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Memorandum

To: Andrew Prophete (National Grid NY)

From: Brian Skelly

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

Date: March 28, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
March 17, 2012 through March 23, 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 March 17 and March 23, 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 site activities during this reporting period. Fifteen-minute averages of TVOC, PM-10, and odor intensity data remained at a Site Condition 1.

Some elevated dust measurements occurred during the week that were caused by construction vehicle traffic onsite, mechanical hammering to break concrete blocks onsite, and street sweeping offsite unrelated to site activities that exceeded the fifteen-minute action level for Particulate Matter (PM-10) [dust] data. GEI notified the construction manager and site health and safety officer. Concentrations of PM-10 decreased below the alert level and action levels within 15 minutes of each occurrence. Since no ground intrusive activities were conducted at these times, PM-10 remained at a Site Condition 1. 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:

- Site wide mobilization in Operable Unit 1 (OU-1) and OU-2
- Installation of sound attenuated enclosure for TFS air unit in OU-2
- Level A subsurface survey along 25 Willow Ave
- Installation of electrical panels in OU-2
- Mobilization of AirLogics Classic Stations with GCs
- Power supplied to CAMP stations with diesel generators
- Mobilization of asbestos removal contractors EEI and TTI to the site
- Installation of curb inlet protection
- Installation of erosion control
- Fusion welding in OU1
- Wastewater treatment plant (WWTP) construction in OU-1
- Installation of lined containment area, and hay bale berm around the WWTP
- Leak testing on WWTP
- Relocating sound attenuated barrier
- Removing existing fence post and grading site
- Spot welding in OU-2

Data collection

Real-time fixed station monitoring for TVOC and PM₁₀ (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. Four AirLogics Classic stations equipped with gas chromatographs (GCs) were installed at FAM#2, FAM#3, FAM#4, and FAM#5.

The Real-time fixed CAMP stations were converted from a six station solar powered system to a hybrid solar and 120 volt system on Friday March 23. Diesel generators were used to power the four AirLogics Classic stations and will continue 24 hours a day, 7 days per week until 120 volt electrical connections are established onsite. Real-time monitoring for TVOC and PM₁₀ was uninterrupted.

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 not collected this week since very little ground intrusive activity took place. Ambient air verification sampling will begin when ground intrusive activity begins. Meteorological data collected at the on-site weather station are included in this report as Figures 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
3/17/2012	0.3	0.1	0.1	0.1	0.0	0.1	96	103	147	89	114	99
3/18/2012	0.1	0.1	0.1	0.1	0.0	0.0	64	58	60	46	60	49
3/19/2012	0.1	0.1	0.6	0.1	0.0	1.1	85	79	83	65	85	62
3/20/2012	0.3	0.1	0.1	0.2	0.0	0.1	80	75	86	67	71	73
3/21/2012	0.9	0.1	0.1	0.1	0.0	0.2	116	94	99	88	92	82
3/22/2012	1.5	0.4	0.8	0.5	0.0	1.5	251	159	78	84	73	83
3/23/2012	0.5	0.4	0.3	0.5	0.0	0.1	94	94	14	107	73	295
Average	0.5	0.2	0.3	0.2	0.0	0.5	112	95	81	78	81	106
Maximum	1.5	0.4	0.8	0.5	0.0	1.5	251	159	99	107	92	295

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

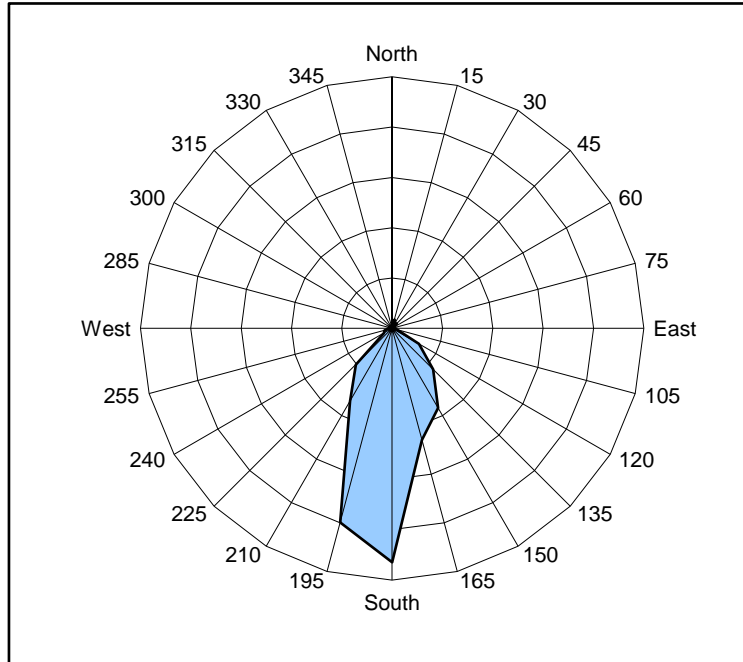


Figure 1. Wind rose for the period 03/17/12 through 03/23/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute averages.

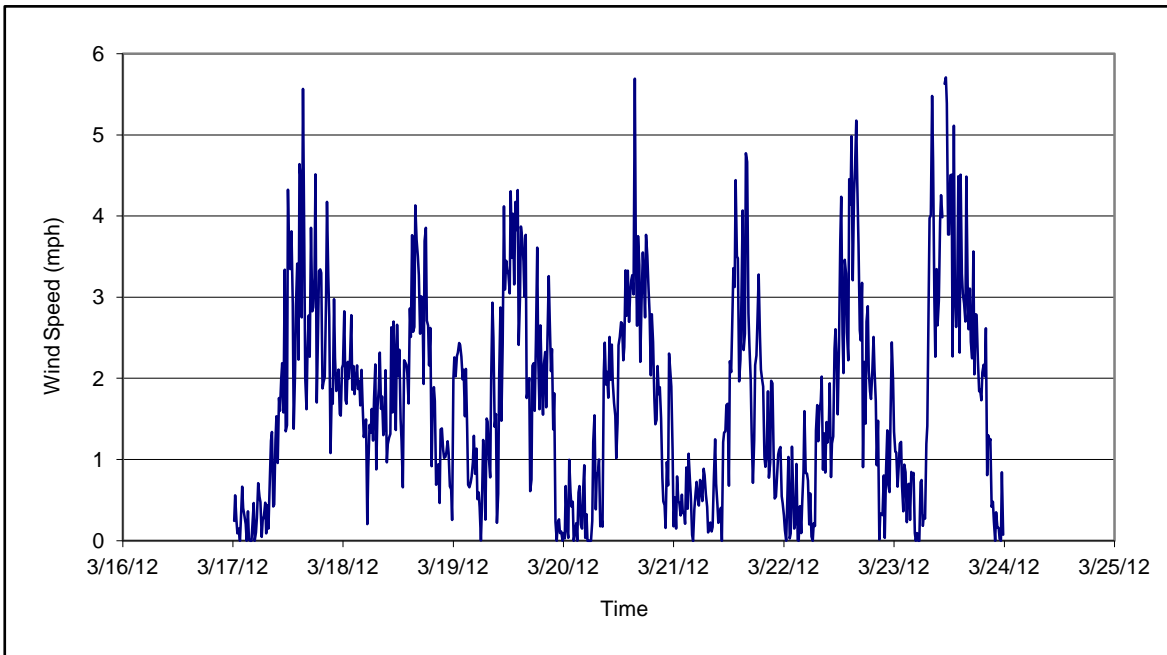


Figure 2. Wind speed for the period 03/17/12 through 03/23/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

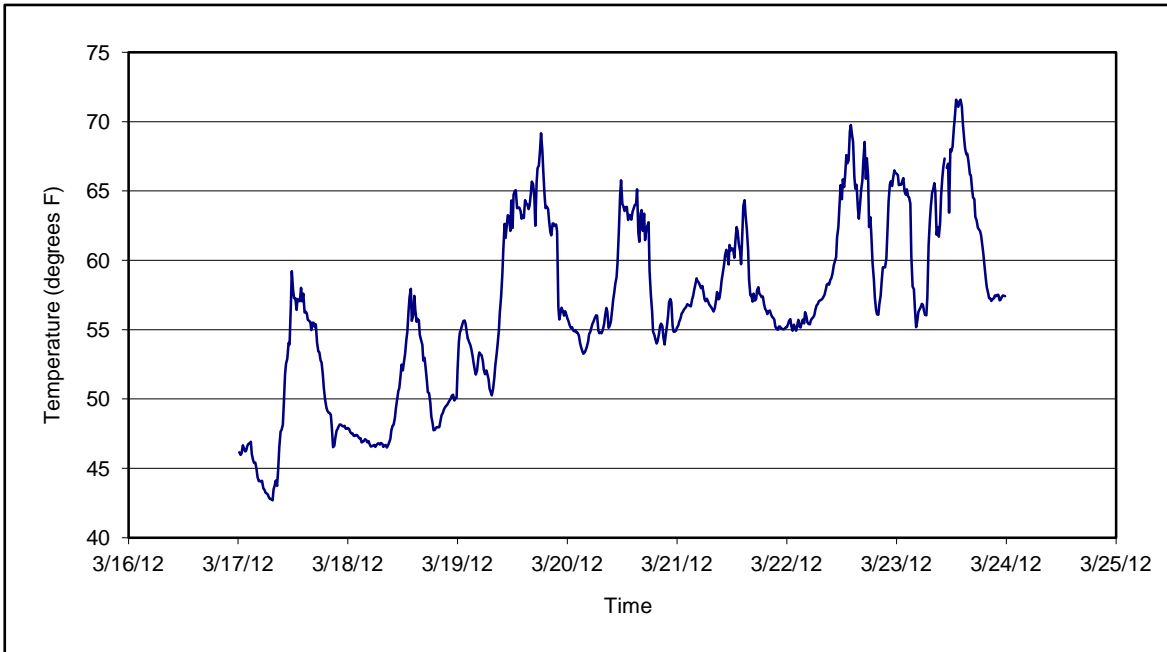


Figure 3. Temperature for the period 03/17/12 through 03/23/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

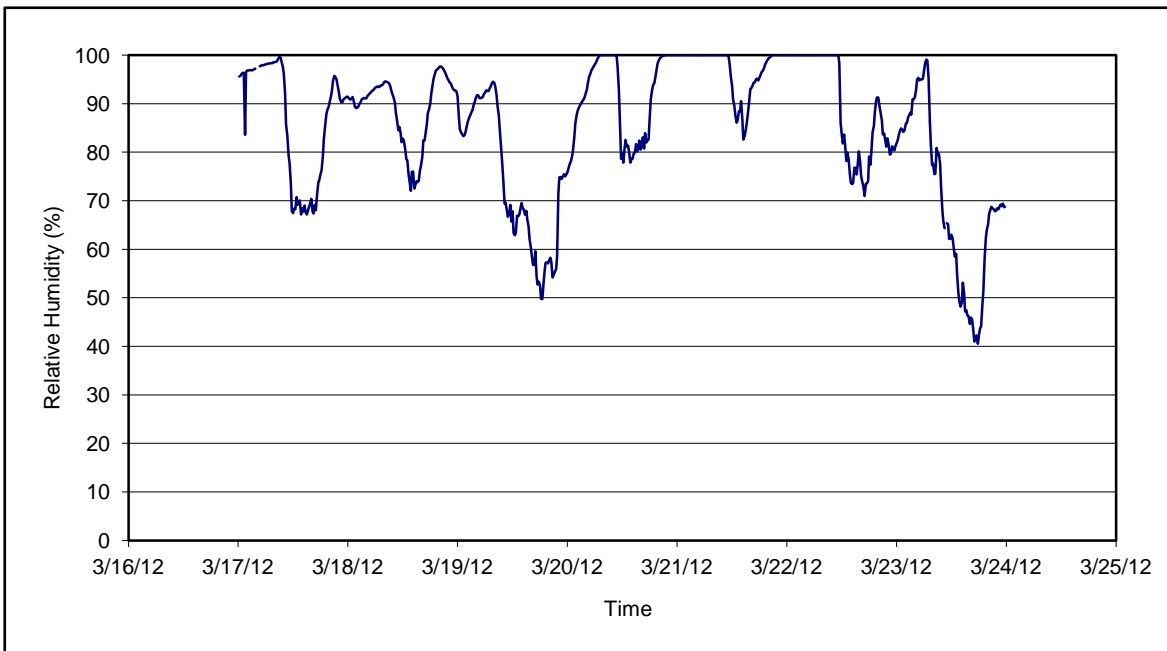


Figure 4. Relative humidity for the period 03/17/12 through 03/23/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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		3/19/2012			General Weather Conditions: sunny ~48° F- ~77°F								
System Start Time		continuous			General Description of Site Activities: Health & Safety Meeting Installation of sound attenuated enclosure for TFS air unit Installation of curb inlet protection EEl and TTI mobilized to site for asbestos removal work								
System Stop Time		continuous											
Total Hrs Monitored		24											
System Calibrations (Time/Status)		Ok 0645-0721											
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
												No ground intrusive activity.	No Exceedances
Comments: No ground intrusive activity took place today.													
					PM-10 (15-min)		TVOC (15-min)		TVOC (1-min)				
					Alert Limit:		3.7 ppm		-				
					Action Limit:		5.0 ppm		25 ppm				
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 Monitorign station location						NA - not applicable							
ug/m ³ - micrograms per cubic meter						ND - no data available							
ppmv - parts per million by volume						Field Representative: Ronell Marshall							
						Date: 3/19/2012							
													Page 1 of 1



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		3/20/2012			General Weather Conditions: sunny ~55° F- ~72°F								
System Start Time		continuous			General Description of Site Activities:								
System Stop Time		continuous			Health & Safety Meeting				Installation of sound attenuated enclosure for TFS air unit				
Total Hrs Monitored		24			Continuous Air Monitoring				Installation of electrical panel inside of TFS				
System Calibrations (Time/Status)		Ok 0710-0737			Installation of erosion control				Installation of lined containment area around WWTP				
Mobilization of AirLogics Classic Stations with GCs						Installation of hay bale berm around the WWTP							
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
												No ground intrusive activity.	No Exceedances
Comments: No ground intrusive activity took place today.													
					PM-10 (15-min)		TVOC (15-min)		TVOC (1-min)				
Alert Limit:					100 ug/m ³		3.7 ppm		-				
Action Limit:					150 ug/m ³		5.0 ppm		25 ppm				
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							
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FAM - Fixed Air Monitorign station location						NA - not applicable							
ug/m ³ - micrograms per cubic meter						ND - no data available							
ppmv - parts per million by volume						Field Representative: Ronell Marshall/ Michael Quinlan							
						Date: 3/20/2012							
Page 1 of 1													

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 3/21/2012 System Start Time continuous System Stop Time continuous Total Hrs Monitored 24 System Calibrations Ok (Time/Status) 0710-0737					General Weather Conditions: Sunny ~56° F- ~67°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Installation of erosion control Mobilization of GC Stations Installation of electrical panel inside of TFS Installation of lined containment area around WWTP Installation of hay bale berm around the WWTP Removing existing fence post and grading site																				
Date	Alert Trigger	Station	Start Time	End Time	# of 15-min Periods	Wind Dir.	Upwind/Downwind	Upwind Station(s)	15-Minute Downwind-Upwind Concentration		Site Condition	Site Activity During the Period (if applicable)	Actions Taken												
									Min**	Max**															
3/21/2012	PM-10	FAM#1	11:40	11:54	14	-	UW/CW	NA	101	116	1*	No ground intrusive activity Street Sweeper (offsite traffic)	Notified construction manager. Contractor sprayed water on the ground surface to control the dust.												
Comments:																									
No ground intrusive activity took place today.																									
* Since no ground intrusive activities were conducted during this reporting period, PM-10 remained at a Site Condition 1.																									
<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%;"></td> <td style="text-align: center;">PM-10 (15-min)</td> <td style="text-align: center;">TVOC (15-min)</td> <td style="text-align: center;">TVOC (1-min)</td> </tr> <tr> <td>Alert Limit:</td> <td style="text-align: center;">100 ug/m³</td> <td style="text-align: center;">3.7 ppm</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Action Limit:</td> <td style="text-align: center;">150 ug/m³</td> <td style="text-align: center;">5.0 ppm</td> <td style="text-align: center;">25 ppm</td> </tr> </table>															PM-10 (15-min)	TVOC (15-min)	TVOC (1-min)	Alert Limit:	100 ug/m ³	3.7 ppm	-	Action Limit:	150 ug/m ³	5.0 ppm	25 ppm
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Alert Limit:	100 ug/m ³	3.7 ppm	-																						
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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: Michael Quinlan Date: 3/21/2012																									
Page 1 of 1																									



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: 3/22/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0643-721					General Weather Conditions: Sunny ~56° F - ~79°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Installation of erosion control Installation of electrical panels around perimeter in OU2 Connection of power to CAMP Classic Stations wwith diesel generators Fusion welding in OU1								
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
3/22/2012	PM-10	FAM#1	7:34	7:49	16	N	UW	N/A	110	251	1*	No ground intrusive activity. Breaking concrete blocks with a mechanical hammer near the station	Notified construction manager. Contractor sprayed water on the ground surface to control the dust.
3/22/2012	PM-10	FAM#1	13:49	14:02	14	N	UW	N/A	152	165	1*	No ground intrusive activity. Breaking concrete blocks with a mechanical hammer near the station	Notified construction manager. Contractor sprayed water on the ground surface to control the dust.
3/22/2013	PM-10	FAM#2	15:01	15:08	8	SW	DW	FAM#4	119	129	1*	No ground intrusive activity. Onsite construction vehicle traffic.	Notified construction manager. Contractor sprayed water on the ground surface to control the dust.
Comments: No ground intrusive activity took place today. * Since no ground intrusive activities were conducted during this reporting period, PM-10 remained at a Site Condition 1.													
					PM-10 (15-min)		TVOC (15-min)		TVOC (1-min)				
					Alert Limit: 100 ug/m ³		3.7 ppm		-				
					Action Limit: 150 ug/m ³		5.0 ppm		25 ppm				
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/m ³ - 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													
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											Date:	3/22/2012	
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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: 3/23/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 1640-1852					General Weather Conditions: Sunny ~57° F- ~77°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Level A subsurface survey along 25 Willow Ave Welding in OU2 Relocating sound attenuated barrier Leak testing on WWTP																				
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												
3/23/2012	PM-10	FAM#4	6:45	6:58	14	SE	CW/UW	NA	101	107	1*	No site activities	None												
3/23/2012	PM-10	FAM#6	14:29	14:43	15	SE	DW	FAM#2	166	270	1*	No ground intrusive activity. Onsite construction vehicle traffic.	Notified Health and Safety Officer. Construction Manager not on site Contractor sprayed water on the ground surface to control the dust.												
Comments:																									
No ground intrusive activity took place today.																									
* Since no ground intrusive activities were conducted during this reporting period, PM-10 remained at a Site Condition 1.																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>PM-10 (15-min)</th> <th>TVOC (15-min)</th> <th>TVOC (1-min)</th> </tr> </thead> <tbody> <tr> <td>Alert Limit:</td> <td>100 ug/m³</td> <td>3.7 ppm</td> <td>-</td> </tr> <tr> <td>Action Limit:</td> <td>150 ug/m³</td> <td>5.0 ppm</td> <td>25 ppm</td> </tr> </tbody> </table>															PM-10 (15-min)	TVOC (15-min)	TVOC (1-min)	Alert Limit:	100 ug/m ³	3.7 ppm	-	Action Limit:	150 ug/m ³	5.0 ppm	25 ppm
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