

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.)

Date: December 10, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
December 1, 2012 through December 7, 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 December 1, 2012 and December 7, 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 exceedances for TVOC above the action level from for approximately 15 minutes during the afternoon at FAM#4 after intrusive site activities had ceased for the work day that was caused by exhaust from a construction vehicle idling near the station to hitch a generator, so a Site Condition 1 remained. The vehicle was moved away and the levels dropped below the action and alert levels on their own. 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:

- Excavated in Temporary Fabric Structure (TFS)
- Backfilled in TFS
- Deconned dump trucks
- Loaded out soil from shallow excavation
- Loaded out soil from TFS
- Operated hoe-ram in shallow excavation
- Operated hoe-ram inside the TFS
- Performed shallow excavation
- Relocated bin blocks from around TFS
- Relocated bin blocks from around TIGG Exhaust
- Relocated of TFS
- Restored side walk west of 85 Willow Ave
- Tarped dump trucks
- Transported clean soil into TFS

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. 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 December 5, 2012. 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.

Weekly Community Air Monitoring Report
Clifton Former MGP Site Operable Unit 2 (OU-2)
December 1, 2012 through December 7, 2012
December 10, 2012
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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
12/1/2012	0.0	0.0	0.1	0.1	0.0	0.0	67	42	16	29	55	89
12/2/2012	0.0	0.0	0.1	0.1	0.1	0.0	77	65	28	45	88	121
12/3/2012	0.1	0.2	0.3	0.2	0.2	0.0	109	51	30	35	64	88
12/4/2012	0.0	1.5	0.2	0.6	0.3	0.0	71	39	20	32	47	91
12/5/2012	0.0	0.1	0.1	0.0	0.1	0.0	21	14	4	42	19	81
12/6/2012	0.4	2.3	0.3	0.1	0.1	0.0	25	22	8	53	33	31
12/7/2012	0.0	0.1	0.5	11.7	0.1	0.0	61	22	16	45	40	68
Average	0.1	0.6	0.2	1.8	0.1	0.0	62	36	17	40	49	81
Maximum	0.4	2.3	0.5	11.7	0.3	0.0	109	65	30	53	88	121

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

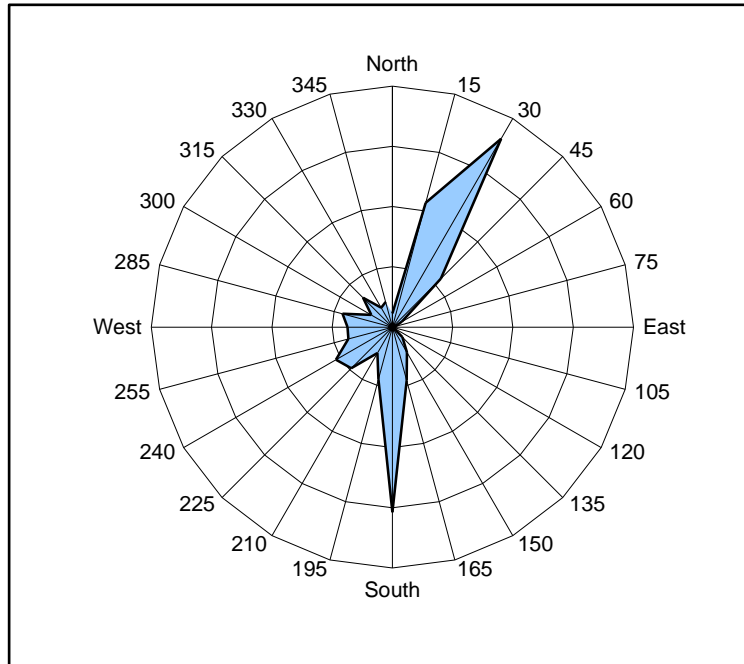


Figure 1. Wind rose for the period 12/01/12 through 12/07/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

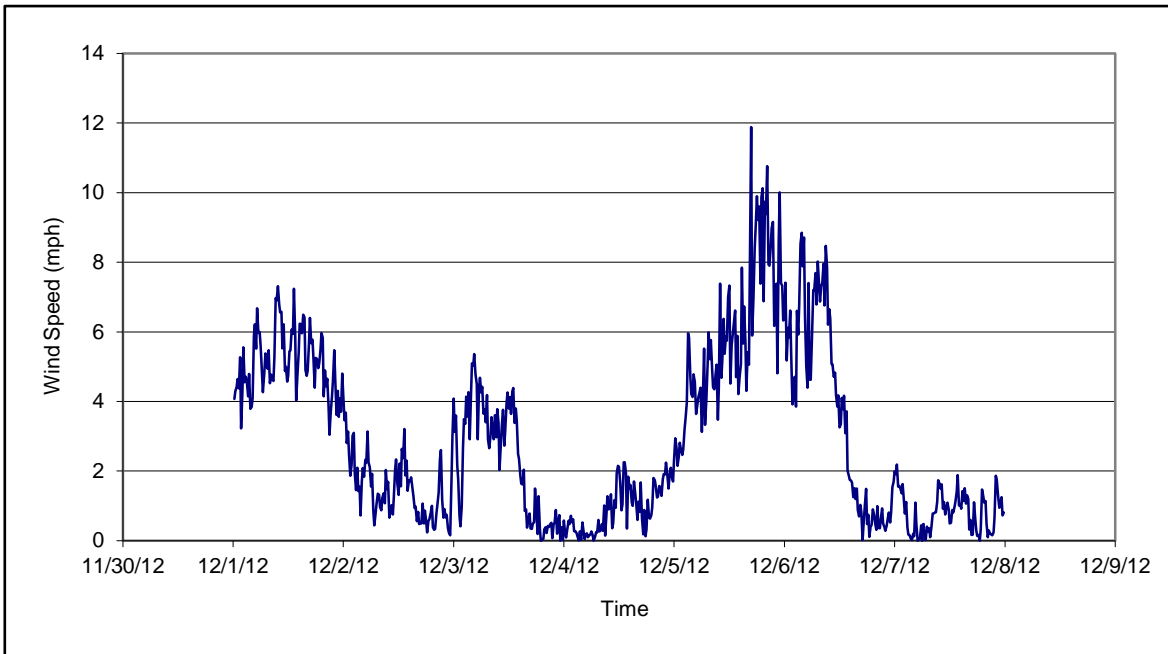


Figure 2. Wind speed for the period 12/01/12 through 12/07/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

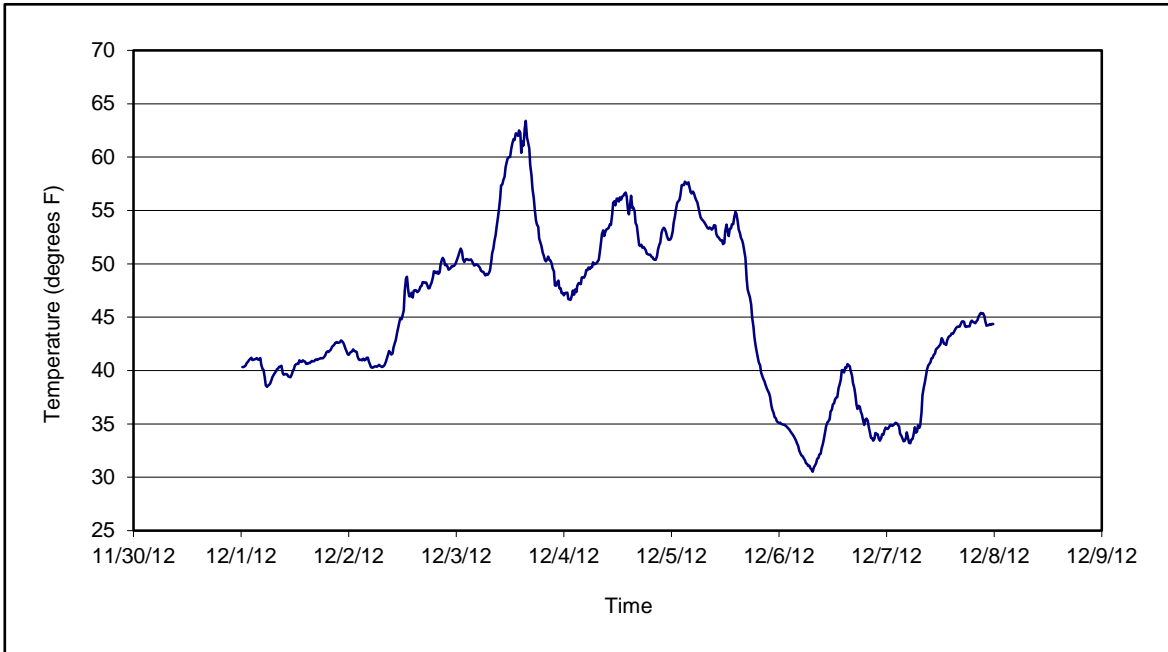


Figure 3. Temperature for the period 12/01/12 through 12/07/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

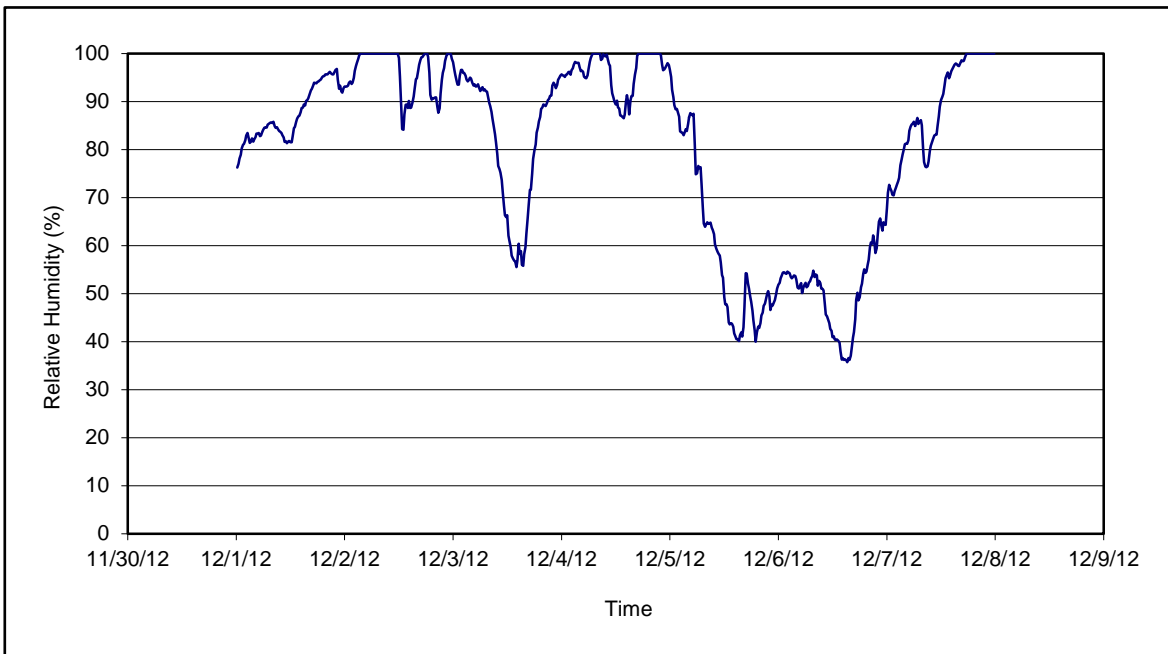


Figure 4. Relative humidity for the period 12/01/12 through 12/07/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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		12/3/2012			General Weather Conditions: Clear - ~ 49°F - ~62°F								
System Start Time		continuous			General Description of Site Activities: Health & Safety Meeting Continued Air Monitoring Backfilled in Temporary Fabric Structure (TFS) Deconned dump trucks Loaded out soil from shallow excavation Tarpded dump trucks								
System Stop Time		continuous			Transported soil into TFS				Operated hoe-ram in shallow excavation				
Total Hrs Monitored		24											
System Calibrations (Time/Status)		Ok 0724-0856											
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
12/3/2012	No exceedances												None taken
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					TVOC - total volatile organic compounds			
** Upwind minus downwind concentrations are a time specific comparison.					NA - not applicable					Field Representative: R. Marshall			
FAM - Fixed Air Monitoring station location					ND - no data available					Date: 12/3/2012			
ug/m ³ - micrograms per cubic meter													
ppmv - parts per million by volume													
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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		12/4/2012		General Weather Conditions: Clear - ~ 47°F - ~56°F																								
System Start Time		continuous		General Description of Site Activities: Transported soil into TFS Operated hoe-ram in shallow excavation																								
System Stop Time		continuous																										
Total Hrs Monitored		24																										
System Calibrations (Time/Status)		Ok 0722-0837																										
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															
12/4/2012	No exceedances												None taken															
Comments:																												
<table style="width: 100%; border: none;"> <tr> <td style="width: 20%;"></td> <td style="text-align: center; width: 15%;">PM-10 (15-min)</td> <td style="text-align: center; width: 15%;">TVOC (15-min)</td> <td style="text-align: center; width: 15%;">TVOC (1-min)</td> <td style="text-align: center; width: 15%;">Odor Intensity (15-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> <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> <td style="text-align: center;">3 (n-butanol scale)</td> </tr> </table>															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)
	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)																								
<table style="width: 100%; border: none;"> <tr> <td style="width: 45%; vertical-align: top;"> 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 </td> <td style="width: 50%; vertical-align: top;"> 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: 12/4/2012 </td> </tr> </table>														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 Field Representative: R. Marshall Date: 12/4/2012													
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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		12/5/2012			General Weather Conditions:									
System Start Time		continuous			Clear - ~ 45°F - ~57°F									
System Stop Time		continuous			General Description of Site Activities:									
Total Hrs Monitored		24			Health & Safety Meeting				Transported soil into TFS					
System Calibrations (Time/Status)		Ok 0645-0704			Continuous Air Monitoring				Operated hoe-ram in shallow excavation					
					Backfilled in Temporary Fabric Structure (TFS)				Restored side walk west of 85 Willow Ave					
					Deconned dump trucks				Relocated bin blocks from around TFS					
					Loaded out soil from shallow excavation				Relocated of TFS					
					Tarped 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	
12/5/2012	No exceedances												None taken	
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						Field Representative: R. Marshall		
ug/m ³ - micrograms per cubic meter						ND - no data available						Date: 12/5/2012		
ppmv - parts per million by volume														
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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	12/6/2012		General Weather Conditions: Clear - - 31°F - -40°F										
System Start Time	continuous		General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Excavated in Temporary Fabric Structure (TFS) Deconned dump trucks Loaded out soil from shallow excavation Tarped dump trucks										
System Stop Time	continuous												
Total Hrs Monitored	24												
System Calibrations (Time/Status)	Ok 0731-0917		Transported soil into TFS Operated hoe-ram inside the TFS Restored side walk west of 85 Willow Ave Relocated bin blocks from around TFS Relocated bin blocks from around TIGG Exhaust Performed shallow excavation										
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
12/6/2012	No exceedances												None taken
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: 12/6/2012	

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	12/7/2012	General Weather Conditions: Overcast w/rain- ~ 34°F - ~44°F													
System Start Time	continuous	General Description of Site Activities:													
System Stop Time	continuous	Health & Safety Meeting				Transported soil into TFS									
Total Hrs Monitored	24	Continuous Air Monitoring				Restored side walk west of 85 Willow Ave									
System Calibrations (Time/Status)	Ok 0801-0927	Excavated in Temporary Fabric Structure (TFS)													
		Decconned dump trucks													
		Loaded out soil from TFS													
		Tarped 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		
12/7//2012	TVOC	FAM#4	17:26	17:41	16	NNE	DW	FAM#2	5.1	11.7	1	Occurred after intrusive site activities had ceased for the day, and caused by exhaust from a construction vehicle idling near the station to hitch a generator.	The vehicle was moved away and the levels dropped below the action and alert levels.		
Comments:															
Alert Limit:						PM-10 (15-min) 100 ug/m ³		TVOC (15-min) 3.7 ppm		TVOC (1-min) -		Odor Intensity (15-min) -			
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/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						Field Representative: Date:		C. John 12/7//2012	

