the site (facing northwest)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
			<b>LANGAN</b>



## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Thursday, August 11, 2022  <b>WEATHER:</b> Partly Cloudy, 73 - 88 °F Wind: N @ 0 – 3.5 mph  <b>TIME:</b> 6:00 AM – 6:30 PM  <b>MONITOR:</b> Brian Kenneally, Elsayh Boak, Camille Quick, Eddie Cai
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 65</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Elsayh Boak, Eddie Cai, Camille Quick, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Michael Sollecito <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Elizabeth Meade <b>UBS</b> (Fence Contractor)	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 12-foot-long by 8-foot-wide area from about 5 to 7 feet below grade surface (bgs) for removal and off-site disposal of hazardous lead contaminated soil/fill in the southern part of the site. Excavated soil/fill was live-loaded into a roll-off container for off-site disposal at Clean Earth of North Jersey (CENJ) facility in Kearny, NJ. The container was covered with a tight-fitting cover and was inspected before leaving the site.             <ul style="list-style-type: none"> <li>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 or staining, or instrumental evidence of contamination was observed.</li> </ul> </li> <li>CCJV excavated an about 24-foot-long by 10-foot-wide area to about 6 feet bgs in preparation for lagging installation along the southern (Water Street) boundary of the site. Following lagging installation, the area was backfilled using soil excavated from the same location.             <ul style="list-style-type: none"> <li>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. No odors or staining, or instrumental evidence of contamination was observed.</li> </ul> </li> <li>CCJV welded brackets and steel walers along the edges of previously installed support of excavation (SOE) soldier piles in preparation for tie-back installation along the eastern site boundary (Peck Slip).</li> <li>CCJV installed two tie-back rods along the eastern site boundary (Peck Slip).</li> <li>CCJV placed grout behind previously installed walers in preparation for tie-back installation along the eastern boundary of the site (Peck Slip).</li> </ul>		
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By: Eddie Cai <div style="text-align: center;"><b>LANGAN</b></div>

## SITE OBSERVATION REPORT

- CCJV installed timber lagging between the SOE soldier piles along the southern boundary of the site (Water 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:	Eddie Cai <b>LANGAN</b>
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## SITE OBSERVATION REPORT

### Material Tracking

- CCJV exported 1 truckload (about 20 cubic yards [CY]) of hazardous lead contaminated soil/fill for off-site disposal at the CENJ facility, located in Kearny, NJ.
- No material was imported to the 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	7	161.51	0	0	2	90.02	12	296.04
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		Bayshore Soil Management Keasbey, NJ Petroleum Contaminated 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)	No. of Loads	Approx. Volume (CY)
Today	0	0	0	0	1	20	0	0	0	0	0	0
Project Total	5	85	25	540	15	300	173	3,460	173	3,460	48	960

### Sampling Activities

- No samples were collected.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Eddie Cai
			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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00  $\mu\text{g}/\text{m}^3$ , 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 ranged from 0.00  $\mu\text{g}/\text{m}^3$  to 0.09  $\mu\text{g}/\text{m}^3$
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.025	0.0	0.01
PM-2	0.066	0.0	0.02
PM-3	0.026	0.7	0.01
PM-4	0.030	0.2	0.00
PM-5	0.030	0.1	0.01
PM-6	0.026	0.0	0.01
WZ-1	0.033	0.0	0.01
WZ-2	0.024	0.1	0.02
WZ-3	0.025	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.047	0.0	0.03
PM-2	**0.368 @ 9:11am	0.0	0.08
PM-3	*0.123 @ 8:10am	2.5	0.22
PM-4	0.048	0.8	0.02
PM-5	0.049	0.6	0.03
PM-6	0.048	0.7	0.04
WZ-1	0.047	0.0	0.02
WZ-2	0.039	0.2	0.04
WZ-3	0.041	0.1	0.02

●  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    ● ppm = parts per million    ●  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Eddie Cai
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

- \*PM10 concentrations at perimeter CAMP station PM-3 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 8:03am to 8:13am (10 minutes). The exceedance was caused by welding activities upwind of perimeter CAMP station PM-3 along the southern boundary of the site and was 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. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-3) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.
- \*\*PM10 concentrations at perimeter CAMP station PM-2 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 8:55am to 9:43am, 10:12am to 10:34am, 15:06pm to 15:08pm, 15:53pm to 15:55pm, and 16:09pm to 16:34pm. The exceedances were caused by welding activities upwind of perimeter CAMP station PM-2 along the southern boundary of the site 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. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-3) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### Equipment Troubleshooting

- Mercury vapor concentrations at off-site CAMP station WZ-3 were not recorded following a battery outage from 11:29pm to 13:56pm (147 minutes in total). Mercury vapor concentrations at on-site CAMP stations PM-2 and PM-3 at the site perimeter did not approach or exceed the action level at this time.
- Work was halted and Atmos® AC-645 dust/vapor suppressing foam was sprayed on exposed soil while the battery was charged and replaced. Mercury vapor concentrations at the corresponding perimeter CAMP station PM-4 did not approach or exceed the action level (1.00 µg/m<sup>3</sup>) during this time.

### 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<sup>3</sup> to 0.5 µg/m<sup>3</sup>.
- 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 6:53am to 5:23pm due to exposed soil/fill within 20 feet of the northern fence line.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:53am to 5:23pm due to exposed soil/fill within 20 feet of the eastern fence line.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:53am to 5:23pm during excavation activities along the southern boundary 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. 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 5:22pm and 5:23pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.05 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Eddie Cai
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

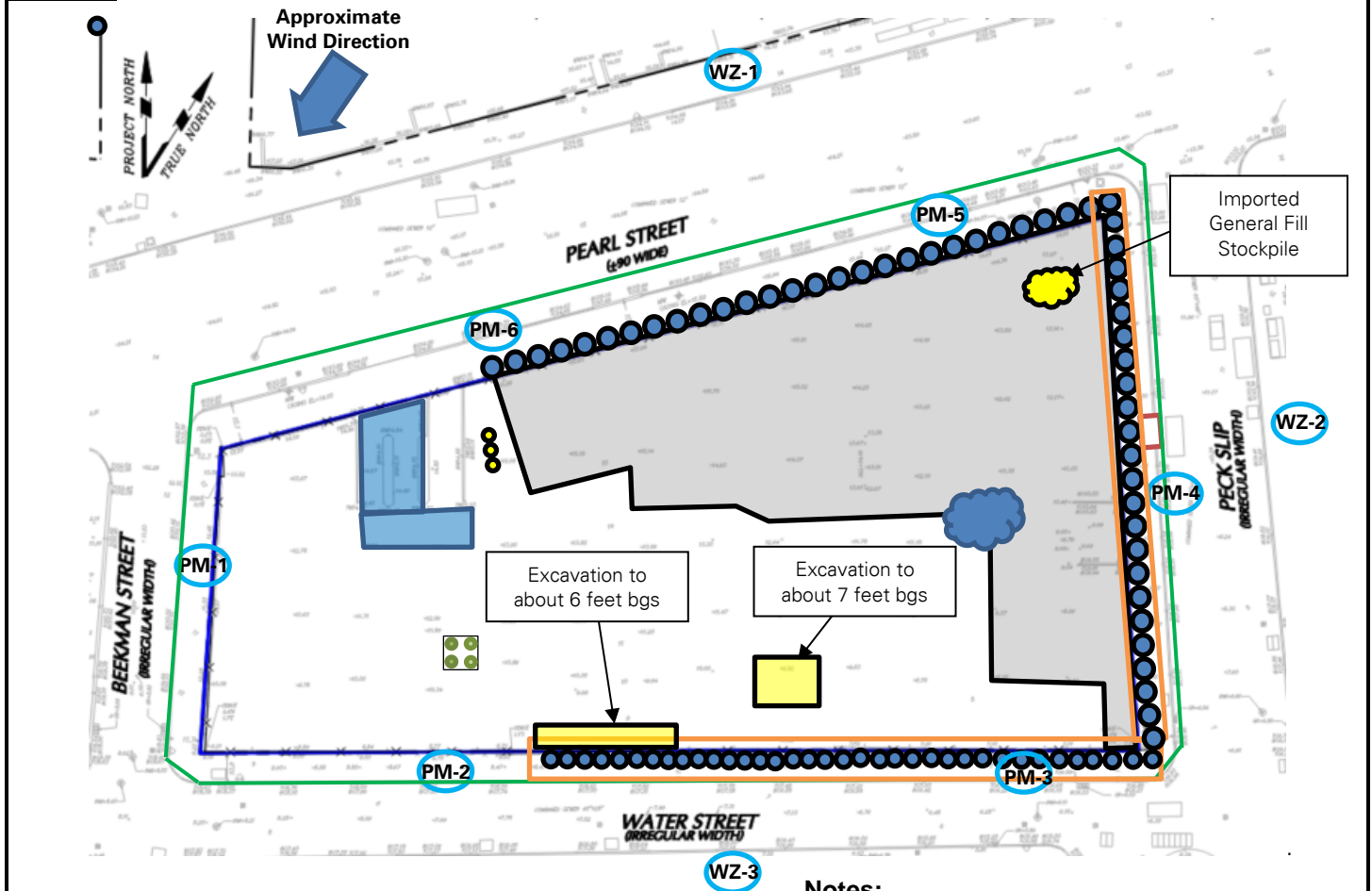
### Anticipated Activities

- CCJV will continue installation of silt fencing along the southern boundary of the site.
- CCJV will continue excavation of test pits along the southern boundary of the site.
- CCJV will continue to install soldier piles along the south boundary of the site
- 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 part of the site.









Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Eddie Cai <b>LANGAN</b>
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# SITE OBSERVATION REPORT

## Site Map



**Legend:**

-  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 Stockpile
-  Approximate location of USTs

-  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

**Notes:**

- 1) Locations of air monitoring stations are approximate.

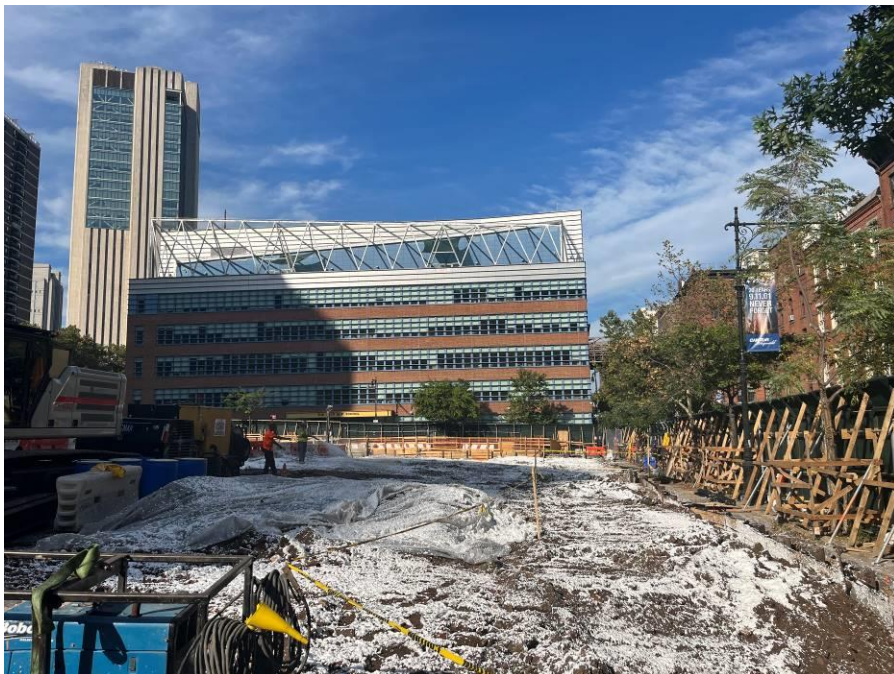
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Eddie Cai
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV installing tie-back rods in the eastern site boundary of the site (facing northeast)



**Photo 2:** CCJV covering exposed soil with ATMOS foam (facing east)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Eddie Cai
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Friday, August 12, 2022  <b>WEATHER:</b> Clear, 72 - 85 °F Wind: NE @ 3.5 – 9.2 mph  <b>TIME:</b> 6:00 AM – 6:30 PM  <b>MONITOR:</b> Maitland Robinson, Elsayh Boak, Camille Quick, Eddie Cai
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 66</b></span> <b>Langan</b> (Environmental/Geotechnical) – Maitland Robinson, Elsayh Boak, Eddie Cai, Camille Quick, Kevin Leong <b>Lend Lease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Michael Sollecito <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Elizabeth Meade <b>UBS</b> (Fence Contractor) <b>Eastern Environmental Solutions, Inc. (Eastern Environmental)</b> (Drilling Contractor)	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 70-foot-long by 20-foot-wide area to about 8 feet below grade surface (bgs) for removal and off-site disposal of non-hazardous petroleum contaminated soils/fill in the southeastern part of site (waste characterization cell WC09). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at Bayshore Soil Management Facility in Keasbey, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. Petroleum-like odor, staining, and a maximum PID reading of 22.1 parts per million (ppm) were observed at a depth of about 6 feet bgs.</li> </ul> </li> <li>CCJV excavated an about 10-foot-long by 4-foot-wide area to about 4 feet bgs in preparation for lagging installation along the southern boundary of the site (Water Street) within the hazardous lead delineation area. Excavated material was temporarily stockpiled within the hazardous lead area, and following lagging installation, the excavated material was backfilled at the area where it originated from.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors or staining, or instrumental evidence of contamination was observed.</li> </ul> </li> <li>Eastern Environmental used a Geoprobe® 7822DT direct-push drill rig with 5-foot Marco-Core® samplers to advance 2 soil borings to facilitate lead delineation in the southern part of the site. Langan documented the work, screened the soil samples for environmental impacts, and collected soil samples:</li> </ul>		
<b>Cc:</b> M. Raygorodetsky, P. McMahon, M. Au	<b>By:</b> Maitland Robinson  <b>LANGAN</b>	



## SITE OBSERVATION REPORT

- Soil borings **SB28\_NE3 and SB28\_NW3** were advanced to a depth of 20 feet bgs. Material was screened for odors, staining and organic vapors using a PID. No odors, or staining were observed.
- CCJV backfilled behind lagging along the southern and eastern boundaries (Water Street and Peck Slip, respectively) between SP84 through SP74 and SP31 through SP41, respectively with imported general fill from Impact Reuse and Recovery Center in Lyndhurst NJ.
- CCJV welded brackets and steel walers along the edges of previously installed support of excavation (SOE) soldier piles in preparation for tie-back installation along the eastern and southern site boundary (Peck Slip and Water Street, respectively).
- CCJV installed 4 tie-back rods along the eastern site boundary (Peck Slip).
- CCJV placed grout behind previously installed walers in preparation for tie-back installation along the eastern boundary of the site (Peck Slip).
- CCJV installed timber lagging between the SOE soldier piles along the southern boundary of the site (Water 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.

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## SITE OBSERVATION REPORT

### Material Tracking

- CCJV exported 18 truckloads (about 360 cubic yards [CY]) of non-hazardous petroleum-contaminated soil/fill from waste characterization cell WC09 for off-site disposal at the Bayshore Soil Management facility, located in Keasbey, NJ.
- CCJV exported 2 truckloads (40 CY) of construction and demolition material (C&D) for off-site disposal at the Impact Reuse and Recovery Center (IRRC) in Lyndhurst, NJ.
- CCJV imported 2 truckloads (about 40 CY) of General Fill from IRRC 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	47.17
Project Total	7	161.51	0	0	2	90.02	14	343.21
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		Bayshore Soil Management Keasbey, NJ Petroleum Contaminated 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)	No. of Loads	Approx. Volume (CY)
Today	0	0	0	0	1	20	0	0	0	0	18	360
Project Total	5	85	25	540	15	300	173	3,460	173	3,460	66	1320

### Sampling Activities

- Langan collected two grab soil samples for laboratory analysis of total and toxicity characteristic leaching procedure (TCLP) lead.
  - An additional six soil samples were collected and placed on hold with the laboratory for potential analysis of total and TCLP lead pending receipt of the initial laboratory report.

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- Samples were relinquished to Alpha Analytical, Inc., an Environmental Laboratory Accredited Program (ELAP)-certified laboratory under standard chain-of-custody protocols.

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## 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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00  $\mu\text{g}/\text{m}^3$ , 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 ranged from 0.00  $\mu\text{g}/\text{m}^3$  to 0.06  $\mu\text{g}/\text{m}^3$
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.014	0.0	0.01
PM-2	0.025	0.0	0.01
PM-3	0.024	0.0	0.00
PM-4	0.019	0.2	0.00
PM-5	0.025	0.7	0.04
PM-6	0.011	0.0	0.02
WZ-1	0.014	0.0	0.01
WZ-2	0.015	0.3	0.01
WZ-3	0.014	0.0	0.00

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.030	0.0	0.02
PM-2	*0.160 @ 7:26am	0.0	0.02
PM-3	**0.163 @ 8:30am	0.0	0.01
PM-4	0.047	1.8	0.00
PM-5	0.039	1.7	0.53
PM-6	0.044	0.0	0.05
WZ-1	0.028	0.0	0.02
WZ-2	0.033	0.7	0.05
WZ-3	0.025	0.0	0.00

●  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    ● ppm = parts per million    ●  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

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## SITE OBSERVATION REPORT

- \*PM10 concentrations at perimeter CAMP station PM-2 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 7:20am to 7:33am (14 minutes). The exceedance was caused by welding activities upwind of perimeter CAMP station PM-2 along the southern boundary of the site 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 this time. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-3) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.
- \*\*PM10 concentrations at perimeter CAMP station PM-3 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 8:28am to 8:42am (15 minutes). The exceedance was caused by welding activities upwind of perimeter CAMP station PM-3 along the southern boundary of the site and was not the result of ground-intrusive activities associated with soil/fill at the site. PM10 concentrations returned to background levels after relocation of perimeter CAMP station PM-3 about 20 feet to the east. Fugitive dust was not observed migrating from the site during these times. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-3) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### Equipment Troubleshooting

- The filter of Jerome J505 mercury vapor analyzer at perimeter CAMP station PM-5 was replaced after notification of instantaneous concentrations above background levels at 7:27am and from 9:34am to 9:39am (6 minutes in total).
  - An instantaneous mercury vapor concentration of 3.57 µg/m<sup>3</sup> was recorded at perimeter CAMP station PM-5 at 7:27am, which resulted in fifteen-minute weighted average concentrations of mercury vapor ranging from 0.30 µg/m<sup>3</sup> to 0.35 µg/m<sup>3</sup>. Additionally, instantaneous mercury vapor concentrations ranging from 1.04 µg/m<sup>3</sup> to 1.73 µg/m<sup>3</sup> were recorded at perimeter CAMP station PM-5 intermittently from 9:34am to 9:39am (4 minutes), which resulted in fifteen-minute weighted average concentrations of mercury vapor ranging from 0.10 µg/m<sup>3</sup> to 0.53 µg/m<sup>3</sup> (below the action level established in the CAMP [1.00 µg/m<sup>3</sup>]). Instantaneous mercury vapor concentrations recorded at the handheld Jerome J505 mercury analyzer, located at perimeter CAMP station PM-5 during these times, ranged from 0.00 µg/m<sup>3</sup> to 0.15 µg/m<sup>3</sup>, and from 0.00 µg/m<sup>3</sup> to 0.08 µg/m<sup>3</sup>, respectively.

### 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<sup>3</sup> to 0.23 µg/m<sup>3</sup>.
- 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 6:48am to 4:29pm due to exposed soil/fill within 20 feet of the northern fence line.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:37am to 4:50pm due to exposed soil/fill within 20 feet of the eastern fence line.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:55am to 4:45pm during excavation activities along the southern boundary of the site.

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## SITE OBSERVATION REPORT

### 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 between 4:29pm and 5:24pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.06 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

### Anticipated Activities

- 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 eastern and southcentral part of the site.

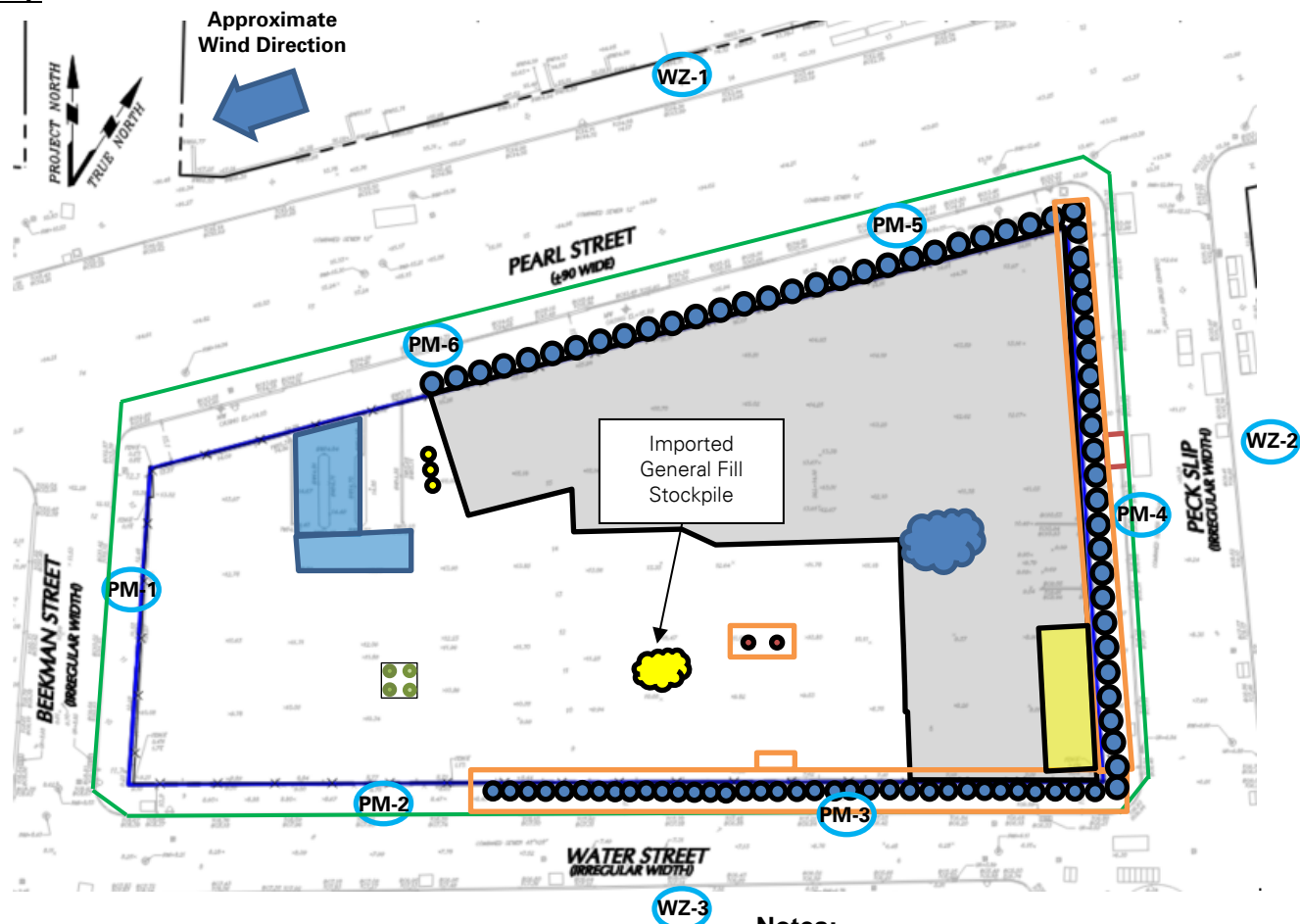
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## SITE OBSERVATION REPORT

### 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 Soil/Fill Stockpile
- Approximate location of USTs

- 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
- Approximate Sampling Location

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## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV excavating soil/fill within waste characterization cell WC09 (facing northwest)



**Photo 2:** CCJV loading excavated soil/fill for off-site disposal (facing north)

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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Saturday, August 13, 2022  <b>WEATHER:</b> Clear, 68 - 80 °F Wind: N @ 0.0 – 10.4 mph  <b>TIME:</b> 8:00 AM – 6:00 PM  <b>MONITOR:</b> Brian Kenneally, Gabriella DeGennaro
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 67</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Gabriella DeGennaro, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Michael Sollecito <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Elizabeth Meade	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV welded brackets and steel walers along the edges of previously installed support of excavation (SOE) soldier piles in preparation for tie-back installation along the eastern and southern site boundary (Peck Slip and Water Street, respectively).</li> <li>CCJV installed 4 tie-back rods along the eastern site boundary (Peck Slip).</li> <li>CCJV installed timber lagging between the SOE soldier piles along the southern site boundary (Water Street).</li> <li>CCJV installed T-brackets along the edges of soldier piles to accommodate timber lagging installation in the southeast corner of the site.</li> <li>CCJV began welding for corner bracing as a part of SOE installation in the northeastern corner of the site.</li> <li>CCJV covered all exposed soil/fill and construction and demolition (C&amp;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.</li> </ul>		
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## SITE OBSERVATION REPORT

### Material Tracking

- No material was exported from the site.
- No material was imported to the 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	7	161.51	0	0	2	90.02	14	343.21
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		Bayshore Soil Management Keasbey, NJ Petroleum Contaminated 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)	No. of Loads	Approx. Volume (CY)
Today	0	0	0	0	0	0	0	0	0	0	0	0
Project Total	5	85	25	540	15	300	173	3,460	173	3,460	66	1320

### Sampling Activities

- No samples were collected.

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By: Brian Kenneally

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## 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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00  $\mu\text{g}/\text{m}^3$ , 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 ranged from 0.00  $\mu\text{g}/\text{m}^3$  to 0.02  $\mu\text{g}/\text{m}^3$
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.006	0.0	0.01
PM-2	0.018	0.0	0.01
PM-3	0.004	0.2	0.00
PM-4	0.030	0.0	0.01
PM-5	0.021	0.1	0.00
PM-6	0.012	0.0	0.01
WZ-1	0.009	0.0	0.01
WZ-2	0.012	0.0	0.01
WZ-3	0.004	0.0	0.00

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.022	0.0	0.03
PM-2	0.031	0.0	0.03
PM-3	0.028	0.4	0.00
PM-4	*0.168 @ 4:34pm	0.0	0.04
PM-5	0.030	0.2	0.01
PM-6	0.039	0.6	0.03
WZ-1	0.013	0.0	0.02
WZ-2	0.036	0.0	0.03
WZ-3	0.010	0.0	0.02

●  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    ● ppm = parts per million    ●  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

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By: Brian Kenneally

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## SITE OBSERVATION REPORT

- \*PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 4:21pm to 4:47pm (27 minutes). The exceedance was caused by welding activities at the southeastern corner of the site, adjacent to perimeter CAMP station PM-4 along the eastern site boundary, 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 this time. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-2) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### Equipment Troubleshooting

- PM10 concentrations were not recorded at DustTrak of perimeter CAMP station PM-1 at 11:28am during recalibration of the DustTrak unit due to persistent negative readings. Data logging resumed at 11:29am and PM10 concentrations returned to background levels after equipment recalibration. Fugitive dust was not observed migrating from the site during this time.
- PM10 concentrations were not recorded at DustTrak of perimeter CAMP station PM-2 intermittently from 1:01pm to 2:24pm (45 minutes in total), during troubleshooting efforts to resolve telemetry connectivity issues. Troubleshooting included powering on and off the equipment multiple times, which prevented data recording at the DustTrak unit during these times. Data logging resumed at 2:25pm, after troubleshooting was completed and telemetry issues were not observed thereafter. Fugitive dust was not observed migrating from the site during these times. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-3) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) 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<sup>3</sup> to 0.13 µg/m<sup>3</sup>.
- 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 9:07am to 5:01pm due to exposed soil/fill within 20 feet of the northern fence line.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 9:04am to 5:01pm due to exposed soil/fill within 20 feet of the eastern fence line.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 9:03am to 5:01pm during excavation activities along the southern boundary 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. 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 5:00pm and 5:01pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.09 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

### Anticipated Activities

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			<b>LANGAN</b>

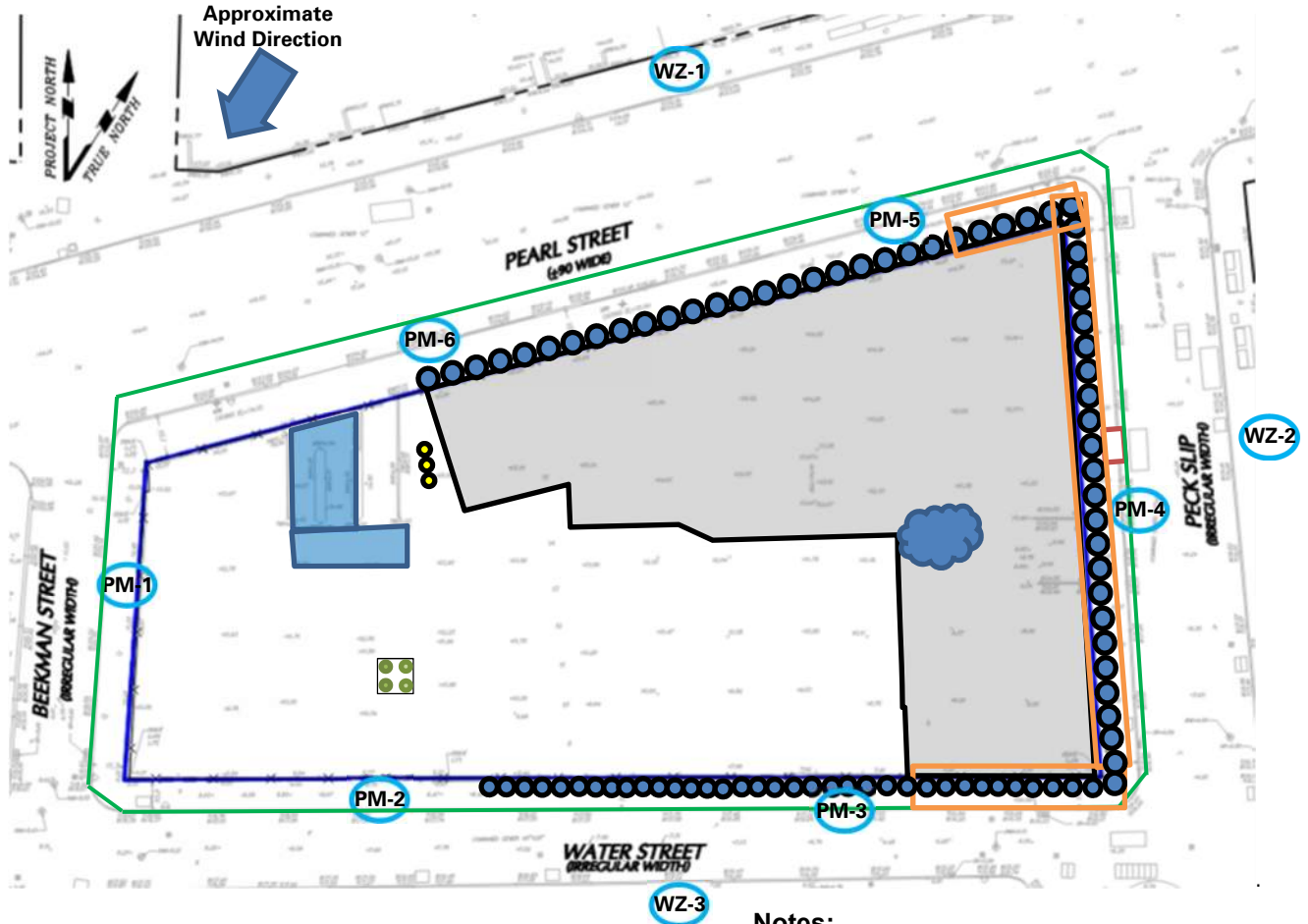
## SITE OBSERVATION REPORT

- 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 eastern and southcentral part of the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally <b>LANGAN</b>
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## SITE OBSERVATION REPORT

### 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 Soil/Fill Stockpile
- Approximate location of USTs

- 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: Brian Kenneally

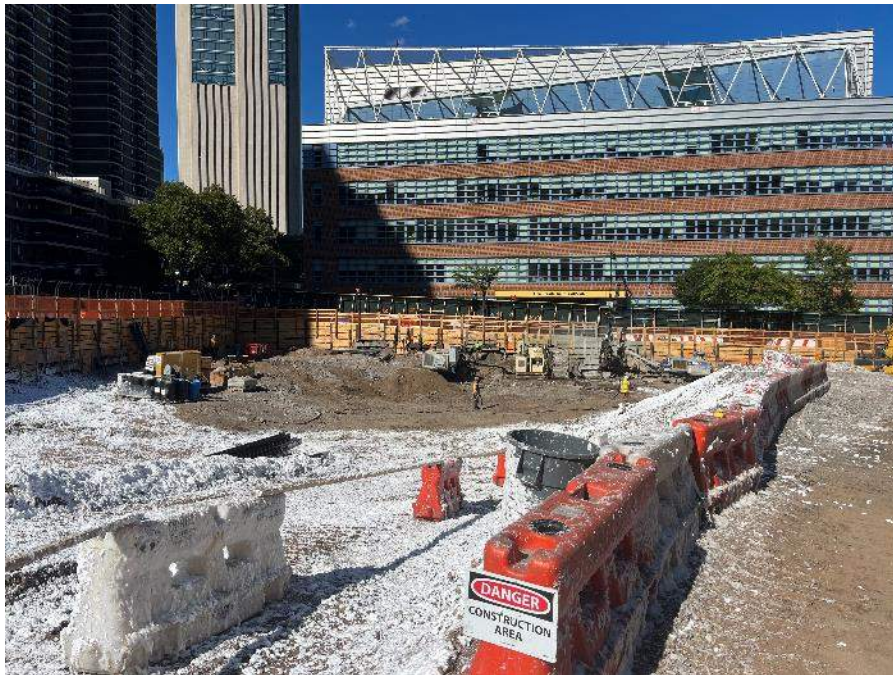
**LANGAN**

## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV installing tiebacks for SOE installation along the eastern site boundary (facing southeast).



**Photo 2:** CCJV covering exposed soil with Atmos foam at the end of the day (facing northeast)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			<b>LANGAN</b>



## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Sunday, August 14, 2022  <b>WEATHER:</b> Clear, 74 - 81 °F Wind: N @ 0.0 – 8.1 mph  <b>TIME:</b> 7:00 AM – 7:00 PM  <b>MONITOR:</b> Caroline Grattan, Padmanabhan Krishnaswamy
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 68</b></span> <b>Langan</b> (Environmental/Geotechnical) – Caroline Grattan, Padmanabhan Krishnaswamy, Kevin Leong <b>EQUIPCO</b> (CAMP Equipment Contractor) – Chris Brown <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – Jack Dettra	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV graded an approximately 20-foot-wide by 10-foot-long area in the southeastern corner of the site to maintain ramp slope.             <ul style="list-style-type: none"> <li>Soil/fill was screened for odors, staining, organic vapors, and mercury vapor using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors or staining, or instrumental evidence of contamination was observed.</li> </ul> </li> <li>CCJV welded brackets along the edges of previously installed support of excavation (SOE) soldier piles in preparation for corner bracing in the northeast corner of the site boundary (Peck Slip and Pearl Street).</li> <li>CCJV tested 4 tie-backs along the eastern site boundary (Peck Slip).</li> <li>CCJV covered all exposed soil/fill and construction and demolition (C&amp;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.</li> </ul>		
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By: Caroline Grattan <b>LANGAN</b>



## SITE OBSERVATION REPORT

### Material Tracking

- No material was exported from the site.
- No material was imported to the 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	7	161.51	0	0	2	90.02	14	343.21
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		Bayshore Soil Management Keasbey, NJ Petroleum Contaminated 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)	No. of Loads	Approx. Volume (CY)
Today	0	0	0	0	0	0	0	0	0	0	0	0
Project Total	5	85	25	540	15	300	173	3,460	173	3,460	66	1320

### Sampling Activities

- No samples were collected.

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Caroline Grattan

**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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00  $\mu\text{g}/\text{m}^3$ , 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 ranged from 0.00  $\mu\text{g}/\text{m}^3$  to 0.02  $\mu\text{g}/\text{m}^3$
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.007	0.0	0.0
PM-2	0.029	0.0	0.0
PM-3	-0.004	0.0	0.0
PM-4	0.049	0.3	0.0
PM-5	0.037	0.1	0.0
PM-6	0.010	0.1	0.0
WZ-1	0.017	0.0	0.0
WZ-2	0.008	0.0	0.0
WZ-3	0.010	0.0	0.0

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.013	0.0	0.0
PM-2	0.049	0.1	0.0
PM-3	0.032	0.2	0.1
PM-4	*0.307 @ 10:34am	1.2	0.1
PM-5	0.053	0.3	0.0
PM-6	0.022	0.2	0.2
WZ-1	0.025	0.1	0.0
WZ-2	0.014	0.1	0.1
WZ-3	0.021	0.0	0.0

●  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    ● ppm = parts per million    ●  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Caroline Grattan

**LANGAN**

## SITE OBSERVATION REPORT

- \*PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 9:40am to 10:15am and 10:21am to 10:49am (63 minutes in total). The exceedances were caused by welding activities adjacent to perimeter CAMP station PM-4 along the eastern border of the site and were not the result of ground-intrusive activities associated with soil/fill at the site. The CAMP station was relocated approximately 20 feet south and PM10 readings fell below action levels. Fugitive dust was not observed migrating from the site during this time. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-2) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### Equipment Troubleshooting

- Mercury vapor concentrations were not recorded off-site CAMP station WZ-1 from 12:06pm to 12:28pm due to an equipment malfunction. The equipment was restarted and data logging resumed at 12:29pm. The handheld Jerome® J505 mercury unit was used to screen ambient air for mercury vapor during this time. No readings above background levels were observed.

### 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<sup>3</sup> to 0.15 µg/m<sup>3</sup>.
- 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 9:40am to 4:10pm due to exposed soil/fill within 20 feet of the northern fence line.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 9:08am to 4:10pm during SOE activities along the eastern boundary of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 9:08am to 4:10pm during SOE activities along the southern boundary 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. 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 3:47pm and 4:04pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.03 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

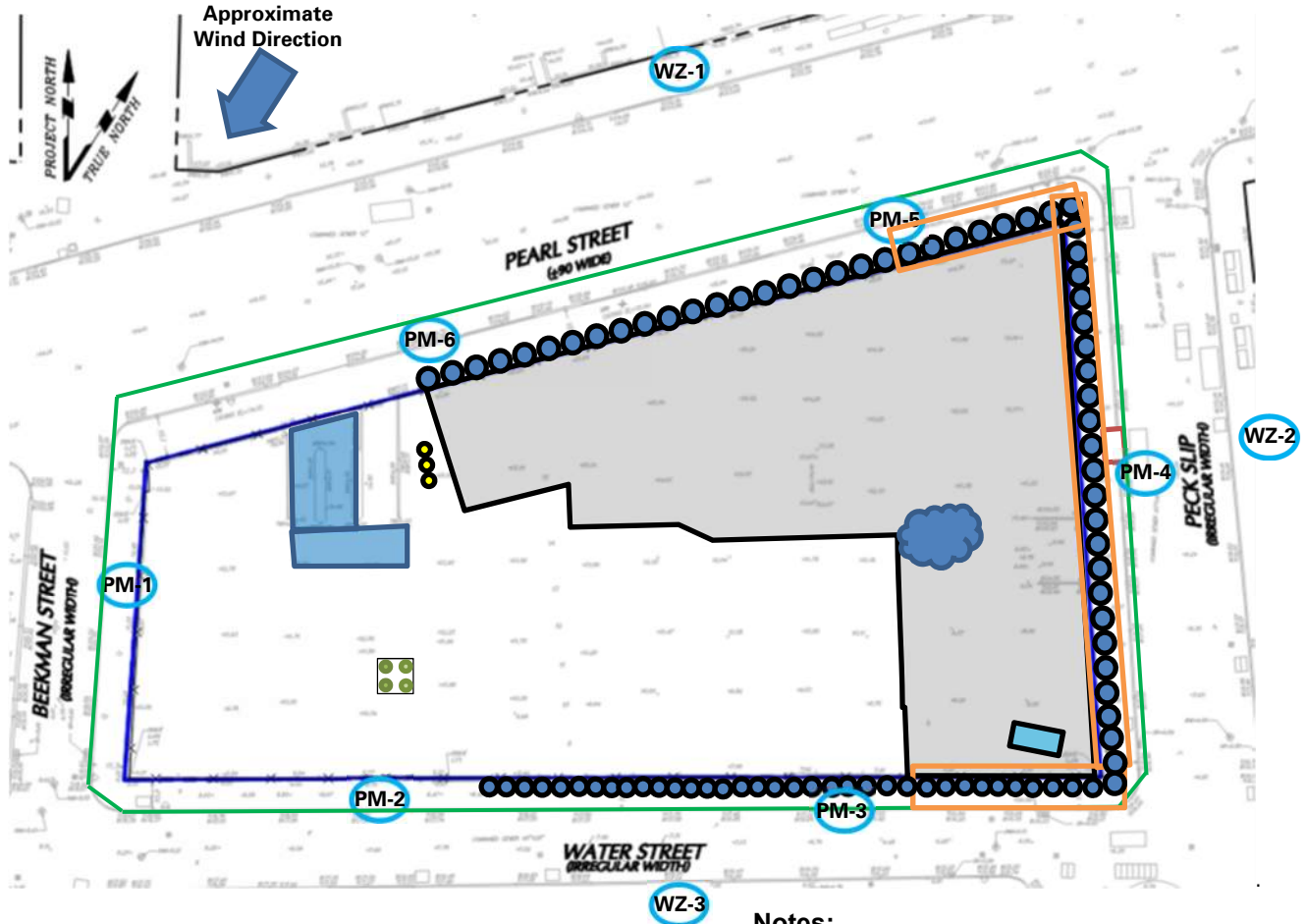
### Anticipated Activities

- CCJV will continue installation of brackets in the northeast corner for corner bracing.
- CCJV will continue installation of timber lagging between soldier piles.
- CCJV will continue excavation and off-site disposal of soil/fill in the eastern and southcentral part of the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Caroline Grattan
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

### 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 Soil/Fill Stockpile
- Approximate location of USTs

- 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
- Approximate Grading Area

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Caroline Grattan

**LANGAN**



## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV testing tiebacks and welding braces for SOE installation along the eastern site boundary (facing east).



**Photo 2:** CCJV covering exposed soil with Atmos foam at the end of the day (facing east)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Caroline Grattan
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Monday, August 15, 2022  <b>WEATHER:</b> Clear, 70 - 83 °F Wind: N @ 0 – 8.8 mph  <b>TIME:</b> 6:00 AM – 6:30 PM  <b>MONITOR:</b> Maitland Robinson, Brian Kenneally, Eddie Cai
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 69</b></span> <b>Langan</b> (Environmental/Geotechnical) – Maitland Robinson, Brian Kenneally, Eddie Cai, Lisa Cristiano, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam <b>UBS</b> (Fence Contractor)	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 10-foot-long by 4-foot-wide area to about 16 feet below grade surface (bgs) to expose soldier piles for T-bracket installation along the northern boundary of the site (Pearl Street) within the mercury impacted area (WC05).             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors or staining, was observed. Excavated material was temporarily stockpiled within the mercury impacted area, and following T-bracket installation, the excavated material was backfilled in the area where it originated from.</li> <li>A maximum instantaneous reading of 2.95 µg/m³ was detected in the excavation area using a handheld J505 mercury vapor analyzer. Mercon X was actively sprayed during excavation. Additionally, mercury vapor concentrations at the closest perimeter CAMP stations (PM-5, PM-6) and off-site CAMP station (WZ-1) did not approach or exceed the action level established by the CAMP (1.00 µg/m³) during this excavation.</li> </ul> </li> <li>CCJV backfilled behind lagging along the eastern boundary (Peck Slip) with imported general fill from Impact Reuse and Recovery Center (IRRC) in Lyndhurst, NJ.</li> <li>CCJV installed 4 tie-back rods along the eastern site boundary (Peck Slip).</li> <li>CCJV poured grout into previously installed support of excavation (SOE) soldier piles along the southern boundary of the site (Water Street).</li> <li>CCJV continued installation of corner bracing in the northeast corner of the site.</li> </ul>		
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By: Brian Kenneally <b>LANGAN</b>

## SITE OBSERVATION REPORT

- 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:	Brian Kenneally <b>LANGAN</b>
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## SITE OBSERVATION REPORT

### Material Tracking

- No material was imported to the site.
- No material was exported from the 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	7	161.51	0	0	2	90.02	14	343.21
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		Bayshore Soil Management Keasbey, NJ Petroleum Contaminated 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)	No. of Loads	Approx. Volume (CY)
Today	0	0	0	0	0	0	0	0	0	0	0	0
Project Total	5	85	25	540	15	300	173	3,460	173	3,460	66	1320

### Sampling Activities

- No samples were collected.

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Brian Kenneally

**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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00  $\mu\text{g}/\text{m}^3$ , 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 ranged from 0.00  $\mu\text{g}/\text{m}^3$  to 0.03  $\mu\text{g}/\text{m}^3$
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.020	0.0	0.01
PM-2	0.026	0.0	0.01
PM-3	0.018	0.2	0.00
PM-4	0.074	0.2	0.01
PM-5	0.026	0.1	0.00
PM-6	0.019	0.0	0.01
WZ-1	0.020	0.0	0.01
WZ-2	0.012	0.4	0.04
WZ-3	0.010	0.0	0.00

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.053	0.0	0.02
PM-2	0.064	0.0	0.02
PM-3	0.053	0.4	0.00
PM-4	*0.438 @ 10:30am	0.4	0.02
PM-5	0.044	0.3	0.01
PM-6	0.073	0.0	0.03
WZ-1	0.038	0.0	0.02
WZ-2	0.029	0.7	0.12
WZ-3	0.029	0.1	0.01

●  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    ● ppm = parts per million    ●  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Brian Kenneally

**LANGAN**

## SITE OBSERVATION REPORT

- \*PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 10:17am to 11:07am, and intermittently from 2:09pm to 5:01 (160 minutes in total). The exceedance was caused by welding activities upwind of the perimeter CAMP station PM-4 in the northeastern corner of the site, 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 this time. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-2) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### Equipment Troubleshooting

- The DustTrak II within perimeter CAMP station PM-3 did not record PM10 concentrations at 8:29am during an equipment swap following consistent negative readings on the device. The unit was replaced and recording of PM10 concentrations resumed at 8:30am.
- The Jerome® J505 mercury vapor analyzer at off-site CAMP station WZ-2 recorded concentrations of mercury vapor ranging from 0.0 to 0.17 µg/m<sup>3</sup> from about 2:33pm to 6:04pm. Fifteen-minute average concentrations did not exceed 0.12 µg/m<sup>3</sup> (CAMP action level 1.00 µg/m<sup>3</sup>). The handheld Jerome® J505 unit was used to screen the area and recorded a reading of 0.0 µg/m<sup>3</sup>. The filter within the Jerome® J505 unit at WZ-2 will be replaced tomorrow.

### 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 0.0 µg/m<sup>3</sup> to 0.7 µg/m<sup>3</sup> during excavation in the mercury impacted area (WC05). Mercon-X was actively sprayed during excavation.
- 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 6:45am to 5:54pm during excavation activities along the northern boundary of the site
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:45am to 5:53pm due to exposed soil/fill within 20 feet of the eastern fence line.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:45am to 5:53pm due to exposed soil/fill within 20 feet of the southern fence line.

### 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 between 5:15pm and 5:27pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.07 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

### Anticipated Activities

- CCJV will continue installation of T-brackets along the edges of soldier piles to accommodate timber lagging installation.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			<b>LANGAN</b>

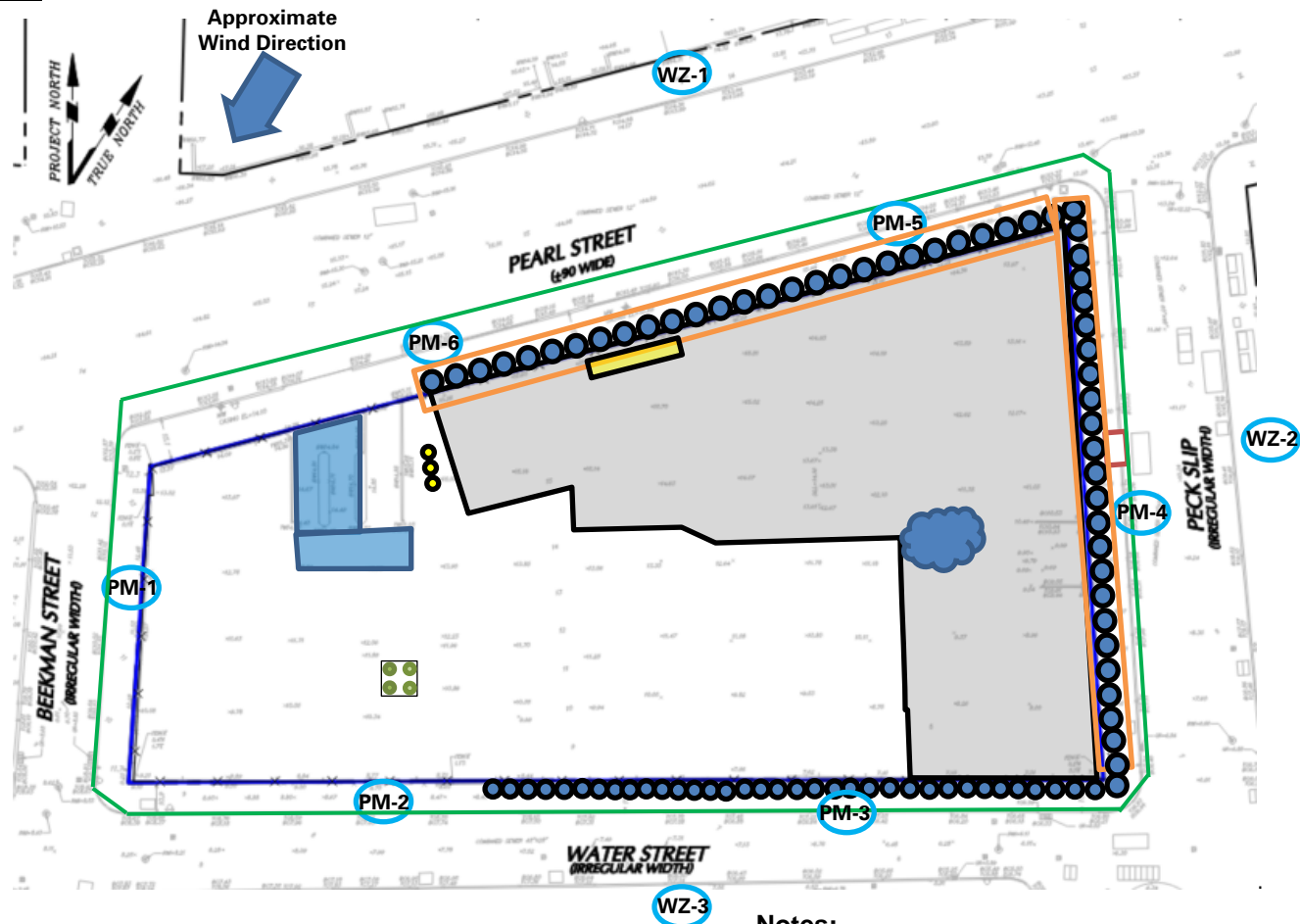
## SITE OBSERVATION REPORT

- CCJV will continue installation of timber lagging between soldier piles.
- CCJV will continue installation of corner bracing in the northeast corner of the site.
- CCJV will continue excavation and off-site disposal of soil/fill in the eastern and southcentral part of the site.

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## SITE OBSERVATION REPORT

### Site Map



### Notes:

1) Locations of air monitoring stations are approximate.

### Legend:

- |      |  |  |   |
|------|--|--|---|
| PM-1 | Approximate Location of Air Monitoring Station     |  | Approximate Location of Stockpiled Virgin Stone   |
|      | Approximate Work Area                              |  | Approximate Location of 55-gallon drum            |
|      | Approximate Location of Installed Pile Cap         |  | Approximate Location of Soldier Pile              |
|      | Approximate Location of Foundation Piles Completed |  | Approximate Perimeter Construction Fence Location |
|      | Approximate Location of Truck Tracking Pad         |  | Previous Excavation Area                          |
|      | Approximate Location of C&D Stockpile              |  | Approximate Excavation Area                       |
|      | Approximate Location of Soil/Fill Stockpile        |  |   |
|      | Approximate location of USTs                       |  |   |

Cc: M. Raygorodetsky, P. McMahon, M. Au

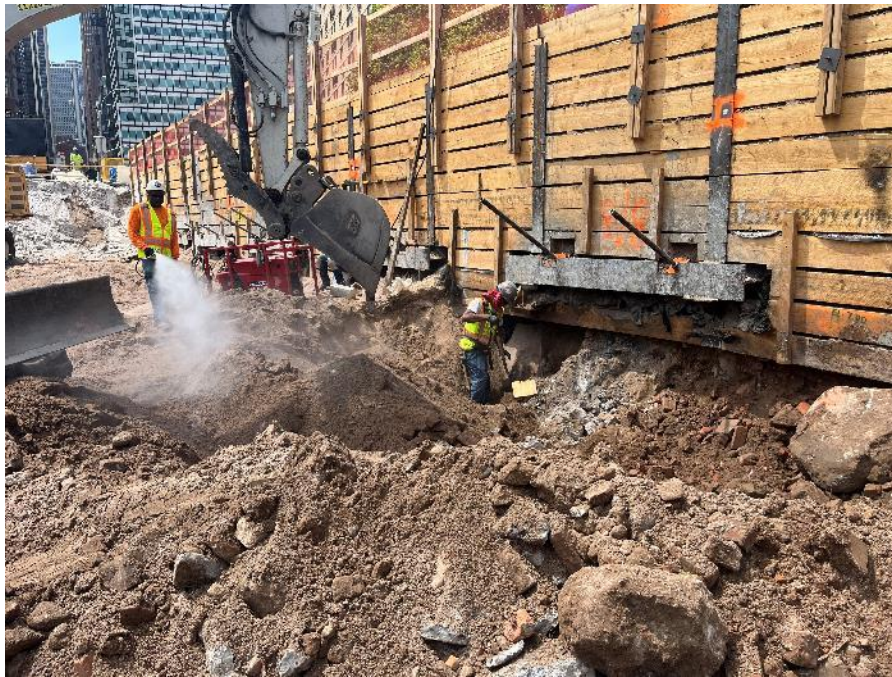
By: Brian Kenneally

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## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV excavating soil/fill within waste characterization cell WC05 to expose soldier piles for T-bracket installation (facing northwest)



**Photo 2:** CCJV spraying water to mitigate fugitive dust migration (facing north)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Tuesday, August 16, 2022  <b>WEATHER:</b> Clear, 68 - 84 °F Wind: ENE @ 0 – 13.8 mph  <b>TIME:</b> 6:00 AM – 6:30 PM  <b>MONITOR:</b> Maitland Robinson, Brian Kenneally, Eddie Cai
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 70</b></span> <b>Langan</b> (Environmental/Geotechnical) – Maitland Robinson, Brian Kenneally, Eddie Cai, Lisa Cristiano, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam <b>UBS</b> (Fence Contractor)	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 60-foot-long by 20-foot-wide area to about 10 feet below grade surface (bgs) for removal and off-site disposal of non-hazardous, petroleum-impacted soil/fill in the southeastern part of site (waste characterization cells WC09 and WC10). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at Bayshore Soil Management Facility in Keasbey, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. Petroleum-like odor, staining, with a maximum PID reading of 5.6 parts per million (ppm) was observed at about 10 feet bgs in WC09. CCJV actively sprayed stained soil with Atmos® AC-645 dust/vapor suppressing foam during excavation. Prior to excavation, CCJV installed additional odor neutralizing socks along the southeastern site boundary to reduce odor.</li> </ul> </li> <li>CCJV excavated an about 80-foot-long by 15-foot-wide area to about 12 feet bgs for removal and off-site disposal of non-hazardous soil/fill in the southeastern part of site (waste characterization cell WC04). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at Clean Earth of Carteret in Carteret, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. No petroleum-like odor, staining, or PID readings were recorded during excavation. CCJV actively sprayed soil with Mercon-X during excavation and loading. A maximum J505 reading of 1.4 µg/m³ was recorded during screening of the excavation area.</li> </ul> </li> </ul>		
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By: Maitland Robinson <b>LANGAN</b>



## SITE OBSERVATION REPORT

- CCJV excavated an about 8-foot-long by 4-foot-wide area to about 15 feet bgs to expose soldier piles for T-bracket installation along the northern boundary of the site (Pearl Street) within the mercury-impacted area .
  - Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors or staining were observed. Excavated material was temporarily stockpiled within the mercury impacted area, and following T-bracket installation, the excavated material was backfilled in the area where it originated from.
- CCJV graded an about 40-foot long by 40-wide area with NYSDEC-approved 1.5-in virgin stone within the truck-wash area of site atop existing geotextile fabric and stone.
- CCJV installed 3 tie-back rods along the eastern site boundary (Peck Slip).
- CCJV poured grout into previously installed support of excavation (SOE) soldier piles along the eastern and southern boundary of the site (Pearl Street and Water Street).
- CCJV continued installation of corner bracing in the northeast corner of the site.
- CCJV covered all exposed soil/fill and construction and demolition (C&D) debris with Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover at the end of each work day.

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By: Maitland Robinson

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## SITE OBSERVATION REPORT

### Material Tracking

- CCJV imported 1 truckload (22.91 tons) of 1.5-inch virgin stone from Stone Industries, Inc. facility located in Haledon, NJ, for tracking pad maintenance.
- CCJV exported 15 truckloads (about 300 cubic yards [CY]) of non-hazardous petroleum-impacted soil/fill from waste characterization cell WC09 for off-site disposal at the Bayshore Soil Management facility, located in Keasbey, NJ.
- CCJV exported 30 truckloads (about 600 CY) of non-hazardous soil/fill (WC04) to the Clean Earth Carteret facility located in Carteret, 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	1	22.91	0	0	0	0	0	0
Project Total	8	184.42	0	0	2	90.02	14	343.21
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	0	0	0	0	0	0
Project Total	5	85	25	540	15	300	173	3,460

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Maitland Robinson
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## SITE OBSERVATION REPORT

### 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 Contaminated 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	15	300	30	600
Project Total	173	3,460	66	1620	30	600

### Sampling Activities

- No samples were collected.

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By: Maitland Robinson

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## 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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00  $\mu\text{g}/\text{m}^3$ , 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 ranged from 0.00  $\mu\text{g}/\text{m}^3$  to 0.04  $\mu\text{g}/\text{m}^3$
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.010	0.0	0.01
PM-2	0.033	0.0	0.01
PM-3	0.020	0.2	0.00
PM-4	0.122	0.2	0.01
PM-5	0.023	0.2	0.00
PM-6	0.018	0.0	0.01
WZ-1	0.021	0.0	0.01
WZ-2	0.014	0.1	0.02
WZ-3	0.016	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.023	0.1	0.02
PM-2	0.052	0.0	0.04
PM-3	**0.102 @ 4:55pm	0.8	0.00
PM-4	*0.575 @ 2:49pm	0.4	0.02
PM-5	0.043	0.5	0.02
PM-6	0.042	0.1	0.04
WZ-1	0.031	0.0	0.02
WZ-2	0.033	0.2	0.06
WZ-3	0.035	0.0	0.06

●  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    ● ppm = parts per million    ●  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

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By: Maitland Robinson

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## SITE OBSERVATION REPORT

- \*PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) intermittently throughout the work day. The exceedances were caused by welding activities adjacent to the perimeter CAMP station PM-4 in the northeastern corner of the site, 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 this time. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-2) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.
- \*\*PM10 concentrations at perimeter CAMP station PM-3 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 4:53pm to 4:56pm (3 minutes). The exceedance was caused by spraying of Atmos® AC-645 dust/vapor suppressing foam in close proximity to perimeter CAMP station PM-3 along the southern border of the site, 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 this time. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-3) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### 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 0.0 µg/m<sup>3</sup> to 1.4 µg/m<sup>3</sup> during loading of excavated soil/fill from waste characterization cell WC04 for off-site disposal.
  - Mercon-X was actively sprayed during excavation. Mercury vapor concentrations at the downwind CAMP station (PM-2) and off-site CAMP station (WZ-3) did not approach or exceed the action level (1.00 µg/m<sup>3</sup>) during this time.
- 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.

### CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 6:47am to 6:07pm during excavation activities along the northern boundary of the site.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:47am to 6:01pm due to exposed soil/fill within 20 feet of the eastern fence line.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:47am to 5:54pm during excavation activities along the southern boundary of the site.
- CAMP station PM-4 was relocated to the northern side of Peck Slip due to access limitations on the Peck Slip side by the site safety manager. During excavation, the mobile monitor was positioned between the excavation area and the Peck Slip 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 5:20pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.03 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

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			<b>LANGAN</b>

## SITE OBSERVATION REPORT

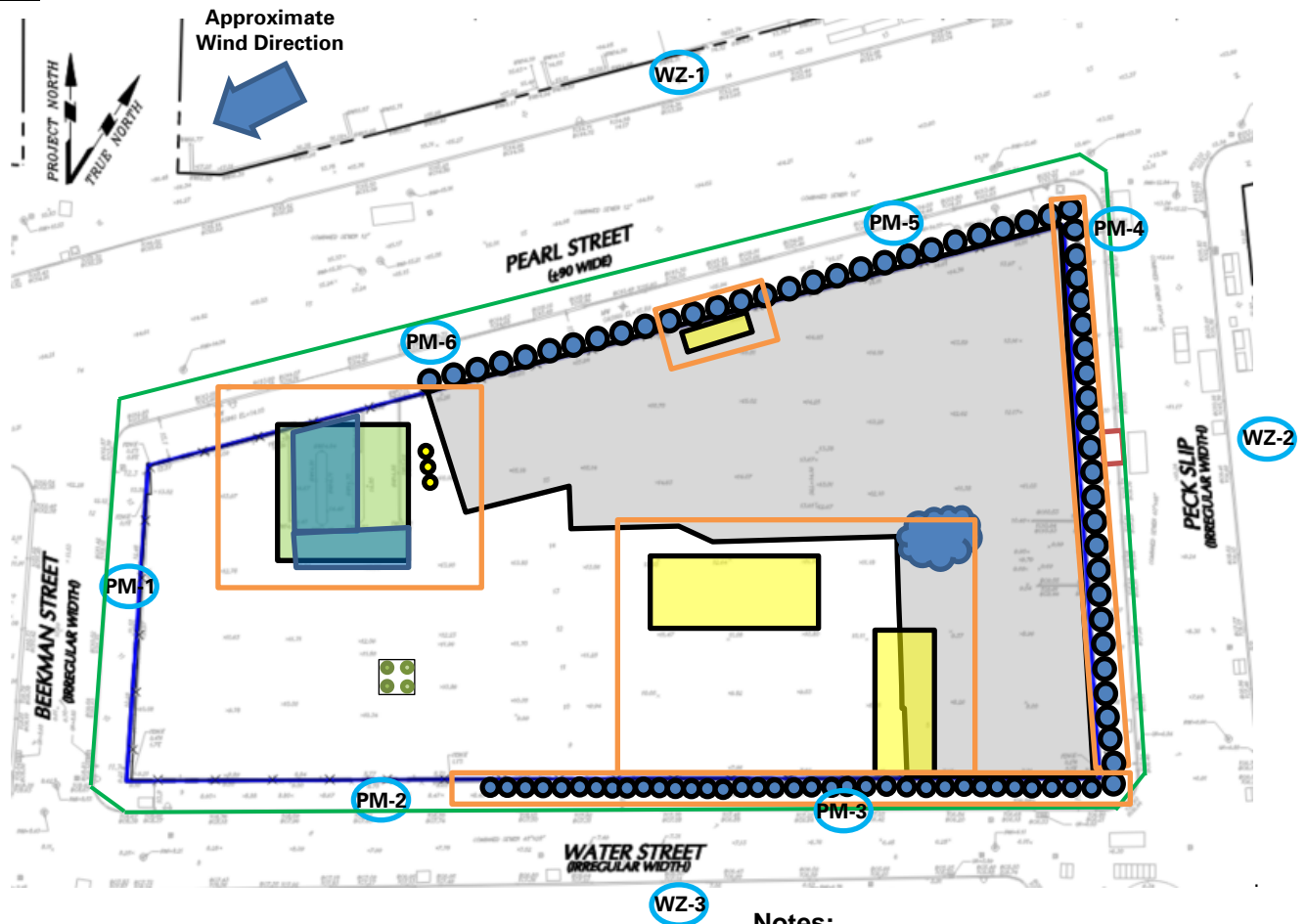
### Anticipated Activities

- 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 installation of corner bracing in the northeast corner of the site.
- CCJV will continue excavation and off-site disposal of soil/fill in the eastern and southcentral part of the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Maitland Robinson <b>LANGAN</b>
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## SITE OBSERVATION REPORT

### 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 Soil/Fill Stockpile
- Approximate location of USTs

- 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
- Approximate Grading Area

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By: Maitland Robinson

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## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV loading excavated soil/fill for off-site disposal (facing south)



**Photo 2:** View of tracking pad following import and grading of 1.5-inch stone (facing west)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Maitland Robinson <b>LANGAN</b>
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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Wednesday, August 17, 2022  <b>WEATHER:</b> Clear, 69 - 80 °F Wind: N @ 0 – 4.6 mph  <b>TIME:</b> 6:00 AM – 6:30 PM  <b>MONITOR:</b> Elsah Boak, Maitland Robinson, Camille Quick, Lisa Cristiano
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 71</b></span> <b>Langan</b> (Environmental/Geotechnical) – Elsah Boak, Maitland Robinson, Camille Quick, Lisa Cristiano, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Theresa Imbriolo	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 40-foot-long by 18-foot-wide area to about 14 feet below grade surface (bgs) for removal and off-site disposal of non-hazardous petroleum-impacted soil/fill in the southeastern part of site (waste characterization cells WC09 and WC10). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at Bayshore Soil Management Facility in Keasbey, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. No petroleum-like odor, staining, or PID readings were recorded during excavation. CCJV actively sprayed soil with Mercon-X during excavation and loading. A maximum J505 reading of 0.83 µg/m³ was recorded during screening of the excavation area.</li> </ul> </li> <li>CCJV excavated an about 30-foot-long by 18-foot-wide area to about 12 feet bgs for removal and off-site disposal of non-hazardous soil/fill in the eastern-central part of site (waste characterization cell WC04). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at Clean Earth of Carteret in Carteret, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. No petroleum-like odor, staining, or PID readings were recorded during excavation. CCJV actively sprayed soil with Mercon-X during excavation and loading. A maximum J505 reading of 1.98 µg/m³ was recorded during screening of the excavation area.</li> </ul> </li> </ul>		
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By: Elsah Boak <b>LANGAN</b>

## SITE OBSERVATION REPORT

- CCJV excavated an about 50-foot-long by 25-foot-wide area to about 14 feet bgs for removal and off-site disposal of non-hazardous soil/fill in the east-central 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 Clean Earth of North Jersey in Kearny, NJ. 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 vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. Petroleum-like odor and a maximum PID reading of 2.1 parts per million (ppm) were observed at about 8 feet bgs in cell WC07. CCJV actively sprayed the excavation area with Atmos® AC-645 dust/vapor suppressing foam during and after excavation.
- CCJV excavated an about 24-foot-long by 4-foot-wide area to about 15 feet bgs to expose soldier piles for T-bracket installation along the northern boundary of the site (Pearl Street) within the mercury-impacted area .
  - Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. No petroleum-like odor, staining, or PID readings were recorded during excavation. Excavated soil/fill was temporarily stockpiled within the mercury impacted area, and following T-bracket installation, the excavated soil/fill was backfilled in the area where it originated from.
- CCJV installed tie-back rods along the eastern site boundary (Peck Slip).
- CCJV continued installation of corner bracing in the northeast corner of the site.
- CCJV covered all exposed soil/fill and construction and demolition (C&D) debris with 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
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

### Material Tracking

- CCJV exported 18 truckloads (about 360 cubic yards [CY]) of non-hazardous petroleum-impacted soil/fill from waste characterization cells WC09 and WC10 for off-site disposal at the Bayshore Soil Management facility, located in Keasbey, NJ.
- CCJV exported 12 truckloads (about 240 CY) of non-hazardous soil/fill from waste characterization cell WC04 to the Clean Earth Carteret facility located in Carteret, NJ.
- CCJV exported 10 truckloads (about 200 CY) of non-hazardous soil/fill from waste characterization cells WC07 and WC08 to the Clean Earth of North Jersey located in Kearny, NJ.
- No materials were imported to the 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	8	184.42	0	0	2	90.02	14	343.21
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	0	0	0	0	10	200
Project Total	5	85	25	540	15	300	183	3,660

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Elisah Boak

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## SITE OBSERVATION REPORT

### 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	18	360	12	240
Project Total	173	3,460	99	1980	42	840

### Sampling Activities

- No samples were collected.

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Elsayh Boak

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## 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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00 µg/m<sup>3</sup>, 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<sup>3</sup>
- 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 <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
PM-1	0.029	0.0	0.01
PM-2	0.033	0.0	0.01
PM-3	0.016	0.1	0.00
PM-4	0.031	0.1	0.01
PM-5	0.022	0.1	0.00
PM-6	0.023	0.0	0.01
WZ-1	0.023	0.0	0.01
WZ-2	0.015	0.1	0.02
WZ-3	0.016	0.0	0.00

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
<b>Action Level</b>	<b>0.100 mg/m<sup>3</sup></b>	<b>5.0 ppm</b>	<b>1.00 µg/m<sup>3</sup></b>
PM-1	0.080	0.0	0.02
PM-2	**0.213 @ 4:37pm	0.0	0.02
PM-3	0.032	0.3	0.00
PM-4	*0.453 @ 7:37am	0.4	0.02
PM-5	0.048	0.4	0.01
PM-6	0.072	0.0	0.05
WZ-1	0.045	0.0	0.02
WZ-2	0.026	0.3	0.05
WZ-3	0.025	0.0	0.01

● mg/m<sup>3</sup> = milligrams per cubic meter    ● ppm = parts per million    ● µg/m<sup>3</sup> = micrograms per cubic meter

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

- \*PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 7:23am to 7:58am, 8:08am to 8:35am, and 8:53am to 9:03am (72 minutes in total). The exceedances were caused by welding activities adjacent to the perimeter CAMP station PM-4 in the northeastern corner of the site, 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 this time. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-2) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.
- \*\*PM10 concentrations at perimeter CAMP station PM-2 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 4:26pm to 4:41pm (16 minutes). The exceedance was caused by spraying of Atmos® AC-645 dust/vapor suppressing foam in close proximity to perimeter CAMP station PM-2 along the southern border of the site, 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 this time. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-3) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### 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 0.0 µg/m<sup>3</sup> to 1.98 µg/m<sup>3</sup> during loading of excavated soil/fill from waste characterization cell WC04 for off-site disposal.
  - Mercon-X was actively sprayed during excavation. Mercury vapor concentrations at the downwind CAMP station (PM-2) and off-site CAMP station (WZ-3) did not approach or exceed the action level (1.00 µg/m<sup>3</sup>) during this time.
- 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 6:52am to 5:10pm during excavation activities along the northern boundary of the site.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:52am to 5:10pm during excavation activities along the eastern boundary of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:52am to 5:10pm during excavation activities along the southern boundary of the site.

### Equipment Troubleshooting

- The DustTrak II within perimeter CAMP station PM-1 did not record PM10 concentrations from 8:18am to 8:19am during an equipment swap for routine maintenance. The unit was replaced and recording of PM10 concentrations resumed at 8:20am.

### 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 between 5:02pm and 5:12pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.09 µg/m<sup>3</sup>.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
			<b>LANGAN</b>



## SITE OBSERVATION REPORT

- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

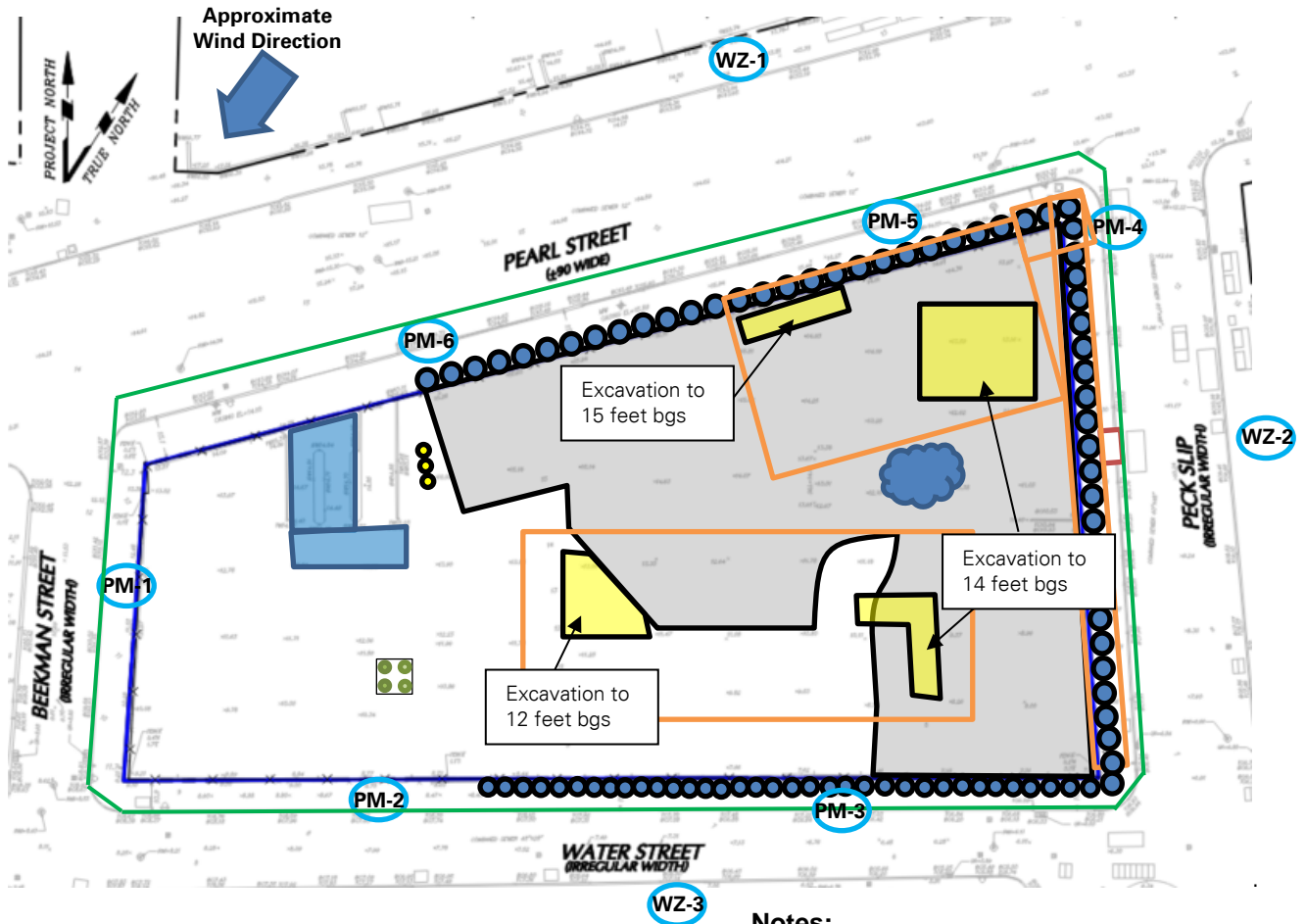
### Anticipated Activities

- 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 installation of corner bracing in the northeast corner of the site.
- CCJV will continue excavation and off-site disposal of soil/fill in the eastern and southcentral part of the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak <b>LANGAN</b>
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## SITE OBSERVATION REPORT

### 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 Soil/Fill Stockpile
- Approximate location of USTs

- 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

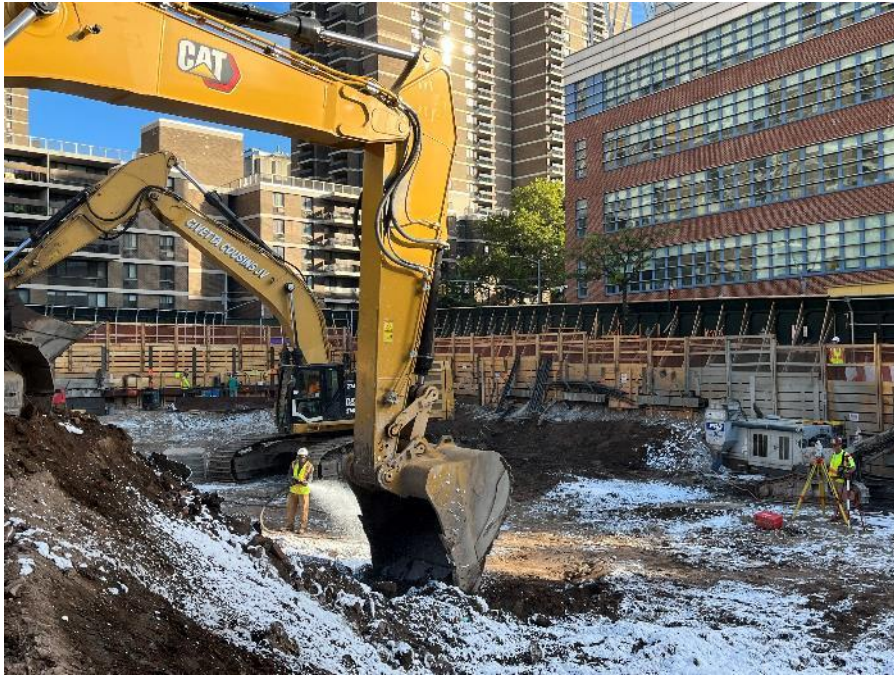
Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Elsayh Boak

**LANGAN**

## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV excavating petroleum-impacted material while spraying Atmos® AC-645 dust/vapor suppressing foam (facing north)



**Photo 2:** CCJV loading excavated soil/fill for off-site disposal (facing north)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak <b>LANGAN</b>
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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Thursday, August 18, 2022  <b>WEATHER:</b> Clear, 68 - 86 °F Wind: N @ 0 – 5.8 mph  <b>TIME:</b> 6:00 AM – 6:00 PM  <b>MONITOR:</b> Elsay Boak, Brian Kenneally, Eddie Cai
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 72</b></span> <b>Langan</b> (Environmental/Geotechnical) – Elsay Boak, Brian Kenneally, Eddie Cai, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Theresa Imbriolo	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 15-foot-long by 15-foot-wide area to about 15 feet below grade surface (bgs) for removal and off-site disposal of non-hazardous soil/fill in the northern-central part of site (waste characterization cell WC05). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at Clean Earth of North Jersey in Kearny, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. Staining and a maximum PID reading of 4.4 parts per million (ppm) were observed between 12 and 15 feet bgs in cell WC05. CCJV actively sprayed soil with Mercon-X during excavation and loading.</li> </ul> </li> <li>CCJV excavated an about 5-foot-long by 5-foot-wide area to about 14 feet bgs for removal and off-site disposal of non-hazardous soil/fill in the northeastern part of site (waste characterization cell WC07). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at Clean Earth of North Jersey in Kearny, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. No petroleum-like odor, staining, or PID readings were recorded during excavation.</li> </ul> </li> <li>CCJV used imported general fill from Impact Reuse &amp; Recovery Center (IRRC) to backfill an approximately 5-foot-long by 5-foot-wide by 4-foot-deep test pit in the southern-central part of the site.</li> <li>CCJV installed tie-back rods along the eastern site boundary (Peck Slip).</li> </ul>		
<b>Cc:</b> M. Raygorodetsky, P. McMahon, M. Au	<b>By:</b> Brian Kenneally  <b>LANGAN</b>	

## SITE OBSERVATION REPORT

- CCJV continued installation of corner bracing in the northeast corner of the site.
- CCJV installed timber lagging along the northern boundary of the site (Pearl Street).
- CCJV covered all exposed soil/fill and construction and demolition (C&D) debris with 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:	Brian Kenneally <b>LANGAN</b>
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## SITE OBSERVATION REPORT

### Material Tracking

- CCJV exported 7 truckloads (about 140 cubic yards [CY]) of non-hazardous mercury-impacted soil/fill from waste characterization cell WC05 for off-site disposal at the Clean Earth of North Jersey facility in Kearny, NJ.
- CCJV exported 2 truckloads (about 40 CY) of non-hazardous soil/fill from waste characterization cell WC07 to the Clean Earth of North Jersey facility in Kearny, NJ.
- CCJV exported 2 truckloads (about 40 CY) of C&D previously stockpiled in waste characterization cell WC08 for disposal at the IRRC facility in Lyndhurst, NJ.
- CCJV imported 2 truckloads (about 40 CY) of general fill from the IRRC facility in Lyndhurst, NJ. Imported fill was used to backfill a test pit in the southern-central part of the site, and stockpiled in the northern part of the site for use as backfill behind timber lagging.

### 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	45.78
Project Total	8	184.42	0	0	2	90.02	16	388.99
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	9	180
Project Total	5	85	27	580	15	300	192	3,840

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By: Brian Kenneally

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## SITE OBSERVATION REPORT

### 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	0	0
Project Total	173	3,460	99	1980	42	840

### Sampling Activities

- No samples were collected.

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By: Brian Kenneally

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## 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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00 µg/m<sup>3</sup>, 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 at 0.00 µg/m<sup>3</sup> to 0.04 µg/m<sup>3</sup>.
- 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 <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
PM-1	0.047	0.0	0.01
PM-2	0.033	0.0	0.01
PM-3	0.018	0.1	0.00
PM-4	0.084	0.1	0.01
PM-5	0.033	0.7	0.00
PM-6	0.022	0.0	0.01
WZ-1	0.028	0.0	0.01
WZ-2	0.016	0.0	0.01
WZ-3	0.047	0.0	0.00

#### **Maximum 15-Minute-Average Concentrations**

Station ID	Particulate (mg/m <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
<b>Action Level</b>	<b>0.100 mg/m<sup>3</sup></b>	<b>5.0 ppm</b>	<b>1.00 µg/m<sup>3</sup></b>
PM-1	0.067	0.1	0.02
PM-2	0.058	0.0	0.02
PM-3	0.050	0.3	0.01
PM-4	*0.723 @ 8:09am	0.4	0.02
PM-5	0.056	2.5	0.01
PM-6	0.064	0.0	0.03
WZ-1	0.043	0.0	0.02
WZ-2	0.045	0.1	0.04
WZ-3	0.067	0.0	0.01

•mg/m<sup>3</sup> = milligrams per cubic meter •ppm = parts per million •µg/m<sup>3</sup> = micrograms per cubic meter

- \*PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) intermittently throughout the work day. The exceedances were caused by welding activities

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## SITE OBSERVATION REPORT

adjacent to the perimeter CAMP station PM-4 in the northeastern corner of the site, 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 this time. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-2) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### 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 0.0 µg/m<sup>3</sup> to 0.54 µg/m<sup>3</sup>.
- 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.

### CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 7:12am to 5:44pm during excavation activities along the northern boundary of the site.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:53am to 5:44pm due to exposed soil within 20 feet of the eastern site boundary.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:53am to 5:44pm due to exposed soil within 20 feet of the southern site boundary.
- CAMP station PM-4 was returned to the location on Peck Slip at 3:40pm following confirmation from the site safety manager that the area could be accessed.

### 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 between 5:13pm and 5:14pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.08 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

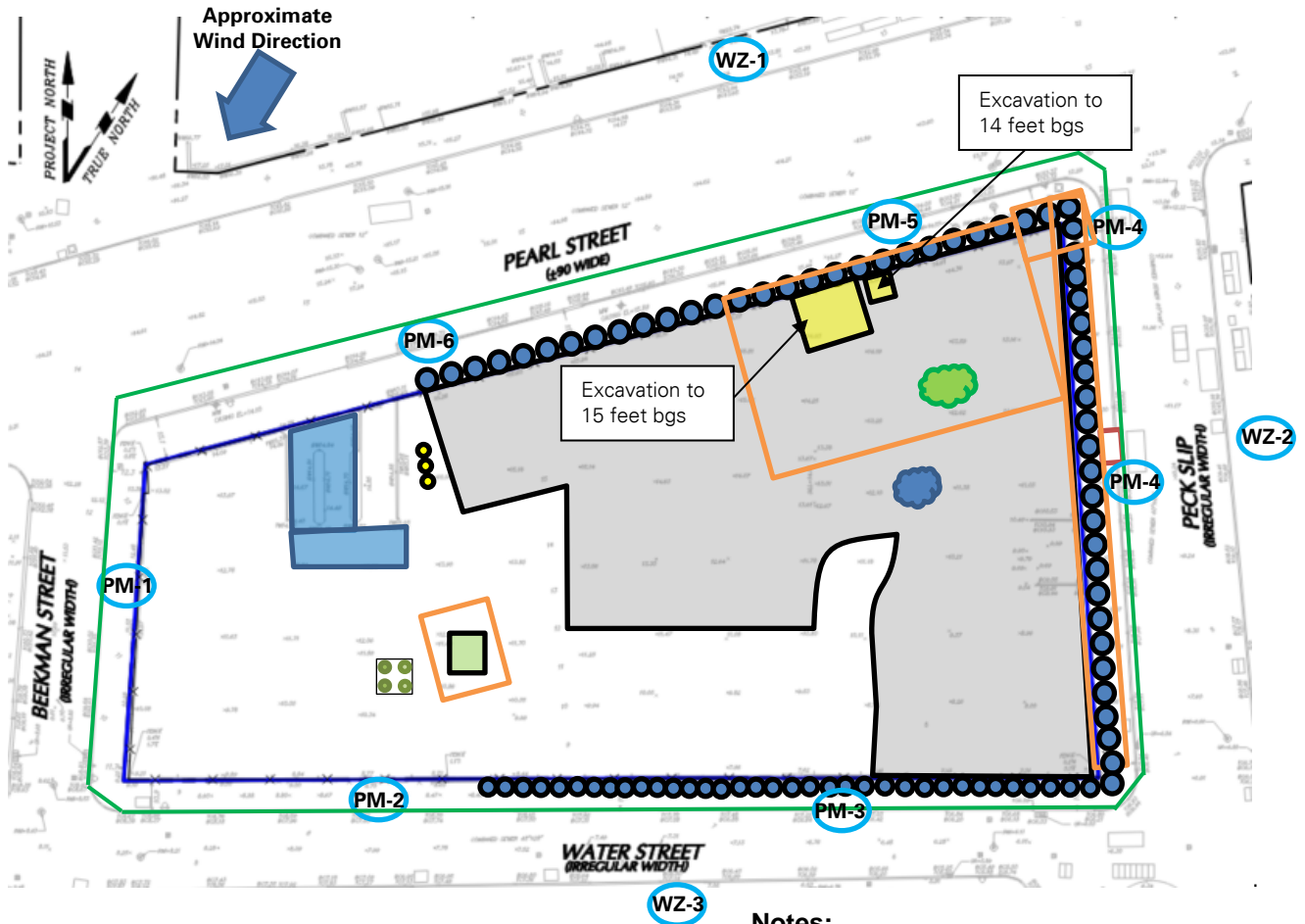
### Anticipated Activities

- 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 installation of corner bracing in the northeast corner of the site.
- CCJV will continue excavation and off-site disposal of soil/fill in the eastern and southcentral part of the site.

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			<b>LANGAN</b>

## SITE OBSERVATION REPORT

### 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 Soil/Fill Stockpile
- Approximate location of USTs

- 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
- Approximate Backfill Area

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Brian Kenneally

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## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV excavating non-hazardous soil/fill while spraying Mercon-X mercury suppressing foam (facing south)



**Photo 2:** CCJV loading C&D for off-site disposal (facing northeast)

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			<b>LANGAN</b>



## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Friday, August 19, 2022  <b>WEATHER:</b> Clear, 71 - 87 °F Wind: N @ 0 – 6.9 mph  <b>TIME:</b> 6:00 AM – 6:00 PM  <b>MONITOR:</b> Elsay Boak, Brian Kenneally, Eddie Cai
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 73</b></span> <b>Langan</b> (Environmental/Geotechnical) – Elsay Boak, Brian Kenneally, Eddie Cai, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Elizabeth Meade	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 20-foot-long by 25-foot-wide area to about 15 feet below grade surface (bgs) for removal and off-site disposal of non-hazardous soil/fill in the northern-central part of site (waste characterization cell WC05). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at Clean Earth of North Jersey in Kearny, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. No petroleum-like odor, staining, or PID readings were recorded during excavation.</li> </ul> </li> <li>CCJV excavated an about 20-foot-long by 25-foot-wide area ranging to about 12 to 15 feet bgs for removal and off-site disposal of non-hazardous soil/fill in the northeastern part of site (waste characterization cell WC07). Excavated soil/fill was live-loaded into tri-axle dump trucks for off-site disposal at Clean Earth of North Jersey in Kearny, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. A maximum PID reading of 3.3 parts per million (ppm) was observed between 12 and 15 feet bgs in cell WC07. CCJV actively sprayed soil with Atmos® AC-645 dust/vapor suppressing foam during excavation and loading.</li> </ul> </li> <li>Langan collected three endpoint samples within waste characterization cells WC04 and WC05. Additional detail provided in Sampling Activities below.</li> </ul>		
<b>Cc:</b> M. Raygorodetsky, P. McMahon, M. Au	<b>By:</b> Brian Kenneally  <b>LANGAN</b>	

## SITE OBSERVATION REPORT

- CCJV used imported general fill from Impact Reuse & Recovery Center (IRRC) to backfill behind the lagging on the eastern boundary of the site (Peck Slip).
- CCJV installed tie-back rods along the eastern site boundary (Peck Slip).
- CCJV installed timber lagging along the northern boundary of the site (Pearl Street).
- CCJV covered all exposed soil/fill and construction and demolition (C&D) debris with 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: Elsayh Boak

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## SITE OBSERVATION REPORT

### Material Tracking

- CCJV exported 5 truckloads (about 100 cubic yards [CY]) of non-hazardous mercury-impacted soil/fill from waste characterization cell WC05 for off-site disposal at the Clean Earth of North Jersey facility in Kearny, NJ.
- CCJV exported 5 truckloads (about 100 CY) of non-hazardous soil/fill from waste characterization cell WC07 to the Clean Earth of North Jersey facility in Kearny, NJ.
- No material was imported to the 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	8	184.42	0	0	2	90.02	16	388.99
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	0	0	0	0	10	200
Project Total	5	85	27	580	15	300	202	4,040

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By: Elsayh Boak

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## SITE OBSERVATION REPORT

### 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	0	0
Project Total	173	3,460	99	1980	42	840

### Sampling Activities

- Langan collected three confirmation endpoint soil samples (EP18\_EL\_3, EP23\_EL\_3, and EP28\_EL\_1) for laboratory analysis of NJDEP/TCL/Part 375 VOCs, SVOCs, PCBs, pesticides, metals including hexavalent and trivalent chromium, PFAS, and 1,4-dioxane.
- Samples were relinquished to Alpha Analytical, Inc., an Environmental Laboratory Accredited Program (ELAP)-certified laboratory under standard chain-of-custody protocols.

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By: Elsayh Boak

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## 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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00  $\mu\text{g}/\text{m}^3$ , 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 ranged from at 0.00  $\mu\text{g}/\text{m}^3$  to 0.03  $\mu\text{g}/\text{m}^3$ .
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.054	0.0	0.01
PM-2	0.049	0.0	0.02
PM-3	0.028	0.1	0.00
PM-4	0.035	0.1	0.02
PM-5	0.034	0.2	0.01
PM-6	0.032	0.0	0.01
WZ-1	0.036	0.0	0.01
WZ-2	0.021	0.1	0.03
WZ-3	0.026	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.072	0.0	0.04
PM-2	*0.269@ 11:55am	0.0	0.05
PM-3	0.082	0.4	0.01
PM-4	0.074	0.3	0.03
PM-5	0.075	1.6	0.03
PM-6	*0.103 @ 11:52am	0.0	0.04
WZ-1	0.053	0.0	0.03
WZ-2	0.031	0.2	0.09
WZ-3	0.050	0.1	0.02

●  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    ● ppm = parts per million    ●  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

- \*PM10 concentrations at perimeter CAMP stations PM-2 and PM-6 exceeded the action level established in the CAMP (0.100  $\text{mg}/\text{m}^3$ ) from 11:45am to 12:07am and 11:52am to 11:53am, respectively. The

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## SITE OBSERVATION REPORT

exceedances were caused by smoke originating from the adjacent building upwind from the perimeter CAMP stations PM-2 and PM-4, and were not the result of ground-intrusive activities associated with soil/fill at the site. The CAMP stations were relocated above 10 feet south and PM10 concentrations fell below action levels. Fugitive dust was not observed migrating from the site during this time.

### 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 0.0 µg/m<sup>3</sup> to 0.28 µg/m<sup>3</sup>.
- 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.

### CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 7:20am to 5:02pm during excavation activities along the northern boundary of the site.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:58am to 5:02pm due to exposed soil within 20 feet of the eastern site boundary.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:58am to 5:02pm due to exposed soil within 20 feet of the southern site boundary.

### Equipment Troubleshooting

- The DustTrak II within off-site CAMP station WZ-3 did not record PM10 concentrations from 1:04pm to 3:45pm due to a battery outage. The battery was replaced and recording of PM10 concentrations resumed at 3:46pm.

### 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 5:02pm, the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.04 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

### Anticipated Activities

- 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 installation of corner bracing in the northeast corner of the site.
- CCJV will continue excavation and off-site disposal of soil/fill in the eastern and southcentral part of the site.
- Langan will continue collecting confirmation endpoint samples.

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## SITE OBSERVATION REPORT

### 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 USTs

- 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
- Approximate Backfill Area
- Approximate Endpoint Sample Location

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By: Elsayh Boak

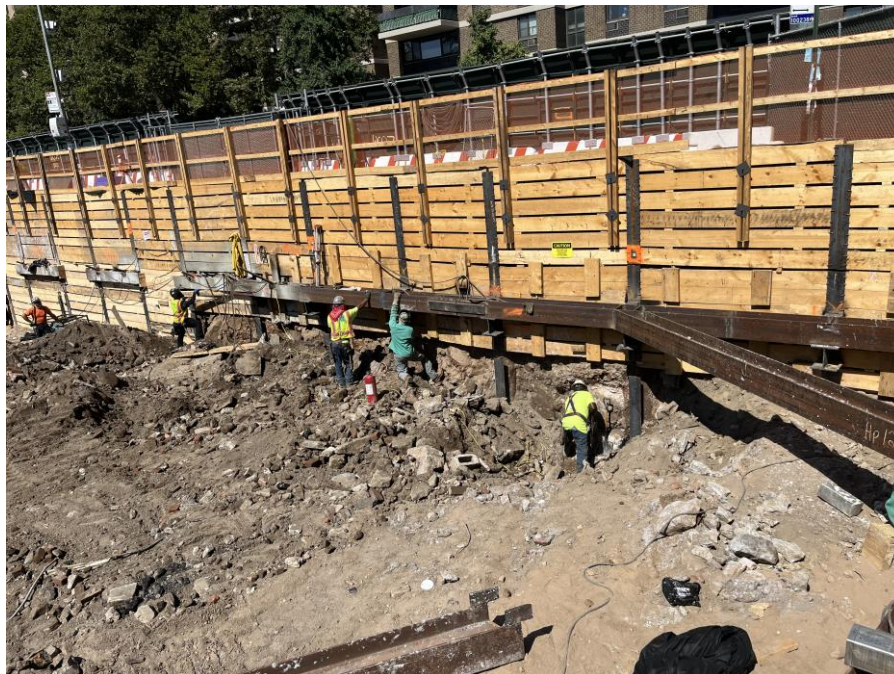
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## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV loading non-hazardous soil/fill into trucks for off-site disposal (facing southwest)



**Photo 2:** CCJV installing support of excavation elements along the northern boundary of the site (facing north)

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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Saturday, August 20, 2022  <b>WEATHER:</b> Clear, 78 - 88 °F Wind: N @ 0.0 – 6.9 mph  <b>TIME:</b> 8:00 AM – 6:00 PM  <b>MONITOR:</b> Brian Kenneally, Audrey Seery
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 74</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Audrey Seery, Maedeh Tavakoli <b>LendLease</b> (Construction Manager) – Mike Palmieri <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – Jack Dettra <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Elizabeth Meade	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an approximately 8-foot-long by 5-foot-wide area to a maximum depth of about 15 feet below grade surface (bgs) in the northeastern corner of the site (waste characterization cell WC07) for timber lagging installation. Excavated soil/fill was temporarily stockpiled adjacent to the excavation within cell WC07.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. Staining and a maximum PID reading of 3.8 parts per million (ppm) were observed between 12 and 15 feet bgs in cell WC07. CCJV sprayed soil Atmos® AC-645 dust/vapor suppressing foam after excavation. Stockpile was covered with both polyurethane sheeting and Atmos® AC-645 dust/vapor suppressing foam at the end of the day.</li> </ul> </li> <li>CCJV covered all exposed soil/fill and construction and demolition (C&amp;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.</li> <li>CCJV installed timber lagging between the support of excavation (SOE) soldier piles along the northern and eastern site boundaries (Pearl Street and Peck Slip).</li> <li>CCJV installed T-brackets along the edges of soldier piles to accommodate timber lagging installation in the northeast corner of the site.</li> <li>CCJV continued welding for corner bracing as a part of SOE installation in the northeastern corner of the site.</li> </ul>		
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By: Brian Kenneally <b>LANGAN</b>

## SITE OBSERVATION REPORT

### Material Tracking

- No material was exported from the site.
- No material was imported to the 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	8	184.42	0	0	2	90.02	16	388.99
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	0	0	0	0	0	0
Project Total	5	85	27	580	15	300	202	4,040

#### 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	0	0
Project Total	173	3,460	99	1980	42	840

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By: Brian Kenneally

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## SITE OBSERVATION REPORT

### Sampling Activities

- No samples were collected.

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By: Brian Kenneally

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## 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 VOCs, and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, and 1.00  $\mu\text{g}/\text{m}^3$ , 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 ranged from 0.00  $\mu\text{g}/\text{m}^3$  to 0.06  $\mu\text{g}/\text{m}^3$
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.061	0.0	0.01
PM-2	0.052	0.0	0.02
PM-3	0.037	0.0	0.00
PM-4	0.047	0.1	0.02
PM-5	0.044	0.1	0.01
PM-6	0.035	0.1	0.01
WZ-1	0.042	0.0	0.01
WZ-2	0.022	0.0	0.06
WZ-3	0.043	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.076	0.0	0.05
PM-2	0.082	0.0	0.05
PM-3	0.047	0.1	0.01
PM-4	*0.109 @ 2:50pm	0.3	0.04
PM-5	0.060	0.3	0.02
PM-6	0.068	1.3	0.05
WZ-1	0.055	0.0	0.04
WZ-2	0.035	0.2	0.14
WZ-3	0.097	0.0	0.03

●  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    ● ppm = parts per million    ●  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

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By: Brian Kenneally

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## SITE OBSERVATION REPORT

- \*PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 4:48pm to 4:58pm (10 minutes). The exceedance was caused by welding activities at the southeastern corner of the site, adjacent to perimeter CAMP station PM-4 along the eastern site boundary, 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 this time. Additionally, PM10 concentrations at the closest off-site CAMP station (WZ-2) did not approach or exceed the action level established by the CAMP (0.100 mg/m<sup>3</sup>) during this time.

### 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<sup>3</sup> to 0.33 µg/m<sup>3</sup>.
- 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 8:47am to 4:51pm due to exposed soil/fill within 20 feet of the northern fence line.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 8:47am to 4:51pm due to exposed soil/fill within 20 feet of the eastern fence line.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 8:47am to 4:41pm during excavation activities along the southern boundary 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. 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 4:38pm and 4:48pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.09 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

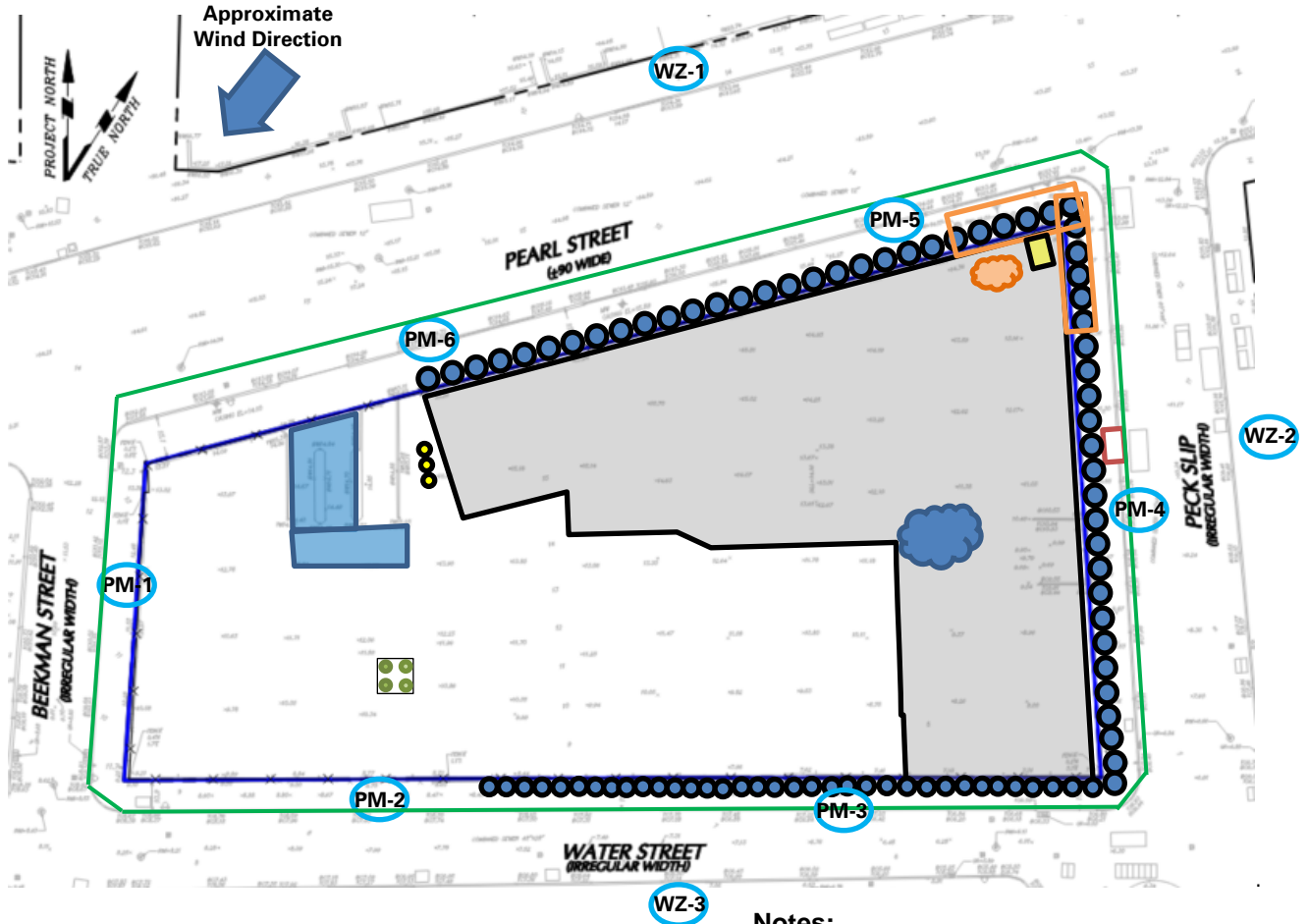
### Anticipated Activities

- 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 eastern and southcentral part of the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

### 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 Soil/Fill Stockpile
- Approximate location of USTs

- 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

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By: Brian Kenneally

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## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV installing timber lagging for SOE installation along the northern site boundary (facing north).



**Photo 2:** CCJV covering exposed soil with Atmos foam at the end of the day (facing east)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally <b>LANGAN</b>
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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Sunday, August 21, 2022  <b>WEATHER:</b> Clear, 77 - 83 °F Wind: N @ 0 – 6.9 mph  <b>TIME:</b> 7:45 AM – 2:00 PM  <b>MONITOR:</b> Maitland Robinson, Jack Millman
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 75</b></span> <b>Langan</b> (Environmental/Geotechnical) – Maitland Robinson, Jack Millman <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – Jack Dettra <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV tested 3 tie-backs along the eastern site boundary (Peck Slip).</li> <li>CCJV covered all exposed soil/fill and construction and demolition (C&amp;D) debris with polyethylene sheeting and/or Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover prior to resuming work on Monday, August 22, 2022.</li> </ul>		
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By: Maitland Robinson  <b>LANGAN</b>

## SITE OBSERVATION REPORT

### Material Tracking

- No material was exported from the site
- No material was imported to the 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	8	184.42	0	0	2	90.02	16	388.99
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	0	0	0	0	0	0
Project Total	5	85	27	580	15	300	202	4,040

### 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	0	0
Project Total	173	3,460	99	1980	42	840

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Maitland Robinson

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SITE OBSERVATION REPORT

Sampling Activities

- No samples were collected.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Maitland Robinson
			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 VOCs, PM10 and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm, 0.100 mg/m<sup>3</sup> and 1.00 µg/m<sup>3</sup>, 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 at 0.00 µg/m<sup>3</sup> to 0.02 µg/m<sup>3</sup>.
- 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 <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
PM-1	0.033	0.0	0.01
PM-2	0.017	0.0	0.01
PM-3	0.015	0.0	0.00
PM-4	0.015	0.0	0.01
PM-5	0.023	0.0	0.01
PM-6	0.014	0.0	0.01
WZ-1	0.021	0.0	0.01
WZ-2	0.010	0.0	0.02
WZ-3	0.010	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
<b>Action Level</b>	<b>0.100 mg/m<sup>3</sup></b>	<b>5.0 ppm</b>	<b>1.00 µg/m<sup>3</sup></b>
PM-1	0.041	0.0	0.04
PM-2	0.023	0.0	0.03
PM-3	0.022	0.0	0.01
PM-4	0.018	0.0	0.03
PM-5	0.028	0.1	0.02
PM-6	0.016	0.0	0.04
WZ-1	0.024	0.0	0.02
WZ-2	0.013	0.0	0.04
WZ-3	0.014	0.0	0.02

●mg/m<sup>3</sup> = milligrams per cubic meter    ●ppm = parts per million    ●µg/m<sup>3</sup> = micrograms per cubic meter

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Maitland Robinson

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## SITE OBSERVATION REPORT

### 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 0.0 µg/m<sup>3</sup> to 0.10 µg/m<sup>3</sup>.
- 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.

### CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 9:07am to 1:36pm due to exposed soil within 20 feet of the northern site boundary.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 9:07am to 1:25pm due to exposed soil within 20 feet of the eastern site boundary.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 9:47am to 1:20pm due to exposed soil 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 between 12:29pm and 12:41pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.01 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

### Anticipated Activities

- 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 re-drill tiebacks along the eastern boundary of the site.
- CCJV will continue excavation and off-site disposal of soil/fill in the eastern and southcentral part of the site.
- Langan will continue collecting confirmation endpoint samples.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Maitland Robinson
			<b>LANGAN</b>

## Site Map



**Legend:**

- Cc: M. Raygorodetsky, P. McMahon, M. Au

By:	Maitland Robinson
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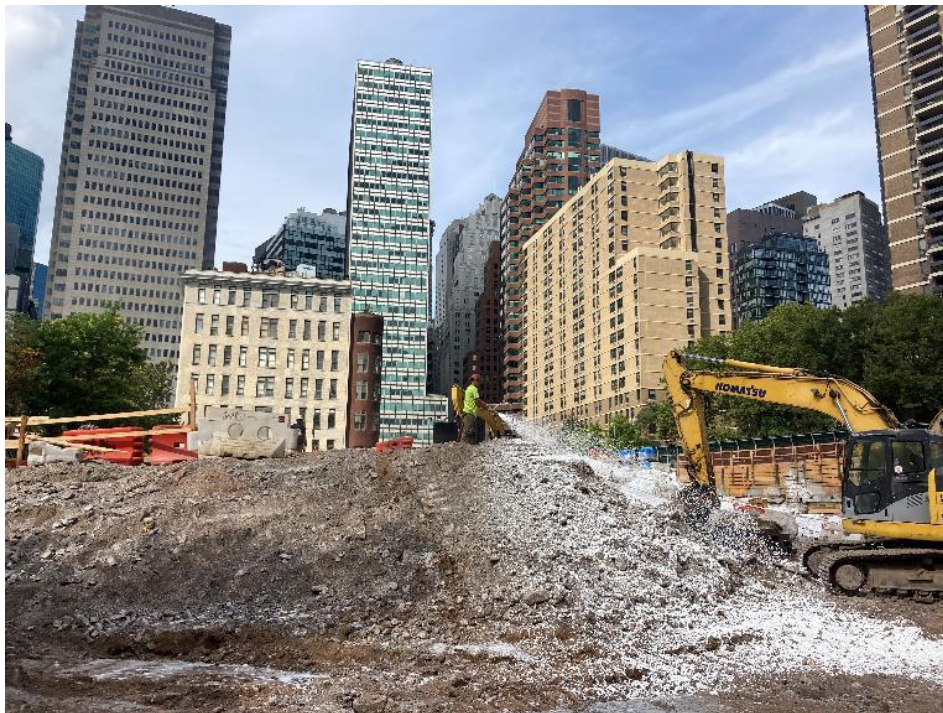
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## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV performing tieback testing along eastern site boundary (facing north)



**Photo 2:** CCJV applying Atmos® AC-645 dust/vapor suppressing foam to all exposed soil (facing west)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Maitland Robinson <b>LANGAN</b>
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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Monday, August 22, 2022  <b>WEATHER:</b> Clear, 73.0 – 81.0 °F Wind: N @ 0 – 8.1 mph  <b>TIME:</b> 6:00 AM – 6:00 PM  <b>MONITOR:</b> Elsay Boak, Maitland Robinson, Eddie Cai	
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 76</b></span> <b>Langan</b> (Environmental/Geotechnical) – Elsay Boak, Maitland Robinson, Eddie Cai, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Theresa Imbriolo		
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>• CCJV excavated an about 20-foot-long by 40-foot-wide area to a maximum depth of about 15 feet below grade surface (bgs) for removal and off-site disposal of non-hazardous soil/fill in the northeastern 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 were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>○ Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. A maximum PID reading of 7.3 parts per million (ppm) was recorded during excavation in waste characterization cell WC07. CCJV actively applied Atmos® AC-645 dust/vapor suppressing foam to soil/fill during excavation and loading for off-site disposal.</li> </ul> </li> <li>• CCJV excavated an about 20-foot-long by 5-foot-wide area to a maximum depth of about 12 feet bgs to expose previously installed soldier piles for T-bracket installation along the eastern boundary of the site (Peck Slip).             <ul style="list-style-type: none"> <li>○ Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. A maximum PID reading of 50.2 ppm was recorded during excavation in waste characterization cell WC08. CCJV actively applied Atmos® AC-645 dust/vapor suppressing foam to soil/fill during excavation.</li> <li>○ Excavated soil/fill was temporarily stockpiled adjacent to the work area and was backfilled into the original location following installation of T-brackets.</li> </ul> </li> </ul>			
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsay Boak  <b>LANGAN</b>

## SITE OBSERVATION REPORT

- CCJV installed tie-back rods for support-of-excavation (SOE) system installation along the eastern boundary of the site (Peck Slip).
- CCJV installed timber lagging and T-brackets for SOE system installation along the eastern boundary of the site (Peck Slip).
- CCJV covered all exposed soil/fill and construction and demolition (C&D) debris with 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: Elsay Boak

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## SITE OBSERVATION REPORT

### Material Tracking

- CCJV exported 10 truckloads (about 200 cubic yards [CY]) of non-hazardous soil/fill from waste characterization cells WC07 and WC08 for off-site disposal at the Middlesex County Landfill in East Brunswick, NJ.
- CCJV exported 2 truckloads (about 40 CY) of C&D to the Impact Reuse & Recovery Center (IRRC) facility in Lyndhurst, NJ
- No material was imported to the 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	8	184.42	0	0	2	90.02	16	388.99
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	29	580	15	300	202	4,040

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Elsayh Boak

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## SITE OBSERVATION REPORT

### 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	10	200	0	0	0	0
Project Total	183	3,660	99	1980	42	840

### Sampling Activities

- Langan collected three confirmation endpoint soil samples (EP18\_EL\_3, EP23\_EL\_3, and EP28\_EL\_1) for laboratory analysis of per- and polyfluoroalkyl substances (PFAS).
- Samples were relinquished to Alpha Analytical, Inc., an Environmental Laboratory Accredited Program (ELAP)-certified laboratory under standard chain-of-custody protocols.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
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## 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 VOCs and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm and 1.00 µg/m<sup>3</sup>, 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<sup>3</sup>.
- 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 <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
PM-1	0.021	0.0	0.01
PM-2	0.020	0.0	0.01
PM-3	0.016	0.0	0.00
PM-4	0.056	0.2	0.02
PM-5	0.013	0.0	0.00
PM-6	0.014	0.1	0.01
WZ-1	0.019	0.0	0.01
WZ-2	0.005	0.0	0.02
WZ-3	0.011	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
<b>Action Level</b>	<b>0.100 mg/m<sup>3</sup></b>	<b>5.0 ppm</b>	<b>1.00 µg/m<sup>3</sup></b>
PM-1	0.031	0.0	0.02
PM-2	0.047	0.0	0.02
PM-3	0.054	0.0	0.01
PM-4	*0.276 @ 1:22pm	0.7	0.04
PM-5	0.025	0.1	0.02
PM-6	0.028	0.4	0.03
WZ-1	0.037	0.0	0.03
WZ-2	0.015	0.0	0.06
WZ-3	0.022	0.0	0.03

• mg/m<sup>3</sup> = milligrams per cubic meter • ppm = parts per million • µg/m<sup>3</sup> = micrograms per cubic meter

- \* PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 9:28am to 9:42am (15 minutes), 11:00am to 11:14am (15 minutes), 11:20am to

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## SITE OBSERVATION REPORT

11:29am (10 minutes), 1:12pm to 1:51pm (40 minutes), 1:58pm to 2:13pm (16 minutes), and 3:01pm to 3:12pm (12 minutes). The exceedances were caused by welding activities adjacent to perimeter CAMP station PM-4 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 this time.

### 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 0.0 µg/m³ to 0.12 µg/m³.
- 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.

### CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 6:54am to 4:37pm during excavation activities along the northern boundary of the site.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:50am to 4:37pm during excavation activities along the eastern boundary of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 7:22am to 4:37pm due to exposed soil within 20 feet of the southern site boundary.

### Equipment Troubleshooting

- PM10 concentrations at perimeter CAMP station PM-3 were not recorded at 12:34pm during data transfer to recover data from the previous work day. There were no ground-intrusive activities ongoing during this time and fugitive dust was not observed migrating from the site. Data logging for PM10 at perimeter CAMP station PM-3 resumed at 12:35pm.

### 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 4:37pm, the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m³ to 0.06 µg/m³.
- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

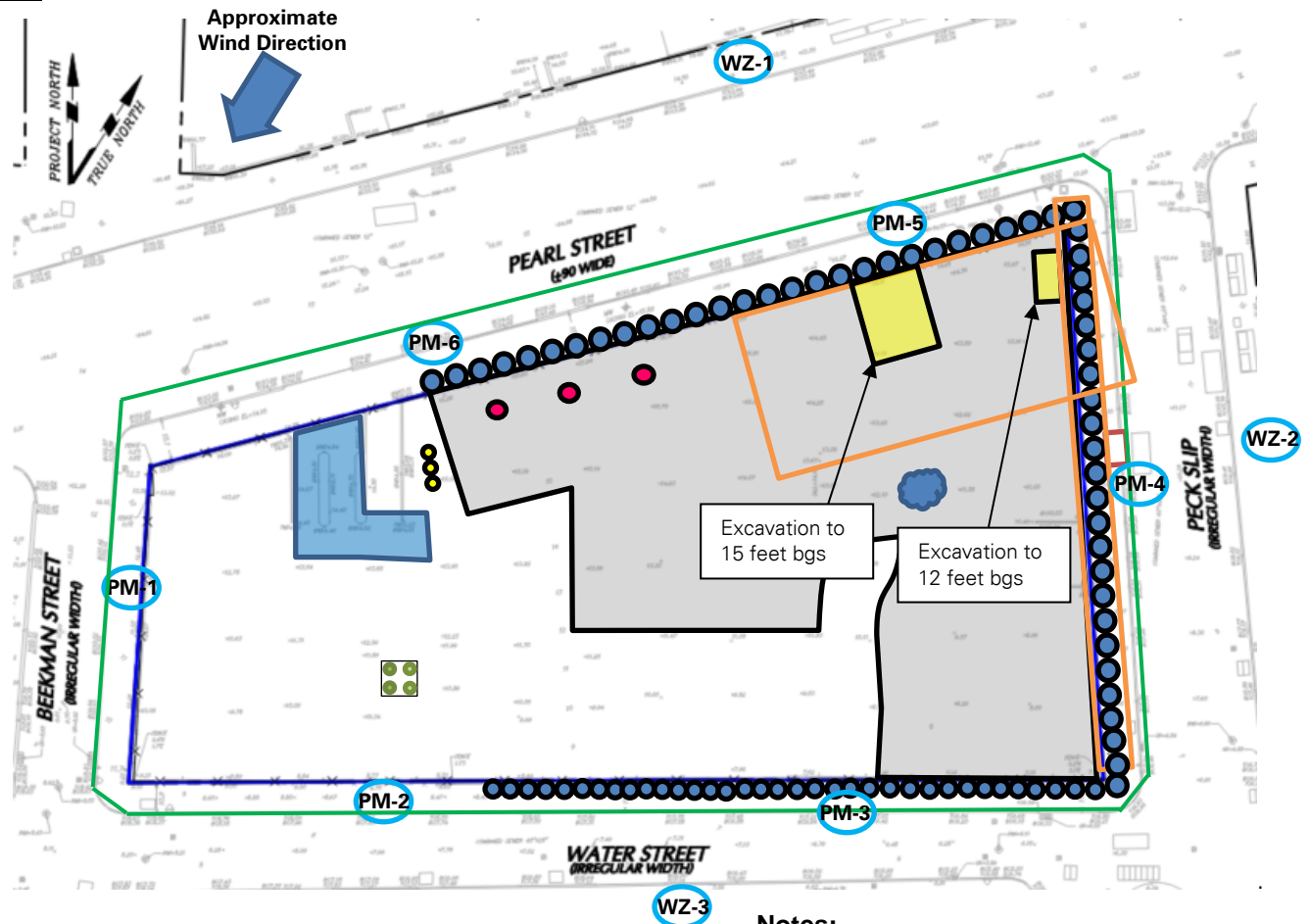
### Anticipated Activities

- 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 eastern and southcentral part of the site.
- Langan will continue collection of confirmation endpoint soil samples across the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak
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## SITE OBSERVATION REPORT

### Site Map



### Notes:

1) Locations of air monitoring stations are approximate.

### Legend:

- |   |  |  |   |
|---|--|--|---|
| <span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">PM-1</span>                                   | Approximate Location of Air Monitoring Station     | <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span>                             | Approximate Location of UST                       |
| <span style="border: 2px solid orange; display: inline-block; width: 20px; height: 10px;"></span>                     | Approximate Work Area                              | <span style="background-color: yellow; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span>      | Approximate Location of 55-gallon drum            |
| <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span>                      | Approximate Location of Installed Pile Cap         | <span style="background-color: blue; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span>        | Approximate Location of Soldier Pile              |
| <span style="background-color: green; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span>  | Approximate Location of Foundation Piles Completed | <span style="border-bottom: 2px solid green; display: inline-block; width: 30px;"></span>                                  | Approximate Perimeter Construction Fence Location |
| <span style="background-color: blue; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span>   | Approximate Location of Truck Tracking Pad         | <span style="background-color: grey; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span>   | Previous Excavation Area                          |
| <span style="background-color: blue; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span>   | Approximate Location of C&D Stockpile              | <span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> | Approximate Excavation Area                       |
| <span style="background-color: green; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span>  | Approximate Location of General Fill Stockpile     | <span style="background-color: green; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span>  | Approximate Backfill Area                         |
| <span style="background-color: grey; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span>   | Approximate Location of Stockpiled Virgin Stone    | <span style="background-color: pink; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span>        | Approximate Endpoint Sample Location              |
| <span style="background-color: orange; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span> | Approximate Excavated Soil/Fill Stockpile          |  |   |

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Elsayh Boak

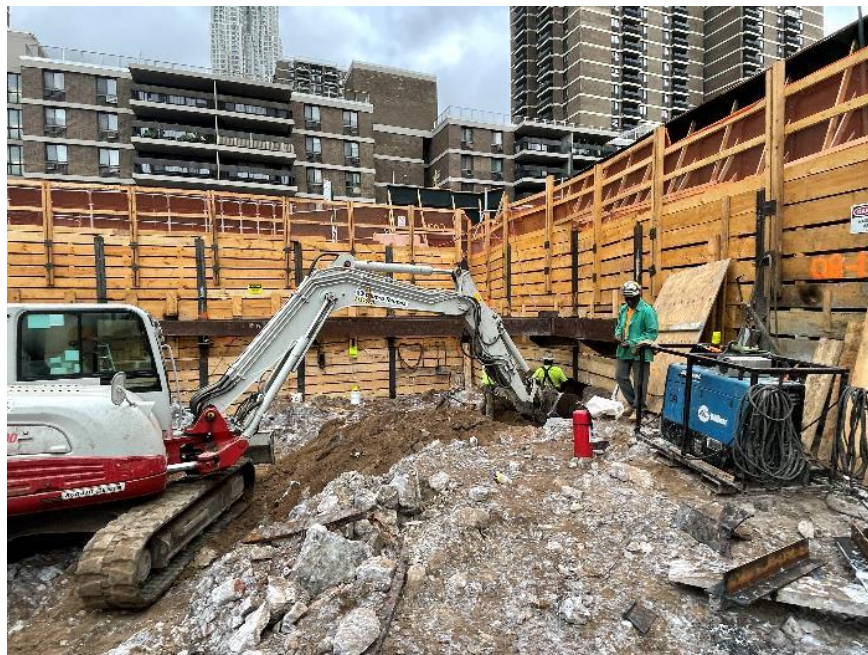
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## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV loading non-hazardous soil/fill into trucks for off-site disposal (facing north)



**Photo 2:** CCJV excavating soil/fill for timber lagging installation in the northeastern part of the site (facing north)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak <b>LANGAN</b>
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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Tuesday, August 23, 2022  <b>WEATHER:</b> Clear, 72.0 – 86.0 °F Wind: N @ 0 – 7.7 mph  <b>TIME:</b> 6:00 AM – 5:00 PM  <b>MONITOR:</b> Brian Kenneally, Maitland Robinson, Eddie Cai
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 77</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Maitland Robinson, Eddie Cai, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Theresa Imbriolo	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 30-foot-long by 20-foot-wide area to a maximum depth of about 15 feet below grade surface (bgs) for removal and off-site disposal of non-hazardous soil/fill in the northeastern 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 were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. A maximum PID reading of 5.1 parts per million (ppm) was recorded during excavation in waste characterization cell WC07. CCJV actively applied Atmos® AC-645 dust/vapor suppressing foam to soil/fill during excavation and loading for off-site disposal.</li> </ul> </li> <li>CCJV excavated an about 30-foot-long by 15-foot-wide area to a maximum depth of about 15 feet 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 Middlesex County Landfill in East Brunswick, NJ. Trucks were covered with tight-fitting covers and were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld 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 actively applied Mercon-X® to soil/fill during excavation and loading for off-site disposal.</li> </ul> </li> </ul>		
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By: Maitland Robinson  <b>LANGAN</b>



## SITE OBSERVATION REPORT

- CCJV excavated an about 20-foot-long by 10-foot-wide area to a maximum depth of about 15 feet bgs in the northeastern part of site (waste characterization cell WC07) for installation of timber lagging along the northern boundary of the site (Pearl Street).
  - Excavated soil/fill was temporarily stockpiled adjacent to the excavation area in preparation for off-site disposal and was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. A maximum PID reading of 43.1 ppm was recorded. CCJV actively applied Atmos® AC-645 dust/vapor suppressing foam to soil/fill during excavation.
- CCJV excavated an about 2-foot-long by 2-foot-wide test pit to a maximum depth of about 11 feet bgs in the east-central part of the site to evaluate groundwater conditions.
  - Excavated soil/fill was temporarily stockpiled adjacent to the test pit and was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. Staining and a maximum PID reading of 363.5 ppm was recorded and CCJV applied Atmos® AC-645 dust/vapor suppressing foam to the stockpiled soil/fill. The test pit was temporarily backfilled using the excavated soil/fill originating from the same location.
- CCJV installed tie-back rods for support-of-excavation (SOE) system installation along the eastern boundary of the site (Peck Slip).
- CCJV installed timber lagging and T-brackets for SOE system installation along the eastern boundary of the site (Peck Slip).
- CCJV covered all exposed soil/fill and construction and demolition (C&D) debris with 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: Maitland Robinson

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## SITE OBSERVATION REPORT

### Material Tracking

- CCJV exported 20 truckloads (about 400 cubic yards [CY]) of non-hazardous soil/fill from waste characterization cells WC04, WC05, WC07 and WC08 for off-site disposal at the Middlesex County Landfill in East Brunswick, NJ.
- CCJV exported 2 truckloads (about 40 CY) of C&D to the Impact Reuse & Recovery Center (IRRC) facility in Lyndhurst, NJ
- CCJV imported 1 truckload (21.96 tons) of general fill from the IRRC facility 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	1	21.96
Project Total	8	184.42	0	0	4	90.02	17	410.95
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	31	620	15	300	202	4,040

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By: Maitland Robinson

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## SITE OBSERVATION REPORT

### 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	20	400	0	0	0	0
Project Total	203	4,060	99	1980	42	840

### Sampling Activities

- No samples were collected.

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By: Maitland Robinson

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## 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 VOCs and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm and 1.00 µg/m³, 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 µg/m³ to 0.03 µg/m³.
- 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/m³)	Organic Vapor (ppm)	Mercury Vapor (µg/m³)
PM-1	0.064	0.0	0.02
PM-2	0.062	0.0	0.03
PM-3	0.047	0.0	0.00
PM-4	0.062	0.2	0.02
PM-5	0.036	0.0	0.01
PM-6	0.047	0.2	0.02
WZ-1	0.061	0.0	0.02
WZ-2	0.014	0.2	0.05
WZ-3	0.043	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m³)	Organic Vapor (ppm)	Mercury Vapor (µg/m³)
<b>Action Level</b>	<b>0.100 mg/m³</b>	<b>5.0 ppm</b>	<b>1.00 µg/m³</b>
PM-1	0.087	0.0	0.05
PM-2	0.099	0.0	0.08
PM-3	0.083	0.1	0.01
PM-4	*0.193 @ 8:52am	0.5	0.03
PM-5	0.049	0.0	0.03
PM-6	0.074	0.5	0.06
WZ-1	0.096	0.0	0.04
WZ-2	0.024	0.5	0.09
WZ-3	0.070	0.0	0.03

●mg/m³ = milligrams per cubic meter ●ppm = parts per million ●µg/m³ = micrograms per cubic meter

- \* PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m³) from 7:50am to 7:51am (2 minutes), 7:53am to 7:54am (2 minutes), 7:56am to 8:33am (38

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## SITE OBSERVATION REPORT

minutes), 8:43am to 9:01am (19 minutes), 9:11am to 9:22am (12 minutes), and 10:22am to 10:35am (14 minutes). The exceedances were caused by welding activities adjacent to perimeter CAMP station PM-4 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 this time.

### 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 0.0 µg/m<sup>3</sup> to 0.51 µg/m<sup>3</sup>.
- 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.

### CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 6:42am to 3:22pm during excavation activities along the northern boundary of the site.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:42am to 3:22pm during excavation activities in the northeastern part of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:48am to 3:22pm due to exposed soil 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 3:22pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.07 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station was recorded at 0.0 ppm.

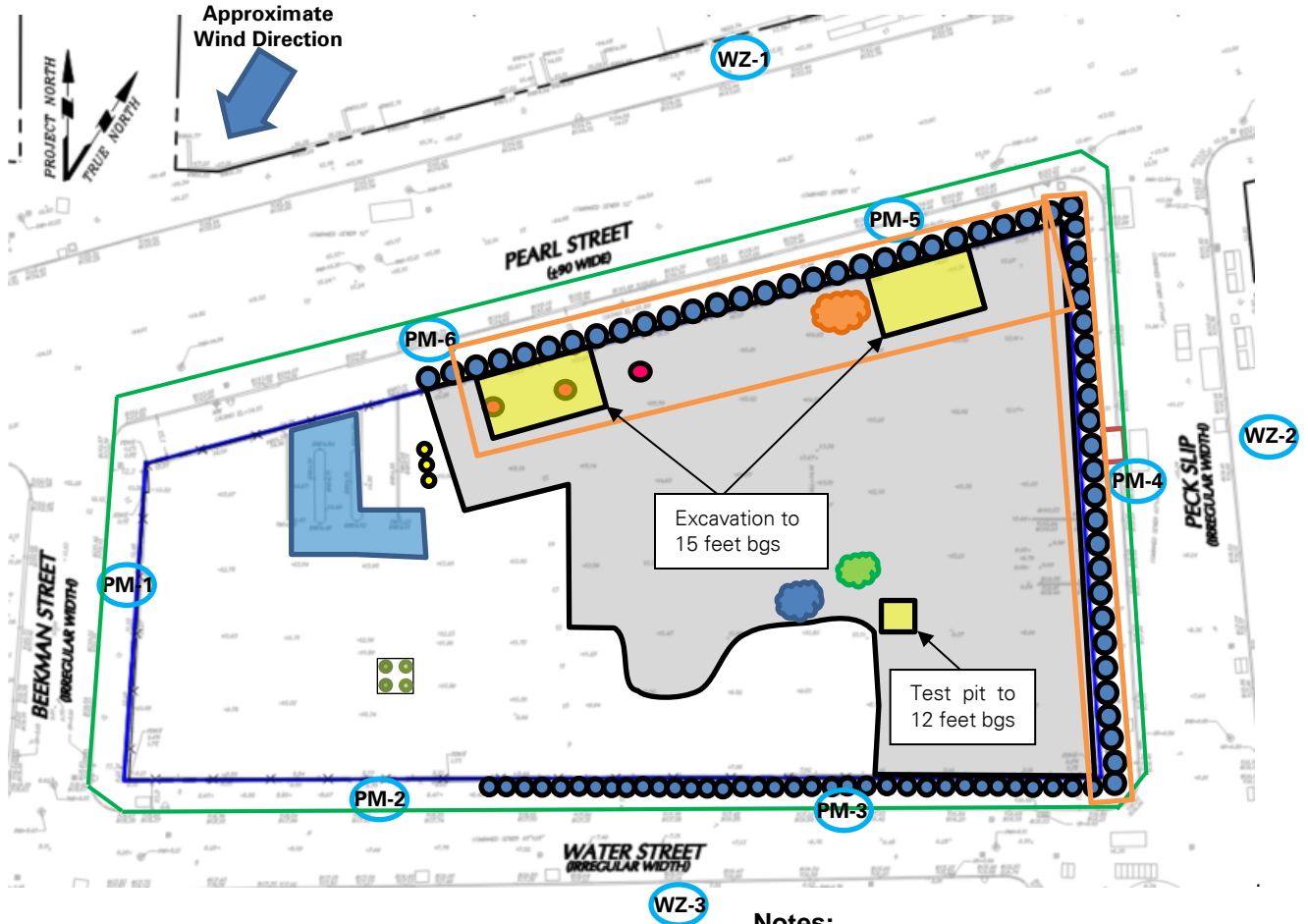
### Anticipated Activities

- CCJV will continue installation of timber lagging between soldier piles.
- CCJV will continue excavation and off-site disposal of soil/fill in the eastern and southcentral parts of the site.
- Langan will continue collection of confirmation endpoint soil samples across the site.

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## 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 General Fill Stockpile
- Approximate Location of Stockpiled Virgin Stone
- Approximate Excavated Soil/Fill Stockpile

- Approximate Location of UST
- 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 Endpoint Sample Location

### Notes:

- 1) Locations of air monitoring stations are approximate.

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## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV excavating non-hazardous soil/fill in the northern part of the site (facing northeast)



**Photo 2:** CCJV securing a tight-fitting cover to a loaded dump truck prior to exiting the site (facing west)

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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Wednesday, August 24, 2022  <b>WEATHER:</b> Clear, 70.0 – 89.0 °F Wind: N @ 0 – 6.9 mph  <b>TIME:</b> 6:00 AM – 5:00 PM  <b>MONITOR:</b> Brian Kenneally, Elsayh Boak, Camille Quick	
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 78</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Elsayh Boak, Camille Quick, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Theresa Imbriolo		
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>• CCJV excavated an about 30-foot-long by 20-foot-wide area to a maximum depth of about 15 feet below grade surface (bgs) for removal and off-site disposal of non-hazardous soil/fill in the northeastern 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 were inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>○ Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors, staining, or instrumental evidence of impacts were observed. CCJV actively applied Atmos® AC-645 dust/vapor suppressing foam to soil/fill during excavation and loading for off-site disposal.</li> </ul> </li> <li>• Langan collected 11 endpoint confirmation soil samples from the base of the excavation. CCJV excavated five about 3-foot-long by 3-foot-wide areas to about 1 foot below the existing grade in the northeastern part of the site to facilitate collection of confirmation endpoint soil samples.</li> <li>• CCJV identified one underground storage tank (UST) at a depth of approximately 15 feet bgs during excavation activities in the northeastern part of the site.             <ul style="list-style-type: none"> <li>○ The headspace above the opening of the tank was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. Petroleum-like odor and maximum PID reading of 18.4 parts ppm was recorded.</li> </ul> </li> </ul>			
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsayh Boak  <b>LANGAN</b>

## SITE OBSERVATION REPORT

- CCJV used imported 1.5-inch clean bluestone to backfill and grade an approximately 60-foot long by 20-foot wide area in the northwestern part of the site for maintenance of the tracking pad.
- CCJV installed tie-back rods for support-of-excavation (SOE) system installation along the eastern boundary of the site (Peck Slip).
- CCJV installed timber lagging and T-brackets for SOE system installation along the eastern boundary of the site (Peck Slip).
- CCJV covered all exposed soil/fill and construction and demolition (C&D) debris with 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 <b>LANGAN</b>
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## SITE OBSERVATION REPORT

### Material Tracking

- CCJV exported 6 truckloads (about 120 cubic yards [CY]) of non-hazardous soil/fill from waste characterization cells WC07 and WC08 for off-site disposal at the Middlesex County Landfill in East Brunswick, NJ.
- CCJV imported 1 truckload (18.50 tons) of 1.5-inch bluestone from the Impact Reuse & Recover Center (IRRC) facility 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	18.50	0	0
Project Total	8	184.42	0	0	5	108.52	17	410.95
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	0	0	0	0	0	0
Project Total	5	85	31	620	15	300	202	4,040

### 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	6	120	0	0	0	0
Project Total	209	4,180	99	1,980	42	840

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By: Elsayh Boak

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## SITE OBSERVATION REPORT

### Sampling Activities

- Langan collected eleven confirmation endpoint soil samples and associated quality assurance/quality control (QA/QC) samples for laboratory analysis of NYSDEC Part 375/target compound list (TCL) volatile organic compounds (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:
  - EP33\_EL\_-0.5
  - EP34\_EL\_0.0
  - EP35\_EL\_-1.0
  - EP36\_EL\_0.5
  - EP39\_EL\_-0.5
  - EP40\_EL\_0.0
  - EP41\_EL\_0.0
  - EP45\_EL\_-0.5
  - EP46\_EL\_-1.0
  - EP47\_EL\_0.0
  - EP51\_EL\_-0.5
  - EPDUP01\_082422
  - FB01\_082422
  - FB01\_PFAS\_082422
- Samples were relinquished to Alpha Analytical, Inc., an Environmental Laboratory Accredited Program (ELAP)-certified laboratory under standard chain-of-custody protocols.
- Sample locations and elevations were surveyed by a professional surveyor.

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## 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, VOCs, and particulate matter less than 10 microns in diameter (PM10), during ground-intrusive activities. There were no fifteen-minute average concentrations for VOCs and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm and 1.00 µg/m<sup>3</sup>, 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 µg/m<sup>3</sup> to 0.02 µg/m<sup>3</sup>.
- 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 <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
PM-1	0.047	0.0	0.02
PM-2	0.039	0.0	0.02
PM-3	0.026	0.1	0.00
PM-4	0.037	0.2	0.01
PM-5	0.031	0.1	0.01
PM-6	0.024	0.0	0.02
WZ-1	0.033	0.0	0.01
WZ-2	0.013	0.0	0.01
WZ-3	0.023	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
<b>Action Level</b>	<b>0.100 mg/m<sup>3</sup></b>	<b>5.0 ppm</b>	<b>1.00 µg/m<sup>3</sup></b>
PM-1	0.066	0.0	0.05
PM-2	*0.119 @ 11:35am	0.0	0.04
PM-3	0.079	0.3	0.01
PM-4	**0.179 @ 2:13pm	0.5	0.04
PM-5	0.057	0.3	0.03
PM-6	0.041	0.1	0.05
WZ-1	0.045	0.0	0.03
WZ-2	0.029	0.2	0.03
WZ-3	0.048	0.0	0.04

• mg/m<sup>3</sup> = milligrams per cubic meter • ppm = parts per million • µg/m<sup>3</sup> = micrograms per cubic meter

- \* PM10 concentrations at perimeter CAMP station PM-2 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 11:23am to 11:35am (13 minutes). During this time, CCJV was in the process of

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## SITE OBSERVATION REPORT

applying Atmos® AC-645 dust/vapor suppressing foam to exposed soil/fill across the site and fugitive dust was not observed migrating from the site.

- \*\*PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 2:05pm to 2:19pm (15 minutes). The exceedance was caused by welding activities adjacent to perimeter CAMP station PM-4 and was not the result of ground-intrusive activities associated with soil/fill at the site. Fugitive dust was not observed migrating from the site during this time.

### 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<sup>3</sup> to 2.28 µg/m<sup>3</sup>.
  - Three instantaneous mercury vapor readings were recorded above 1.00 µg/m<sup>3</sup> (1.42 µg/m<sup>3</sup> at 1:08pm, 1.05 µg/m<sup>3</sup> at 1:22pm, and 2.28 µg/m<sup>3</sup> at 1:24pm), however, mercury vapor was not detected at concentrations approaching or exceeding the action level established in the CAMP at any perimeter or off-site CAMP station throughout the work day.
- 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.

### CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 6:53am to 3:12pm during excavation activities along the northern boundary of the site.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 7:08am to 3:12pm during excavation activities in the northeastern part of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:53m to 3:12pm due to exposed soil 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 3:12pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.06 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station ranged from 0.0 ppm to 0.2 ppm.

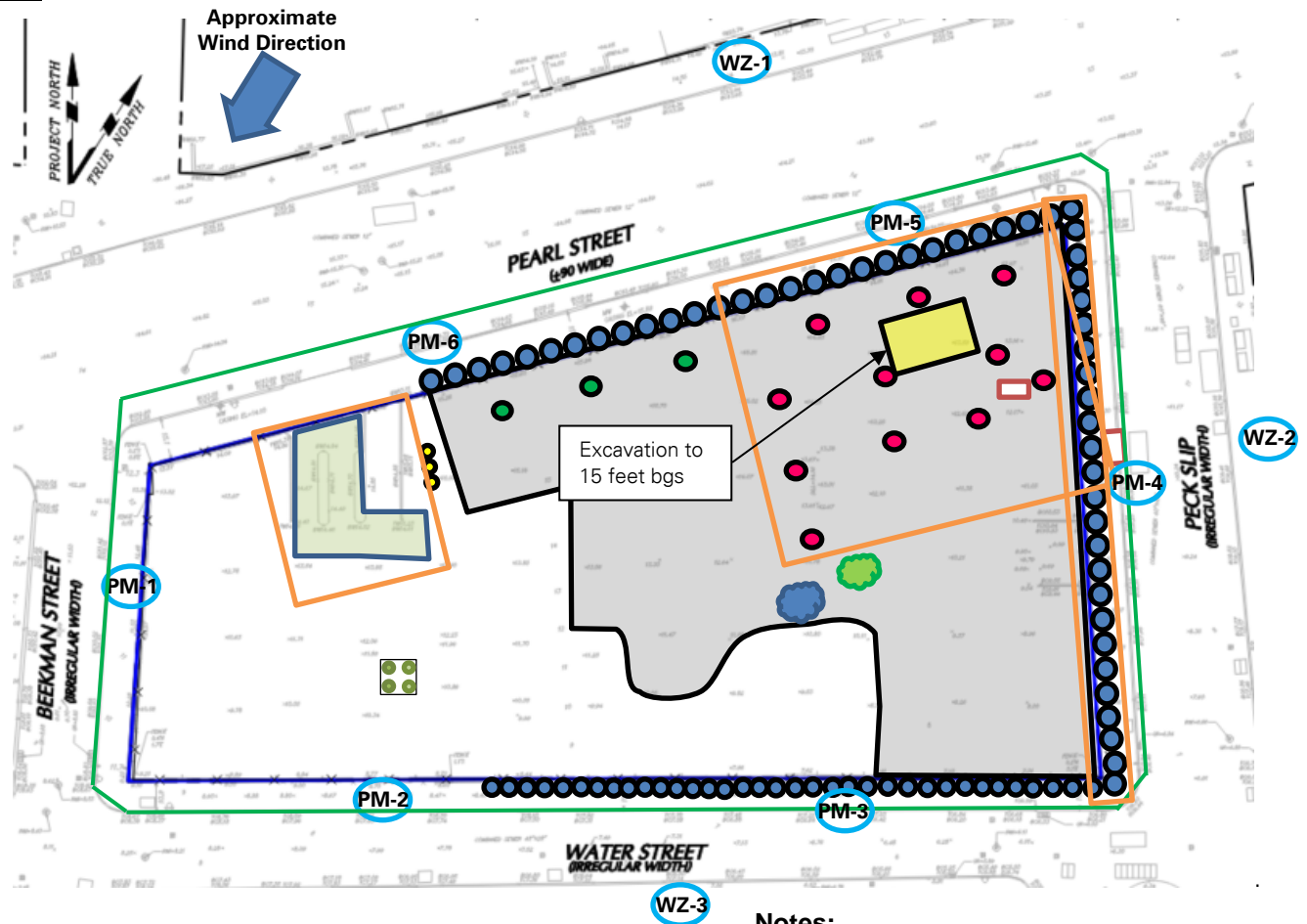
### Anticipated Activities

- CCJV will continue installation of timber lagging between soldier piles.
- CCJV will continue excavation and off-site disposal of soil/fill in the eastern and southcentral parts of the site.
- Langan will continue collection of confirmation endpoint soil samples across the site.

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			<b>LANGAN</b>

## 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 General Fill Stockpile
- Approximate Location of Stockpiled Virgin Stone
- Approximate Excavated Soil/Fill Stockpile

### Notes:

1) Locations of air monitoring stations are approximate.

- Approximate Location of UST
- 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 Endpoint Sample Location
- Approximate Location of Previously Collected Endpoint Sample

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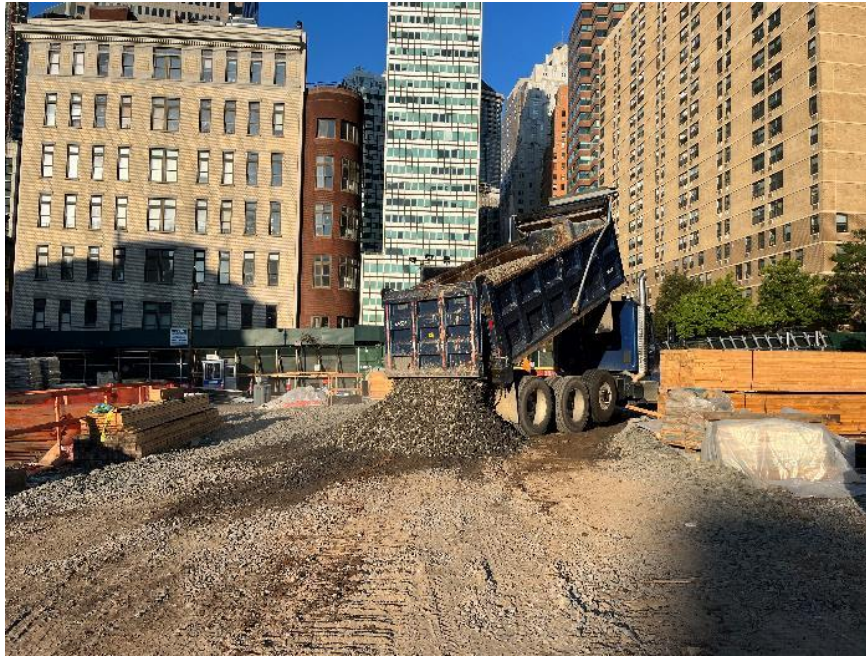
By: Elsayh Boak

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## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV importing 1.5-inch clean bluestone to the site for tracking pad maintenance (facing west)



**Photo 2:** CCJV actively applying Atmos® AC-645 dust/vapor suppressing foam to soil/fill during excavation in the northeastern part of the site (facing north)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak <b>LANGAN</b>
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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Thursday, August 25, 2022  <b>WEATHER:</b> Clear, 70.0 – 90.0 °F Wind: NNW @ 0.6 – 4.0 mph  <b>TIME:</b> 6:00 AM – 4:15 PM  <b>MONITOR:</b> Brian Kenneally, Elsayh Boak, Eddie Cai	
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 79</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Elsayh Boak, Eddie Cai, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – Jack Dettra <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Theresa Imbriolo		
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>• CCJV excavated an about 20-foot-long by 8-foot-wide area to about 1 foot below the existing grade to investigate an underground storage tank (UST) encountered on August 24, 2022.             <ul style="list-style-type: none"> <li>○ Excavated soil/fill was temporarily stockpiled adjacent to the work area and was screened for odors, staining, organic vapors, and mercury vapor using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. Petroleum-like odors and a maximum PID reading of 785 parts per million (ppm) was recorded.</li> <li>○ CCJV identified three additional USTs (4 in total) at a depth of approximately 15 feet below grade surface (bgs). The headspaces above the opening of the tanks were screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. Petroleum-like odor and a maximum PID reading of 15,000 ppm (the maximum reading for the PID) was recorded.</li> <li>○ CCJV applied Atmos® AC-645 dust/vapor suppressing foam atop the USTs and the surrounding area in preparation for removal of tank contents at a later date.</li> </ul> </li> <li>• CCJV installed tie-back rods for support-of-excavation (SOE) system installation along the eastern boundary of the site (Peck Slip).</li> <li>• CCJV covered all exposed soil/fill and construction and demolition (C&amp;D) debris with Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover at the end of each work day.</li> </ul>			
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally  <b>LANGAN</b>

## SITE OBSERVATION REPORT

### Material Tracking

- No material was exported from the site.
- No material was imported to the 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	8	184.42	0	0	5	108.52	17	410.95
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	0	0	0	0	0	0
Project Total	5	85	31	620	15	300	202	4,040

#### 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	0	0
Project Total	209	4,180	99	1,980	42	840

### Sampling Activities

- No samples were collected.

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## 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 VOCs and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm and 1.00 µg/m³, 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 µg/m³ to 0.03 µg/m³.
- 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/m³)	Organic Vapor (ppm)	Mercury Vapor (µg/m³)
PM-1	0.047	0.0	0.02
PM-2	0.039	0.0	0.01
PM-3	0.028	0.0	0.00
PM-4	0.032	0.4	0.01
PM-5	0.037	0.2	0.01
PM-6	0.027	0.0	0.02
WZ-1	0.035	0.0	0.01
WZ-2	0.024	0.1	0.01
WZ-3	0.025	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m³)	Organic Vapor (ppm)	Mercury Vapor (µg/m³)
<b>Action Level</b>	<b>0.100 mg/m³</b>	<b>5.0 ppm</b>	<b>1.00 µg/m³</b>
PM-1	0.078	0.0	0.04
PM-2	0.082	0.0	0.04
PM-3	0.053	0.1	0.01
PM-4	*0.106 @ 8:47am	1.4	0.03
PM-5	0.089	0.5	0.03
PM-6	0.041	0.0	0.04
WZ-1	0.072	0.0	0.04
WZ-2	0.029	0.2	0.03
WZ-3	0.039	0.0	0.04

•mg/m³ = milligrams per cubic meter •ppm = parts per million •µg/m³ = micrograms per cubic meter

- \*PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m³) from 8:39am to 8:52am (14 minutes). The exceedance was caused exhaust from an active

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## SITE OBSERVATION REPORT

generator adjacent to perimeter CAMP station PM-4 and was not the result of ground-intrusive activities associated with soil/fill at the site. Fugitive dust was not observed migrating from the site during this time.

### 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<sup>3</sup> to 0.17 µg/m<sup>3</sup>.
- 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, with the exception of screening during exposure of the USTs in the northeastern part of the site.

### CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 6:59am to 3:18pm during excavation activities in the northeastern part of the site.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:59am to 3:18pm during excavation activities in the northeastern part of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:59am to 3:18pm due to exposed soil within 20 feet of the southern site boundary.

### Equipment Troubleshooting

- PM10 concentrations were not recorded at off-site CAMP station WZ-2 between 7:54am and 8:16am during replacement of the external battery. No ground-intrusive activities were ongoing during this time and fugitive dust was not observed migrating from the site. Data logging at off-site CAMP station WZ-2 resumed at 8:17am following replacement of the battery. Additionally, perimeter CAMP station PM-4, which was located between the work area and the off-site CAMP station, did not record PM10 at concentrations above background conditions during this time.

### 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 3:18pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.03 µg/m<sup>3</sup>.
- VOCs concentrations at each CAMP station were recorded at 0.0 ppm.

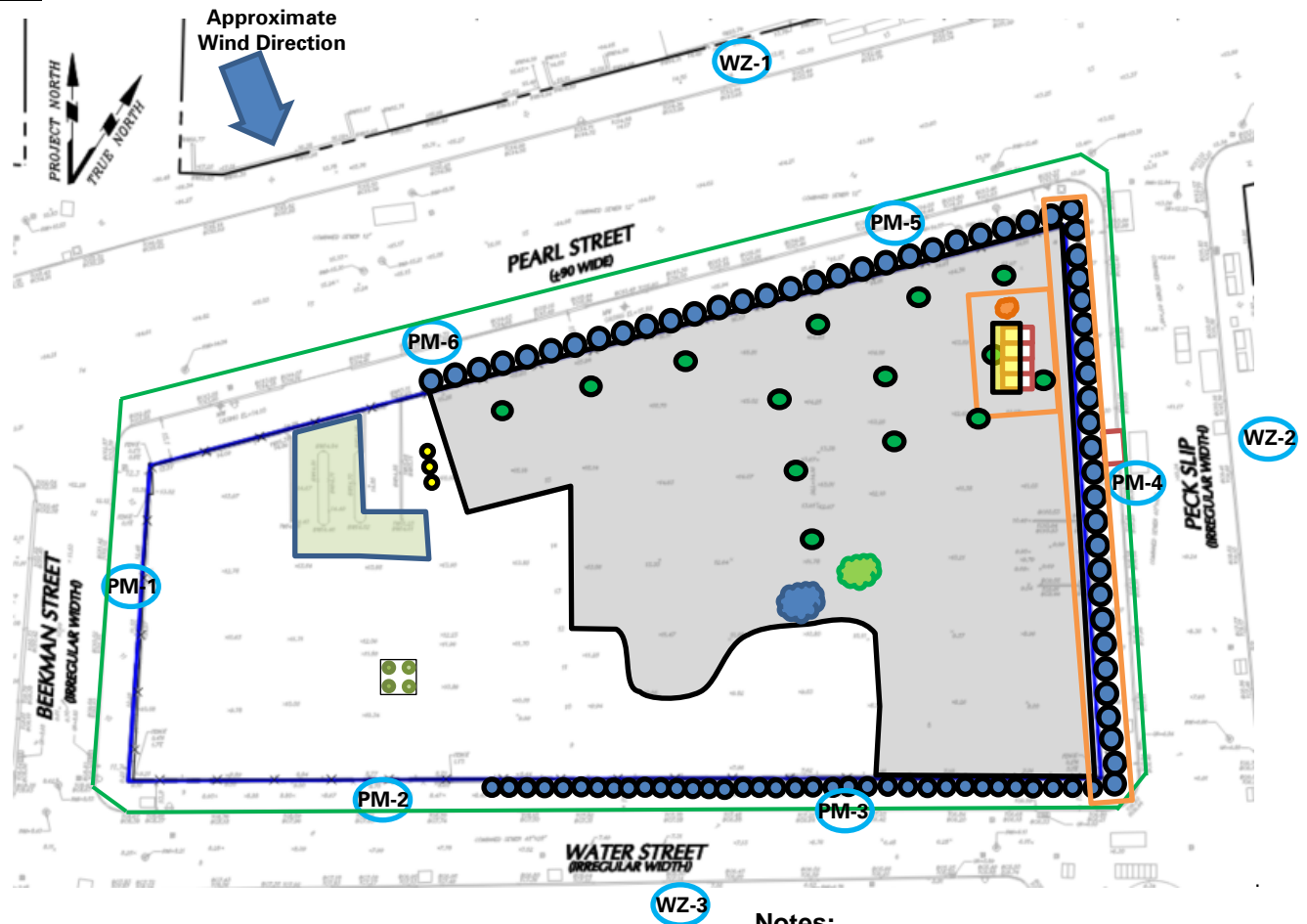
### Anticipated Activities

- CCJV will continue installation of timber lagging between soldier piles.
- CCJV will continue excavation and off-site disposal of soil/fill in the eastern and southcentral parts of the site.
- Langan will continue collection of confirmation endpoint soil samples across the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			<b>LANGAN</b>

## 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 General Fill Stockpile
- Approximate Location of Stockpiled Virgin Stone
- Approximate Excavated Soil/Fill Stockpile

### Notes:

1) Locations of air monitoring stations are approximate.

- Approximate Location of UST
- 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 Endpoint Sample Location
- Approximate Location of Previously Collected Endpoint Sample

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By: Brian Kenneally

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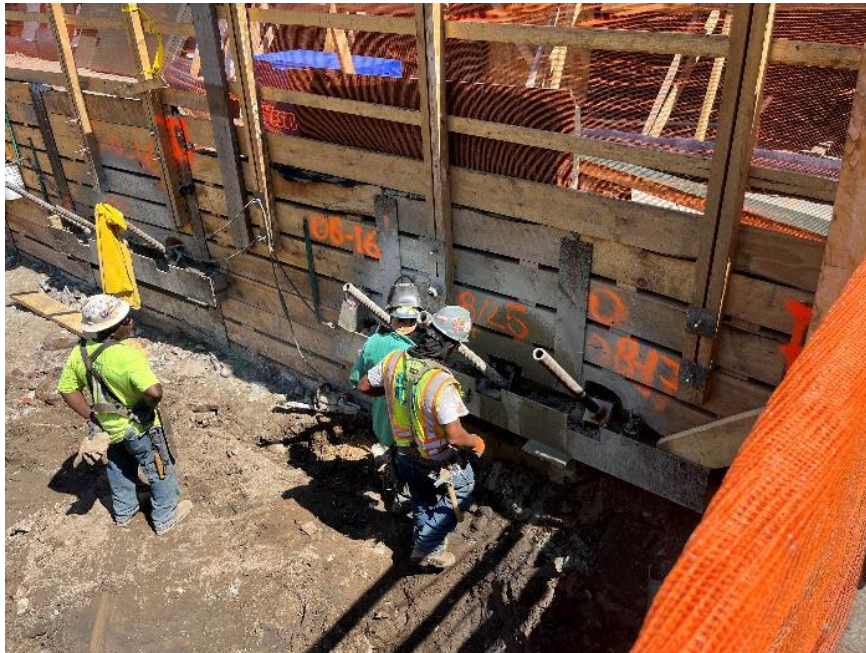


## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV installing a tieback rod along the eastern boundary of the site (Peck Slip) (facing northeast)



**Photo 2:** CCJV welding tieback rods to steel walers along the eastern boundary of the site (Peck Slip) (facing northeast)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally <b>LANGAN</b>
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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Friday, August 26, 2022  <b>WEATHER:</b> Clear, 74.0 – 86.0 °F Wind: N @ 0. – 6.9 mph  <b>TIME:</b> 6:00 AM – 4:15 PM  <b>MONITOR:</b> Maitland Robinson, Elsayh Boak, Eddie Cai
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 80</b></span> <b>Langan</b> (Environmental/Geotechnical) – Maitland Robinson, Elsayh Boak, Eddie Cai, Kevin Leong <b>LendLease</b> (Construction Manager) – Marty Cohen <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – Jack Dettra <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam <b>AKRF Inc. (AKRF)</b> (Archaeologist) – Theresa Imbriolo	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV excavated an about 25-foot-long by 15-foot-wide area to about 1 foot below the existing grade for removal and off-site disposal of non-hazardous soil/fill in the northeastern part of site (waste characterization cell WC07) and to expose previously identified underground storage tanks (USTs). Excavated soil/fill was live-loaded into a tri-axle dump truck for off-site disposal at the Middlesex County Landfill facility in East Brunswick, NJ. The truck was covered with tight-fitting covers and was inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>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. Petroleum-like odor and a maximum PID reading of 21.9 parts per million (ppm) was recorded. CCJV actively applied Atmos® AC-645 dust/vapor suppressing foam to soil/fill during excavation and loading for off-site disposal.</li> </ul> </li> <li>CCJV excavated an about 20-foot-long by 15-foot-wide area to about 1 foot below the existing grade for removal and off-site disposal of non-hazardous mercury-impacted soil/fill in the north-central part of site (waste characterization cell WC05). Excavated soil/fill was live-loaded into a tri-axle dump truck for off-site disposal at the Middlesex County Landfill facility in East Brunswick, NJ. The truck was covered with tight-fitting covers and was inspected and washed before leaving the site.             <ul style="list-style-type: none"> <li>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. No odors or staining, or instrumental evidence of contamination was observed. CCJV actively applied Mercon-X® to soil/fill during excavation and loading for off-site disposal.</li> </ul> </li> <li>CCJV covered all exposed soil/fill and construction and demolition (C&amp;D) debris with Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover at the end of each work day.</li> </ul>		
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By: Eddie Cai <div style="text-align: center;"><b>LANGAN</b></div>

## SITE OBSERVATION REPORT

### Material Tracking

- CCJV exported 2 truckloads (about 40 cubic yards [CY]) of non-hazardous soil/fill from waste characterization cells WC05 and WC07 for off-site disposal at the Middlesex County Landfill in East Brunswick, NJ.
- No material was imported to the 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	8	184.42	0	0	5	108.52	17	410.95
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	0	0	0	0	0	0
Project Total	5	85	31	620	15	300	202	4,040

#### 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	2	40	0	0	0	0
Project Total	211	4,220	99	1,980	42	840

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Eddie Cai

**LANGAN**

## SITE OBSERVATION REPORT

### Sampling Activities

- Langan collected one grab soil sample (SB4\_EP\_EL\_-1.0) for laboratory analysis of total mercury.
- The sample was relinquished to Alpha Analytical, Inc., an Environmental Laboratory Accredited Program (ELAP)-certified laboratory under standard chain-of-custody protocols.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Eddie Cai <b>LANGAN</b>
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## 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 VOCs and mercury vapor that approached or exceeded the action level established by the CAMP (5.0 ppm and 1.00 µg/m<sup>3</sup>, 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 µg/m<sup>3</sup> to 0.03 µg/m<sup>3</sup>.
- 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 <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
PM-1	0.059	0.0	0.02
PM-2	0.064	0.0	0.02
PM-3	0.052	0.0	0.00
PM-4	0.048	0.0	0.02
PM-5	0.037	0.0	0.01
PM-6	0.050	0.0	0.01
WZ-1	0.063	0.0	0.01
WZ-2	0.042	0.0	0.01
WZ-3	0.045	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
<b>Action Level</b>	<b>0.100 mg/m<sup>3</sup></b>	<b>5.0 ppm</b>	<b>1.00 µg/m<sup>3</sup></b>
PM-1	0.080	0.0	0.06
PM-2	*0.104 @ 7:54am	0.0	0.04
PM-3	0.085	0.1	0.01
PM-4	0.059	0.0	0.03
PM-5	0.056	0.1	0.03
PM-6	0.086	0.0	0.03
WZ-1	0.079	0.0	0.03
WZ-2	0.056	0.1	0.03
WZ-3	0.073	0.0	0.02

●mg/m<sup>3</sup> = milligrams per cubic meter    ●ppm = parts per million    ●µg/m<sup>3</sup> = micrograms per cubic meter

- \* PM10 concentrations at perimeter CAMP station PM-2 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 7:50am to 7:55am (6 minutes). During this time, CCJV was sweeping the sidewalk

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			<b>LANGAN</b>

## SITE OBSERVATION REPORT

adjacent to the perimeter CAMP station. The exceedance was not the result of ground-intrusive activities associated with soil/fill at the site and fugitive dust was not observed migrating from the site.

### 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<sup>3</sup> to 0.22 µg/m<sup>3</sup>.
- 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, with the exception of screening during exposure of the USTs in the northeastern part of the site.

### CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 6:54am to 3:13pm during excavation activities in the northeastern part of the site.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:54am to 3:13pm during excavation activities in the northeastern part of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:54am to 3:13pm due to exposed soil 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 between 3:03pm and 3:13pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.04 µg/m<sup>3</sup>.
- VOCs concentrations at each CAMP station were recorded at 0.0 ppm.

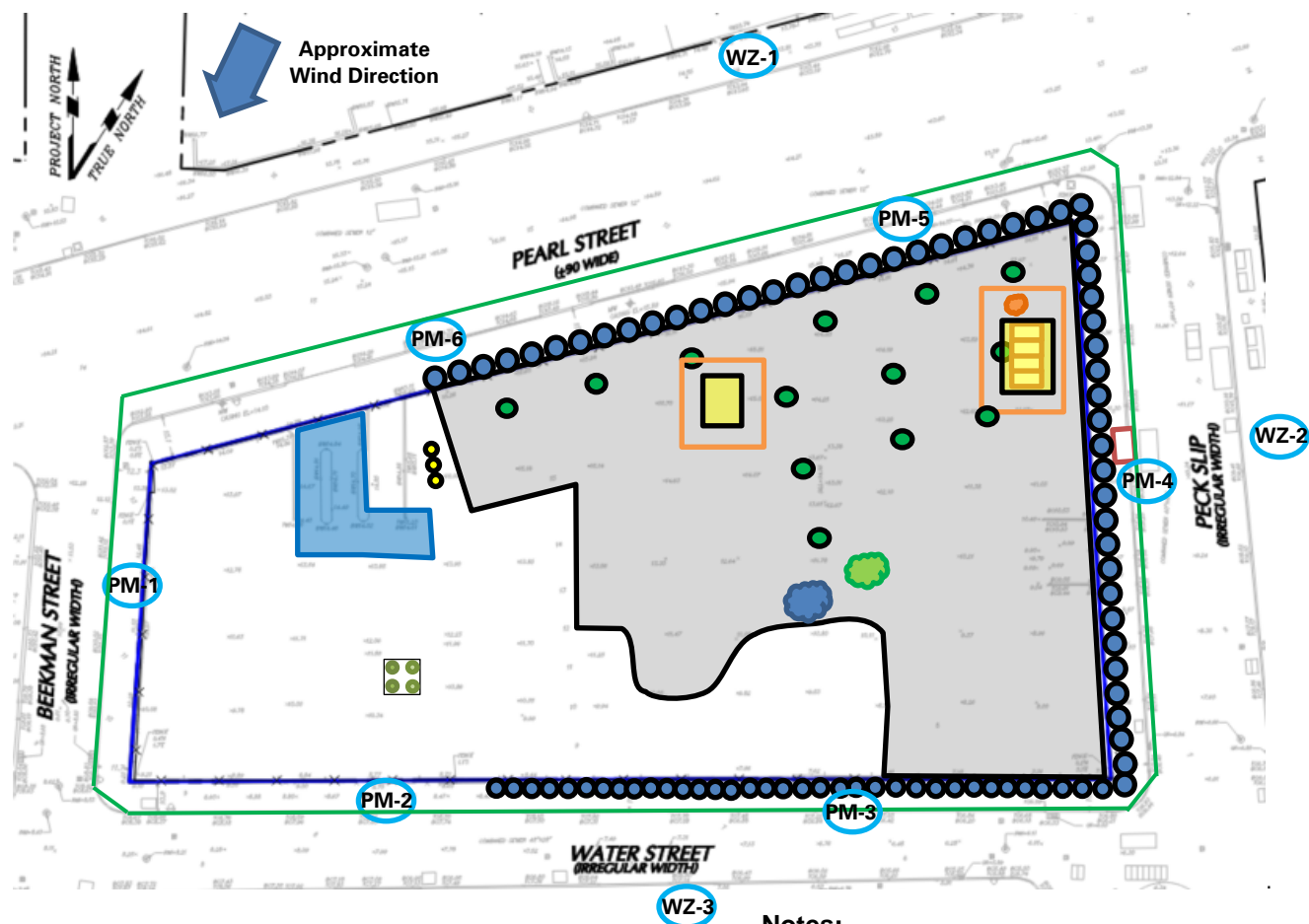
### Anticipated Activities

- CCJV will continue installation of timber lagging between soldier piles.
- CCJV will continue excavation and off-site disposal of soil/fill in the eastern and southcentral parts of the site.
- Langan will continue collection of confirmation endpoint soil samples across the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Eddie Cai
			<b>LANGAN</b>

## 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 General Fill Stockpile
- Approximate Location of Stockpiled Virgin Stone
- Approximate Excavated Soil/Fill Stockpile

### Notes:

1) Locations of air monitoring stations are approximate.

- Approximate Location of UST
- 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 Endpoint Sample Location
- Approximate Location of Previously Collected Endpoint Sample

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Eddie Cai

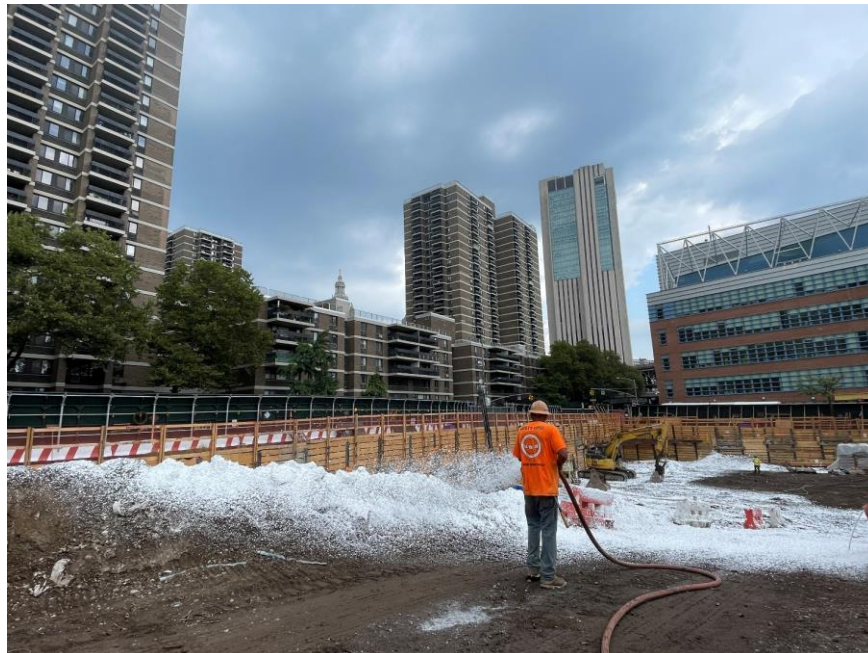
**LANGAN**

## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV excavating non-hazardous soil/fill in the northeastern part of the site and actively applying Atmos® AC-645 dust/vapor suppressing foam (facing northeast)



**Photo 2:** CCJV applying Atmos® AC-645 dust/vapor suppressing foam to exposed soil/fill across the site (facing northeast)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Eddie Cai
			LANGAN



## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Saturday, August 27, 2022  <b>WEATHER:</b> Clear, 73.0 – 79.0 °F Wind: NW @ 0.0 – 14 mph  <b>TIME:</b> 8:45 AM – 11:15 AM  <b>MONITOR:</b> Elsayh Boak
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 81</b></span> <b>Langan</b> (Environmental/Geotechnical) – Elsayh Boak <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – Jack Dettra <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Rafi Alam	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>CCJV covered all exposed soil/fill and construction and demolition (C&amp;D) debris with Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover.</li> </ul>		
<b>Cc:</b>	M. Raygorodetsky, P. McMahon, M. Au	<b>By:</b> Elsayh Boak  <b>LANGAN</b>

## SITE OBSERVATION REPORT

### Material Tracking

- No material was exported from the site.
- No material was imported to the 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	8	184.42	0	0	5	108.52	17	410.95
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	0	0	0	0	0	0
Project Total	5	85	31	620	15	300	202	4,040

#### 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	0	0
Project Total	211	4,220	99	1,980	42	840

### Sampling Activities

- No samples were collected.

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

## SITE OBSERVATION REPORT

### CAMP Activities

The community air monitoring plan (CAMP) was not implemented, as there were no ground-intrusive activities ongoing at the site. Langan performed ambient air monitoring across the site using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer during reinstallation of the temporary overnight cover.

#### 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<sup>3</sup> to 0.15 µg/m<sup>3</sup>. The average recorded Jerome® J505 was 0.029 µg/m<sup>3</sup>.
- The dedicated mobile monitor (Langan) used a handheld photoionization detector (PID) to monitor volatile organic compound (VOC) concentrations throughout the site. VOC concentrations were at or below background concentrations throughout the work day.

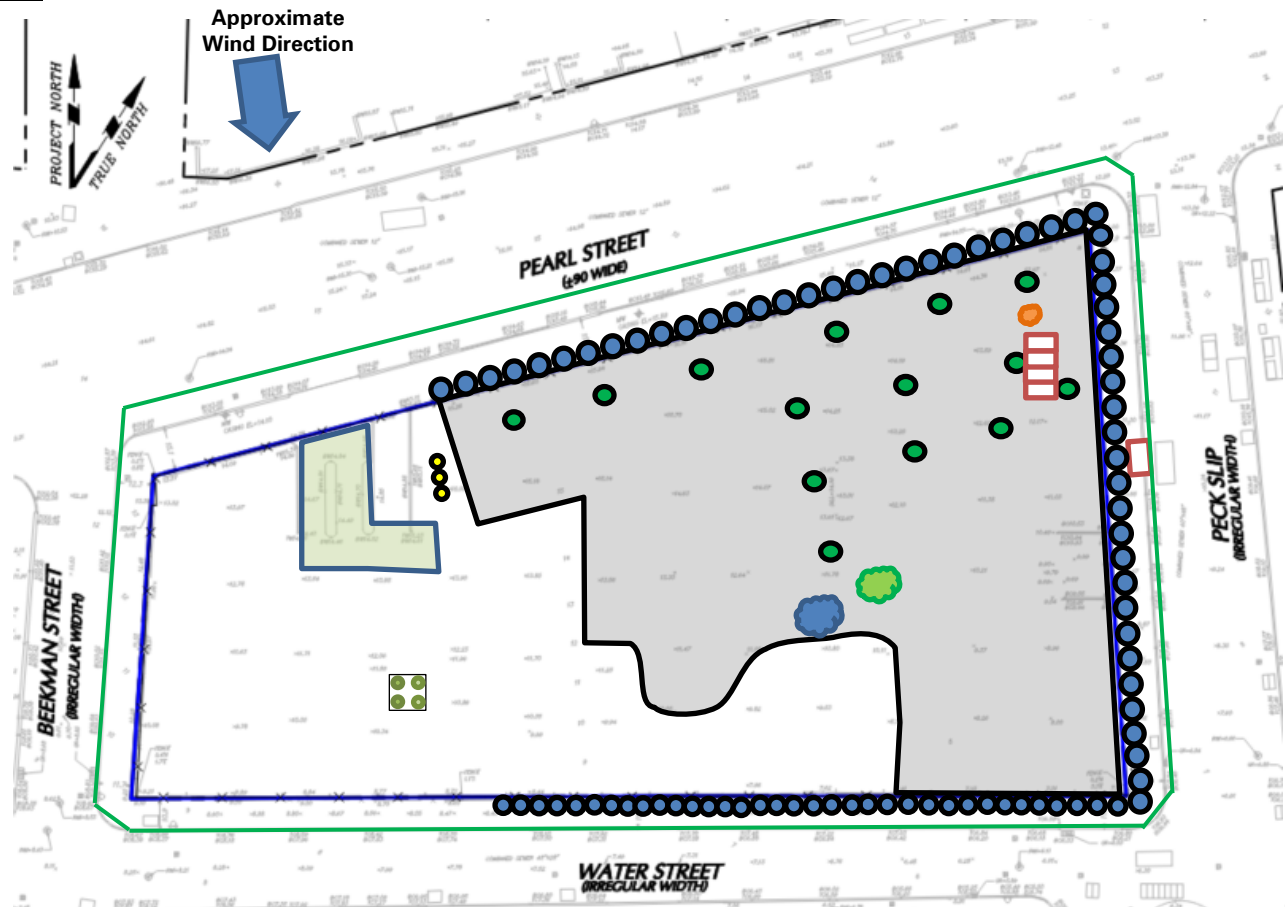
### Anticipated Activities

- CCJV will continue installation of timber lagging between soldier piles.
- CCJV will continue excavation and off-site disposal of soil/fill in the southern part of the site.
- Langan will continue collection of confirmation endpoint soil samples across the site.






Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Elsah Boak <b>LANGAN</b>
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## SITE OBSERVATION REPORT

### Site Map












### Legend:

-  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

### Notes:

1) Locations of air monitoring stations are approximate.

-  Approximate Location of UST
-  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 Endpoint Sample Location
-  Approximate Location of Previously Collected Endpoint Sample

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Elsayh Boak

**LANGAN**

## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** Atmos® AC-645 dust/vapor suppressing foam applied to exposed soil/fill across the site (facing west)

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

## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Sunday, August 28, 2022  <b>WEATHER:</b> Sunny, 73.0 – 81.0 °F Wind: NE @ 0.0 – 7.0 mph  <b>TIME:</b> 9:00 AM – 10:25 AM  <b>MONITOR:</b> Camille Quick
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290	<b>PRESENT AT SITE:</b> <b>Day 82</b> <b>Langan</b> (Environmental/Geotechnical) –Camille Quick <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – Jack Dettra <b>LendLease</b> (General Contractor)	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"><li>CCJV covered all exposed soil/fill and construction and demolition (C&amp;D) debris with Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover.</li></ul>		
<b>Cc:</b>	M. Raygorodetsky, P. McMahon, M. Au	<b>By:</b> Camille Quick  <b>LANGAN</b>

## SITE OBSERVATION REPORT

### Material Tracking

- No material was exported from the site.
- No material was imported to the 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	8	184.42	0	0	5	108.52	17	410.95
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	0	0	0	0	0	0
Project Total	5	85	31	620	15	300	202	4,040

#### 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	0	0
Project Total	211	4,220	99	1,980	42	840

### Sampling Activities

- No samples were collected.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Camille Quick
			LANGAN



## SITE OBSERVATION REPORT

### **CAMP Activities**

The community air monitoring plan (CAMP) was not implemented, as there were no ground-intrusive activities ongoing at the site. Langan performed ambient air monitoring across the site using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer during reinstallation of the temporary overnight cover.

#### 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<sup>3</sup> to 0.04 µg/m<sup>3</sup>.
- The dedicated mobile monitor (Langan) used a handheld photoionization detector (PID) to monitor volatile organic compound (VOC) concentrations throughout the site. VOC concentrations were at or below background concentrations throughout the work day.

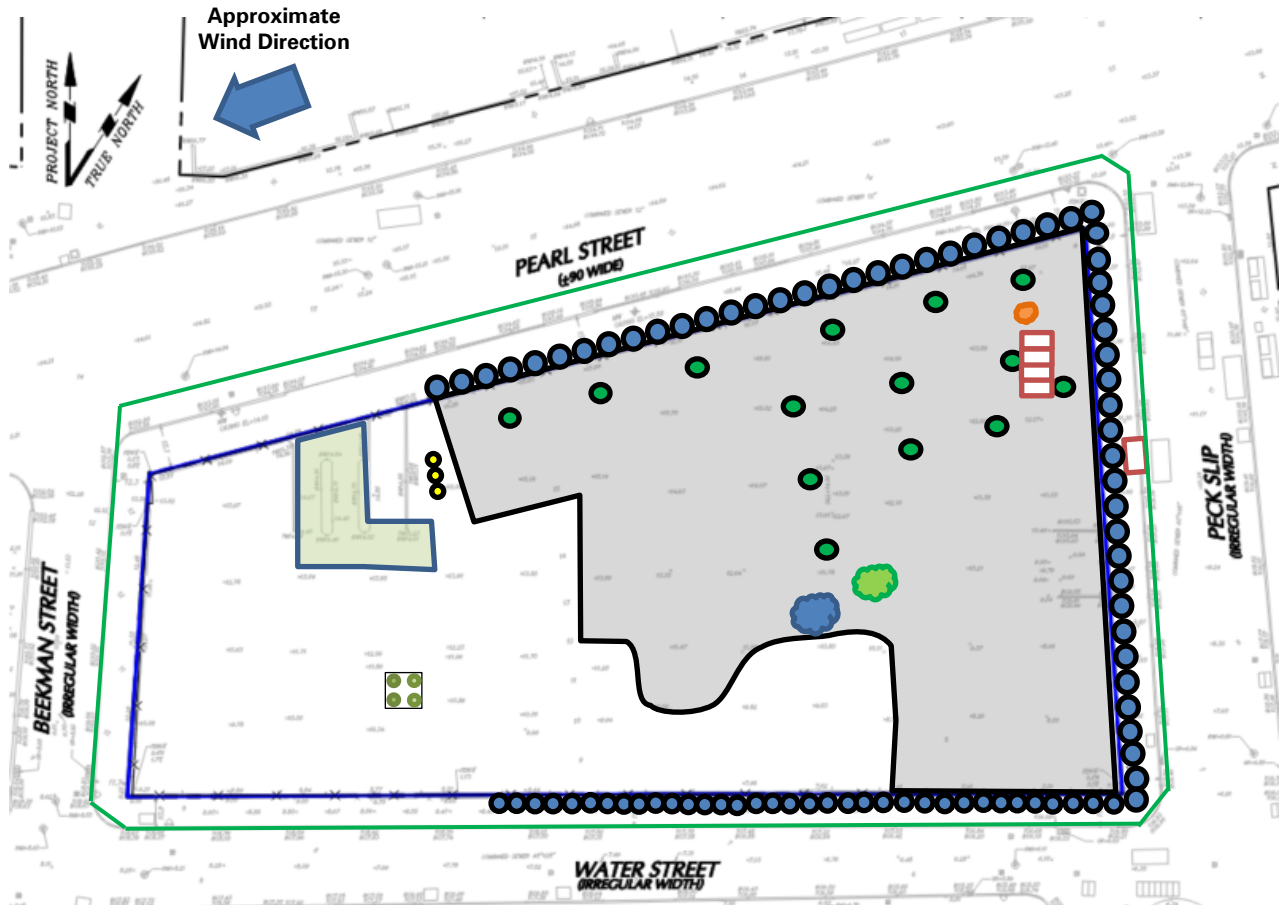
### **Anticipated Activities**

- CCJV will continue installation of timber lagging between soldier piles.
- CCJV will continue excavation and off-site disposal of soil/fill in the southern part of the site.
- Langan will continue collection of confirmation endpoint soil samples across the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Camille Quick
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

### Site Map



### Legend:

- 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

### Notes:

1) Locations of air monitoring stations are approximate.

- Approximate Location of UST
- 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 Endpoint Sample Location
- Approximate Location of Previously Collected Endpoint Sample

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Camille Quick

**LANGAN**

## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV applying Atmos® AC-645 dust/vapor suppressing foam to exposed soil/fill across the site (facing east)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Camille Quick
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Monday, August 29, 2022  <b>WEATHER:</b> Clear, 75.0 – 86.0 °F Wind: N @ 0.0 – 5.8 mph  <b>TIME:</b> 6:00 AM – 6:00 PM  <b>MONITOR:</b> Maitland Robinson, Camille Quick
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290 JCB 110W Hydradig	<b>PRESENT AT SITE:</b> <b>Day 83</b> <b>Langan</b> (Environmental/Geotechnical) – Maitland Robinson, Camille Quick, Kevin leong <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – Jack Dettra <b>Akela Contracting, LLC</b> (Excavation Contractor) – Akille McCallister <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Marnie Chancey	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>Akela Contracting installed temporary fencing, consisting of jersey barriers and chain-link fence, off-site along Peck Slip (immediately east of the perimeter construction fencing) to prepare for installation of a connection to the New York City Department of Environmental Protection (NYCDEP) sewer for future dewatering activities at the site.</li> <li>Akela Contracting excavated an about 8-foot-long by 2-foot-wide area to a maximum depth of about 2 feet below grade surface (bgs) off-site along Peck Slip (immediately east of the perimeter construction fencing) to facilitate connection to the NYCDEP sewer for future dewatering activities at the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors, staining, or instrumental evidence of impacts were recorded.</li> <li>Excavated soil/fill was placed in a 20-cubic-yard roll-off container in preparation for future off-site disposal at a later date. The 20-cubic-yard roll-off container was covered at the end of the work day.</li> </ul> </li> <li>CCJV excavated an about 40-foot-long by 6-foot-wide area to about 1 foot below the existing grade to investigate a previously identified concrete pad in northeastern part of site (waste characterization cells WC07 and WC08).             <ul style="list-style-type: none"> <li>CCJV identified an about 9-foot-long by 9-foot-wide concrete footing and remnant sections of a former concrete pad at a depth of approximately 16 feet bgs. Concrete from the former concrete pad was removed from the excavation area and temporarily stockpiled in the south-central part of the site in preparation for off-site disposal at a later date.</li> </ul> </li> </ul>		
<b>Cc:</b> M. Raygorodetsky, P. McMahon, M. Au	<b>By:</b> Maitland Robinson  <b>LANGAN</b>	

## SITE OBSERVATION REPORT

- Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. A maximum PID reading of 14.1 parts per million (ppm) was recorded. CCJV actively applied Atmos® AC-645 dust/vapor suppressing foam to soil/fill during excavation. Excavated soil/fill was graded into the original location following removal of concrete.
- CCJV covered all exposed soil/fill and construction and demolition (C&D) debris with Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover.

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Maitland Robinson

**LANGAN**

## SITE OBSERVATION REPORT

### Material Tracking

- No material was exported from the site.
- No material was imported to the 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	8	184.42	0	0	5	108.52	17	410.95
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	0	0	0	0	0	0
Project Total	5	85	31	620	15	300	202	4,040

#### 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	0	0
Project Total	211	4,220	99	1,980	42	840

### Sampling Activities

- No samples were collected.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Maitland Robinson
			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, 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, and PM10 that approached or exceeded the action level established by the CAMP (1.00  $\mu\text{g}/\text{m}^3$ , 5.0 ppm, and 0.100  $\text{mg}/\text{m}^3$ , 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 ranged from 0.00  $\mu\text{g}/\text{m}^3$  to 0.03  $\mu\text{g}/\text{m}^3$ .
- Background concentrations of VOCs at each CAMP station ranged from 0.0 ppm to 0.2 ppm.

### Perimeter and Work Zone Concentrations

#### Daily Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.042	0.0	0.01
PM-2	0.040	0.0	0.02
PM-3	0.026	0.0	0.00
PM-4	0.023	0.2	0.02
PM-5	0.030	0.1	0.01
PM-6	0.023	0.2	0.01
WZ-1	0.035	0.0	0.02
WZ-2	0.020	0.0	0.05
WZ-3	0.020	0.1	0.00

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.057	0.0	0.03
PM-2	0.079	0.0	0.05
PM-3	0.038	0.1	0.01
PM-4	0.033	0.4	0.05
PM-5	0.042	0.7	0.03
PM-6	0.048	1.3	0.03
WZ-1	0.060	0.0	0.04
WZ-2	0.031	0.0	0.13
WZ-3	0.035	0.2	0.02

•  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    • ppm = parts per million    •  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Maitland Robinson

**LANGAN**



## SITE OBSERVATION REPORT

### 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<sup>3</sup> to 0.27 µg/m<sup>3</sup>.
- 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.

### CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 6:50am to 4:43pm during excavation activities in the northeastern part of the site.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:46am to 4:43pm during excavation activities along Peck Slip.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:51am to 4:43pm due to excavation activities along Peck Slip.

### 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 between 4:35pm and 4:43pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.0 µg/m<sup>3</sup> to 0.08 µg/m<sup>3</sup>.
- VOCs concentrations at each CAMP station were recorded at 0.0 ppm.

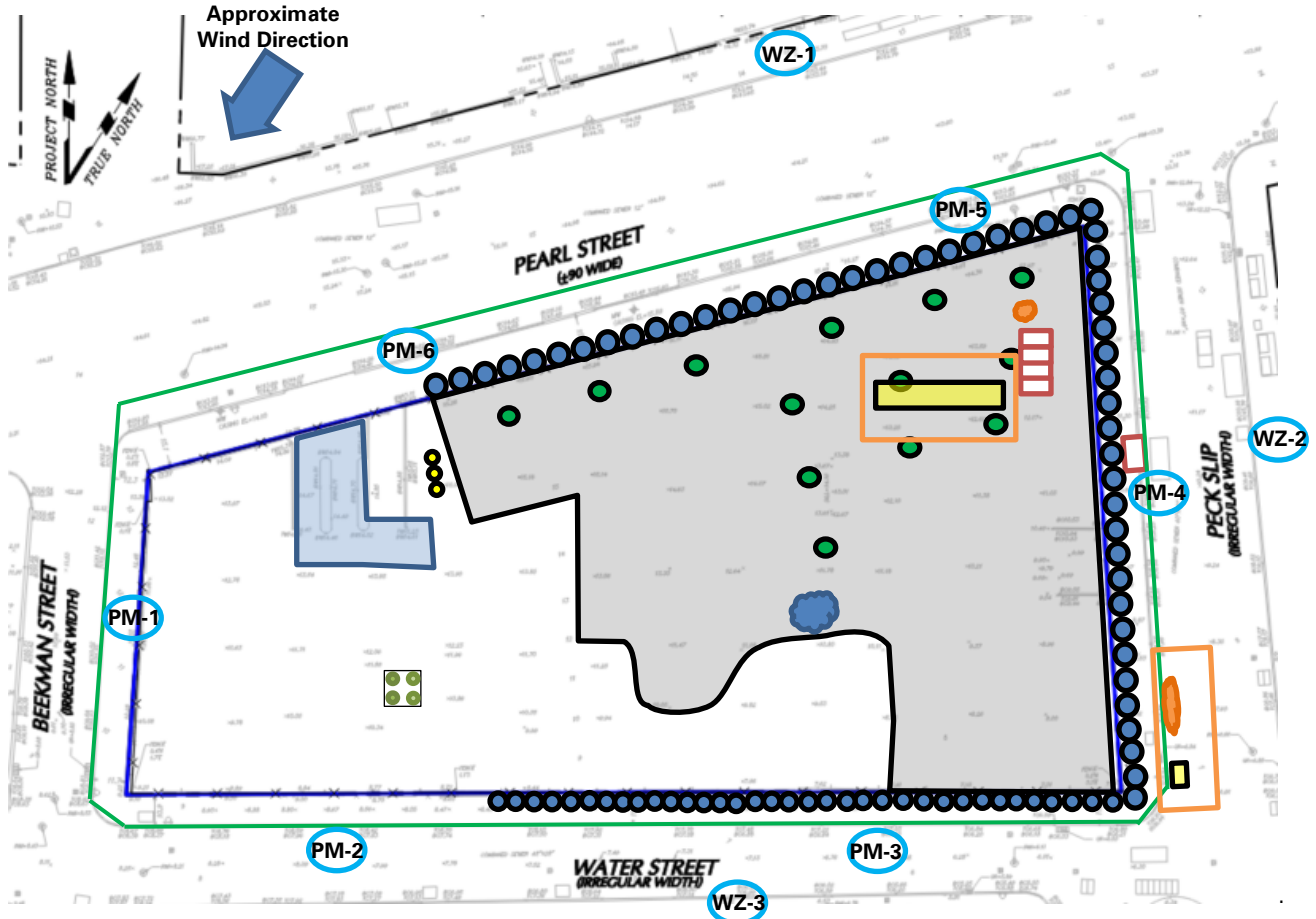
### Anticipated Activities

- CCJV will continue installation of timber lagging between soldier piles.
- CCJV will continue excavation and off-site disposal of soil/fill in the southern part of the site.
- CCJV will remove contents from previously identified underground storage tanks (USTs) in the northeastern part of the site.
- Langan will continue collection of confirmation endpoint soil samples across the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Maitland Robinson
			<b>LANGAN</b>

## 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 General Fill Stockpile
- Approximate Location of Stockpiled Virgin Stone
- Approximate Excavated Soil/Fill Stockpile

### Notes:

1) Locations of air monitoring stations are approximate.

- Approximate Location of UST
- 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 Endpoint Sample Location
- Approximate Location of Previously Collected Endpoint Sample

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Maitland Robinson

**LANGAN**

## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV actively applying Atmos® AC-645 dust/vapor suppressing foam during excavation in the northeastern part of the site (facing south)



**Photo 2:** Covered roll-off container located along Peck Slip for off-site excavation work (facing northwest)

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Maitland Robinson <b>LANGAN</b>
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## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Tuesday, August 30, 2022  <b>WEATHER:</b> Clear, 75.0 – 86.0 °F Wind: N @ 0.0 – 13.0 mph  <b>TIME:</b> 6:00 AM – 6:00 PM  <b>MONITOR:</b> Brian Kenneally, Elsayh Boak, Eddie Cai
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290 JCB 110W Hydradig	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 84</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Elsayh Boak, Eddie Cai, Kevin leong <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn, Jack Dettra <b>Lendlease</b> (General Contractor) – Marty Cohen <b>Akela Contracting, LLC</b> (Excavation Contractor) – Akille McCallister <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Marnie Chancey	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>Akela Contracting excavated an about 6-foot-long by 2-foot-wide area to a maximum depth of about 5 feet below grade surface (bgs) between previously installed support-of-excavation (SOE) lagging and the perimeter construction fencing (off-site along Peck Slip, but within the perimeter construction fencing) to facilitate connection to the New York City Department of Environmental Protection (NYCDEP) sewer for future dewatering activities at the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors, staining, or instrumental evidence of impacts were recorded.</li> <li>Excavated soil/fill was placed in a 20-cubic-yard roll-off container in preparation for future off-site disposal at a later date. The 20-cubic-yard roll-off container was covered at the end of the work day.</li> </ul> </li> <li>CCJV removed an about 9-foot-long by 9-foot-wide concrete footing and remnant sections of a former concrete pad located in the northeastern part of the site (waste characterization cell WC07). Concrete was temporarily stockpiled in the south-central part of the site in preparation for off-site disposal at a later date.</li> <li>CCJV began installation of steel sheet piles in the southeastern part of the site for SOE system installation.</li> <li>CCJV graded previously backfilled 1.5-inch virgin stone in the southwestern part of the site (the former pile cap construction area) to create a staging area for temporary stockpiling of excavated soil/fill.</li> <li>CCJV covered all exposed soil/fill and construction and demolition (C&amp;D) debris with Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover.</li> </ul>		
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By: Brian Kenneally <b>LANGAN</b>

## SITE OBSERVATION REPORT

### Material Tracking

- No material was exported from the site.
- No material was imported to the 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	8	184.42	0	0	5	108.52	17	410.95
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	0	0	0	0	0	0
Project Total	5	85	31	620	15	300	202	4,040

#### 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	0	0
Project Total	211	4,220	99	1,980	42	840

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Brian Kenneally

**LANGAN**

## SITE OBSERVATION REPORT

### Sampling Activities

- Langan collected one confirmation endpoint soil sample (EP30\_EL\_-1) and associated quality assurance/quality control (QA/QC) samples for laboratory analysis of NYSDEC Part 375/target compound list (TCL) volatile organic compounds (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.
- Sample locations and elevations were surveyed by a professional surveyor.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally <b>LANGAN</b>
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## 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, 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, and PM10 that approached or exceeded the action level established by the CAMP (1.00  $\mu\text{g}/\text{m}^3$ , 5.0 ppm, and 0.100  $\text{mg}/\text{m}^3$ , 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 ranged from 0.00  $\mu\text{g}/\text{m}^3$  to 0.02  $\mu\text{g}/\text{m}^3$ .
- 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 ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
PM-1	0.030	0.0	0.01
PM-2	0.026	0.0	0.02
PM-3	0.013	0.0	0.00
PM-4	0.000	0.2	0.02
PM-5	0.025	0.0	0.01
PM-6	0.012	0.1	0.01
WZ-1	0.019	0.0	0.01
WZ-2	0.004	0.0	0.03
WZ-3	0.014	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate ( $\text{mg}/\text{m}^3$ )	Organic Vapor (ppm)	Mercury Vapor ( $\mu\text{g}/\text{m}^3$ )
<b>Action Level</b>	<b>0.100 <math>\text{mg}/\text{m}^3</math></b>	<b>5.0 ppm</b>	<b>1.00 <math>\mu\text{g}/\text{m}^3</math></b>
PM-1	0.044	0.0	0.05
PM-2	0.056	0.0	0.05
PM-3	0.022	0.1	0.01
PM-4	0.000	0.5	0.04
PM-5	0.045	0.0	0.02
PM-6	0.024	0.4	0.03
WZ-1	0.027	0.0	0.03
WZ-2	0.024	0.0	0.06
WZ-3	0.030	0.0	0.03

•  $\text{mg}/\text{m}^3$  = milligrams per cubic meter    • ppm = parts per million    •  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Brian Kenneally

**LANGAN**



## SITE OBSERVATION REPORT

### 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<sup>3</sup> to 0.22 µg/m<sup>3</sup>.
- 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.

### CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 7:13am to 5:27pm due to exposed soil/fill within 20 feet of the northern site boundary.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:56am to 5:23pm during excavation activities along Peck Slip and installation of steel sheet piles in the southeastern part of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:56am to 5:19pm during excavation activities along Peck Slip and installation of steel sheet piles in the southeastern part of the site.

### Equipment Troubleshooting

- PM10 concentrations were not recorded at perimeter CAMP station PM-2 between 10:33am and 11:07am due to a depleted battery. No ground-intrusive activities were ongoing during this time and dust was not observed migrating from the site. Data logging at perimeter CAMP station PM-2 resumed at 11:08am following replacement of the battery.
- PM10 concentrations were not recorded at off-site CAMP station WZ-3 between 2:08pm and 2:09pm due to a depleted battery. During this time, CCJV was in the process of installing steel sheet piles in the southeastern part of the site and fugitive dust was not observed migrating from the site. Additionally, PM10 was not recorded at concentrations above background conditions at perimeter CAMP station PM-3, which was located between the work area and off-site CAMP station WZ-3. Data logging at off-site CAMP station WZ-3 resumed 2:10pm following replacement of the battery.

### 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 between 5:15pm and 5:27pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 µg/m<sup>3</sup> to 0.06 µg/m<sup>3</sup>.
- VOCs concentrations at each CAMP station were recorded at 0.0 ppm.

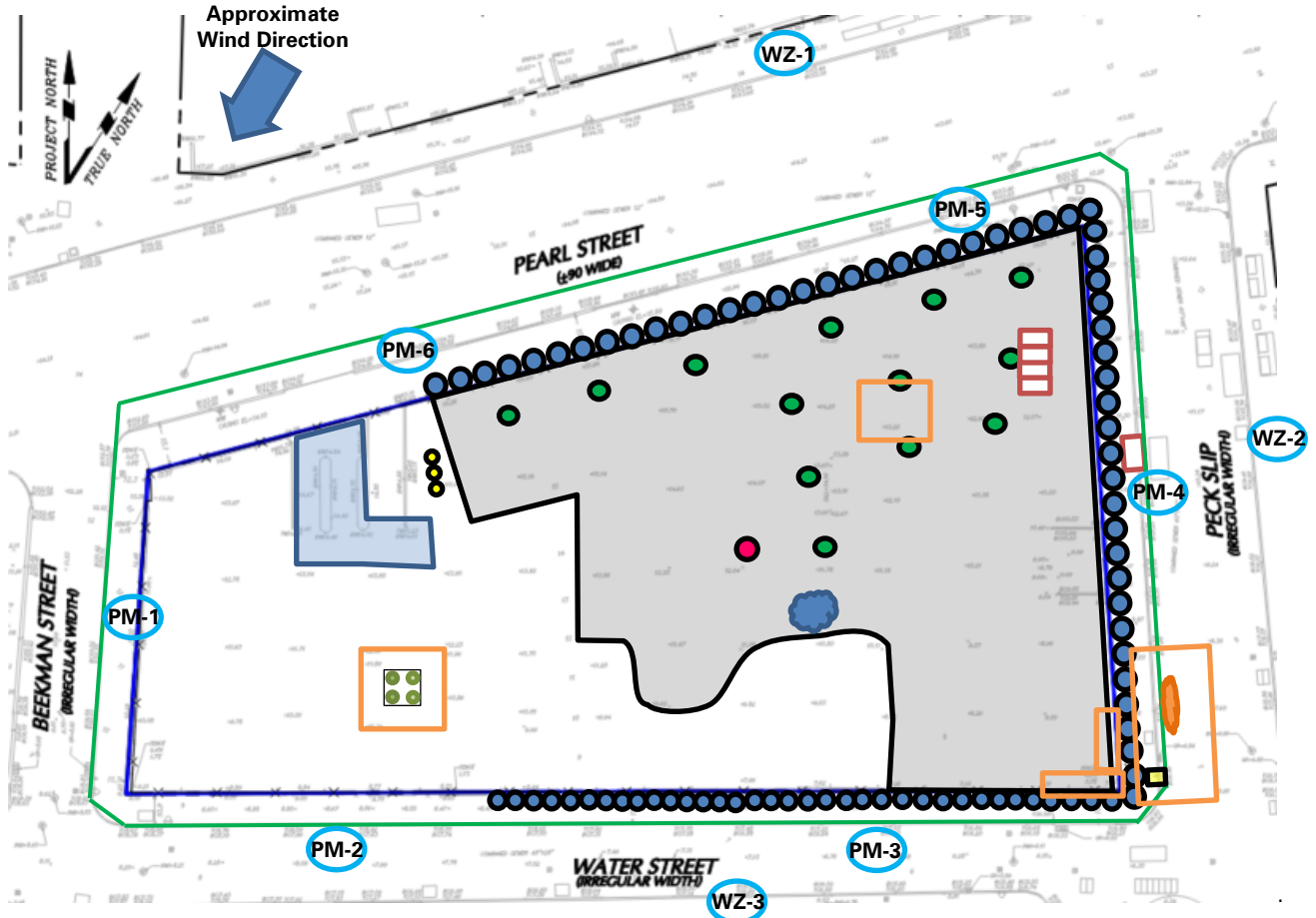
### Anticipated Activities

- CCJV will continue installation of timber lagging between soldier piles.
- CCJV will continue excavation and off-site disposal of soil/fill in the southern part of the site.
- Langan will continue collection of confirmation endpoint soil samples across the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

### 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 UST
- 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 Endpoint Sample Location
- Approximate Location of Previously Collected Endpoint Sample

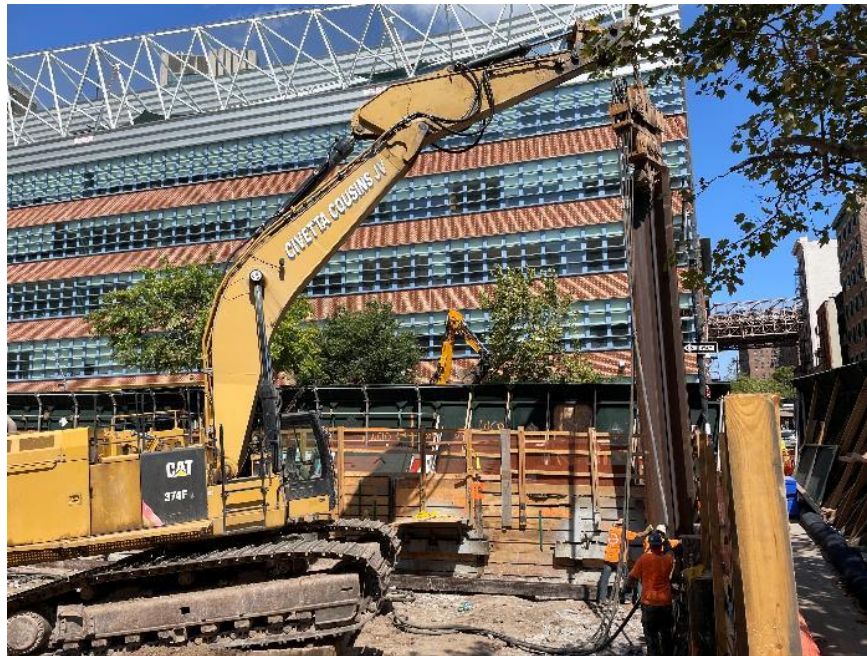
Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Brian Kenneally

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## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV installing a steel sheet pile for SOE system installation in the southeastern part of the site (facing east).



**Photo 2:** CCJV grading previously backfilled stone to create a staging area for temporary stockpiling of excavated soil/fill (facing north).

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

<b>PROJECT No.:</b> 170381202  <b>PROJECT:</b> 250 Water Street  <b>LOCATION:</b> New York, NY  <b>BCP SITE ID:</b> C231127	<b>CLIENT:</b> 250 Seaport District, LLC c/o The Howard Hughes Corporation	<b>DATE:</b> Wednesday, August 31, 2022  <b>WEATHER:</b> Clear, 77.9 – 85.1 °F Wind: N @ 0.1 mph  <b>TIME:</b> 6:00 AM – 6:30 PM  <b>MONITOR:</b> Brian Kenneally, Maitland Robinson, Camille Quick
<b>EQUIPMENT:</b> MiniRAE 3000 PID DustTrak II Jerome J405® Jerome J505® Hand tools CAT 374F Komatsu 969 Komatsu 228 Takeuchi TB290 JCB 110W Hydradig	<b>PRESENT AT SITE:</b> <span style="float: right;"><b>Day 85</b></span> <b>Langan</b> (Environmental/Geotechnical) – Brian Kenneally, Maitland Robinson, Camille Quick, Kevin leong <b>Civetta Cousins JV, LLC (CCJV)</b> (Foundation Contractor) – George Washburn, Jack Dettra <b>Lendlease</b> (General Contractor) – Marty Cohen <b>Akela Contracting, LLC</b> (Excavation Contractor) – Akille McCallister <b>New York State Department of Environmental Conservation (NYSDEC)</b> – Marnie Chancey	
<b>OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:</b>  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).  <b>Site Activities</b> <ul style="list-style-type: none"> <li>Akela Contracting excavated an about 6-foot-long by 2-foot-wide area to a maximum depth of about 7 feet below grade surface (bgs) between previously installed support-of-excavation (SOE) lagging and the perimeter construction fencing (off-site along Peck Slip, but within the perimeter construction fencing) to facilitate connection to the New York City Department of Environmental Protection (NYCDEP) sewer for future dewatering activities at the site.             <ul style="list-style-type: none"> <li>Excavated soil/fill was screened for odors, staining, organic vapors, and mercury vapors using a handheld photoionization detector (PID) and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors, staining, or instrumental evidence of impacts were recorded.</li> <li>Excavated soil/fill was placed in a 20-cubic-yard roll-off container in preparation for future off-site disposal at a later date. The 20-cubic-yard roll-off container was covered at the end of the work day.</li> </ul> </li> <li>CCJV continued installation of steel sheet piles in the southeastern part of the site for SOE system installation.</li> <li>CCJV excavated an approximately 50-foot-long by 35-foot-wide area to a maximum depth of about 8 feet bgs for removal of hazardous lead-impacted soil in the southern part of the site.             <ul style="list-style-type: none"> <li>Excavated material consisted of hazardous lead-impacted soil/fill and was screened for odors, staining, organic vapors, and mercury vapors using a handheld PID and handheld Jerome® J505 mercury vapor analyzer, respectively. No odors, staining or instrumental evidence of impacts were recorded. CCJV actively applied Atmos® AC-645 dust/vapor suppressing foam to the exposed soil/fill during excavation.</li> <li>Excavated soil/fill was temporarily stockpiled on and covered with polyethylene sheeting in the southwestern part of the site (the former pile cap construction area) in preparation for off-site disposal</li> </ul> </li> </ul>		
Cc:	M. Raygorodetsky, P. McMahon, M. Au	By: Brian Kenneally <b>LANGAN</b>

## SITE OBSERVATION REPORT

at a later date. The polyethylene cover was anchored using sand bags and the stockpile was surrounded with silt fencing and hay bales for erosion and sediment control.

- CCJV covered all exposed soil/fill and construction and demolition (C&D) debris with Atmos® AC-645 dust/vapor suppressing foam to create a temporary overnight cover.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			LANGAN

## SITE OBSERVATION REPORT

### Material Tracking

- No material was exported from the site.
- No material was imported to the 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	8	184.42	0	0	5	108.52	17	482.65
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	0	0	0	0	0	0
Project Total	5	85	31	620	15	300	201	4,020

#### 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	0	0
Project Total	211	4,220	99	1,980	42	840

### Sampling Activities

- No samples were collected.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			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 compound (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, and PM10 that approached or exceeded the action level established by the CAMP (1.00 µg/m<sup>3</sup>, 5.0 ppm, and 0.100 mg/m<sup>3</sup>, 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 µg/m<sup>3</sup> to 0.02 µg/m<sup>3</sup>.
- 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 <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
PM-1	0.034	0.0	0.01
PM-2	0.033	0.0	0.01
PM-3	0.017	0.0	0.00
PM-4	0.000	0.1	0.01
PM-5	0.026	0.0	0.01
PM-6	0.016	0.0	0.02
WZ-1	0.026	0.0	0.01
WZ-2	0.014	0.1	0.01
WZ-3	0.017	0.0	0.01

#### Maximum 15-Minute-Average Concentrations

Station ID	Particulate (mg/m <sup>3</sup> )	Organic Vapor (ppm)	Mercury Vapor (µg/m <sup>3</sup> )
<b>Action Level</b>	<b>0.100 mg/m<sup>3</sup></b>	<b>5.0 ppm</b>	<b>1.00 µg/m<sup>3</sup></b>
PM-1	0.056	0.0	0.04
PM-2	0.060	0.0	0.03
PM-3	0.030	0.0	0.01
PM-4	0.001	0.3	0.04
PM-5	0.038	0.0	0.02
PM-6	0.037	0.0	0.05
WZ-1	0.033	0.0	0.03
WZ-2	0.025	0.8	0.04
WZ-3	0.031	0.3	0.03

•mg/m<sup>3</sup> = milligrams per cubic meter    •ppm = parts per million    •µg/m<sup>3</sup> = micrograms per cubic meter

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			<b>LANGAN</b>



## SITE OBSERVATION REPORT

### 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<sup>3</sup> to 0.14 µg/m<sup>3</sup>.
- 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.

### CAMP Station Relocation

- CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 7:03am to 5:33pm due to exposed soil/fill within 20 feet of the northern site boundary.
- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:49am to 5:33pm during excavation activities along Peck Slip and installation of steel sheet piles in the southeastern part of the site.
- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 6:49am to 5:33pm during excavation activities in the southern part of the site and installation of steel sheet piles in the southeastern 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. 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 5:20pm and 5:33pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 µg/m<sup>3</sup> to 0.06 µg/m<sup>3</sup>.
- VOCs concentrations at each CAMP station were recorded at 0.2 ppm.

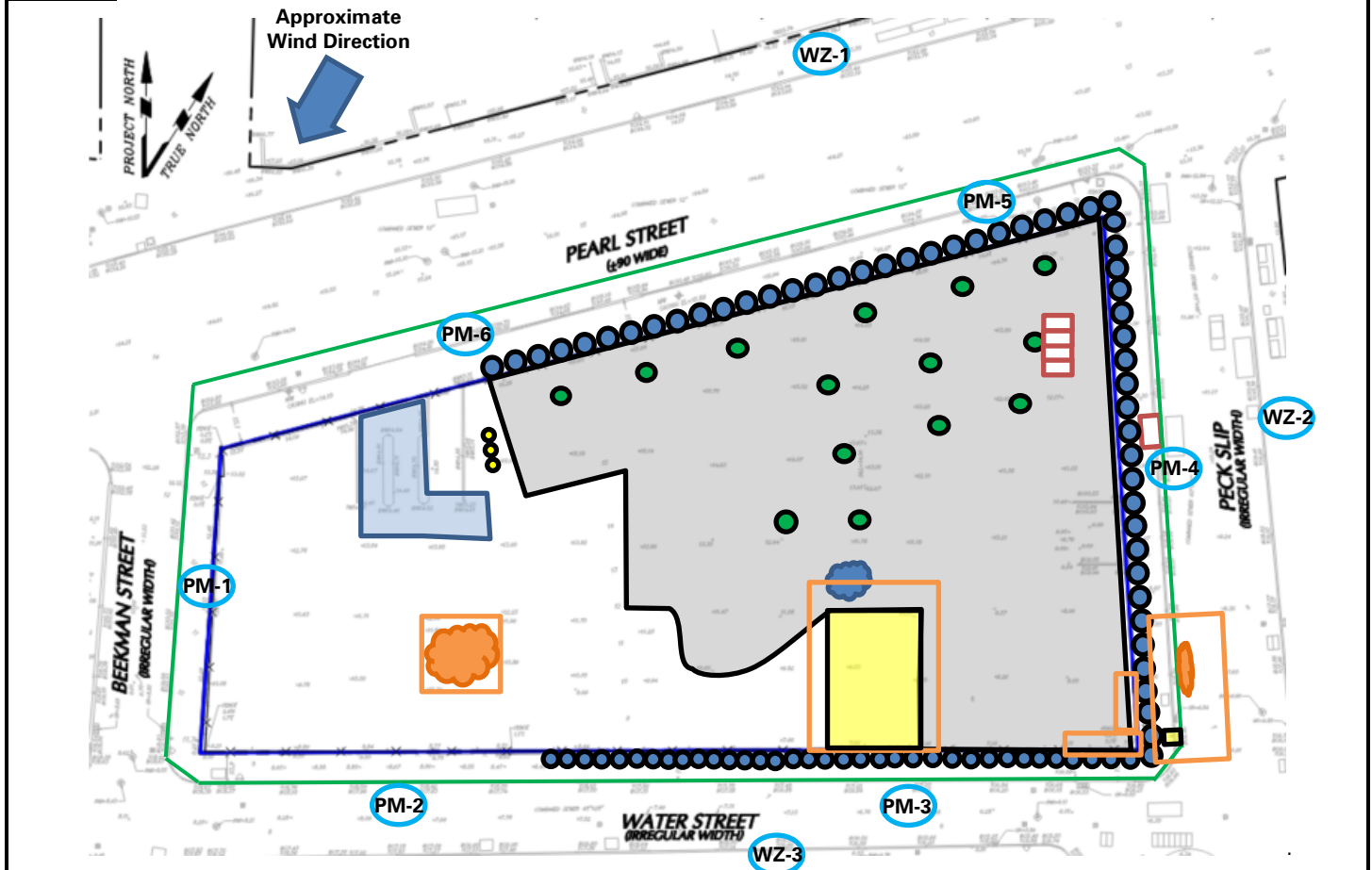
### Anticipated Activities

- CCJV will continue installation of sheet piles.
- CCJV will continue excavation and off-site disposal of soil/fill in the southern part of the site.
- CCJV will remove contents from previously identified underground storage tanks (USTs) in the northeastern part of the site.
- Langan will continue collection of confirmation endpoint soil samples across the site.

Cc:	M. Raygorodetsky, P. McMahon, M. Au	By:	Brian Kenneally
			<b>LANGAN</b>

## SITE OBSERVATION REPORT

### 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 UST
- 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 Endpoint Sample Location
- Approximate Location of Previously Collected Endpoint Sample

Cc: M. Raygorodetsky, P. McMahon, M. Au

By: Brian Kenneally

**LANGAN**

## SITE OBSERVATION REPORT

### Select Site Photographs:



**Photo 1:** CCJV actively applying Atmos® AC-645 dust/vapor suppressing foam to stockpiled soil/fill during excavation (facing northwest).



**Photo 2:** Excavated soil/fill temporarily stockpiled on polyethylene sheeting in the southwestern part of the site (facing south).

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