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Memorandum

To: Andrew Prophete (National Grid NY)

From: Brian Skelly

Copy to: Richard Dana and R. Scott Deyette (NYSDEC)
Chris Schroer (EA Engineering)
Andrew Rizk (Louis Berger)
Stephanie Selmer (NYSDOH)
Dave Boram and Thor Helgason (de maximis)
Ted Leissing (National Grid NY)
Shail Pandya (AECOM)
Ronell Marshall and Clayton John (GEI Consultants, Inc.)

July 5, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
June 16, 2012 through June 22, 2012

Dear Andrew:

This report includes a summary of data collected during implementation of the Community Air Monitoring Plan (CAMP) at the Clifton Former MGP Site Operable Unit 2 (OU-2) in Staten Island, New York. Data collected are discussed in relation to remediation activities that occurred between June 16 and June 22, 2012.

There were no fifteen-minute exceedances of the Total Volatile Organic Compounds (TVOC), Particulate Matter (PM-10) [dust], or odor action levels associated with ground intrusive site activities during this reporting period. There were some elevated levels of dust measured that were attributed to onsite activities which was addressed by Severson applying water to the site roadways, or to GeoCon bentonite loading operations the batch plant which was mitigated by applying water to the hopper loading area. The tables and figures accompanying this report summarize air monitoring results related to the action levels described by the CAMP Work Plan (AECOM, 2011 and GEI, 2012).

The following information is summarized in this report:

- Site construction activities
- Daily maximum 15-minute average concentrations of TVOC and PM-10 (dust) at each fixed station

- Elevated concentrations (if any)
- Meteorological data

Site Construction Activities

Construction activities during this reporting period included:

- Backfilled trench with slurry
- Deconned load out dump trucks
- Excavated along Willow Avenue for slurry wall installation
- Excavated along Willow Avenue for tar separator
- Load out soil from site via tarped dumptrucks
- Mixed slurry at batch plant in OU-2
- Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust
- Operated mist odor suppressant along Willow Avenue
- Received delivery of bentonite
- Set up jersey blocks in exclusion zone
- Stockpiled clean soil
- Stockpiling scrap metal from demolition
- Surveyed site on Willow Avenue
- Transported soil from excavation operations along Willow Avenue to the TFS via dump trucks

Data collection

Real-time fixed station monitoring for TVOC and PM-10 (dust) was performed on the OU-2 site perimeter at six locations (FAM#1 through FAM#6). FAM#3 was located in the northeast corner of the 40 Willow Avenue Property during the week. Due to work progressing along Willow Avenue, FAM#4 was temporarily relocated on Operable Unit 1 along Willow Avenue west of the wastewater treatment plant near the brick buildings. Four AirLogics Classic stations equipped with gas chromatographs (GCs) were operated at FAM#2, FAM#3, FAM#4, and FAM#5 and two AirLogics Light stations were operated at FAM#1 and FAM#6.

Table 1 summarizes the target concentrations for action levels and Site Conditions described by the CAMP. Table 2 provides a daily summary of maximum fifteen-minute average ambient air concentrations from each station. The daily reports appended to this report depict more detailed and time-specific comparison of upwind and downwind measurements and site activities that is needed to determine the Site Condition.

Upwind and downwind ambient air verification samples were collected on June 20, 2012. Meteorological data collected at the on-site weather station are included in this report as Figures

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Clifton Former MGP Site Operable Unit 2 (OU-2)
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1 through 4 which show a directional wind rose for the period and temperature, relative humidity, and wind speed time series for the period.

If you have any questions regarding the information in this report, please contact me.

References

AECOM (2011). Appendix A of CERP Community Air Monitoring Plan (CAMP) Former Manufactured Gas Plant Operable Unit - 2 Remediation. Clifton, New York. August.

GEI Consultants, Inc (2012). Community Air Monitoring Plan: Clifton Former Manufactured Gas Plant Site – Operable Unit 2, Borough of Staten Island, New York. February.

New York State Department of Environmental Conservation (2010). DER-10 / Technical Guidance for Site Remediation and Investigation. Washington: Division of Environmental Remediation, December. Appendix 1-A. May.

Table 1 - Action Levels and Site Conditions
Community Air Monitoring Program
Clifton Former MGP Site Operable Unit 2
Borough of Staten Island, New York

	Alert Level	Action Level	Site Condition 1	Site Condition 2	Site Condition 3
TVOC (15-minute)	3.7 ppm	5.0 ppm	< 3.7 ppm	≥ 3.7 ppm, < 5.0 ppm	≥ 5.0 ppm
TVOC (1-minute)	NA	25 ppm	< 25 ppm	NA	≥ 25 ppm
PM-10 (15-minute)	100 ug/m ³	150 ug/m ³	< 100 ug/m ³	≥ 100 ug/m ³ , < 150 ug/m ³	≥ 150 ug/m ³
Odor (15-minute)	Odors / Complaints	NA	No odors	NA	3 (n-butanol)
HCN (15-minute)	Visual Detection	NA	< 0.6 ppm	≥ 0.6 ppm (4-gas meter)	≥ 0.6 ppm (Draeger tube)
Naphthalene (15-minute)	NA	NA	< 440 ug/m ³	≥ 330 ug/m ³ , < 440 ug/m ³	≥ 440 ug/m ³

Notes:

¹ Alert Levels are not established by the NYSDOH or NYSDEC and are internally established concentration levels for total volatile organic compounds. Alert Levels are set below the levels established by the NYSDOH so that actions can be taken prior to exceeding a NYSDOH threshold. An Alert Level serves as a screening tool to trigger contingent measures if necessary, to assist in minimizing off-site transport of contaminants during remedial activities

² Response Levels and Action Levels are not defined in Appendix 1A of the New York State Department of Environmental Conservation *DER-10 / Technical Guidance for Site Investigation and Remediation* (NYSDEC, 2010)

ug/m³ - micrograms per cubic meter

ppmv - parts per million by volume

TVOC - total volatile organic compounds

PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter

HCN - hydrogen cyanide

NA - not applicable

Table 2. Daily Maximum 15-Minute Average Concentrations of TVOC and PM-10
 Community Air Monitoring Program
 Clifton Former MGP Site Operable Unit 2
 Borough of Staten Island, New York

Date	TVOC						PM-10					
	(ppm)						(ug/m ³)					
	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6
6/16/2012	0.3	0.2	0.2	0.4	0.1	0.3	68	38	6	7	0	45
6/17/2012	0.2	0.1	0.1	0.1	0.1	0.1	48	19	3	3	0	30
6/18/2012	0.2	0.1	0.1	0.3	0.1	0.1	86	38	3	1	80	67
6/19/2012	0.3	0.1	0.1	0.3	0.0	0.1	150	21	3	1	1	34
6/20/2012	0.1	0.1	0.1	0.8	0.2	0.1	103	51	5	27	75	126
6/21/2012	0.1	0.2	0.1	0.2	0.1	0.1	107	85	5	24	5	93
6/22/2012	0.2	0.1	0.2	0.4	0.4	0.1	142	67	6	40	23	142
Average	0.2	0.1	0.1	0.4	0.1	0.2	101	46	4	15	26	77
Maximum	0.3	0.2	0.2	0.8	0.4	0.3	150	85	6	40	80	142

Notes:

FAM - fixed air monitoring station location

ug/m³ - micrograms per cubic meter

ppmv - parts per million by volume

TVOC - total volatile organic compounds

PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter

Figures 1-4
Meteorological Data
Weekly Community Air Monitoring Report
Clifton Former MGP Site Operable Unit 2
Borough of Staten Island, New York

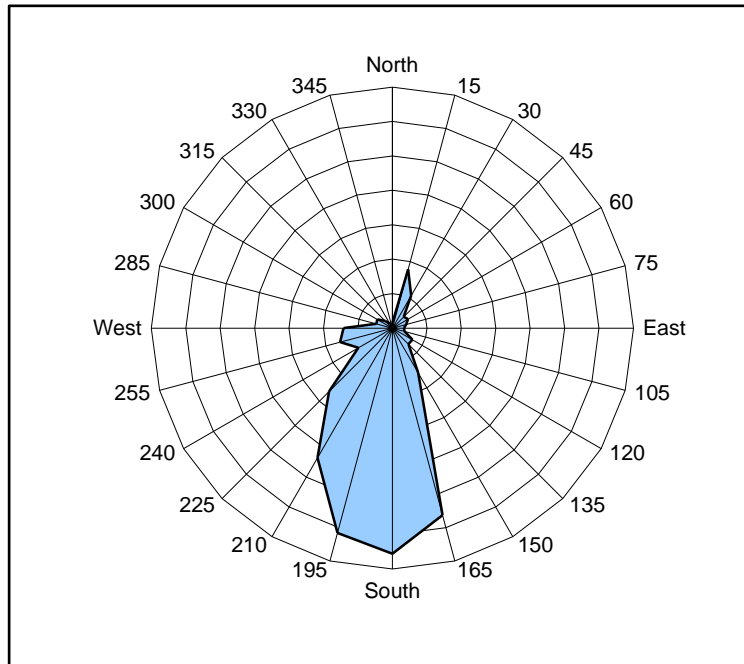


Figure 1. Wind rose for the period 06/16/12 through 06/22/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

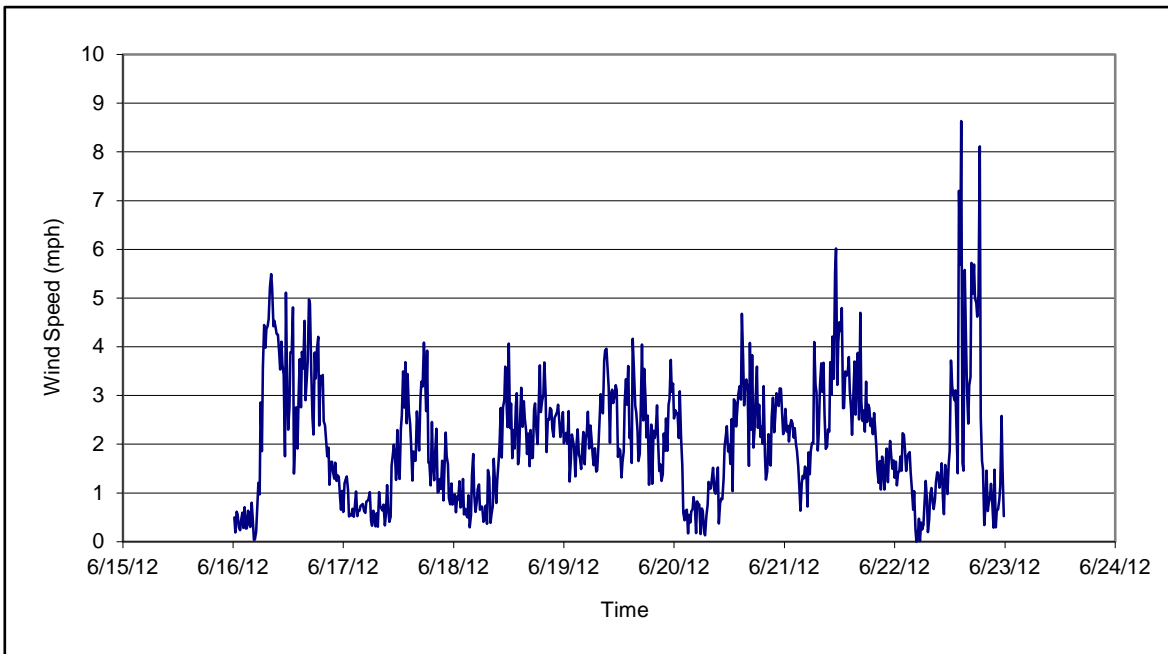


Figure 2. Wind speed for the period 06/16/12 through 06/22/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

Figures 1-4
Meteorological Data
Weekly Community Air Monitoring Report
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Borough of Staten Island, New York

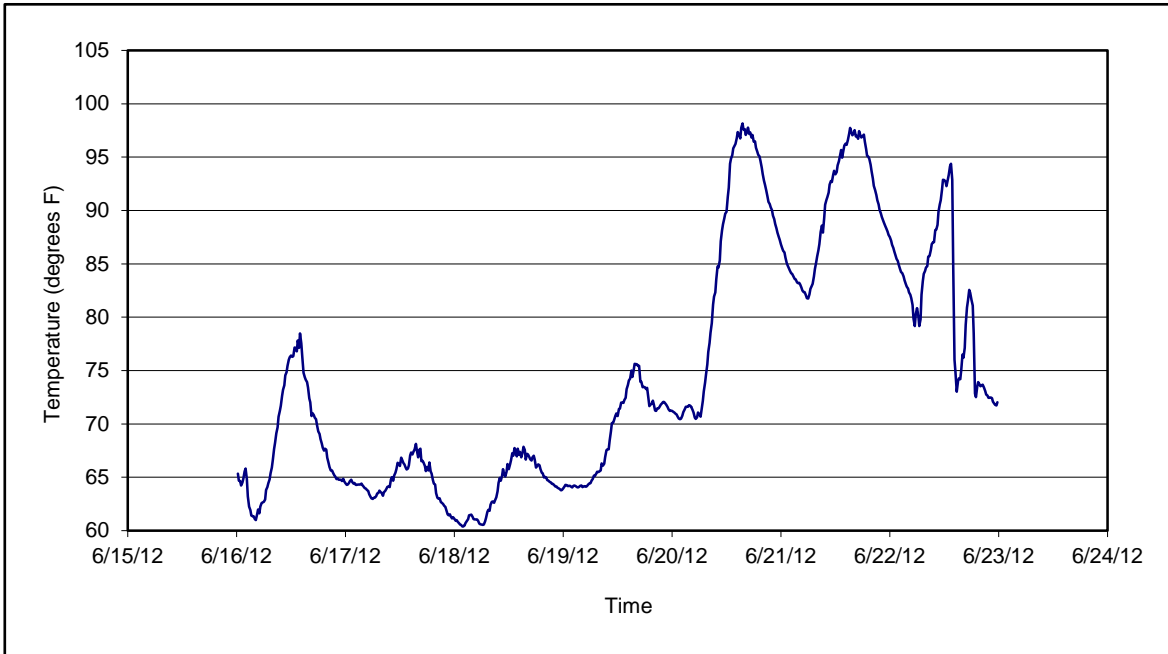


Figure 3. Temperature for the period 06/16/12 through 06/22/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

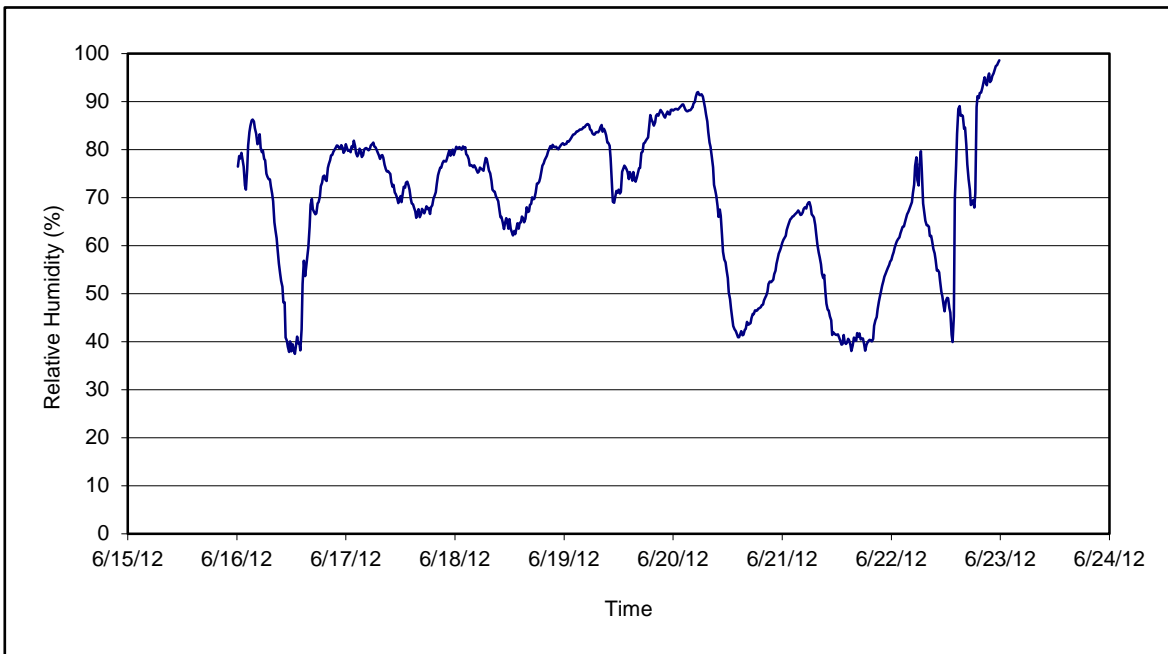


Figure 4. Relative humidity for the period 06/16/12 through 06/22/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

Daily Field Report
 Community Air Monitoring Program
 Clifton Former MGP Site Operable Unit 2
 Borough of Staten Island, New York

System Operations					General Observations									
Sampling Date	6/18/2012	General Weather Conditions:			Clear ~61°F- ~67°F									
System Start Time	continuous	General Description of Site Activities:			Health & Safety Meeting Stockpiled clean soil Backfilled trench with slurry Continuous Air Monitoring Deconned load out dump trucks Stockpiling scrap metal from demolition Load out soil from site via tarped dumptrucks Mixed slurry at batch plant in OU-2 Surveyed site on Willow Avenue Excavated along Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust Operated mist odor suppressant along Willow Avenue Transported soil from excavation operations along Willow Avenue to the TFS via dump trucks									
System Stop Time	continuous													
Total Hrs Monitored	24													
System Calibrations (Time/Status)	Ok 0620-0915													
Date	Alert Trigger	Station	Start Time	End Time	# of 15-min Periods	Wind Dir.	Upwind/ Downwind	Upwind Station(s)	15-Minute Downwind-Upwind Concentration Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken	
6/18/2012	None												No exceedances	
Comments:														
					PM-10 (15-min)		TVOC (15-min)		TVOC (1-min)		Odor Intensity (15-min)			
					Alert Limit: 100 ug/m ³		3.7 ppm		-		-			
					Action Limit: 150 ug/m ³		5.0 ppm		25 ppm		3 (n-butanol scale)			

Notes:

* Wind directions are presented by octant (i.e. N, NE, E, SE, S, SW, W, NW).
 ** Upwind minus downwind concentrations are a time specific comparison.
 FAM - Fixed Air Monitoring station location
 ug/m³ - micrograms per cubic meter
 ppmv - parts per million by volume

PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter
 TVOC - total volatile organic compounds
 NA - not applicable
 ND - no data available

Field Representative: R. Marshall
 Date: 6/18/2012



Daily Field Report
Community Air Monitoring Program
Clifton Former MGP Site Operable Unit 2
Borough of Staten Island, New York

System Operations					General Observations										
Sampling Date: 6/19/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0643-0906					General Weather Conditions: Clear ~65°F - ~67°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Stockpiling scrap metal from demolition Mixed slurry at batch plant in OU-2 Excavated along Willow Avenue Operated mist odor suppressant along Willow Avenue Stockpiled clean soil Decconned load out dump trucks Load out soil from site via tarped dumptrucks Surveyed site on Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust Transported soil from excavation operations along Willow Avenue to the TFS via dump trucks Backfilled trench with slurry Set up jersey blocks in exclusion zone Received delivery of bentonite										
Date	Alert Trigger	Station	Start Time	End Time	# of 15-min Periods	Wind Dir.	Upwind/Downwind	Upwind Station(s)	15-Minute Downwind-Upwind Concentration Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken		
6/19/2012	PM-10	FAM#1	9:14	9:27	14	SSW	DW	FAM#6	85	135	2	Batchplant operations	Notified construction manager Water was sprayed		
6/19/2012	PM-10	FAM#1	10:41	10:46	7	SSE	CW	N/A	110	113	1	Vehicle traffic	Notified construction manager Water was sprayed		
Comments:															
Alert Limit:					PM-10 (15-min)			TVOC (15-min)			TVOC (1-min)		Odor Intensity (15-min)		
					100 ug/m ³			3.7 ppm			-		-		
Action Limit:					150 ug/m ³			5.0 ppm			25 ppm		3 (n-butanol scale)		
Notes:															
* Wind directions are presented by octant (i.e. N, NE, E, SE, S, SW, W, NW).						PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter									
** Upwind minus downwind concentrations are a time specific comparison.						TVOC - total volatile organic compounds									
FAM - Fixed Air Monitoring station location						NA - not applicable									
ug/m ³ - micrograms per cubic meter						ND - no data available									
ppmv - parts per million by volume						Field Representative: R. Marshall						Date: 6/19/2012			



Daily Field Report
Community Air Monitoring Program
Clifton Former MGP Site Operable Unit 2
Borough of Staten Island, New York

System Operations					General Observations									
Sampling Date 6/20/2012 System Start Time continuous System Stop Time continuous Total Hrs Monitored 24 System Calibrations (Time/Status) Ok 0720-0918					General Weather Conditions: Clear ~71°F - ~98°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Stockpiling scrap metal from demolition Mixed slurry at batch plant in OU-2 Excavated along Willow Avenue Operated mist odor suppressant along Willow Avenue Stockpiled clean soil Backfilled trench with slurry Decconned load out dump trucks Load out soil from site via tarped dumptrucks Surveyed site on Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust Transported soil from excavation operations along Willow Avenue to the TFS via dump trucks									
Date	Alert Trigger	Station	Start Time	End Time	# of 15-min Periods	Wind Dir.	Upwind/Downwind	Upwind Station(s)	15-Minute Downwind-Upwind Concentration Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken	
6/20/2012	PM-10	FAM#1	12:00	12:07	8	NE	UW	N/A	100	103	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed	
6/20/2012	PM-10	FAM#1	15:12	15:13	2	NE	UW	N/A	101	101	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed	
6/20/2012	PM-10	FAM#6	10:13	10:27	15	ESE	DW	FAM#4	98	100	2	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed	
6/20/2012	PM-10	FAM#6	11:29	11:42	14	NNE	DW	FAM#1	16	30	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed	

Comments:

	PM-10 (15-min)	TVOC (15-min)	TVOC (1-min)	Odor Intensity (15-min)
Alert Limit:	100 ug/m ³	3.7 ppm	-	-
Action Limit:	150 ug/m ³	5.0 ppm	25 ppm	3 (n-butanol scale)

Notes:

* Wind directions are presented by octant (i.e. N, NE, E, SE, S, SW, W, NW).
 ** Upwind minus downwind concentrations are a time specific comparison.
 FAM - Fixed Air Monitoring station location
 ug/m³ - micrograms per cubic meter
 ppmv - parts per million by volume

PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter
 TVOC - total volatile organic compounds
 NA - not applicable
 ND - no data available

Field Representative: R. Marshall
 Date: 6/20/2012



Daily Field Report
Community Air Monitoring Program
Clifton Former MGP Site Operable Unit 2
Borough of Staten Island, New York

System Operations					General Observations									
Sampling Date: 6/21/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0630-0821					General Weather Conditions: Clear -89°F- -98°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Stockpiling scrap metal from demolition Operated hoe-ram at tar separator excavation Excavated along Willow Avenue for slurry wall installation Operated mist odor suppressant along Willow Avenue Excavated along Willow Avenue for tar separator Backfilled trench with slurry Deconned load out dump trucks Load out soil from site via tarped dumptrucks Surveyed site on Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust Transported soil from excavation operations along Willow Avenue to the TFS via dump trucks									
Date	Alert Trigger	Station	Start Time	End Time	# of 15-min Periods	Wind Dir.	Upwind/Downwind	Upwind Station(s)	15-Minute Downwind-Upwind Concentration Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken	
6/21/2012	PM-10	FAM#1	11:39	11:52	14	NNW	UW	N/A	104	107	1	Vehicle traffic	Notified construction manager Water was sprayed	
Comments:														
					PM-10 (15-min)	TVOC (15-min)	TVOC (1-min)	Odor Intensity (15-min)						
					Alert Limit: 100 ug/m ³	3.7 ppm	-	-						
					Action Limit: 150 ug/m ³	5.0 ppm	25 ppm	3 (n-butanol scale)						
Notes:														
* Wind directions are presented by octant (i.e. N, NE, E, SE, S, SW, W, NW).						PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter								
** Upwind minus downwind concentrations are a time specific comparison.						TVOC - total volatile organic compounds								
FAM - Fixed Air Monitoring station location						NA - not applicable								
ug/m ³ - micrograms per cubic meter						ND - no data available								
ppmv - parts per million by volume						Field Representative: C. John				Date: 6/21/2012				



Daily Field Report
Community Air Monitoring Program
Clifton Former MGP Site Operable Unit 2
Borough of Staten Island, New York

System Operations					General Observations								
Sampling Date		6/22/2012		General Weather Conditions:									
System Start Time		continuous		Clear -89°F - -98°F									
System Stop Time		continuous		General Description of Site Activities:				Excavated along Willow Avenue for tar separator					
Total Hrs Monitored		24		Health & Safety Meeting				Backfilled trench with slurry					
System Calibrations (Time/Status)		Ok 0630-0821		Continuous Air Monitoring				Deconned load out dump trucks					
				Stockpiled scrap metal from demolition				Load out soil from site via tarped dumptrucks					
				Operated hoe-ram at tar separator excavation				Surveyed site on Willow Avenue					
				Excavated along Willow Avenue for slurry wall installation				Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust					
				Operated mist odor suppressant along Willow Avenue				Transported soil from excavation operations along Willow Avenue to the TFS via dump trucks					
Date	Alert Trigger	Station	Start Time	End Time	# of 15-min Periods	Wind Dir.	Upwind/Downwind	Upwind Station(s)	15-Minute Downwind-Upwind Concentration Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken
6/22/2012	PM-10	FAM#1	6:39	9:22	164	NNE	UW	N/A	100	142	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#1	10:34	13:14	161	SSE	DW/CW	FAM#2	43	85	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#1	13:39	13:58	20	SSW	CW	N/A	101	109	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#6	4:08	4:19	12	SSW	CW/UW	N/A	100	105	1	None	None. Non working hours
6/22/2012	PM-10	FAM#6	4:52	5:28	37	WNW	CW/UW	N/A	101	107	1	None	None. Non working hours
6/22/2012	PM-10	FAM#6	5:34	6:20	47	SSW	CW/UW	N/A	100	123	1	None	None. Non working hours
6/22/2012	PM-10	FAM#6	6:49	6:54	6	W	CW/UW	N/A	100	101	1	None	None. Non working hours
6/22/2012	PM-10	FAM#6	7:02	7:24	23	SSW	CW/UW	N/A	100	105	1	None	None. Site activities had not yet begun
6/22/2012	PM-10	FAM#6	8:00	8:14	15	ENE	DW	FAM#1	<0	<0	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#6	8:38	8:45	7	ENE	DW	FAM#1	<0	<0	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#6	8:47	8:50	4	NE	DW	FAM#1	<0	<0	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#6	10:21	10:48	28	ENE	DW	FAM#1	<0	19	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#6	11:10	11:24	15	ESE	DW	FAM#2	66	72	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#6	11:30	11:34	5	S	DW	FAM#4	70	49	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#6	11:39	11:40	2	SE	DW	FAM#2	49	49	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#6	11:43	12:25	43	SSW	DW	FAM#4	49	95	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#6	12:38	12:38	1	S	DW	FAM#4	67	67	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#6	12:42	12:44	3	SSE	DW	FAM#2	42	43	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#6	12:47	13:05	19	SSE	DW	FAM#2	43	56	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
6/22/2012	PM-10	FAM#6	13:50	14:04	15	SSE	DW	FAM#2	46	85	1	Construction vehicles moving along the terrain	Notified construction manager Water was sprayed
Comments:													
					PM-10 (15-min)		TVOC (15-min)		TVOC (1-min)		Odor Intensity (15-min)		
					Alert Limit: 100 ug/m ³		3.7 ppm		-		-		
					Action Limit: 150 ug/m ³		5.0 ppm		25 ppm		3 (n-butanol scale)		
Notes:													
* Wind directions are presented by octant (i.e. N, NE, E, SE, S, SW, W, NW).					PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter					Field Representative: C. John			
** Upwind minus downwind concentrations are a time specific comparison.					TVOC - total volatile organic compounds					Date: 6/22/2012			
FAM - Fixed Air Monitoring station location					NA - not applicable								
ug/m ³ - micrograms per cubic meter					ND - no data available								
ppmv - parts per million by volume													