

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: October 8, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
September 15, 2012 through September 21, 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 September 15, 2012 and September 21, 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. 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:

- Relocated Temporary Fabric Structure (TFS)
- Deconned dump trucks
- Loaded out impacted material from TFS offsite
- Operated dust suppressant South of TFS
- Operated hoe-ram in TFS
- Operated hoe-ram on foundation of former one-story building
- Operated odor suppressant system at TFS
- Performed intrusive work inside of trench Northwest of TFS
- Received deliveries of clean backfill
- Repaired runoff pipe at the base of trench
- Repaired the interior structure of TFS
- Stockpiled clean Backfill
- Stockpiled clean soil
- Stockpiled concrete waste
- Tarped 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. 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 September 19, 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)
September 15, 2012 through September 21, 2012
October 8, 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
9/15/2012	0.0	0.1	0.3	0.1	0.2	0.1	21	6	3	0	2	0
9/16/2012	0.1	0.2	0.7	0.2	0.2	0.1	21	5	2	0	0	0
9/17/2012	0.1	0.1	0.4	0.2	0.2	0.2	63	6	2	3	24	0
9/18/2012	0.2	0.0	0.1	0.1	0.3	0.2	68	6	2	6	15	0
9/19/2012	0.1	0.2	0.1	0.1	0.2	0.2	18	5	2	1	10	0
9/20/2012	0.1	0.1	0.3	0.2	0.2	0.4	20	6	2	8	6	0
9/21/2012*	0.4	0.2	0.2	0.1	0.3	0.3	42	7	11	9	0	0
Average	0.1	0.1	0.3	0.1	0.2	0.2	36	6	3	4	8	0
Maximum	0.4	0.2	0.7	0.2	0.3	0.4	68	7	11	9	24	0

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

* due to a power outage after working hours, data are not available after 6:18 pm on 9/21/2012.

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

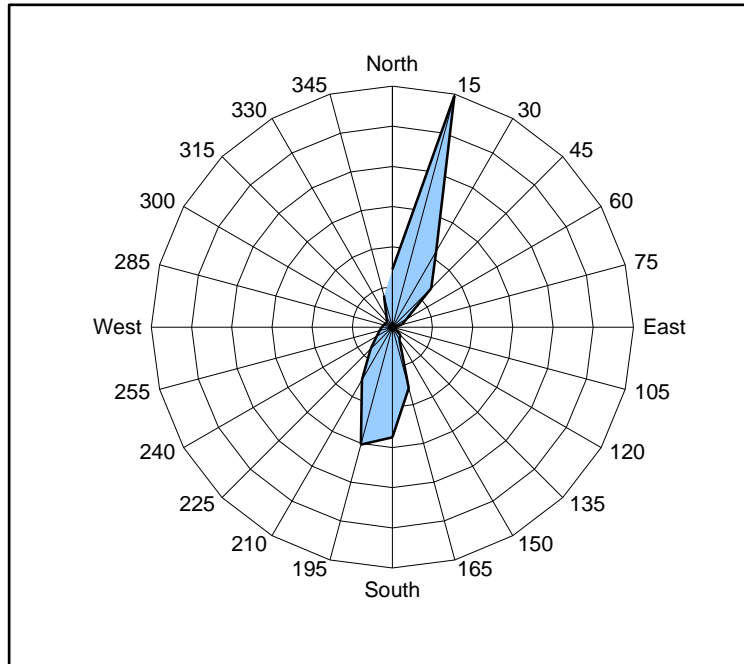


Figure 1. Wind rose for the period 09/15/12 through 09/21/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

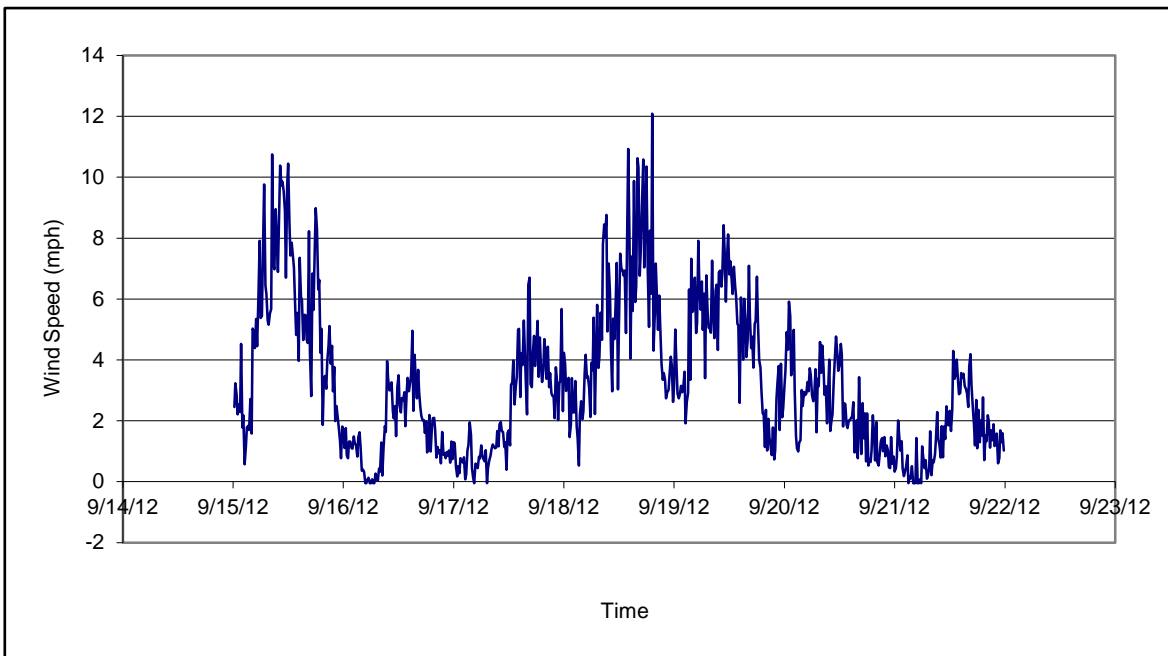


Figure 2. Wind speed for the period 09/15/12 through 09/21/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

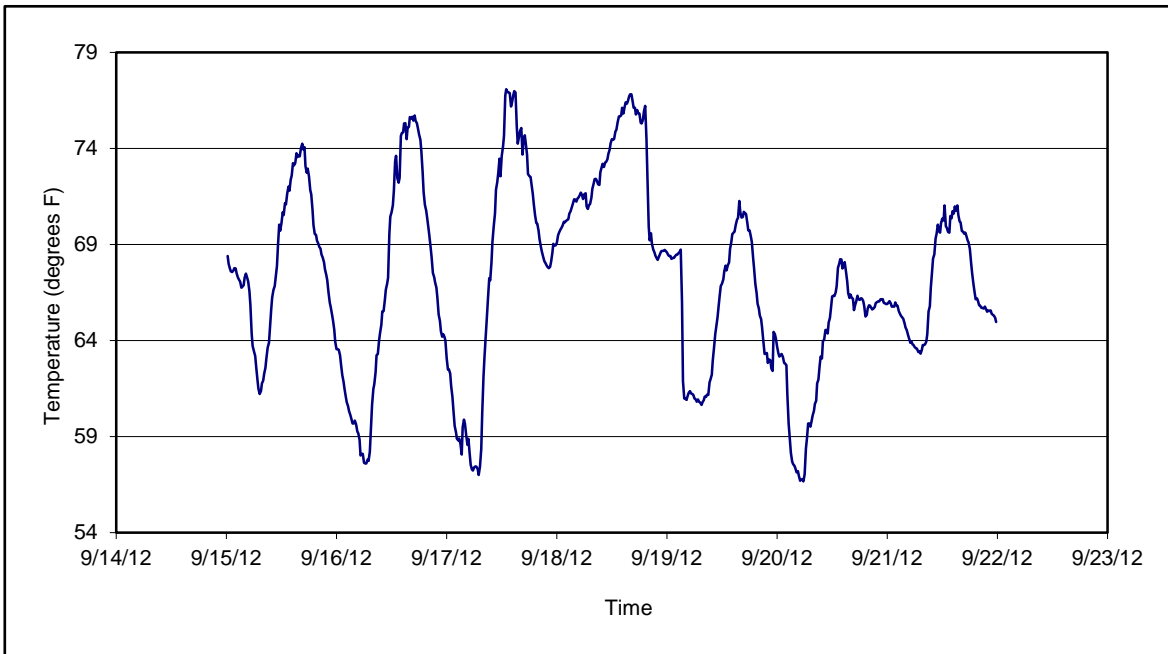


Figure 3. Temperature for the period 09/15/12 through 09/21/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

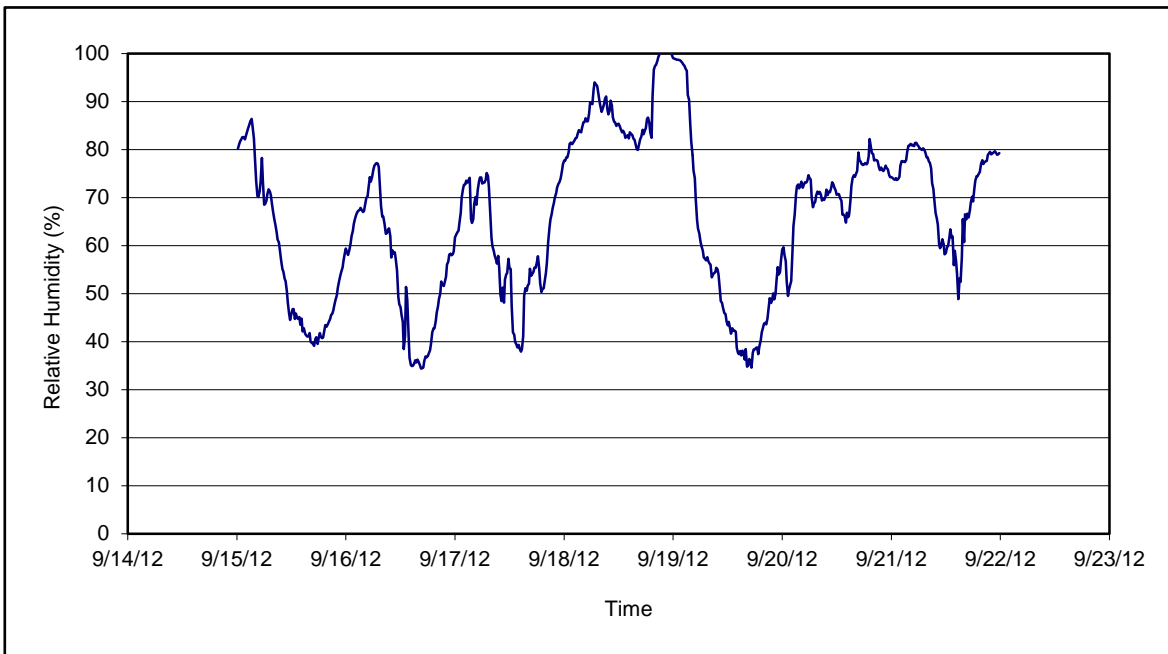


Figure 4. Relative humidity for the period 09/15/12 through 09/21/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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	9/17/2012				General Weather Conditions: Clear - ~ 61°F - ~76°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Stockpiled clean soil Deconned dump trucks Received deliveries of clean backfill Operated hoe-ram on foundation of former one-story building Tarped dump trucks Stockpiled concrete waste Relocated Temporary Fabric Structure (TFS) Repaired the interior structure of TFS							
System Start Time	continuous											
System Stop Time	continuous											
Total Hrs Monitored	24											
System Calibrations (Time/Status)	Ok 0650-1005											

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**			
9/17/2012	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: C. John
 Date: 9/17/2012



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: 9/18/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0710-0918	General Weather Conditions: Raining - ~ 71°F - ~75°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Stockpiled clean Backfill Decconned dump trucks Received deliveries of clean backfill Operated hoe-ram on foundation of former one-story building Tarped dump trucks Stockpiled concrete waste Relocated Temporary Fabric Structure (TFS) Repaired the interior structure of TFS Performed intrusive work inside of Trench NW of TFS Repaired runoff pipe at the base of Trench NW of trench

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**			
9/18/2012	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:

<ul style="list-style-type: none"> * 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 	<ul style="list-style-type: none"> 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: <u>C. John</u> Date: <u>9/18/2012</u>
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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: 9/19/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0805-0945					General Weather Conditions: Clear - ~ 56°F - ~70°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Stockpiled clean Backfill Decconned dump trucks Received deliveries of clean backfill Operated hoe-ram on foundation of former one-story building Tarped dump trucks Load out of material from TFS to Dump trucks Odor Suppressant system operational @ TFS Intrusive work at Trench NW of TFS								
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
9/19/2012	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/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: C. John Date: 9/19/2012			



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	9/20/2012				General Weather Conditions: Overcast - - 57°F - -68°F								
System Start Time	continuous				General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Stockpiled clean Backfill Decconned dump trucks Received deliveries of clean backfill Operated hoe-ram in TFS								
System Stop Time	continuous												
Total Hrs Monitored	24												
System Calibrations (Time/Status)	Ok 0610-0833												
					Tarped dump trucks Loaded out of material from TFS to Dump trucks Operated odor suppressant system operational @ TFS Performed intrusive work at Trench NW of TFS Operated dust suppressant South of TFS								
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
9/20/2012	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).						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: 9/20/2012							



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: 9/21/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0606-0746		General Weather Conditions: Overcast - ~ 57°F - ~68°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Stockpiled clean Backfill Deconned dump trucks Received deliveries of clean backfill Operated hoe-ram in TFS								Tarped dump trucks Loaded out of material from TFS offsite Odor Suppressant system operational @ TFS Performed shallow excavation NW of TFS Operated dust Suppressant S of TFS				
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	
9/21/2012	No Exceedances								Min**	Max**			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: C. John				
ug/m ³ - micrograms per cubic meter					ND - no data available					Date: 9/21/2012				
ppmv - parts per million by volume														