											06/11/22	
			יוואר					T		Projec	t number: 170381202	
			JAIL	ΙΑΙΚΙ		GRE	PUR			Page	1 of 2	Rev No 0
	ΙΑΙΝ	2	250 W	Vater S	treet Reme	diati	on Sit	te	Submitted By: Maitland Robinson			1100.110.0
ENGINEERING & ENVIRONME	ENTAL SERVICES	_				-			Du	st Action I	₋evel (µg/m³)	100
				Man	hattan, New Yo	ork			V	OC Action	Level (ppm)	5
									Н	g Action L	evel (µg/m³)	1.0
Weather Data Range fo	or Work Day	Wind Di	rection	NNE	Relative Humidity (%)	38.9	- 46.1	Deiby	Readings in the sum			able and graphs
Temp (°F)	71.6 - 77.0	Wind Spe	ed (MPH)	0.6 - 4.8	Barometer (inHg)	29.99	- 30.01	Dally	t <b>ain (in)</b> 0.05		concentration	s.
Station Location Work Area	Daily Avg. Dust Concentration (µg/m³)		Dust Max 15 Minute Dust Tin (μg/m³) Concentration (μg/m³)		Time of Maximum 15 Minut Reading	e Avg Dust	Daily A Concentra	vg. VOC tion (ppm)	Max 15 Min Concentration	ute VOC on (ppm)	Time of Max 15 Minut Reading	te Avg VOC
PM-1	16.0	33.8		8:28		C	.0	0.1		9:44		
PM-2	12.9	) 21.5		13:16		C	.0	0.0		8:06		
PM-3	8.8	14.7		13:16		C	.0	0.1		9:41		
PM-4	12.7	21.2		13:10		C	.0	0.0		8:05		
PM-5	19.7		26.7		11:40		0.0		0.0		8:05	
PM-6	15.5	23.2		13:17		0.0		0.0		8:05		
WZ-1	19.7			27.8	13:16		C	0 0.0			8:06	
Station Location Work Area	Daily Avg	J. Mercury C	oncentratio	n (µg/m³)	Max 15 Minute Me	rcury Conce	entration (µg	/m³)	Time of Max 15 Minute Avg Mercury Reading			
PM-1		0.	.0			0.1					10:16	
PM-2		0.	.0			0.0					8:07	
PM-3		0.	.0			0.0					8:30	
PM-4		0.	.0			0.0					8:06	
PM-5		0.	.1		0.4				9:49			
PM-6		0.	.0		0.0				8:06			
WZ-1	0.0				0.2				10:54			







Ambient Air (Handheld Jerome<sup>®</sup> J505 and Handheld PID)

- Langan used a handheld Jerome\* J505 mercury vapor analyzer to monitor ambient air conditions at various heights throughout the site.

- Raw data from the Jerome<sup>\*</sup> J505 mercury vapor analyzer will be downloaded on Tuesday, June 14, 2022. Instantaneous mercury vapor concentrations throughout the site were not detected at concentrations above background conditions for the duration of the work day.

- Langan used a handheld PID to monitor VOC concentrations throughout the site. VOC concentrations were not detected above background concentrations throughout the work day. Off-Site CAMP Station Relocation

- Perimeter air monitoring station PM-5 was relocated to the northern sidewalk of Pearl Street from 7:51am to 9:13am during advancement of soil boring SB24.

- Perimeter air monitoring station PM-4 was relocated to the eastern sidewalk of Peck Slip from 10:59am to 11:31am during advancement of soil boring WC10D.

# Prior to CAMP Shutdown

- Prior to discontinuing CAMP at the conclusion of ground-intrusive activities, VOC and mercury vapor concentrations were confirmed to return to background conditions at each perimeter station using the handheld PID and handheld Jerome\* J505 mercury vapor analyzer. CAMP stations were discontinued at 1:17pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station were recorded at  $0.00 \,\mu\text{g/m}^3$ .

- VOC concentrations at each CAMP station ranged from 0.0 to 0.2 ppm.







# DAILY AIR MONITORING REPORT

**250 Water Street Remediation Site** 

**Manhattan, New York** 

06/29/22	
Project number: 170381202	
Page 1 of 2	Pov No. 0
Submitted By:	Nev. NO. U
Dust Action Level (µg/m <sup>3</sup> )	100
VOC Action Level (ppm)	5
Hg Action Level (µg/m <sup>3</sup> )	1.0

Weather Data F	Range fo	r Work Day	Wind Di	irection	SE	Relative Humidity (%)	31.3	- 38.3	Daily	Rain (in)	0.00	Readings in the summary table and graphs
Temp (°F)		78.9 - 84.3	Wind Spe	ed (MPH)	1.3 - 5.8	Barometer (inHg)	30.24	- 30.31	5	0.00		concentrations.
Station Location Area	Work	Daily Avg. Concentratior	Dust n (µg/m³)	Max 15 Concent	Minute Dust ration (µg/m <sup>3</sup> )	Time of Maximum 15 Minute Reading	e Avg Dust	Daily A Concentra	vg. VOC tion (ppm)	Max 15 Min Concentrati	ute VOC on (ppm)	Time of Max 15 Minute Avg VOC Reading
PM-1		14.4		52.0		11:45		0.0		0.0		11:13
PM-2		3.3			15.4	15:04		0	.1	0.2		15:19
PM-3		6.2	6.2 16.1		13:18		0.6		0.8		13:19	
PM-4		10.1	10.1 15.8			13:41		0.0		0.0		11:05
PM-5		46.7			51.9	14:09		0.1		0.2		11:49
PM-6		23.4	23.4 58.5		11:44		0	.0	0.1		11:02	
WZ-1		26.0			44.1	15:27		0	.0	0.0		11:05
Station Location Area	Work	Daily Av	g. Mercury C	oncentration	ι (μg/m³)	Max 15 Minute Me	ntration (µg/	Tim	e of Max 15	Minute Avg Mercury Reading		
PM-1			0	.1				11:04				
PM-2			0	.0			0.0					10:58
PM-3			0	.0			0.0					13:37
PM-4			0	.4			0.5					15:45
PM-5			0	.1						13:05		
PM-6			0	.0				10:58				
WZ-1		0.0				0.0				10:58		



Air Monitoring Notes:

Langan performed air monitoring at the perimeter of the site and at the work zone at seven locations for particulate matter less than 10 microns in diameter (PM10), volatile organic compounds (VOCs), and mercury vapor, during ground-intrusive activities. Fifteen-minute time-weighted average concentrations of PM10, VOCs and mercury vapor did not exceed the action levels established in the site community air monitoring plan (CAMP) for the duration of work activities. - CAMP was not implemented until 10:42 am due to a lack of ground-intrusive activities.

### Background Concentrations

- Background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>\*</sup> J505 mercury vapor analyzer and a handheld photoionization detector (PID), respectively. Background concentrations of mercury vapor at each CAMP station ranged from 0.00 µg/m<sup>3</sup> to 0.01 µg/m<sup>3</sup>. Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.
- Ambient Air (Handheld Jerome\* J505 and Handheld PID)
- Langan used a handheld Jerome<sup>1</sup> JSOS mercury vapor analyzer and a handheld PID 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 0.06 µg/m<sup>3</sup>.
   Instantaneous VOC concentrations were not recorded above background concentrations throughout the work day.

Equipment Troubleshooting The DustTrak unit at perimeter CAMP station PM-3 was recalibrated at 1:54 pm due to negative readings being recorded. PM10 readings returned to background conditions following equipment recalibration and data logging resumed at 1:57 pm.

Prior to CAMP Shutdown Prior to discontinuing CAMP, VOC and mercury vapor concentrations were confirmed to return to background conditions at each perimeter station using the handheld PID and handheld Jerome<sup>+</sup> JSOS mercury vapor analyzer. CAMP stations were discontinued between 3:38 pm and 3:45 pm at the conclusion of groundintrusive 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.





												06/30/22	
									F		Projec	t number: 170381202	
				DAIL			GRE	PUK			Page	1 of 2	Rev No 0
			2	250 V	Nater S	treet Reme	diati	on Sit	е		Submitt	ed By:	1.00.10
ENGINEERING & EN	<i>VIRONME</i>	ENTAL SERVICES								D	ust Action L	₋evel (μg/m³)	100
					Man	hattan, New Yo	nattan, New York				VOC Action Level (ppm)		
										ł	Hg Action Lo	evel (µg/m³)	1.0
Weather Data	or Work Day	Wind Direction ENE			Relative Humidity (%)	32.7	- 53.3	Deihu	Dain (in)	0.00	Readings in the summary ta	able and graphs	
Temp (°F)		73.0 - 84.5	Wind Spee	ed (MPH)	1.0 - 5.8	Barometer (inHg)	30.25	- 30.29	Daily	ain (in) 0.00 below are the reported concentration			aownwina s.
Station Location Area	Work	Daily Avg. Concentration	Dust n (µg/m³)	Max 15 Concen	5 Minute Dust tration (μg/m³)	Time of Maximum 15 Minut Reading	e Avg Dust	Dust Daily Avg. V Concentration		Max 15 Minute VOC Concentration (ppm)		Time of Max 15 Minu Reading	te Avg VOC
PM-1		15.8	21.4		7:48		(	0.0	0.1		9:28		
PM-2		20.0	68.0		8:20		(	0.0	0.0		8:17		
PM-3		15.2	29.2		11:42		(	0.6	1.1		12:59		
PM-4		18.8	37.2		7:17		(	0.0	0.0		9:37		
PM-5		24.2			32.2	13:04		0.1		0.3		11:37	
PM-6		7.6			25.5	13:03		0.2		1.1		9:32	
WZ-1		27.2			45.2	7:39		(	0.0			8:01	
Station Location Area	Work	Daily Ave	g. Mercury Co	oncentratio	n (µg/m³)	Max 15 Minute Me	ercury Conce	entration (µg/	m³)	Time of Max 15 Minute Avg Mercury Reading			
PM-1			0.	1			0.1					10:53	
PM-2			0.0	0			0.0					11:54	
PM-3			0.0	0			0.0					10:42	
PM-4			0.0	0		0.0				9:59			
PM-5			0.	1		0.1				10:37			
PM-6			0.0	0		0.0				13:05			
WZ-1			0.0	0		0.0				7:28			





Langan performed air monitoring at the perimeter of the site and at the work zone at seven locations for particulate matter less than 10 microns in diameter (PM10), volatile organic compounds (VOCs), and mercury vapor, during ground-intrusive activities. Fifteen-minute average concentrations of PM10, VOCs, and mercury vapor did not exceed the action levels established in the site community air monitoring plan (CAMP) for the duration of work activities.

### **Background Concentrations**

Prior to implementation of ground-intrusive work, background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>®</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station ranged from 0.01  $\mu g/m^3$  to 0.09  $\mu g/m^3.$ 

- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

# Ambient Air (Handheld Jerome® J505 and Handheld PID)

- Langan used a handheld Jerome<sup>\*</sup> 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 0.24 µg/m<sup>3</sup>.

- Langan used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations were not detected above background concentrations throughout the work day.

### Off-Site CAMP Station Relocation

- Air monitoring station WZ-1 was relocated to the southern sidewalk of Water Street from 6:28am to 1:10pm.

# Equipment Troubleshooting

- Drilling activities were halted between 9:03am and 9:09am during battery replacement at perimeter CAMP station PM-4. PM10 concentrations were not recorded during this time and fugitive dust was not observed migrating from the site. Data logging resumed at 9:10am.

- The DustTrak unit at perimeter CAMP station PM-6 was recalibrated at 11:04am due to negative readings being recorded. PM10 readings returned to background conditions following equipment recalibration and data logging resumed at 11:08am.

### Prior to CAMP Shutdown

Prior to discontinuing CAMP at the conclusion of ground-intrusive activities, VOC and mercury vapor concentrations were confirmed to return to background conditions at each perimeter station using the handheld PID and handheld Jerome<sup>\*</sup> J505 mercury vapor analyzer. CAMP stations were discontinued between 12:59pm and 1:10pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.01  $\mu$ g/m<sup>3</sup> to 0.08  $\mu$ g/m<sup>3</sup>.

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







											07/01/22	
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		⊢	JAIL	IAIKI	NUNIIURIN	G RE	PUR			Page	1 of 2	Rev No 0
	ΙΑΝ	2	50 V	Vater S	treet Reme	diati	on Sif	e	Submitted By:			1.00.100.0
ENGINEERING & ENVIRONM	ENTAL SERVICES	_				Du	∟evel (µg/m³)	100				
				Man	hattan, New Yo	ork			V	OC Action	Level (ppm)	5
									H	g Action L	evel (µg/m³)	1.0
Weather Data Range f	or Work Day	Wind Direction		S	Relative Humidity (%)	24.0	- 71.6				Readings in the summary t	able and graphs
Temp (°F)	72.8 - 95.9	Wind Spee	ed (MPH)	0.3 - 6.0	Barometer (inHg)	30.02	- 30.20	Daily	Rain (in)	0.00	below are the reported downwin concentrations.	
Station Location Work Area	Daily Avg. Concentratior	Dust n (µg/m³)	ust Max 15 Minute Dust Tim μg/m³) Concentration (μg/m³)		Time of Maximum 15 Minut Reading	e Avg Dust	Daily A Concentra	vg. VOC ation (ppm)	Max 15 Minute VOC Concentration (ppm)		Time of Max 15 Minu Reading	te Avg VOC
PM-1	45.1			72.7	11:46		C	0.0	0.0		7:24	
PM-2	46.5	63.2		11:42		C	0.0	0.1		11:18		
PM-3	40.0	46.6		7:24		C	.3	0.7		12:05		
PM-4	43.3	51.4		7:24		C	0.0	0.0		7:23		
PM-5	39.1	52.4		10:52		0.1		0.1		11:53		
PM-6	54.5			*218.2	10:13		0.5		1.2		9:29	
WZ-1	62.1			70.4	7:24		C	0.0	0.0		7:24	
Station Location Work Area	Daily Avç	g. Mercury Co	oncentratio	n (µg/m³)	Max 15 Minute Me	rcury Conce	entration (µg	/m³)	Time of Max 15 Minute Avg Mercury Reading			
PM-1		0.0	)			0.0					9:57	
PM-2		0.0	)			0.0					11:57	
PM-3		0.0	)			0.0					11:26	
PM-4		0.0	)		0.0				10:40			
PM-5		0.0	)			8:50						
PM-6		0.0	0			9:01						
WZ-1		0.0	)			7:25						





Langan performed air monitoring at the perimeter of the site and at the work zone at seven total locations for particulate matter less than 10 microns in diameter (PM10), VOCs, and mercury vapor during ground-intrusive activities. Fifteen-minute average concentrations of VOCs and mercury vapor did not exceed the action levels established in the site community air monitoring plan (CAMP) for the duration of work activities. Fifteen-minute average concentrations of PM10 exceeded the action level established in the site CAMP in once instance discussed below.

### **Background Concentrations**

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>\*</sup> 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

- \*Particulate (PM10) concentrations exceeded the action level established in the CAMP from 10:13am to 10:26am at perimeter CAMP station PM-6 due to pinched tubing attached to the intake of the particulate monitor. The particulate monitor was recalibrated at 10:27am and the tubing was replaced. Particulate concentrations returned to background conditions and data logging resumed at 10:28am. The exceedances were determined not to be the result of ground-intrusive activities, as the two downwind CAMP stations nearest to the work area (PM-4 and PM-5) did not register PM10 above background conditions. Fugitive dust was not observed leaving the site during this time.

### Ambient Air (Handheld Jerome® J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome<sup>\*</sup> 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. Instantaneous VOC concentrations were not detected above background concentrations throughout the work day.

### Off-Site CAMP Station Relocation

- CAMP station WZ-1 was relocated to the eastern sidewalk of Peck Slip from 7:09am to 10:04am during advancement of soil borings WC07D and WC08D. - CAMP station WZ-1 was relocated to the northern sidewalk of Pearl Street from 10:04am to 12:10pm during advancement of soil borings WC07A and WC07B.

### Equipment Troubleshooting

- The PID at perimeter CAMP station PM-6 was recalibrated at 9:42am due to a persistent reading of 1.2 ppm, which was inconsistent with readings on the handheld unit (0.0 ppm). VOC concentrations returned to background conditions following equipment recalibration and data logging resumed at 9:43am.

- The DustTrak unit at perimeter CAMP station PM-6 was recalibrated at 10:27am due to erroneous high readings caused by pinched tubing attached to the intake of the particulate monitor. PM10 concentrations returned to background conditions following equipment recalibration and replacement of the tubing and data logging resumed at 10:28am.

# Prior to CAMP Shutdown

- Prior to discontinuing CAMP, all locations in which ground-intrusive activities occurred (ie. soil borings) were backfilled with clean drill cuttings and/or clean sand and were sealed at the surface using cold patch asphalt.

- Prior to discontinuing CAMP, VOC and mercury vapor concentrations were confirmed to return to background conditions at each perimeter station using the handheld PID and handheld Jerome<sup>\*</sup> J505 mercury vapor analyzer. CAMP stations were discontinued sequentially between 12:03 pm and 12:11 pm at the conclusion of ground-intrusive activities.



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

- Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.03  $\mu g/m^3$ 



											07/05/22	
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			DAIL			GRE	PUK	8		Page	1 of 2	Rev No 0
LAND			250 V	Vater S	treet Reme	diati	on Sit	е		Submitt	ed By:	1101.110.0
ENGINEERING & ENVIRONM	ENTAL SERVICES								Di	.evel (µg/m³)	100	
				Man	hattan, New Yo	ork			v	Level (ppm)	5	
									H	g Action Le	evel (µg/m³)	1.0
Weather Data Range for	or Work Day	Wind Di	rection	SE	Relative Humidity (%)	36.4	- 56.1				Readings in the summary ta	able and graphs
Temp (°F)	72.6 - 85.4	Wind Spe	ed (MPH)	1.4 - 7.0	Barometer (inHg)	30.10	- 30.17	Daily	Rain (in)	0.00	below are the reported concentration	downwind s.
Station Location Work Area	Daily Avg. Concentratior	Daily Avg. Dust Concentration (µg/m³)		Dust Max 15 Minute Dust Tim (μg/m³) Concentration (μg/m³)		e Avg Dust	Daily A Concentra	vg. VOC Max 15 M tion (ppm) Concentr		ute VOC on (ppm)	Time of Max 15 Minu Reading	te Avg VOC
PM-1	28.7	40.7		8:03		0	.3	0.6		10:55		
PM-2	31.1	42.1		42.1	8:35		0	.0	0.0		9:27	
PM-3	26.0	34.9		7:34		0	.4	0.7		12:11		
PM-4	28.8	40.7		8:35		0	.0	0.0		7:17		
PM-5	31.5		37.4		10:13		0.4		0.6		11:26	
PM-6	33.6			43.0	8:04		0.4		0.6		10:13	
WZ-1	N/A			N/A	N/A		N/A		N/A		N/A	
Station Location Work Area	Daily Avç	g. Mercury C	oncentratio	n (µg/m³)	Max 15 Minute Me	rcury Conce	entration (µg/	/m³)	Time of Max 15 Minute Avg Mercury Reading			
PM-1		0.	.0			0.0					9:34	
PM-2		0.	.0			0.0					9:26	
PM-3		0.	.0			0.2			10:11			
PM-4		0.	.0		0.0				10:56			
PM-5		0.	.3		0.4				11:43			
PM-6		0.	.0		0.0				12:07			
WZ-1		N/	/A				N/A					





Langan performed air monitoring at the perimeter of the site at six total locations for particulate matter less than 10 microns in diameter (PM10), VOCs, and mercury vapor. Fifteenminute average concentrations of PM10, VOCs, and mercury vapor did not exceed the action levels established in the site community air monitoring plan (CAMP) for the duration of air monitoring activities.

# Background Concentrations

Prior to implementation of air monitoring, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>®</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station ranged from 0.00  $\mu\text{g/m}^3$  to 0.01  $\mu\text{g/m}^3.$ 

- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

### Ambient Air (Handheld Jerome® J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used three handheld Jerome<sup>\*</sup> J505 mercury vapor analyzers 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 0.11 μg/m<sup>3</sup>.

- The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations were not detected above background concentrations throughout the work day.

# Prior to CAMP Shutdown

Prior to discontinuing air monitoring activities, VOC and mercury vapor concentrations were confirmed to return to background conditions at each perimeter station using the handheld PID and handheld Jerome<sup>®</sup> J505 mercury vapor analyzer. CAMP stations were discontinued sequentially between 12:07pm and 12:11 pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.04  $\mu g/m^3.$ 

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





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			DAIL			GRE	PUR	l		Page	1 of 2	Rev No 0
			250 V	Vater S	treet Reme	diati	on Sit	е		Submitt	ed By:	1.00.100.0
ENGINEERING & ENVIRONM	ENTAL SERVICES	_							Du	ust Action I	₋evel (µg/m³)	100
				Man	hattan, New Yo	ork			v	OC Action	Level (ppm)	5
									Н	lg Action L	evel (µg/m³)	1.0
Weather Data Range for	or Work Day	Wind Di	rection	ENE	Relative Humidity (%)	39.8	- 77.0				Readings in the summary ta	able and graphs
Temp (°F)	77.0 - 86.3	Wind Spe	ed (MPH)	0.7 - 6.2	Barometer (inHg)	29.86	- 29.94	Daily	Rain (in) 0.00		below are the reported concentration	I downwind IS.
Station Location Work Area	Daily Avg. Dust Concentration (µg/m³)		Dust Max 15 Minute Dust Tir (μg/m³) Concentration (μg/m³)		Time of Maximum 15 Minut Reading	e Avg Dust	Daily A Concentra	vg. VOC Max 15 M tion (ppm) Concentra		Max 15 Minute VOC Time of Max Concentration (ppm)		te Avg VOC
PM-1	21.4	51.6		7:10		0	.1	0.4		9:36		
PM-2	22.6	51.6		7:10		0	.3	0.4		9:30		
PM-3	21.3	45.0		7:17		0	.5	0.8		13:44		
PM-4	20.9		47.4		7:17		0	.0	0.0		7:10	
PM-5	16.1		22.6		14:17		0.1		0.2		10:10	
PM-6	26.6			52.4	7:11		0.1		0.7		10:01	
WZ-1	36.7			65.5	7:10		0	.0	0.1		10:32	
Station Location Work Area	Daily Avç	g. Mercury C	oncentratio	n (µg/m³)	Max 15 Minute Me	rcury Conce	entration (µg/	/m³)	Time of Max 15 Minute Avg Mercury Reading			
PM-1		0.	.0			0.0					12:49	
PM-2		0.	.0			0.0					11:41	
PM-3		0.	0			0.0			10:30			
PM-4		0.	0		0.0				12:20			
PM-5		0.	.0		0.0				7:58			
PM-6		0.	0		0.0				9:29			
WZ-1		0.	0		0.0				7:11			





Langan performed air monitoring at the perimeter of the site and at the northern sidewalk of Pearl Street at seven total locations for particulate matter less than 10 microns in diameter (PM10), volatile organic compounds (VOCs), and mercury vapor. Fifteen-minute average concentrations of PM10, VOCs, and mercury vapor did not exceed the action levels established in the site CAMP for the duration of air monitoring activities.

# **Background Concentrations**

Prior to implementation of air monitoring, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>®</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station were recorded at 0.00  $\mu\text{g}/\text{m}^3.$ 

- Background concentrations of VOCs at each CAMP station were recorded at 0.0 parts per million (ppm).

### Ambient Air (Handheld Jerome® J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used two handheld Jerome<sup>\*</sup> J505 mercury vapor analyzers 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. Instantaneous VOC concentrations were not detected above background concentrations throughout the work day.

# Off-Site CAMP Station Relocation

- CAMP station WZ-1 was placed on the northern sidewalk of Pearl Street from 6:56am to 2:10pm during removal of a Citi Bike station located along the Pearl Street sidewalk, immediately north of the site.

# Prior to CAMP Shutdown

Prior to discontinuing CAMP, VOC and mercury vapor concentrations were confirmed to return to background conditions at each perimeter station using the handheld PID and handheld Jerome<sup>®</sup> J505 mercury vapor analyzer. CAMP stations were discontinued sequentially between 2:10pm and 2:25pm.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.05  $\mu\text{g/m}^3.$ 

- VOC concentrations at each CAMP station were recorded at 0.1 ppm.





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	ΙΑΝ		250 V	Vater S	treet Reme	diati	on Sit	е	Submitted By:			1.00.100.0
ENGINEERING & ENVIRONM	ENTAL SERVICES	-				-			Di	ust Action L	.evel (µg/m³)	100
				Man	hattan, New Yo	ork			V	Level (ppm)	5	
									H	lg Action Lo	evel (µg/m³)	1.0
Weather Data Range for	or Work Day	Wind Di	irection	N	Relative Humidity (%)	42.0	- 60.9	Duit			Readings in the summary ta	able and graphs
Temp (°F)	74.6 - 82.9	Wind Spe	ed (MPH)	0.8 - 10.2	Barometer (inHg)	30.06	- 30.08	Daily	Rain (in)	0.00	below are the reported concentration	downwind s.
Station Location Work Area	Daily Avg. Concentratior	Daily Avg. Dust Concentration (µg/m³)		Dust Max 15 Minute Dust Tin (µg/m³) Concentration (µg/m³)		e Avg Dust	Daily A Concentra	vg. VOC tion (ppm)	Max 15 Minute VOC Concentration (ppm)		Time of Max 15 Minut Reading	te Avg VOC
PM-1	6.1	16.9		14:15		0	.0	0.0		7:13		
PM-2	8.6	23.5		14:15		0	.2	0.3		10:53		
PM-3	8.7	16.7		14:51		0	.3	1.0		12:50		
PM-4	8.2	11.7		12:40		0	.0	0.0		7:00		
PM-5	22.1	29.3		14:13		0.0		0.1		12:51		
PM-6	13.1			39.7	14:54		0.2		1.4		8:48	
WZ-1	15.0			24.1	N/A		0	.0	0.1		N/A	
Station Location Work Area	Daily Avç	g. Mercury C	oncentratio	n (µg/m³)	Max 15 Minute Me	rcury Conce	entration (µg	/m³)	Time of Max 15 Minute Avg Mercury Reading			
PM-1		0.	.0			0.0					13:57	
PM-2		0.	.0			0.0					10:28	
PM-3		0.	.0			0.2			8:33			
PM-4		0.	.0		0.0				13:17			
PM-5		0.	.0		0.0				10:26			
PM-6		0.	.0		0.0				9:25			
WZ-1		0.	.0		0.0				N/A			





Langan performed air monitoring at the perimeter of the site and at the work zone at seven total locations for particulate matter less than 10 microns in diameter (PM10), volatile organic compounds (VOCs), and mercury vapor, during ground-intrusive activities. Fifteen-minute average concentrations of PM10, VOCs, and mercury vapor did not exceed the action levels established in the site community air monitoring plan (CAMP) for the duration of work activities.

### **Background Concentrations**

Prior to implementation of air monitoring, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>®</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station ranged from of 0.00 to 0.05  $\mu\text{g}/\text{m}^3.$ 

- Background concentrations of VOCs at each CAMP station ranged from 0.0 to 0.1 ppm.

# Ambient Air (Handheld Jerome® J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used two handheld Jerome<sup>\*</sup> J505 mercury vapor analyzers 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 0.11 µg/m<sup>3</sup>.

- The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations were not detected above background concentrations throughout the work day.

### Equipment Troubleshooting

The PID at perimeter CAMP station PM-6 was recalibrated at 9:01am due to a persistent reading of 1.0 ppm, which was inconsistent with readings on the handheld unit (0.0 ppm). VOC concentrations returned to background conditions following equipment recalibration and data logging resumed at 9:10am.

### Prior to CAMP Shutdown

Prior to discontinuing air monitoring activities, VOC and mercury vapor concentrations were confirmed to return to background conditions at each perimeter station using the handheld PID and handheld Jerome<sup>\*</sup> J505 mercury vapor analyzer. CAMP stations were discontinued between 3:04pm and 3:05pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station were recorded at 0.00  $\mu\text{g}/\text{m}^3.$
- VOC concentrations at each CAMP station were recorded at 0.0 ppm.





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LANG		2	50 W	later S	treet Reme	diati	on Sit	te	Submitted By:			1.00.110.0
ENGINEERING & ENVIRONME	ENTAL SERVICES						0 0		Du	ist Action L	.evel (µg/m³)	100
				Man	hattan, New Yo	ork			V	OC Action	Level (ppm)	5
									Н	g Action Le	evel (µg/m³)	1.0
Weather Data Range fo	or Work Day	Wind Dir	rection	SW	Relative Humidity (%)	52.1	1 - 75.1		Dain (in)	0.00	Readings in the summary ta	able and graphs
Temp (°F)	71.0 - 81.5	Wind Spee	ed (MPH)	0.7 - 5.1	Barometer (inHg)	30.07	- 30.10	Dally	ain (in) 0.00		concentration	s.
Station Location Work Area	Daily Avg. Concentration	Daily Avg. Dust Concentration (µg/m <sup>3</sup> )		ust Max 15 Minute Dust Tim μg/m³) Concentration (μg/m³)		e Avg Dust	Daily A Concentra	vg. VOC tion (ppm)	Max 15 Minute VOC Concentration (ppm)		Time of Max 15 Minu Reading	te Avg VOC
PM-1	12.8	20.0		12:03		0	.0	0.0		7:30		
PM-2	21.0	73.3		11:38		0	.3	0.4		12:35		
PM-3	13.0	32.1		11:39		0	.4	0.9		12:35		
PM-4	15.1		21.1		11:39		0.0		0.0		7:21	
PM-5	16.0		29.9		11:38		0.2		0.5		12:35	
PM-6	18.6			41.9	11:41		0.5		1.1		9:50	
WZ-1	28.0			82.4	N/A		0	.0	0.0		N/A	
Station Location Work Area	Daily Avg	. Mercury Co	oncentratio	n (µg/m³)	Max 15 Minute Mer	rcury Conce	entration (µg/	/m³)	Time of Max 15 Minute Avg Mercury Reading			
PM-1		0.0	C			0.0					12:27	
PM-2		0.0	)			0.0					10:15	
PM-3		0.0	)			0.0					7:58	
PM-4		0.0	0			0.0					12:08	
PM-5		0.0	0		0.0				12:22			
PM-6		0.0	0		0.0				9:39			
WZ-1		0.0	)			N/A						





Langan performed air monitoring at the perimeter of the site and at the work zone at seven total locations for particulate matter less than 10 microns in diameter (PM10), VOCs, and mercury vapor, during ground-intrusive activities. Fifteen-minute average concentrations of VOCs and mercury vapor did not exceed the action levels established in the site community air monitoring plan (CAMP) for the duration of work activities.

### **Background Concentrations**

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>®</sup> 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 0.01 μg/m³.
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

# Ambient Air (Handheld Jerome® J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome<sup>\*</sup> 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 0.10 µg/m<sup>3</sup>.

- The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations were not detected above background concentrations throughout the work day.

# Off-Site CAMP Station Relocation

- CAMP station WZ-1 was relocated to the southern sidewalk of Water Street from 6:54am to 12:35pm during advancement of soil borings in the west-central and south-central parts of the site.

### Prior to CAMP Shutdown

Prior to discontinuing CAMP at the conclusion of ground-intrusive activities, VOC and mercury vapor concentrations were confirmed to return to background conditions at each perimeter station using the handheld PID and handheld Jerome<sup>\*</sup> J505 mercury vapor analyzer. CAMP stations were discontinued sequentially between 12:35pm and 12:53pm at the conclusion of ground-intrusive activities.



- Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.04  $\mu\text{g/m^3}.$ 



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	ΙΑΝ	2	250 V	Nater S	treet Reme	diati	on Sif	P		Submitt	ed By:	INEV. INO. 0	
ENGINEERING & ENVIRONME	ENTAL SERVICES								D	ust Action L	₋evel (µg/m³)	100	
				Man	hattan, New Y	ork			N N	OC Action	Level (ppm)	5	
									ŀ	Ig Action L	evel (µg/m³)	1.0	
Weather Data Range for	or Work Day	Wind Di	rection	SE	Relative Humidity (%)	36.8	- 66.4	Deihu	Dain (in)	0.00	Readings in the summary t	able and graphs	
Temp (°F)	69.0 - 84.0	Wind Spee	ed (MPH)	1.4 - 6.4	Barometer (inHg)	29.98	- 30.08	Dally	Rain (in)	0.00	concentration	i downwind is.	
Station Location Work Area	Daily Avg. Concentratior	Daily Avg. Dust     Max 15 Minute Dust       Concentration (µg/m³)     Concentration (µg/m³)			Time of Maximum 15 Minut Reading	te Avg Dust	Daily A Concentra	vg. VOC ation (ppm)	Max 15 Minute VOC Concentration (ppm)		Time of Max 15 Minu Reading	te Avg VOC	
PM-1	14.2	14.2			11:39		0	.1	0.8		8:58		
PM-2	14.8	.8 26.6		11:37		0	.0	0.1		14:52			
PM-3	13.1	13.1 19.2		14:03		0	.4	0.5		11:56			
PM-4	15.8	15.8		43.5	12:37		0	.0	0.0		8:43		
PM-5	18.5			26.0	14:26		0	.3	0.5		11:16		
PM-6	20.4			42.2	11:38		0	.2	1.1		8:56		
WZ-1	22.1			28.0	N/A		0	.0	0.0		N/A		
Station Location Work Area	Daily Avç	g. Mercury C	oncentratio	on (µg/m³)	Max 15 Minute Me	ercury Conce	entration (µg/	/m³)	Time	e of Max 15	Minute Avg Mercury Rea	ading	
PM-1		0.	.0			0.0					11:27		
PM-2		0.	.0			0.0					12:33		
PM-3	0.0					0.0					14:10		
PM-4	0.0					0.0					8:48		
PM-5	0.0				0.0			14:38					
PM-6		0.0				0.0			13:43				
W7-1		0	0			0.0			N/A				





Langan performed air monitoring at the perimeter of the site and at the work zone at seven total locations for particulate matter less than 10 microns in diameter (PM10), volatile organic compounds (VOCs), and mercury vapor, during ground-intrusive activities. Fifteen-minute average concentrations of VOCs and mercury vapor did not exceed the action levels established in the site community air monitoring plan (CAMP) for the duration of work activities.

## **Background Concentrations**

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>®</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station were recorded at 0.00  $\mu$ g/m<sup>3</sup>.

- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

# Ambient Air (Handheld Jerome® J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome<sup>®</sup> 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 0.12 μg/m<sup>3</sup>.

- The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations were not detected above background concentrations throughout the work day.

# Off-Site CAMP Station Relocation

- CAMP station WZ-1 was relocated to the eastern sidewalk of Peck Slip from 7:21am to 15:17pm during extension of the perimeter construction fence in the eastern part of the site.

### Prior to CAMP Shutdown

Prior to discontinuing CAMP at the conclusion of ground-intrusive activities, VOC and mercury vapor concentrations were confirmed to return to background conditions at each perimeter station using the handheld PID and handheld Jerome<sup>®</sup> J505 mercury vapor analyzer. CAMP stations were discontinued sequentially between 15:10pm and 15:26pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.09  $\mu\text{g}/\text{m}^3.$ 

- VOC concentrations at each CAMP station ranged from 0.0 to 0.1 ppm.







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	ΙΑΝ	2	50 V	Vater S	treet Reme	diati	on Sif	e		Submitt	ed By:	1.07.110.0	
ENGINEERING & ENVIRONM	IENTAL SERVICES					-			Du	st Action L	.evel (µg/m³)	100	
				Man	hattan, New Y	ork			v	OC Action	Level (ppm)	5	
									H	g Action Lo	evel (µg/m³)	1.0	
Weather Data Range f	for Work Day	Wind Dire	ection	SE	Relative Humidity (%)	46.1	- 77.4	Deiby	Dein (in)	0.00	Readings in the summary t	able and graphs	
Temp (°F)	71.7 - 88.3	Wind Speed	ed (MPH)	1.8 - 6.4	Barometer (inHg)	29.80	- 29.90	Dally	Rain (in)	0.00	concentration	is.	
Station Location Work Area	Daily Avg. Concentratior	ly Avg. Dust Max 15 Minute Dust ntration (μg/m <sup>3</sup> ) Concentration (μg/m <sup>3</sup> )			Time of Maximum 15 Minut Reading	e Avg Dust	Daily A Concentra	vg. VOC tion (ppm)	Max 15 Minute VOC Concentration (ppm		Time of Max 15 Minu Reading	te Avg VOC	
PM-1	19.2	2 26.9		13:25		0	.0	0.2		7:09			
PM-2	22.3	30.8		30.8	13:29		0	.1	0.2		7:38		
PM-3	18.9	18.9		34.9	14:03		0	.6	2.4		13:05		
PM-4	25.6			77.4	13:14		0	.0	0.1		13:05		
PM-5	16.0			27.9	10:50		0	.7	1.1		13:24		
PM-6	23.7			36.4	10:29		0	.4	1.6		8:29		
WZ-1	31.4			41.2	14:17		0	.0	0.0		7:23		
Station Location Work Area	Daily Avç	g. Mercury Co	oncentratio	n (µg/m³)	Max 15 Minute Me	rcury Conce	entration (µg	/m³)	Time	of Max 15	Minute Avg Mercury Rea	lding	
PM-1		0.0	)			0.0					11:25		
PM-2		0.0	)			0.0					11:38		
PM-3	0.0					0.0					13:03		
PM-4	0.0					0.0					13:18		
PM-5	0.0			0.0				9:32					
PM-6	0.0			0.0				11:16					
WZ-1	0.0				0.0				7:00				





Langan performed air monitoring at the perimeter of the site and at the work zone at seven total locations for particulate matter less than 10 microns in diameter (PM10), volatile organic compounds (VOCs), and mercury vapor, during ground-intrusive activities. Fifteen-minute average concentrations of PM10, VOCs and mercury vapor did not exceed the action levels established in the site community air monitoring plan (CAMP) for the duration of work activities.

### Background Concentrations

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>\*</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station ranged from 0.00 to 0.03  $\mu$ g/m<sup>3</sup>.

- Background concentrations of VOCs at each CAMP station were recorded at 0.0 parts per million (ppm).

# Ambient Air (Handheld Jerome® J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome<sup>\*</sup> 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 0.11 µg/m<sup>3</sup>.

- The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations were not detected above background concentrations throughout the work day.

### Equipment Troubleshooting:

- The DustTrak unit at perimeter CAMP station PM-5 was recalibrated at 8:03am due to persistent negative readings being recorded. PM10 concentrations returned to background conditions following equipment recalibration and data logging resumed at 8:04am. Fugitive dust or odors were not observed migrating the site during this time.

- The PID at perimeter CAMP station PM-6 was recalibrated at 8:30am due to persistent readings ranging between 1.0 and 1.8 ppm, which was inconsistent with readings on the handheld unit (0.0 ppm). VOC concentrations returned on background conditions following equipment recalibration and data logging resumed at 8:31am.

- The PID at perimeter CAMP station PM-3 was recalibrated at 12:45pm due to persistent readings ranging between 1.0 and 2.8 ppm, which were inconsistent with readings on the handheld unit (0.0 ppm). Data logging resumed at 12:46pm and VOC concentrations returned to background conditions for approximately 4 minutes before spiking again. The PID at perimeter CAMP station PM-3 was replaced with a spare unit at 1:11pm. VOC concentrations returned to background conditions and data logging resumed at 1:12pm.

### Off-Site CAMP Station Relocation

CAMP station WZ-1 was relocated to the eastern sidewalk of Peck Slip from 7:09am to 2:21pm during excavation and backfill of test pits in the northeastern part of the site.

### Prior to CAMP Shutdown

Prior to discontinuing CAMP at the conclusion of ground-intrusive activities, VOC and mercury vapor concentrations were confirmed to return to background conditions at each perimeter station using the handheld PID and handheld Jerome<sup>\*</sup> J505 mercury vapor analyzer. Additionally, areas of exposed soil were covered with polyethylene sheeting. CAMP stations were discontinued sequentially between 2:20pm and 2:21pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.04  $\mu\text{g}/\text{m}^3.$ 

- VOC concentrations at each CAMP station were recorded at from 0.0 ppm.











Langan performed air monitoring at the perimeter of the site and at the work zone at seven total locations for particulate matter less than 10 microns in diameter (PM10), volatile organic compounds (VOCs), and mercury vapor, during ground-intrusive activities. Fifteen-minute average concentrations of VOCs and mercury vapor did not exceed the action levels established in the site community air monitoring plan (CAMP) for the duration of work activities.

### **Background Concentrations**

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>\*</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station ranged from 0.00 to 0.06  $\mu\text{g}/\text{m}^3.$ 

- Background concentrations of VOCs at each CAMP station were recorded at 0.0 parts per million (ppm).

### Perimeter and Work Zone Concentrations

\* PM10 concentrations at perimeter stations PM-2, PM-3, and/or PM-6 exceeded the action level established in the CAMP between 12:13pm and 12:30pm due to an apparent off-site building fire in proximity to Water Street, where visible smoke was observed to be entering the site. The PM10 exceedances were not a result of ground-intrusive activities at the site.

### Ambient Air (Handheld Jerome<sup>®</sup> J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome<sup>\*</sup> 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. Instantaneous VOC concentrations were not detected above background concentrations throughout the work day.

# Off-Site CAMP Station Relocation

CAMP station WZ-1 was relocated to the eastern sidewalk of Peck Slip from 7:02am to 3:19pm during excavation and backfill of test pits in the eastern part of the site.

### Prior to CAMP Shutdown

Prior to discontinuing CAMP at the conclusion of ground-intrusive activities, VOC and mercury vapor concentrations were confirmed to return to background conditions at each perimeter station using the handheld PID and handheld Jerome<sup>\*</sup> J505 mercury vapor analyzer. Additionally, areas of exposed soil were covered with polyethylene sheeting and/or Atmos<sup>\*</sup> AC-645 dust/vapor suppressing foam. CAMP stations were discontinued sequentially between 3:17pm and 3:25pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.03  $\mu\text{g}/\text{m}^3.$ 

- VOC concentrations at each CAMP station were recorded at from 0.0 ppm.







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		250	Water S	Street Reme	diati	on Sit	e		Submit	ted By:	
ENGINEENING & ENVIRONN	VENTAL SERVICES		Mor	hattan Naw V	ork			D	ust Action	Level (µg/m³)	100
			Iviar	inatian, New T	Urk			V	OC Action	Level (ppm)	5
								ŀ	lg Action L	evel (µg/m³)	1.0
Weather Data Range	for Work Day	Wind Direction	ENE	Relative Humidity (%)	34.4	- 65.7	D. II		0.00	Readings in the summary t	able and graphs
Temp (°F)	75.0 - 89.4	Wind Speed (MP	) 0.9 - 7.0	Barometer (inHg)	30.01	- 30.05	Dally	Rain (in)	0.00	below are the reported concentration	a aownwina ns.
Station Location Work Area	Daily Avg. Concentration	g. Dust Max 15 Minute Dust on (µg/m³) Concentration (µg/m³		Time of Maximum 15 Minute Avg Dust Reading		Daily A Concentra	vg. VOC tion (ppm)	Max 15 Min Concentrati	ute VOC on (ppm)	Time of Max 15 Minu Reading	te Avg VOC
PM-1	21.8		33.9	9:49	9 0.0		.0	0.0		10:30	
PM-2	22.2		27.3	10:43 0.1		.1	0.3		12:26		
PM-3	21.3		25.7	14:00		0	.2	0.5	i	10:07	
PM-4	23.9		46.7	13:02		0	.0	0.0		9:13	
PM-5	30.1		36.1	11:12		0	.1	0.3		11:55	
PM-6	28.0		48.4	13:43		0	.2	1.2		9:20	
WZ-1	30.7		35.9	7:56		0	.0	0.0		7:17	
WZ-2	N/A		N/A	N/A		N	/A	N/A	٨	N/A	
WZ-3	17.7		32.1	10:01		0	.2	1.0		9:48	
Station Location Work Area	Daily Ave	g. Mercury Concent	ation (µg/m³)	Max 15 Minute Me	ercury Conce	entration (µg	/m³)	Time	of Max 15	Minute Avg Mercury Rea	ading
PM-1		0.0			0.0					10:07	
PM-2		0.0			0.0					14:09	
PM-3		0.0			0.0					15:00	
PM-4		0.0			0.0					14:26	
PM-5		0.0		0.0					11:07		
PM-6		0.0			0.0					13:41	
WZ-1		0.0			0.0					9:30	
WZ-2		N/A	N/A			N/A					
WZ-3		0.0		0.0				9:46			



MERCURY MONITORING RESULTS - 07/14/22





# Air Monitoring Notes:

1.2

Langan performed air monitoring at the perimeter of the site and at the work zone at eight total locations for particulate matter less than 10 microns in diameter (PM10), volatile organic compounds (VOCs), and mercury vapor, during ground-intrusive activities. Fifteen-minute average concentrations of PM10, VOCs and mercury vapor did not exceed the action levels established in the site community air monitoring plan (CAMP) for the duration of work activities.

### **Background Concentrations**

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>®</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station ranged from 0.00 to 0.03  $\mu g/m^3.$
- Background concentrations of VOCs at each CAMP station ranged from 0.0 to 0.1 parts per million (ppm).

# Ambient Air (Handheld Jerome® J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome<sup>\*</sup> 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. Instantaneous VOC concentrations were not detected above background concentrations throughout the work day.

### Equipment Troubleshooting

PM10 data were not recorded at CAMP station WZ-1 between 8:31am and 9:05am due to a low battery. Data logging resumed at 9:06am, after replacement of the depleted battery. No ground-intrusive activities were ongoing at this time, and fugitive dust was not observed migrating from the site.

### Off-Site CAMP Station Relocation

- CAMP station WZ-1 was relocated to the eastern sidewalk of Peck Slip from 7:02am to 2:56pm during excavation and backfill of test pits in the eastern part of the site. - CAMP station WZ-3 was relocated to the northern sidewalk of Pearl Street from 7:47am to 8:00am and from 8:53am to 10:17am during excavation and backfill of a test pit in the northeastern part of site.

- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 8:00am to 8:53am during excavation and backfill of a test pit in the southeastern part of site.

### Prior to CAMP Shutdown

Prior to discontinuing CAMP at the conclusion of ground-intrusive activities, VOC and mercury vapor concentrations were confirmed to return to background conditions at each perimeter station using the handheld PID and handheld Jerome<sup>®</sup> J505 mercury vapor analyzer. Additionally, areas of exposed soil were covered with polyethylene sheeting and/or Atmos<sup>®</sup> AC-645 dust/vapor suppressing foam. CAMP stations were discontinued sequentially between 2:56pm and 3:16pm at the conclusion of ground-intrusive activities. - Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.03 µg/m<sup>3</sup>.



- VOC concentrations at each CAMP station were recorded at from 0.1 ppm.



											07/15/22		
								-		Projec	t number: 170381202		
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	<b>JAN</b>	2	50 V	Vater S	treet Reme	diati	on Sif	e		Submit	ted By:	Nev. NO. 0	
ENGINEERING & ENVIRONM	MENTAL SERVICES								Du	st Action I	Level (µg/m³)	100	
				Man	hattan, New Y	ork			V	OC Action	Level (ppm)	5	
									H	g Action L	evel (µg/m³)	1.0	
Weather Data Range	for Work Day	Wind Dir	rection	SSE	Relative Humidity (%)	30.2	- 52.6			0.00	Readings in the summary to	able and graphs	
Temp (°F)	75.2 - 85.6	Wind Spee	ed (MPH)	1.2 - 6.4	Barometer (inHg)	30.18	- 30.23	Daily	Rain (in)	0.00	concentration	i downwind Is.	
Station Location Work Area	Daily Avg. Concentration	Daily Avg. DustMax 15 Minute DustConcentration (µg/m³)Concentration (µg/m³)15.737.4			Time of Maximum 15 Minut Reading	Time of Maximum 15 Minute Avg Dust Daily Avg. VOC Reading Concentration (ppm)		Max 15 Minute VOC Concentration (ppm)		Time of Max 15 Minu Reading	te Avg VOC		
PM-1	15.7			37.4	11:56		C	0.0 0.0			7:07		
PM-2	26.1	26.1 49.8			11:56		C	.0	0.2		12:29		
PM-3	17.8			30.2	10:07		C	.5	0.8		11:52		
PM-4	19.5			59.6	9:41		C	.0	0.0		7:26		
PM-5	28.8			39.1	11:19		C	.1	0.3		12:30		
PM-6	24.6			46.3	11:56			.3	1.4		11:03		
WZ-1	24.9			43.7	10:13		C	0.0			7:07		
WZ-2	N/A			N/A	N/A		Ν	/A	N/A	L.	N/A		
WZ-3	N/A			N/A	N/A		Ν	/A	N/A		N/A		
Station Location Work Area	Daily Ave	g. Mercury Co	oncentratio	on (µg/m³)	Max 15 Minute Me	rcury Conce	entration (µg	/m³)	Time	of Max 15	Minute Avg Mercury Rea	ding	
PM-1		0.0	0			0.0					9:54		
PM-2		0.0	0			0.0					13:19		
PM-3		0.0	0			0.0					9:40		
PM-4		0.0	0			0.0					14:14		
PM-5		0.0				0.0					13:58		
PM-6		0.0				0.0			12:58				
WZ-1		0.0			0.0				11:32				
WZ-2		N/A				N/A			N/A				
WZ-3		N//	A		1	N/A			N/A				





MERCURY MONITORING RESULTS - 07/15/22



# Air Monitoring Notes:

1.2

Langan performed air monitoring at the perimeter of the site and at the work zone at seven 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, VOCs, or PM10 that approached or exceeded the action level established by the community air monitoring plan (CAMP) (1.0 ug/L, 5.0 ppm, and 0.1 mg/m<sup>3</sup>, respectively).

### Background Concentrations

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>\*</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station were recorded at 0.00  $\mu\text{g}/\text{m}^3.$ 

- Background concentrations of VOCs at each CAMP station were recorded at 0.0 parts per million (ppm).

# Ambient Air (Handheld Jerome<sup>®</sup> J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome<sup>\*</sup> 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. Instantaneous 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 eastern sidewalk of Peck Slip from 6:52am to 3:02pm during removal of UST contents in the eastern part of the site.

### Equipment Troubleshooting

- PM10 data were not recorded at CAMP station PM-2 between 10:21am and 10:22am during replacement of the particulate monitoring unit. Data logging resumed at 10:23am, after the new unit was connected. No ground-intrusive activities were ongoing and fugitive dust was not observed migrating off-site during this time.

### Prior to CAMP Shutdown

Prior to discontinuing the CAMP, air quality at each CAMP station was verified using the handheld PID and handheld Jerome<sup>®</sup> J505 mercury vapor analyzer and there were either no readings or no readings above background concentrations recorded. Additionally, areas of exposed soil were covered with polyethylene sheeting and/or Atmos<sup>®</sup> AC-645 dust/vapor suppressing foam. CAMP stations were discontinued at 3:02pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.05  $\mu\text{g}/\text{m}^3.$ 

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





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	ΙΑΝ	2	50 V	Vater S	treet Reme	diati	on Sif	e		Submit	ted By:	1.00.100.0
ENGINEERING & ENVIRONM	IENTAL SERVICES	_					• •		D	ust Action	Level (µg/m³)	100
				Man	hattan, New Yo	ork			v	OC Action	Level (ppm)	5
									ŀ	lg Action L	evel (µg/m³)	1.0
Weather Data Range f	or Work Day	Wind Dire	ection	SW	Relative Humidity (%)	48.1	- 71.0				Readings in the summary t	able and graphs
Temp (°F)	75.9 - 84.9	Wind Spee	d (MPH)	0.5 - 7.5	Barometer (inHg)	30.12	- 30.20	Daily	Rain (in)	0.00	below are the reported concentration	l downwind IS.
Station Location Work Area	Daily Avg. Concentratior	Dust n (µg/m³)	Max 15 Concent	ο Minute Dust tration (μg/m³)	Time of Maximum 15 Mir Dust Reading	nute Avg	Daily A Concentra	vg. VOC tion (ppm)	Max 15 Minute VOC Concentration (ppm		Time of Max 15 Minu Reading	te Avg VOC
PM-1	27.3	27.3 44.2			11:41		0	.0	0.0		8:11	
PM-2	40.7	7 57.2			11:42		0	.1	0.5		12:30	
PM-3	26.0			36.7	14:54		0	.2	0.5		11:48	
PM-4	28.1			43.4	8:42		0	.2	0.4		12:52	
PM-5	33.1			44.2	14:43		0	.0	0.0		8:10	
PM-6	33.1			49.9	14:45			.3	2.4		11:38	
WZ-1	38.5			46.3	12:00	0.0		0.0		8:11		
WZ-2	N/A			N/A	N/A		N	/A	N/A	۱	N/A	
WZ-3	41.7			52.5	13:40		0	.2	2.4		10:35	
Station Location Work Area	Daily Avg	g. Mercury Co	oncentratio	n (µg/m³)	Max 15 Minute Me	rcury Conc	entration (µg	/m³)	Time	of Max 15	Minute Avg Mercury Rea	ading
PM-1		0.0	)			0.0					13:29	
PM-2		0.0	)			0.0					8:41	
PM-3		0.0	)			0.0					7:49	
PM-4		0.0	)			0.0					12:04	
PM-5	0.0				0.0					8:25		
PM-6	0.0				0.0			15:33				
WZ-1	0.0			0.0			11:35					
WZ-2	N/A			N/A				N/A				
WZ-3	0.0				0.0			11:52				





MERCURY MONITORING RESULTS - 07/16/22





# Air Monitoring Notes:

1.2

Langan performed air monitoring at the perimeter of the site and at the work zone at eight 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, VOCs, or PM10 that approached or exceeded the action level established by the community air monitoring plan (CAMP) (1.0 ug/L, 5.0 ppm, and 0.1 mg/m<sup>3</sup>, respectively).

### **Background Concentrations**

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>®</sup> 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  $\mu g/m^3.$
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 parts per million (ppm).

### Ambient Air (Handheld Jerome<sup>®</sup> J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used two handheld Jerome<sup>\*</sup> J505 mercury vapor analyzers 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. Instantaneous VOC concentrations were at or below background concentrations throughout the work day.

# Equipment Troubleshooting

- The PID at perimeter CAMP station PM-6 was recalibrated at 11:39am due to persistent readings of 2.4 ppm, which was inconsistent with readings on the handheld unit (0.0 ppm). Data logging resumed at 11:41am and VOC concentrations returned to background conditions following equipment recalibration. Odors were not observed migrating off-site during this time.

# Off-Site CAMP Station Relocation

- CAMP station WZ-1 was relocated to the eastern sidewalk of Peck Slip from 7:56am to 2:26pm during removal of UST contents in the eastern part of the site. - CAMP station WZ-3 was relocated to the northern sidewalk of Pearl Street from 9:36am to 3:59pm during excavation and backfill of test pits along northern boundary of site.

### Prior to CAMP Shutdown

Prior to discontinuing the CAMP, air quality at each CAMP station was verified using the handheld PID and Jerome<sup>\*</sup> J505 mercury vapor analyzer and there were either no readings or no readings above background concentrations recorded. Additionally, areas of exposed soil were covered with polyethylene sheeting and/or Atmos<sup>\*</sup> AC-645 dust/vapor suppressing foam. CAMP stations (with the exception of station WZ-1) were discontinued at 3:59pm at the conclusion of ground-intrusive activities. CAMP station WZ-1 was discontinued at 2:26pm at the conclusion of UST removal activities within 20 feet of the eastern fence line.



- Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.02  $\mu g/m^3.$  - VOC concentrations at each CAMP station ranged from 0.0 to 0.2 ppm.





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LAND		2	50 V	Vater S	treet Reme	diati	on Sit	e		Submit	ted By:	
ENGINEERING & ENVIRONM	ENTAL SERVICES	_						-	D	ust Action	Level (µg/m³)	100
				Man	hattan, New Yo	ork			١	OC Action	Level (ppm)	5
									ł	Ig Action L	evel (µg/m³)	1.0
Weather Data Range f	or Work Day	Wind Direc	ction	N	Relative Humidity (%)	55.6	- 77.9				Readings in the summary to	able and graphs
Temp (°F)	77.3 - 87.9	Wind Speed	(MPH)	0.7 - 8.9	Barometer (inHg)	29.84	- 30.04	Daily	Rain (in)	0.04	below are the reported concentration	l downwind IS.
Station Location Work Area	Daily Avg. Concentration	Avg. Dust Max 15 Minute Dust ration (µg/m <sup>3</sup> ) Concentration (µg/m <sup>3</sup> )			Time of Maximum 15 Minut Reading	Time of Maximum 15 Minute Avg Dust Daily Avg. VOC Reading Concentration (ppm)			Max 15 Min Concentrati	ute VOC on (ppm)	Time of Max 15 Minu Reading	te Avg VOC
PM-1	29.3			63.6	11:50		0	.0	0.0		15:18	
PM-2	36.7			74.2	11:49		0	.1	0.4		7:56	
PM-3	24.2			43.7	11:53		0	.3	1.3		13:32	
PM-4	27.4			48.8	11:52		0	.3	1.4		13:35	
PM-5	31.7			54.0	11:50		0	.0	0.0		7:18	
PM-6	27.8			64.3	11:50		0	.2	1.0		13:24	
WZ-1	40.1			70.8	11:50		0.0				7:18	
WZ-2	N/A			N/A	N/A		N	/A	N/A	1	N/A	
WZ-3	N/A			N/A	N/A		N	/A	N/A	1	N/A	
Station Location Work Area	Daily Av	g. Mercury Con	centration	n (µg/m³)	Max 15 Minute Me	rcury Conce	entration (µg/	m³)	Time	e of Max 15	Minute Avg Mercury Rea	ding
PM-1		0.0				0.0					8:01	
PM-2		0.0				0.0					16:15	
PM-3		0.0				0.0					12:30	
PM-4		0.0				0.0					8:03	
PM-5		0.0				0.0					13:24	
PM-6		0.0				0.1					15:50	
WZ-1		0.0				0.1					7:00	
WZ-2		N/A				N/A					N/A	
WZ-3		N/A				N/A					N/A	
120.0 PM10	DUST MONI	FORING RE	SULTS	- 07/18/22	6	0	voc i	MONITOF	RING RESU	LTS - 07	/18/22	



Langan performed air monitoring at the perimeter of the site and at the work zone at seven total locations for mercury vapor, volatile organic compounds (VOCs), and particulate matter less than 10 micross in diameter (PMID), during ground-intrusive activities. There were no fifteen-minute average concentrations for mercury vapor, VOCs, or PMID that approached or exceeded the activities level stabilished by the CAWP (Log US), 50 ppm, and O. Ling mm/r respectively.

Background Concentrations Phor to Ingelementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheid Jerome<sup>\*</sup> 1505 mercury vapor analyzer and a handheid PD, respectively. - Background concentrations of neurory vapor at each CAMP station were recorded at 0.00 µg/m<sup>\*</sup>. - Background concentrations of VOCs at each CAMP station were recorded at 0.00 parts per million (ppm).

Ambient Air (Handheld Jerome<sup>1</sup> 1505 and Handheld PID) - The dedicated mobile monitor (Langan) used two handheld Jerome<sup>1</sup> 1505 mercury vapor analyzers 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>1</sup> to 0.47 µg/m<sup>1</sup>. The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations ranged from 0.0 ppm to 1.4 ppm.

Off Site CAMP Station Relocation - CAMP station W2 - Was relocated to the northern sidewalk of Pearl Street from 7:03am to 4:55pm during test pit excavation.fackfill and solder pile installation along the northern boundary of the stee.

Prior to CAMP Shutdown
Prior to CAMP Shutdown
Prior to discontinuing the CAMP, air quality at each CAMP station was verified using the handheld PID and Jerome<sup>a</sup> JSOS mercury vapor analyzer and there were no readings above
background concentrations recorded. Additionally, areas of exposed soil were covered with polyethylene sheeting and/or Atmos<sup>4</sup> AC-645 dust/vapor suppressing foam. CAMP stations
were discontinued sequentially between 4:50pm and 4:55pm at the conclusion of ground-intrusive activities.
- Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.06 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station ranged from 0.00 to 0.1 ppm.





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LAND		2	250 V	Nater S	treet Reme	diati	on Sit	e		Submit	ted By:	1404.140.0
ENGINEERING & ENVIRONM	ENTAL SERVICES	_						•	D	ust Action	Level (µg/m³)	100
				Man	hattan, New Y	ork			1	OC Action	Level (ppm)	5
										Hg Action L	evel (µg/m³)	1.0
Weather Data Range fe	or Work Day	Wind Dir	rection	SW	Relative Humidity (%)	30.5	- 54.2		<b>5</b> · <i>a</i> >	0.00	Readings in the summary ta	able and graphs
Temp (°F)	82.2 - 94.6	Wind Spee	ed (MPH)	1.1 - 8.0	Barometer (inHg)	29.83	- 29.88	Dally	Kain (in)	0.00	below are the reported concentration	downwind IS.
Station Location Work Area	Daily Avg. Concentration	Dust n (µg/m³)	Max 15 Concen	i Minute Dust tration (μg/m³)	Time of Maximum 15 Minut Reading	e Avg Dust	Daily A Concentra	/g. VOC tion (ppm)	Max 15 Mir Concentrat	ute VOC ion (ppm)	Time of Max 15 Minut Reading	te Avg VOC
PM-1	23.7	23.7 33.5			15:33		0	.0	0.1		9:11	
PM-2	38.4	38.4 47.4			15:32		0	.1	0.2		12:30	
PM-3	25.2			35.0	15:36		0	.4	0.6	6	11:34	
PM-4	25.1			35.8	11:19		0	.7	2.4	1	12:21	
PM-5	38.7			58.6	15:05		0	.1	0.1		13:08	
PM-6	29.7			49.5	12:51		0	.2	0.5	i	9:11	
WZ-1	38.4			48.6	15:42 0.0			.0	0.0	)	7:12	
WZ-2	N/A			N/A	N/A		N	/A	N/#	4	N/A	
WZ-3	N/A			N/A	N/A		N	/A	N//	4	N/A	
Station Location Work Area	Daily Avg	g. Mercury Co	oncentratio	n (µg/m³)	Max 15 Minute Me	ercury Conce	entration (µg/	m³)	Tim	e of Max 15	Minute Avg Mercury Rea	ding
PM-1		0.0	0			0.0					9:26	
PM-2		0.0	0			0.0					13:45	
PM-3		0.0	0			0.0					10:48	
PM-4		0.0	0			0.0					15:00	
PM-5	0.0					0.0					9:12	
PM-6	0.0					0.1					12:51	
WZ-1	0.0			0.0				9:02				
WZ-2	N/A			N/A						N/A		
WZ-3		N/A			N/A				N/A			



Langan performed air monitoring at the perimeter of the site and at the work zone at seven 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, VOCs, or PM10 that approached or exceeded the activities level activities (July *min S*, Soppm, and July *min S*, Soppm, and July *min*, Soppm, and Ju

### Background Concentrations

Background Concentrations Photo to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheid Jerome<sup>\*</sup> J505 mercury vapor analyzer and a handheid PJO, respectively. - Background concentrations of recurvy vapor as each CAMP station ranged from 0.00 to 0.05 µg/m<sup>2</sup> - Background concentrations of VOCs at each CAMP station were recorded at 0.0 parts per million (ppm).

Ambient Air (Handheid Jerome<sup>\*</sup> JSOS and Handheid PID) - The dedicated mobile monitor (Langan) used two handheid Jerome<sup>\*</sup> JSOS mercury vapor analyzers 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>1</sup> to 0.36 µg/m<sup>1</sup>. - The dedicated mobile monitor (Langan) used a handheid PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations ranged from 0.0 ppm to 1.6 ppm.

un-are LAWY station Relocation - CAMP station W21 was relocated to the northern sidewalk of Pearl Street from 6:57am to 4:10pm during test pit excavation/backfill and soldier pile installation along the northern boundary of the site.

Equipment Troubleshooting
PMI10 concentrations were intermittently not recorded at perimeter CAMP station PM-1 between 7:53am and 9:44am due to a connectivity issue with the telemetry system. Equipment
troubleshooting was performed by replacing the CAMP station battery and the DustTrak unit, and data logging resumed at 9:45am
- During this time, CCV was in the process of excavating test pits and installing SQE soldier piles in the northeastern part of the site.
- Perimeter CAMP stated relates 13:09 feat a vary from the nearest work area and in an upwind direction.
- Fuglitive dust was not observed migrating from the site during this times.

Prior to CAMP Shutdown Prior to GAMP Shutdown Prior to Game Shutdown Prior to Game Shutdown Prior to Game Shutdown Background Concentrations were recorded. Additionally, areas of exposed soil were covered with polyethylene sheeting and/or Amos<sup>4</sup> AC-645 dust/vapor suppressing foam. CAMP stations were discontinued between 4:10pm and 4:12pm at the conclusion of ground-intrusive activities. - Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.07 µg/m<sup>2</sup>. - VOC concentrations at each CAMP station ranged from 0.00 to 0.29 µm<sup>2</sup>.







Langan performed air monitoring at the perimeter of the site and at the work zone 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, VOCs, or PM10 that approached or exceeded than 10 microns in diameter (PM10), during ground-intrusive activities. There were no fifteen-minute average concentration the action level established by the community air monitoring plan (CAMP) (1.0 µg/m², 5.0 ppm, and 0.1 mg/m³, respectively).

Badground Concentrations of ground-intrusive work, instantaneous badground concentrations of mercury vapor and VOCs were recorded using a handheid Jerome<sup>®</sup> 1505 mercury vapor analyzer and a handheid PID, respectively. - Badground concentrations of mercury vapor at each CAMP station ranged from 0.00 to 0.03 µg/m<sup>3</sup>. - Badground concentrations of mercury vapor at each CAMP station were recorded at 00 ppm.

Perimeter and Work Zone Concentrations —Two Instantaneous mecrury vapor readings above background concentrations were recorded at off-site CAMP station W/2.2 (2.5 µg/m<sup>2</sup> at 8:15am) and perimeter CAMP station PM-6 (4.4 µg/m<sup>2</sup> at 2:17am), respectively. There were no 15-minute average exceedances of the action level established in the CAMP. Nowever, out of an abundance of Caution, work was temporarily halted and Mercon-X<sup>4</sup> was applied to all stockpiles and exposed sol/fill throughout the site. In each instance, mercury vapor concentrations returined background conditions immediately following the instantaneous reading and work resumed following application of MerconX<sup>4</sup>.

Ambient Air (Handheld Jerome<sup>\*</sup> J505 and Handheld PID) - The dedicated mobile monitor (Langan) used a handheld Jerome<sup>\*</sup> 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>2</sup> to 1.61 µg/m<sup>2</sup>. - The dedicated mobile monitor (Langan) used a handheld PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations throughout the site and the background concentrations throughout the work day.

Equipment Troubleshooting - The PID at off-site CAMP station VVZ-1 was recalibrated at 8.58am due to persistent readings of 1.2 ppm, which was inconsistent with readings on the handheld unit (0.0 ppm). Data logging resumed at 9.00m and VOC concentrations returned to background conditions following equipment recalibration. Odorswere not observed migrating from the site during this time. - The PID at perimeter CAMP station PM-4 was recalibrated at 11:39am and 12:33pm due to persistent readings ranging from 2.1 ppm to 2.7ppm, which was inconsistent with readings on the handheld unit (0.0 ppm). Data logging resumed at 11:42am and 12:33pm, respectively, and VOC concentrations returned to lackground conditions in each instance. Odors were not observed migrating from the site during this time.

Off-Site CAMP Station Relocation - CAMP station W2-1 was relocated to the northern sidewalk of Pearl Street from 7:12am to 5:01pm during excavation/backfill of test pits and installation of SOE soldier piles along the northern boundary of the site.

CAMP station W1-2 was relocated to the southern sidewalk of Water Street from 7:04am to 12:50pm during advancement of soil borings in the south-central part of the site. CAMP station W2-3 was relocated to the eastern sidewalk of Peck Slip from 8:09am to 5:01pm during excavation/backfill of t est pits along the eastern boundary of the site.

### Prior to CAMP Shutd

Prior discontinue GAMP, air guality at each CAMP station was verified using the handheld PID and handheld Jeromé JSOS mercury vapor analyter and no readings above background concentrations were recorded. Additionally, areas of exposed sol/fill were covered with polyethylene sheeting and/or Atmod AC-645 dust/vapor suppressing foam. CAMP stations were discontinued at SDI part at the conclusion of ground-intrusive activities. - Mercury vapor concentrations at each CAMP station ranged from 000 to 0.02 µg/m<sup>1</sup>. - VIC concentrations at each CAMP station were recorded at 0.02 pm.







Langan performed air monitoring at the perimeter of the site and at the work zone at eight total locations for mercury vapor,volatile organic compounds (VOCS), and particulate matter less than 10 microws in diameter (PMLD), during ground-intrusive activities. There were no fifteen-minute average concentrations for VOCs that approached or exceeded the action level established by the CMM (5 0 pm).

### Background Concentrations

background current atoms protocommon of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorde d using a handheld Jerome<sup>\*</sup> 1505 mercury vapor analyzer and a handheld PID, respectively. - Background concentrations of IVOCs at each CAMP station ranged from 0.00 to 0.07 µg/m<sup>2</sup>. - Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

Beneficial and the end of VoCs a cell clean clean statum ere recorded at to Jpin.
 Berinders and VoCs and Concentrations
 Pouring application of Mercors X aroos the excavated at the north-central part of the site, the 15-minute TWA action level for mercury vapor (1.00 µg/m<sup>2</sup>) was exceeded at perimeter CMP station PAC which was located about 30 feet from the work res, for a during of about 50 minutes (from 3.48gm to 3.53gm). Work was previously halted aroos the exceeded at perimeter Machine and the north-central part of the site, the 15-minute TWA action level for mercury vapor (1.00 µg/m<sup>2</sup>) was exceeded at perimeter Machine and the north-central part of the site at 3.36gm to 3.53gm). Work was previously halted aroos the set at 3.36gm due to an instantaneous mercury vapor content site at 4.336gm to 3.42gm<sup>2</sup>. During 10 minutes (from 3.48gm to 1.53gm<sup>2</sup>) and a maximum 15-minute Machine and the north-central part of the site at 4.336gm to 3.42gm<sup>2</sup>. During 10 minutes (from 3.48gm<sup>2</sup>) to 1.42gm<sup>2</sup>. During 11 minutes (from 3.48gm<sup>2</sup>) to 1.42gm<sup>2</sup>. During 11 minutes 11 minutes (from 3.48gm<sup>2</sup>) to 1.42gm<sup>2</sup>. During 11 minutes (from 3.42gm<sup>2</sup>) to 1.42gm<sup>2</sup>. During

Ambient And (Isondhed, Jenner) 2005 and Isondhed 200) The decidated holds monitor (Langel) local handhed 200) The decidated holds monitor (Langel) local handhed is more 1505 mercury vapor analyzer to monitor ambient air conditions at various heights throughout the site. With the seception of the 15-minute TWA mercury vapor exceedance previously described, instantaneous mercury vapor concentrations throughout the site ranged from 0.01 µg/m<sup>-1</sup> to 0.41 µg/m<sup>-1</sup>. The decidated mobile monitor (Langel) used a handhed PD to monitor VOC concentrations throughout the site. With the exception of ambient air screening during emoval of the USTs, instantaneous VOC concentrations were at or below background concentrations throughout the work day, A maximum instantaneous/VOC concentrations throughout the work day. A maximum instantaneous/VOC concentrations throughout the vork day, A maximum instantaneous/VOC concentrations throughout the site with the USTs in the easter and or the USTs in the easter and or the Site. Nower, VOC concentrations at the nearest perimeter CAMP station(TM-4) were not recorded above background concentrations.

Off-Site CAMP Station Relocation - CAMP Station RV2 1 was relocated to the northern sidewalk of Pearl Street from 7:07am to 4:44pm during excavation of test p its and installation of SOE soldier piles along the northern boundary of the site. - CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 7:16am to 4:44pm during excavation of test pits and demolition of concrete along the eastern boundary of the

Prior to CAMP Shutdown Prior to CAMP Shutdown Prior to Gacontinuing CAMP and approximately 30 minutes after mercury vapor readings returned to background concentrations at perimeter CAMP station PM-6, air quality at each CAMP station was writed using the handheid PID and handheid Jerome 1505 mercury vapor analyzer and no readings above background concentrations were recorded. Additionally, areas of exposed soluțilii were covered with polyethylene sheeting and/or AtmoG AC-645 dist/vapor rusppressing foam. CAMP stations were discontinued at 4.44pm at the conclusion of ground -intrave activities. - Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.08 µ/m<sup>2</sup>. - VOC concentrations at each CAMP station ranged from 0.0 pm to 0.1 pm.







Langan performed air monitoring at the perimeter of the site and at the work zone at eight total locations for mercury vapor, volatile organic compounds (VOCs), and particulate matter less than 10 microns in diameter (PMID), during ground -infrusive activities. There were no fifteen-minute average concentrations for mercury vapor or VOCs that approached or exceeded the action level stabilished by the COMP (Login<sup>21</sup> and 50 going; respectively).

Background Concentrations Prior to Implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheid Jerome<sup>3</sup> JSOS mercury vapor - Background concentrations of Incore vapor at each CAMP station ranged from 0.00 to 0.01 µg/m<sup>3</sup>. - Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

- \* PMI0 concentrations at perimeter CAMP station PM -6 exceeded the action level established in the CAMP (0.100 mg/m<sup>2</sup>) for a duration of about 15 minutes (9:36am to 9:50am). The
maximum 15-minute TWA concentrations at perimeter CAMP station PM -6 exceeded the action level established in the CAMP (0.100 mg/m<sup>2</sup>) for a duration of about 15 minutes (9:36am to 9:50am). The
maximum 15-minute TWA concentrations at perimeter CAMP station PM -6 exceeded the action level established in the CAMP (0.100 mg/m<sup>2</sup>) for a duration of about 15 minutes (9:36am to 9:50am). The
maximum 15-minute TWA concentrations at perimeter CAMP station PM -6 exceeded the station were established in the CAMP (0.100 mg/m<sup>2</sup>) for a duration of about 25 minutes (10:56am to 1103am).
The maximum 15-minute TWA concentration of PM10 was recorded at 0.123 mg/m<sup>2</sup> and was caused by instantaneous PM10 concentrations at perimeter CAMP station PM -6 exceeded the scence of the static during this time. - The DustTrak unit at perimeter CAMP station PM -4 was
recolarized and instantaneous PM10 concentration of PM10 was recorded at 0.123 mg/m<sup>2</sup> and was caused by instantaneous PM10 concentrations at perimeter CAMP station PM -4 was
relocated further downwind of the work are at 11:10am to avido potential interference from the generator. During this time, of H=16 CAMP station PM -4 was
relocated further downwind of the work are at attion level at attion level established in the CAMP (0.100 mg/m<sup>2</sup>) for a duration of about 26 minutes (1:55mm).
- PM10 concentrations at perimeter CAMP station PM -4 exceeded the action level established in the CAMP (0.100 mg/m<sup>2</sup>) for a duration of about 27 was located on the eastern
station were caused by concrete denolition activities in proximp to the perimeter CAMP station DM and was caused by instanteneous PM10 concentrations at perimeter CAMP station PM -4 exceeded the action level established in the CAMP (0.100 mg/m<sup>2</sup>) for a duration of a

Ambient Air (Handheid Jerome\* 1505 and Handheid PID). - The 6elicated mobile monitor (Langan) used a handheid Jerome \* 1505 mercury vapor analyzer to monitor ambient air conditions at various heights throughout the site. Instantaneous mercury vapor concentrations throughout the site anged from 0.00 µg/m \* to 0.28 µg/m<sup>3</sup>. - The 6elicated mobile monitor (Langan) used a handheid PID to monitor VOC concentrations throughout the site. Instantaneous VOC concentrations throughout the site.

Off Site CAMP Station Relocation - CAMP station W2-1 was relocated to the northern sidewalk of Pearl Street from 6:S8am to 5:23pm during excavation/backfilling activities along the northern boundary of the site. - CAMP station W2-2 was relocated to the eastern sidewalk of Peck Sig from 6:S8am to 5:23pm during installation of SOE soldier piles along the eastern boundary of the site.

Equipment Troubleshooting PMIC concentrations were not recorded at perimeter CAMP station PMA4 between 11:10am and 11:20am during relocation of the CAMP station further downwind of the work area to avoid interference from a nearby generator. Fuglitive dust was not observed migrating from the site during this time and data logging resumed at 11:21am. During this time, off-site CAMP station WZ-2 was located on the eastern sidewalk of Peck 31p and no instantaneous PMID concentrations above background conditions were recorded.

Prior to CAMP Shutdown
Prior to CAMP Shutdown
Prior to GAMP Shutdown
Prior to GAMP Shutdown
Prior to GAMP Shutdown
Prior to Game Camp Shutdown
Prior to Camp Shutdo





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ENGINEERIN	NG & ENVIRONM	ENTAL SERVICES	250	Water S	itreet Reme	diati	on Sit	е		ust Action	(cu by:	100
				Mar	hattan. New Y	ork				USt Action	Level (µg/m)	100
										OC Action	Level (ppm)	5
										Hg Action L	.evel (µg/m³)	1.0
Weathe	er Data Range fo	or Work Day	Wind Direction	Ν	Relative Humidity (%)	25.6	- 35.6				Readings in the summary t	able and graphs
Tem	np (°F)	90.5 - 97.8	Wind Speed (MPH)	1.2 - 6.2	Barometer (inHg)	30.04	- 30.09	Daily	Rain (in)	0.00	below are the reported concentration	d downwind ns.
Station Work	Location k Area	Daily Avg. Concentration	Dust Max (µg/m <sup>3</sup> ) Conce	15 Minute Dust ntration (µg/m³)	Time of Maximum 15 Minut Reading	e Avg Dust	Daily Av Concentra	vg. VOC tion (ppm)	Max 15 Min Concentrati	ute VOC ion (ppm)	Time of Max 15 Minu Reading	te Avg VOC
PI	PM-1	14.2		45.4	16:40		0	.0	0.0	)	9:26	
PI	PM-2	8.9		36.4	12:56		0	.0	0.2	2	13:30	
PI	PM-3	30.8		53.3	11:28		1	.3	3.4	1	15:23	
PI	PM-4	31.0		41.6	15:33		0	.4	3.9	)	12:13	
PI	PM-5	42.3		61.1	11:16		0	.0	0.0	)	13:30	
PI	PM-6	37.1		184.6	11:01		0.0		0.0	)	10:03	
W	VZ-1	37.5		51.6	13:48		0	.0	0.0	)	9:16	
W	VZ-2	26.9		42.2	15:33		0	.3	0.6	6	13:05	
W	VZ-3	N/A		N/A	N/A		N	/A	N//	4	N/A	
Station Work	Location k Area	Daily Avg	g. Mercury Concentrati	on (µg/m³)	Max 15 Minute Me	ercury Conc	entration (µg/	m³)	Tim	e of Max 15	Minute Avg Mercury Rea	iding
PI	PM-1		0.01			0.03					16:10	
PI	PM-2		0.01			0.03					13:58	
PI	PM-3		0.00			0.01					17:29	
PI	PM-4		0.02			0.03					11:32	
PI	PM-5		0.02			0.09					11:17	
PI	PM-6		0.05			0.48					10:04	
W	VZ-1		0.01			0.02					9:34	
W	VZ-2		0.01			0.11					9:38	
W	VZ-3		N/A			N/A					N/A	
200.0 180.0 (E 160.0	PM10	DUST MONIT	ORING RESULT	S - 07/23/22	و م	.0	voc r	MONITOR	ING RESU	LTS - 07	2/23/22	
~					5							



Langan performed air monitoring at the perimeter of the site and at the work zone at eight total locations for mercury vapor, volatile organic compounds (VOCs), and particulate matter less than 10 microsi in diameter (PMID), during ground-intrusive activities. There were no fifteen-minute average concentrations for mercury vapor or VOCs that exceeded the action level exabilished by the ACMP (LOB (gring mail So ppm, respectively).

Background Concentrations Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>\*</sup> J505 mercury vapor implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>\*</sup> J505 mercury vapor a background concentrations of mercury vapor at each CAMP station were recorded at 0.00 µg/m<sup>\*</sup>. Background concentrations of VOCs at each CAMP station were recorded at 0.00 µg/m<sup>\*</sup>.

Perimeter and Work Zone Concentrations -\* PMUID concentrations at perimeter CAMP station PM-6 exceeded the action level established in the CAMP (0.100 mg/m3) from 10.55am to 11.08am (14 minutes), 11.24am to 11.35am (12 minutes), and 12.56gm (13 minutes). The exceedances were caused by welding activities in proximity to perimeter CAMP station PM-6 and were not a result of ground-intrusive activities at the site. In each instance, work was temporarily halted and dust suppression was implemented by spraying the work area with water. Fugitive dust was not observed migrating from the site during each of these times.

Ambient.Air. (Handheid Jerome", JSOS and Handheid PID)
The dedicated mobile monitor (Langan) used a handheid Jerome" JSOS 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>4</sup> to 0.79 µg/m<sup>4</sup> (mercury vapor concentrations above background concentrations are associated with ambient air
corening in the notific-contral part of the site during excession activities in the mercury-impacted area).
The dedicated mobile monitor (Langan) used a handheid 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-2 was relocated to the northern sidewalk of Pearl Street from 9:19am to 5:27pm during excavation and demolition activities along the northern boundary of the site. - CAMP station WZ-2 was relocated to the eastern sidewalk of Peak Slip from 9:51am to 5:11pm during installation of SOE soldier piles along the eastern boundary of the site.

Prior to CAMP Shutdown
Prior to discontinuing CAMP, air quality at each CAMP station was verified using the handheid PID and handheid Jerome<sup>1</sup> J505 mercury vapor analyzer and no readings above background
concentrations were recorded. Additionally, areas of exposed soll/fill were covered with polyethylene sheeting and/or Atmos<sup>4</sup> AC-645 dust/vapor suppressing foam. CAMP stations were
discontinued between 5:07pm and 5:29pm at the conclusion of ground-intrusive activities.
- Vercury vapor concentrations at each CAMP station were recorded at 0.00 µg/m<sup>3</sup>.
- VOC concentrations at each CAMP station were recorded at 0.00 µg/m<sup>3</sup>.





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LANĽ	JAN	250	Water S	treet Reme	diati	on Sit	te		Submit	ted By:	Nev. NO. 0
ENGINEERING & ENVIRONI	MENTAL SERVICES	200			MIMEI			D	ust Action	Level (µg/m³)	100
			Man	hattan, New Y	ork			V	OC Action	Level (ppm)	5
								ŀ	lg Action L	.evel (µg/m³)	1.0
Weather Data Range	for Work Day	Wind Direction	WSW	Relative Humidity (%)	55.0	- 73.7	Deily	Poin (in)	0.10	Readings in the summary to	able and graphs
Temp (°F)	78.9 - 88.3	Wind Speed (MPH	) 0.4 - 7.7	Barometer (inHg)	29.91	- 29.95	Dally	Rain (in)	0.19	concentration	is.
Station Location Work Area	Daily Avg. Concentration	Dust Ma n (µg/m³) Con	x 15 Minute Dust centration (µg/m³)	Time of Maximum 15 Minut Reading	e Avg Dust	Daily A Concentra	vg. VOC ation (ppm)	Max 15 Min Concentrati	ute VOC on (ppm)	Time of Max 15 Minu Reading	te Avg VOC
PM-1	37.6		76.8	11:46	11:46 0.0			0.0		8:27	
PM-2	39.2		64.3	11:45	C	0.0 0.1			10:04		
PM-3	43.5		74.9	7:31		C	.1	0.3		9:56	
PM-4	27.6		62.9	11:45		C	.3	0.4		9:27	
PM-5	43.1		* 281.0	14:20		C	.0	0.3		16:48	
PM-6	39.6		77.2	9:18 0.0			0.0		9:44		
WZ-1	49.6		82.7	11:47 0.0			.0	0.0		7:35	
WZ-2	33.6		50.7	11:43		0.0		0.0		8:05	
WZ-3	38.7		75.6	7:31		C	.1	0.3		9:02	
Station Location Work Area	Daily Avg	g. Mercury Concentr	ation (µg/m³)	Max 15 Minute Me	rcury Conce	entration (µg	/m³)	Time	e of Max 15	Minute Avg Mercury Rea	ding
PM-1		0.01			0.03					14:44	
PM-2		0.01			0.03					17:11	
PM-3		0.00			0.01					11:56	
PM-4		0.02		0.07					7:25		
PM-5		0.02		0.05					14:36		
PM-6		0.04			0.12					12:21	
WZ-1		0.02			0.05			12:06			
WZ-2		0.00		0.00			7:38				
WZ-3		0.00	0.12				8:21				



**MERCURY MONITORING RESULTS - 07/25/22** 





# Air Monitoring Notes:

1.2

Langan performed air monitoring at the perimeter of the site and at the work zone at nine total locations for mercury vapor, volatile organic compounds (VOCs), and particulate matter less than 10 microns in diameter (PM10), during ground-intrusive activities. There were no fifteen-minute average concentrations for mercury vapor or VOCs that approached or exceeded the action level established by the Community Air Monitoring Plan (CAMP) (1.00 µg/m<sup>3</sup> and 5.0 ppm, respectively).

# **Background Concentrations**

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>\*</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station ranged from at 0.00 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

\* PM10 concentrations at perimeter CAMP station PM-5 exceeded the action level established in the CAMP (0.100 mg/m3) from 2:06pm to 2:32pm (26 minutes). The exceedance was caused by welding activities in proximity to perimeter CAMP station PM-5 and was not a result of ground-intrusive activities at the site. Work was temporarily halted and dust suppression was implemented by spraying the work area with water. Fugitive dust was not observed migrating from the site during this time.
 A Jerome® J405 mercury vapor analyzer was used at off-site CAMP station WZ-3 throughout the work day due to a malfunction of two Jerome® J505 units which required maintenance by the equipment manufacturer. Four additional Jerome® J505 units are anticipated to be delivered to the site on July 26, 2022.

# Equipment Troubleshooting

- PM10 concentrations were not recorded at perimeter CAMP station PM-4 from 11:14am to 11:26am due to a malfunction with the remote telemetry system. Work was halted and troubleshooting measures were implemented to restart the system. Fugitive dust was not observed migrating from the site during this time and data logging resumed at 11:27am.

- PM10 concentrations were not recorded at perimeter CAMP station PM-6 from 1:53pm to 1:53pm due to a depleted battery. During this time, CCJV was in the process of welding T-brackets to the edges of previously installed soldier piles along the northern boundary of the site. Data logging resumed at 1:59pm following replacement of the battery at perimeter CAMP station PM-6. 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<sup>\*</sup> J505 mercury vapor analyzer to monitor ambient air conditions at various heights throughout the site. Instantaneous mercury vapor concentrations throughout the site ranged from  $0.00 \,\mu\text{g/m}^3$  to  $0.74 \,\mu\text{g/m}^3$  (mercury vapor concentrations above background concentrations are associated with ambient air screening in the north-central part of the site during excavation activities in the mercury-impacted area).

- 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 7:20am to 4:48pm during excavation and demolition activities along the northern boundary of the site.

- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 7:10am to 5:18pm during excavation activities and installation of SOE soldier piles along the eastern boundary of the site.

- CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 7:44am to 5:13pm during installation of SOE soldier piles along the eastern 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<sup>\*</sup> 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<sup>\*</sup> AC-645 dust/vapor suppressing foam. CAMP stations were discontinued between 4:48pm and 5:44pm at the conclusion of ground-intrusive activities. - Mercury vapor concentrations at each CAMP station ranged from 0.00 to 0.01 µg/m<sup>3</sup>.







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 (PMU), during ground-intrusive activities. There were no fifteen -minute average concentrations for mercury vapor or VOCs that approached or exceeded the action level established by the CMMP (Lough-mat SD game) and game and gam

Background Concentrations Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VDCs were recorded using a handheld Jerome<sup>®</sup> 1505 mercury vapor analyser and a handheld FD, respectively. - Background concentrations of MCCs are it each CAMP station ranged from at 0.00 to 0.03 µg/m<sup>®</sup>. - Background concentrations of WCS are it each CAMP station ranged from at 0.00 to 0.03 µg/m<sup>®</sup>.

Perimeter and Work Zone Concentrations •\* PMID concentrations a perimeter CAMP station PM -6 exceeded the action level established in the CAMP (0.100 mg/m3) from 8:34am to 8:48am (15 minutes). The exceedance was caused by actue spraying of Mercon-X\* The portaminy to perimeter CAMP station PM-6 and was not the result of ground-intrusive activities at the site. During this time, work was temporarly halted due to instantaneous mercury vapor concentrations above background conditions recorded during screening of the ambient air in the north-central part of the site. •\*\* PMID concentrations at perimeter CAMP station PM -3 exceeded the action level established in the CAMP (0.100 mg/m) from 3:32pm to 3:10pm (9 minutes). During this time, CCV was loading CEM definition a truck for off site disposal. Out suppression was implemented by spraying the CED debris with wat er and concentrations of PM10 returned to background conditions. Fuglitive dust was not observed migrating from the site during this time.

Equipment Troubleshooting - PMID concentrations at perimeter CAMP station PM-6 were not recorded from 7.41am to 7.48am due to a malfunction with the emote telemetry system. During this time, the dedicated mobile motion visually monitored the PMID concentrations on the DustTrak unit while restarting the telemetry system, however, the data was not able to be recovered. PMID concentrations did not approach or exceed the action level established in CAMP (0.100 mg/m<sup>2</sup>). Figilive dust was not observed migrating from the site during this time and data logging resumed at 7.39am.

Ambeen And (Issueliad account) 1005 and Issueliad 000) memory says conductions allowed in location of the says of the same 1505 mercury vagor analyses to monitor ambient air conditions at various heights throughout the site. Instantaneous mercury vagor conditions through the says of the says of the says of the same 1505 mercury vagor concentration was recorded at 2.51 g/m<sup>2</sup>, however, there were no 15-minute VMA concentrations for mercury vagor sceneding the scale heights through the same sceneding at 2.51 g/m<sup>2</sup>, however, there were no 15-minute VMA concentrations for mercury vagor sceneding the scale height the stabilished in the CMP at any perimeter or work can eCAMP station. - The decidated mobile monitor (Largan) used a handhed PID to monitor VOC concentrations throughout the site. VOC concentrations days.

OIL Size CAMP Statem Relocation - CAMP statem Relocated to the eastern adewalk of Peck Sign from 707am to 5:21pm during installation of SOE soldier piles along the eastern boundary of the site. - CAMP statem Relocated to the southern sidewalk of Water Street from 7.07am to 5:21pm during installation of the primeter construction frace along the southern boundary of the site.

Prior to CAMP Shutdown Prior to CAMP Shutdown Prior to Eccentruing CAMP, air quality at each CAMP station was verified using the handheld PID and handheld Jerome<sup>+</sup> 3505 mercury vapor analyzer and no readings above background concentrations was recorded. Additionally, areas of exposed sol/fill were covered with polyethylene sheeting and/or Atmos<sup>+</sup> AC-645 data/vapor suppressing foam. CAMP stations were discontinued at 5.21pm at the conclusion of ground-intrusive activities.





											07/27/22	
								-		Project	t number: 170381202	
		D	AIL			GRE	PUR	•		Page	1 of 2	Rev No 0
	<b>TAIN</b>	25	50 M	later S <sup>.</sup>	treet Reme	diati	on Sif	te		Submit	ted By:	1.00.100.0
ENGINEERING & ENVIRONM	MENTAL SERVICES								Di	ust Action I	₋evel (µg/m³)	100
				Man	hattan, New Yo	ork			V	OC Action	Level (ppm)	5
									ŀ	lg Action L	evel (µg/m³)	1.0
Weather Data Range	for Work Day	Wind Direc	ction	Ν	Relative Humidity (%)	43.4	- 48.6	Deibul	Daire (in)	0.00	Readings in the summary ta	able and graphs
Temp (°F)	75.2 - 78.0	Wind Speed	I (MPH)	0.5 - 4.0	Barometer (inHg)	30.04	- 30.04	Dally	Kain (in)	0.00	concentration	i downwind Is.
Station Location Work Area	Daily Avg. Concentration	Dust n (µg/m³)	Max 15 Concent	Minute Dust tration (µg/m³)	Time of Maximum 15 Mir Dust Reading	nute Avg	Daily Av Concentra	vg. VOC tion (ppm)	Max 15 Min Concentrati	Max 15 Minute VOC Time Concentration (ppm)		te Avg VOC
PM-1	10.9	10.9         25.3           24.0         73.3			11:49		0	.0	0.0		14:27	
PM-2	34.0	34.0 73.3			8:23		0	.0	0.2		13:37	
PM-3	31.4			55.5	14:36		0	.1	0.3		10:21	
PM-4	17.2			47.4	10:31		0	.1	0.4		11:53	
PM-5	37.6			80.0	11:42		0	.1	0.6		7:21	
PM-6	24.3		*	102.2	9:30		0	.0	0.1		8:51	
WZ-1	25.6			96.8	9:32		0	0.0			9:33	
WZ-2	8.9			19.3	17:30		0	0.4 0			15:17	
WZ-3	19.0			42.2	16:39		0	.4	1.6		14:40	
Station Location Work Area	Daily Avg	. Mercury Con	ncentratio	n (µg/m³)	Max 15 Minute Me	rcury Conce	entration (µg	/m³)	Time	of Max 15	Minute Avg Mercury Rea	Iding
PM-1		0.01				0.02					14:10	
PM-2		0.01				0.02					8:39	
PM-3		0.00				0.01					8:01	
PM-4		0.01				0.03					10:30	
PM-5		0.02				0.07					7:29	
PM-6	0.01				0.05			7:30				
WZ-1	0.01				0.03			16:56				
WZ-2		0.02			0.08			12:22				
WZ-3		0.01			0.03				16:40			





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 or VOCs that approached or exceeded the action level established by the CAMP (1.00  $\mu\text{g}/\text{m}^3$  and 5.0 ppm, respectively).

### Background Concentrations

Prior to implementation of ground-intrusive work, 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 to 0.03  $\mu g/m^3.$
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

### Perimeter and Work Zone Concentrations

- \* PM10 concentrations at perimeter CAMP station PM-6 exceeded the action level established in the CAMP (0.100 mg/m3) from 9:29am to 9:34am (6 minutes). The exceedance was caused by exhaust from a truck exiting the site following delivery of tie-backs for the SOE system. Fugitive dust was not observed migrating from the site during this time.

# Equipment Troubleshooting

- PM10 concentrations at off-site CAMP station WZ-2 (located along the Peck Slip sidewalk) were not recorded from 11:19am to 11:52am due to a depleted battery. Upon notification that off-site CAMP station WZ-2 was not transmitting data, the dedicated CAMP monitor investigated the station and observed that the telemetry case and Jerome\* J505 unit was stolen. A Jerome<sup>®</sup> J405 unit was stationed with off-site CAMP station WZ-2 prior to the start of work and a spare Jerome<sup>®</sup> J505 was placed atop the station for the remainder of the day. The Daily Air Monitoring Report reflects mercury vapor data using the Jerome<sup>®</sup> J405 from 6:51am to 12:06pm and the Jerome<sup>®</sup> J505 from 12:06pm to 5:31pm. Following coordination with the New York City Police Department, the depleted battery at off-site CAMP station WZ-2 was replaced and data logging for PM10 resumed at 11:53am. Perimeter CAMP station PM-4 was located between the work area and off-site CAMP station WZ-2 during this time and PM10 concentrations were not recorded above background conditions.

### Ambient Air (Handheld Jerome® J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome<sup>\*</sup> 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 0.85 µg/m<sup>3</sup> (mercury vapor concentrations above background conditions are associated with ambient air screening during excavation activities in the mercury-impacted area). There were no 15-minute time-weighted average (TWA) concentrations for mercury vapor that exceeded the action level established in the CAMP at any perimeter or work zone CAMP station.

- 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 6:58am to 5:31pm during excavation activities and SOE soldier pile installation along the northern boundary of the site.

- CAMP station WZ-2 was relocated to the eastern sidewalk of Peck Slip from 6:58am to 5:31pm during installation of SOE soldier piles along the eastern boundary of the site. - CAMP station WZ-3 was relocated to the southern sidewalk of Water Street from 7:00am to 5:31pm during test pit excavation and installation of the perimeter construction fence 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<sup>®</sup> 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 5:31pm at the conclusion of ground-intrusive activities.

- Mercury vapor concentrations at each CAMP station were recorded at  $0.02 \,\mu g/m^3$ .

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





											07/28/22	
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			DAIL			G RE	FUR			Page	1 of 2	Rev No 0
LANC		2	250 V	<b>Vater S</b>	treet Reme	diati	on Sit	e		Submit	ted By:	
ENGINEERING & ENVIRONM	IENTAL SERVICES	_							D	ust Action I	Level (µg/m³)	100
				Man	nattan, New Y	ork			\	OC Action	Level (ppm)	5
									ŀ	Ig Action L	evel (µg/m³)	1.0
Weather Data Range f	or Work Day	Wind Di	rection	N	Relative Humidity (%)	53.2	- 65.9	Deilte	Dain (in)	0.00	Readings in the summary ta	able and graphs
Temp (°F)	82.7 - 88.1	Wind Spe	ed (MPH)	0.1 - 0.1	Barometer (inHg)	29.86	- 29.93	Daily	Rain (in)	0.00	concentration	is.
Station Location Work Area	Daily Avg. Concentration	Dust n (µg/m³)	Max 1 Concen	5 Minute Dust tration (µg/m³)	Time of Maximum 15 Minut Reading	e Avg Dust	Daily A Concentra	vg. VOC tion (ppm)	Max 15 Min Concentrati	ute VOC on (ppm)	Time of Max 15 Minut Reading	te Avg VOC
PM-1	54.5	54.5     * 308.8       38.9     64.1			8:48		0	.1	1.4		8:53	
PM-2	38.9	38.9 64.1			13:25		0	.0	0.1		15:45	
PM-3	45.4			85.0	10:23		0	.2	0.4		15:40	
PM-4	40.3			70.7	13:41		0	.1	0.4		12:03	
PM-5	42.4			66.1	10:27		0	.1	0.4		12:54	
PM-6	36.5			54.0	8:57 0.0			.0	0.0		7:03	
WZ-1	7.6			20.7	15:55			.0	0.0		7:11	
WZ-2	N/A			N/A	N/A		N	/A	N/A	١	N/A	
WZ-3	35.4			50.1	15:56		0	.5	2.4		15:27	
Station Location Work Area	Daily Ave	g. Mercury Co	oncentratio	n (µg/m³)	Max 15 Minute Me	ercury Conce	entration (µg/	/m³)	Time	e of Max 15	Minute Avg Mercury Rea	ding
PM-1		0.0	)3			0.13					13:28	
PM-2		0.0	01			0.03					8:50	
PM-3		0.0	00			0.00					14:22	
PM-4		0.0	)2			0.03					11:04	
PM-5		0.01				0.03					9:45	
PM-6	0.01				0.02					16:23		
WZ-1	0.01			0.03				11:00				
WZ-2	N/A		N/A			N/A						
WZ-3		0.01			0.02				13:13			





MERCURY MONITORING RESULTS - 07/28/22

1.2



# Air Monitoring Notes:

Langan performed air monitoring at the perimeter of the site and at work zones at eight total locations for mercury vapor, volatile organic compounds (VOCs), and particulate matter less than 10 microns in diameter (PM10), during ground-intrusive activities. There were no fifteen-minute average concentrations for mercury vapor or VOCs that approached or exceeded the action level established by the CAMP (1.00 µg/m<sup>3</sup> and 5.0 ppm, respectively).

### Background Concentrations

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>®</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station ranged from at 0.00 to 0.08  $\mu$ g/m<sup>3</sup>.
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

### Perimeter and Work Zone Concentrations

\* PM10 concentrations at perimeter CAMP station PM-1 exceeded the action level established in the CAMP (0.100 mg/m<sup>3</sup>) from 8:26am to 9:01am (36 minutes) and from 9:18am to 9:35am (18 minutes). The exceedances were caused by saw-cutting of the Beekman Street sidewalk immediately west of the site boundary by an independent contractor. The off-site work was not related to 250 Water Street construction or remediation activities within the site and fugitive dust was not observed migrating from the site during these times.

# Equipment Troubleshooting

- PM10 concentrations at the following perimeter CAMP stations were not recorded during replacement of the external batteries:

- PM-5 from 8:03am to 8:14am (11 minutes)
- PM-4 from 1:43pm to 2:07pm (24 minutes)
- PM-6 from 3:10pm to 3:27pm (17 minutes)
- PM-2 from 3:39pm to 3:57pm (18 minutes)

- In each instance, work was halted upon notification via the remote telemetry system that the DustTrak units were not sending data or there were no ongoing ground-intrusive activities on site. Fugitive dust was not observed migrating from the site during each of these times. Additionally, off-site CAMP stations WZ-1 and WZ-3 (located across the Pearl Street and Peck Slip sidewalks, respectively) did not record concentrations of PM10 above background conditions.

# Ambient Air (Handheld Jerome® J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome<sup>\*</sup> 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 0.12 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 5:17pm during excavation activities and SOE soldier pile installation along the northern boundary of the site.

- CAMP station WZ-3 was relocated to the eastern sidewalk of Peck Slip from 6:48am to 5:09pm during excavation activities in the northeastern 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<sup>®</sup> 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<sup>®</sup> AC-645 dust/vapor suppressing foam. CAMP stations were discontinued between 5:09pm and 5:24pm at the conclusion of ground-intrusive activities.



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



											07/29/22		
									Project number: 170381202				
		DAILT AIK MUNITUKING REPORT							Page 1 of 2			Dev No. 0	
	<b>JAN</b>	2	250 Water Street Remediation Site						Submitted By:		Rev. NO. 0		
ENGINEERING & ENVIRON	MENTAL SERVICES			Water Street Kemediation Site					Dust Action Le		Level (µg/m³)	100	
			Manhattan, New York						VOC Action Level (ppm)		Level (ppm)	5	
									н	g Action L	evel (µg/m³)	1.0	
Weather Data Range for Work Day		Wind Direction WNW		Relative Humidity (%) 0.0		- 0.0				Readings in the summary t	ble and graphs		
Temp (°F)	75.0 - 87.0	Wind Spe	ed (MPH)	0.0 - 13.0	Barometer (inHg)	0.00 - 0.00		Daily	Rain (in)	0.00	below are the reported concentration	d downwind ns.	
Station Location Work Area	Daily Avg Concentratio	. Dust n (μg/m <sup>3</sup> )	Max 15 Concen	5 Minute Dust tration (µg/m³)	Time of Maximum 15 Minute Avg Dust Reading		Daily A Concentra	vg. VOC Max 15 Min ation (ppm) Concentrati		ute VOC on (ppm)	Time of Max 15 Minute Avg VOC Reading		
PM-1	35.1	35.1		81.8	11:38		0.0		0.0		7:05		
PM-2	48.6	48.6		* 102.7	11:40		0.0		0.0		8:44		
РМ-3	49.9		71.5		8:38		0.2		0.3		11:47		
PM-4	34.1	34.1		51.4	15:00		0.5		1.2		17:40		
PM-5	36.8		67.6		11:42		0.0		0.1		11:44		
PM-6	26.3		72.9		11:40		0.0		0.1		10:34		
WZ-1	46.3		75.9		11:44		0.0		0.0		7:06		
WZ-2	N/A		N/A		N/A		N/A		N/A		N/A		
WZ-3	33.5		48.6		17:13		0.2		0.6		16:48		
Station Location Work Area	Daily Av	Daily Avg. Mercury Concentration (µg/m³)				Max 15 Minute Mercury Concentration (µg/m <sup>3</sup> )				Time of Max 15 Minute Avg Mercury Reading			
PM-1		0.02				0.05				8:30			
PM-2		0.0	00		0.02				15:25				
PM-3		0.0	00		0.00				10:28				
PM-4	0.01				0.04				8:28				
PM-5	0.01				0.02			11:10					
PM-6		0.01			0.03				13:12				
WZ-1	0.01				0.22				7:36				
WZ-2		N/A				N/A				N/A			
WZ-3	0.01				0.02				17:05				





MERCURY MONITORING RESULTS - 07/29/22



# Air Monitoring Notes:

Langan performed air monitoring at the perimeter of the site and at work zones at eight total locations for mercury vapor, volatile organic compounds (VOCs), and particulate matter less than 10 microns in diameter (PM10), during ground-intrusive activities. There were no fifteen-minute average concentrations for mercury vapor or VOCs that approached or exceeded the action level established by the CAMP (1.00 µg/m<sup>3</sup> and 5.0 ppm, respectively).

### **Background Concentrations**

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>®</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station ranged from 0.00 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

- \* PM10 concentrations at perimeter CAMP station PM-2 exceeded the action level established in the CAMP (0.100 mg/m3) from 11:39am to 11:41am (3 minutes). The exceedance was caused by saw-cutting of the Beekman Street sidewalk, immediately west of the site, by an independent contractor. The off-site work was not related to 250 Water Street construction or remediation activities within the site and fugitive dust was not observed migrating from the site during this time.

### Ambient Air (Handheld Jerome<sup>®</sup> J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome<sup>\*</sup> 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 0.09 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 6:51am to 5:29pm during excavation activities in the north-central part of the site. - CAMP station WZ-3 was relocated to the eastern sidewalk of Peck Slip from 7:07am to 5:20pm during excavation activities in the northeastern 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<sup>®</sup> 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<sup>®</sup> AC-645 dust/vapor suppressing foam. CAMP stations were discontinued between 5:20pm and 5:40pm at the conclusion of ground-intrusive activities. - Mercury vapor concentrations at each CAMP station ranged from 0.00 µg/m<sup>3</sup>.







Weather Data Range for Work Day         Wind Direction         WNW         Relative Humidity (%)         32.0         38.0         Daily Rain (in)         0.00         Readings in the summary table and gelow multiconse.           Station Location         Daily Avg. Dust         Max 15 Minute Dust         Time of Maximum 15 Minute Avg Dust         Daily Avg. VOC         Concentration (µg/m³)         1.1           Work Area         Concentration (µg/m³)         Max 15 Minute Dust         Time of Maximum 15 Minute Avg Dust         Daily Avg. VOC         Max 15 Minute VOC         Time of Max 15 Minute Avg Dust         Daily Avg. VOC         Max 15 Minute VOC         Time of Maximum 15 Minute Avg Dust         Daily Avg. VOC         Concentration (µg/m³)         Time of Maximum 15 Minute Avg Dust         Daily Avg. VOC         Max 15 Minute VOC         Time of Max 15 Minute Avg Dust         Daily Avg. VOC         Time of Max 15 Minute Avg Dust         Daily Avg. VOC         Max 15 Minute VOC         Time of Max 15 Minute Avg Dust         Daily Avg. VOC         Concentration (µg/m)         Time of Maximum 15 Minute Avg Dust         Daily Avg. VOC         Concentration (µg/m)         Time of Maximum 15 Minute Avg Dust         Daily Avg. VOC         Concentration (µg/m)         Time of Max 15 Minute Avg Dust         Daily Avg. VOC         Concentration (µg/m)         Time of Max 15 Minute Avg Dust         Daily Avg. VOC         Concentration (µg/m)         Time of Max 15 Minute Avg Dust         Daily Avg.	07/30/22			
MARLT Ark montroking kepoking           Page 1 of 2           Submitted By:           Submitted By:           Dust Action Level (µg/m³)         10           VOC Action Level (µg/m³)         10           Wind Direction         WINW         Relative Humidity (%)         32.0         38.0           Temp (*F)         84.0 - 88.0         Wind Direction         WINW         Relative Humidity (%)         32.0         - 38.0           Station Location         Daily Avg. Dust         Max 15 Minute Dust         Concentration (µg/m³)         Time of Maximum 15 Minute Avg Dust         Daily Avg. VOC         Concentration (µg/m³)         Concentration (µg/m³)         Time of Maximum 15 Minute Avg Dust         Daily Avg. VOC         Concentration (µg/m³)           PM-1         12.0         17.8         16:20         0.0         Max 15 Minute Avg V           PM-1         12.0         17.8         16:20         0.0         0.0         0.0 </th <th colspan="4">Project number: 170381202</th>	Project number: 170381202			
Submitted By:         Notice           Submitted By:         Notice           Submitted By:         Notice           Submitted By:         Notice           Dust Action Level (µg/m <sup>3</sup> )         10           Weather Data Range for Work Day         Wind Direction         WNW         Relative Humidity (%)         32.0         38.0         Daily Rain (in)         0.00         Readings in the summary table and g below are the reported downwinc concentration.           Station Location         Daily Avg. Dust Concentration (µg/m <sup>3</sup> )         Max 15 Minute Dust Concentration (µg/m <sup>3</sup> )         Time of Maximum 15 Minute Avg Dust Reading         Daily Avg. VOC Concentration (ppm)         Max 15 Minute VOC Reading         Time of Max 15 Minute Avg V Concentration (ppm)         Time of Max 15 Minute Avg V Concentration (ppm)         Time of Max 15 Minute Avg V Reading           PM-1         12.0         17.8         16:20         0.0         0.0         9:46           PM-2         16:0         21.5         12:39         0.0         0.0         13:23           PM-4         45.8         ** 184.0         16:37         0.1         0.3         12:24           PM-5          10.0 <th col<="" th=""><th rowspan="2">Rev. No. 0</th></th>	<th rowspan="2">Rev. No. 0</th>	Rev. No. 0		
ENGINEERING & ENVIRONMENTAL SERVICES         Dust Action Level (µg/m <sup>3</sup> )         10           Manhattan, New York         Dust Action Level (µg/m <sup>3</sup> )         10           Weather Data Range for Work Day         Wind Direction         WNW         Relative Humidity (%)         32.0 - 38.0         Daily Action Level (µg/m <sup>3</sup> )         11           Weather Data Range for Work Day         Wind Direction         WNW         Relative Humidity (%)         32.0 - 38.0         Daily Action Level (µg/m <sup>3</sup> )         11           Temp (°F)         84.0 - 88.0         Wind Speed (MPH)         3.5 - 11.5         Barometer (inHg)         30.00 - 30.00         Daily Avg. VOC         Max 15 Minute VOC         Time of Max 15 Minute Avg V           Work Area         Daily Avg. Dust Concentration (µg/m <sup>3</sup> )         Max 15 Minute Dust Concentration (µg/m <sup>3</sup> )         Time of Maximum 15 Minute Avg Dust Reading         Daily Avg. VOC Concentration (ppm)         Max 15 Minute Avg V         Reading           PM-1         12.0         17.8         16:20         0.0         0.0         9:46           PM-2         16.0         21.5         12:39         0.0         0.0         0.2         9:32           PM-3         32.6         85.9         13:19				
Weather Data Range for Work Day         Wind Direction         WNW         Relative Humidity (%)         32.0 - 38.0         Daily Rain (in)         0.00         Readings in the summary table and g below are the reported downwine concentrations.           Station Location Work Area         Daily Avg. Dust Concentration (µg/m³)         Max 15 Minute Dust Concentration (µg/m³)         Time of Maximum 15 Minute Avg Dust Concentration (µg/m³)         Daily Avg. VOC Concentration (µg/m³)         Max 15 Minute Avg V Reading           PM-1         12.0         17.8         16.20         0.0         0.0         9:46           PM-2         16.0         21.5         12:39         0.0         0.0         9:46           PM-3         32.6         85.9         13:19         0.0         0.2         9:32           PM-4         45.8         ** 184.0         16:37         0.1         0.3         12:24           PM-5         32.0         46.0         15:09         0.1         0.2         12:23           PM-6         14.6         *112.7         11:11         0.0         0.1         9:57	10			
Weather Data Range for Work Day         Wind Direction         WNW         Relative Humidity (%)         32.0         38.0         Daily Rain (in)         0.00         Readings in the summary table and g below are the reported downwin concentration.           Station Location Work Area         Daily Avg. Dust Concentration (µg/m³)         Max 15 Minute Dust Concentration (µg/m³)         Time of Maximum 15 Minute Avg Dust Reading         Daily Avg. VOC Concentration (ppm)         Max 15 Minute VVC Reading         Time of Max 15 Minute Avg Dust Reading         Daily Avg. VOC Concentration (ppm)         Max 15 Minute Avg V Reading         Max 15 Minute VOC Concentration (ppm)         Time of Max 15 Minute Avg V Reading           PM-1         12.0         17.8         16:20         0.0         0.0         9:46           PM-2         16:0         21.5         12:39         0.0         0.0         9:46           PM-3         32.6         85.9         13:19         0.0         0.2         9:32           PM-4         45.8         ** 184.0         16:37         0.1         0.3         12:24           PM-5         32.0         46.0         15:09         0.1         0.2         12:23           PM-6         14:6         * 112.7         11:11         0.0         0.1         9:57	j –			
Weather Data Range for Work Day         Wind Direction         WNW         Relative Humidity (%)         32.0         38.0         Daily Rain (in)         0.00         Readings in the summary table and g below are the reported downwing concentrations.           Temp (°F)         84.0         88.0         Wind Speed (MPH)         3.5         11.5         Barometer (inHg)         30.00         30.00         30.00         Max 15 Minute VOC Concentrations.         Readings in the summary table and g below are the reported downwing concentrations.           Station Location Work Area         Daily Avg. Dust Concentration (µg/m³)         Max 15 Minute Dust Concentration (µg/m³)         Time of Maximum 15 Minute Avg Dust Reading         Daily Avg. VOC Concentration (ppm)         Max 15 Minute VOC Concentration (ppm)         Time of Max 15 Minute Avg V Reading           PM-1         12.0         17.8         16:20         0.0         0.0         0.0         9:46           PM-2         16.0         21.5         12:39         0.0         0.0         0.2         9:32           PM-3         32.6         85.9         13:19         0.0         0.1         0.3         12:24           PM-4         45.8         ** 184.0         16:37         0.1         0.2         12:23           PM-6         14.6         * 112.7         11:11	0			
Temp (°F)         84.0         88.0         Wind Speed (MPH)         3.5         11.5         Barometer (inHg)         30.00         30.00         Daily Avg. VOC Concentration (µg/m³)         Daily Avg. Dust Concentration (µg/m³)         Max 15 Minute Dust Concentration (µg/m³)         Time of Maximum 15 Minute Avg Dust Reading         Daily Avg. VOC Concentration (µg/m²)         Max 15 Minute Avg V Reading           PM-1         12.0         17.8         16:20         0.0         0.0         9:46           PM-2         16.0         21.5         12:39         0.0         0.0         0.0         13:23           PM-3         32.6         85.9         13:19         0.0         0.1         0.3         12:24           PM-5         32.0         46.0         15:09         0.1         0.2         12:23           PM-6         14.6         *112.7         11:11         0.0         0.1         9:57	le and graphs			
Station Location Work Area         Daily Avg. Dust Concentration (µg/m³)         Max 15 Minute Dust Concentration (µg/m³)         Time of Maximum 15 Minute Avg Dust Reading         Daily Avg. VOC Concentration (ppm)         Max 15 Minute VOC Concentration (ppm)         Time of Max 15 Minute Avg V Reading           PM-1         12.0         17.8         16:20         0.0         0.0         9:46           PM-2         16.0         21.5         12:39         0.0         0.0         13:23           PM-3         32.6         85.9         13:19         0.0         0.2         9:32           PM-4         45.8         ** 184.0         16:37         0.1         0.3         12:24           PM-5         32.0         46.0         15:09         0.1         0.2         12:23           PM-6         14.6         * 112.7         11:11         0.0         0.1         9:57	a			
PM-112.017.816:200.00.09:46PM-216.021.512:390.00.013:23PM-332.685.913:190.00.29:32PM-445.8** 184.016:370.10.312:24PM-532.046.015:090.10.212:23PM-614.6* 112.711:110.00.19:57	Time of Max 15 Minute Avg VOC Reading			
PM-216.021.512:390.00.013:23PM-332.685.913:190.00.29:32PM-445.8** 184.016:370.10.312:24PM-532.046.015:090.10.212:23PM-614.6* 112.711:110.00.19:57	9:46			
PM-332.685.913:190.00.29:32PM-445.8** 184.016:370.10.312:24PM-532.046.015:090.10.212:23PM-614.6* 112.711:110.00.19:57	13:23			
PM-4         45.8         ** 184.0         16:37         0.1         0.3         12:24           PM-5         32.0         46.0         15:09         0.1         0.2         12:23           PM-6         14.6         * 112.7         11:11         0.0         0.1         9:57	9:32			
PM-5         32.0         46.0         15:09         0.1         0.2         12:23           PM-6         14.6         * 112.7         11:11         0.0         0.1         9:57	12:24			
PM-6         14.6         * 112.7         11:11         0.0         0.1         9:57	12:23			
	9:57			
WZ-1         N/A         N/A         N/A         N/A	N/A			
WZ-2         9.0         15.7         16:39         0.2         0.5         14:51	14:51			
WZ-3         8.4         15.2         16:27         0.3         1.3         15:38	15:38			
Station Location Work Area Daily Avg. Mercury Concentration (µg/m <sup>3</sup> ) Max 15 Minute Mercury Concentration (µg/m <sup>3</sup> ) Time of Max 15 Minute Avg Mercury Reading	Time of Max 15 Minute Avg Mercury Reading			
<b>PM-1</b> 0.02 0.06 10:16	10:16			
<b>PM-2</b> 0.00 0.01 11:39	11:39			
<b>PM-3</b> 0.00 0.00 9:11	9:11			
<b>PM-4</b> 0.01 0.02 16:53	16:53			
<b>PM-5</b> 0.01 0.02 13:18	13:18			
<b>PM-6</b> 0.01 0.03 17:20	17:20			
WZ-1         N/A         N/A	N/A			
WZ-2 0.01 0.02 15:10	15:10			
WZ-3 0.01 0.02 16:25	16:25			





**VOC MONITORING RESULTS - 07/30/22** 

MERCURY MONITORING RESULTS - 07/30/22



# Air Monitoring Notes:

Langan performed air monitoring at the perimeter of the site and at work zones at eight total locations for mercury vapor, volatile organic compounds (VOCs), and particulate matter less than 10 microns in diameter (PM10), during ground-intrusive activities. There were no fifteen-minute average concentrations for mercury vapor or VOCs that approached or exceeded the action level established by the CAMP (1.00 µg/m<sup>3</sup> and 5.0 ppm, respectively).

## **Background Concentrations**

Prior to implementation of ground-intrusive work, instantaneous background concentrations of mercury vapor and VOCs were recorded using a handheld Jerome<sup>\*</sup> J505 mercury vapor analyzer and a handheld PID, respectively.

- Background concentrations of mercury vapor at each CAMP station were recorded at 0.00  $\mu\text{g/m^3}.$
- Background concentrations of VOCs at each CAMP station were recorded at 0.0 ppm.

### Perimeter and Work Zone Concentrations

- \* PM10 concentrations at perimeter CAMP station PM-6 exceeded the action level established in the CAMP (0.100 mg/m3) from 11:11am to 11:24am (14 minutes). During this time, CCJV was excavating test pits along the southern site boundary, which was downwind of perimeter CAMP station PM-6. The exceedance was not the result of ground-intrusive activities and fugitive dust was not observed migrating from the site. The DustTrak unit within perimeter CAMP station PM-6 was recalibrated and concentrations of PM10 returned to background conditions.

- \*\* PM10 concentrations at perimeter CAMP station PM-4 exceeded the action level established in the CAMP (0.100 mg/m3) from 1:26pm to 1:45pm (20 minutes), 3:41pm to 3:44pm (4 minutes), 4:00pm to 4:14pm (15 minutes), and 4:31pm to 4:45pm (15 minutes). 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 at the site. Fugitive dust was not observed migrating from the site during each of these times.

# Ambient Air (Handheld Jerome<sup>®</sup> J505 and Handheld PID)

- The dedicated mobile monitor (Langan) used a handheld Jerome<sup>\*</sup> 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 0.07 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-2 was relocated to the southern sidewalk of Water Street from 9:11am to 4:51pm 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 9:07am to 4:57pm 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<sup>\*</sup> 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<sup>\*</sup> AC-645 dust/vapor suppressing foam. CAMP stations were discontinued between 4:51pm and 5:39pm at the conclusion of ground-intrusive activities.



- VOC concentrations at each CAMP station ranged from at 0.0 ppm to 0.4 ppm.



