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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.)

Date: February 4, 2013

Regarding: Weekly Community Air Monitoring Report  
Clifton Former MGP Site - Operable Unit 2 (OU-2)  
January 26, 2013 through February 1, 2013

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 January 26, 2013 and February 1, 2013.

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:

- Excavated in Temporary Fabric Structure (TFS)
- Backfilled in TFS
- Decconned dump trucks
- Loaded out soil from TFS
- Operated hoe-ram in TFS
- Mobilized sonic drill rig
- Operated sonic drill rig
- Received delivery of clean backfill
- Received delivery of gravel
- Relocated frac tank
- Secured sound barriers along on Bay Street
- Secured sound barriers along Willow Avenue
- Stockpiled clean soil
- Surveyed site in OU-2
- Tarped dump trucks
- Transported soil into TFS
- Transported support beams near East entrance of TFS.
- Welded western entrance gate on 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 January 31, 2013. 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)  
January 26, 2013 through February 1, 2013  
February 4, 2013  
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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 <sup>3</sup>	150 ug/m <sup>3</sup>	< 100 ug/m <sup>3</sup>	≥ 100 ug/m <sup>3</sup> , < 150 ug/m <sup>3</sup>	≥ 150 ug/m <sup>3</sup>
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 <sup>3</sup>	≥ 330 ug/m <sup>3</sup> , < 440 ug/m <sup>3</sup>	≥ 440 ug/m <sup>3</sup>

**Notes:**

<sup>1</sup> 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

<sup>2</sup> 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/m<sup>3</sup> - 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 <sup>3</sup> )					
	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6
1/26/2013	0.0	0.4	0.2	0.1	0.1	0.0	79	13	5	4	14	45
1/27/2013	0.0	0.7	0.5	0.1	0.1	0.0	20	18	7	12	24	47
1/28/2013	0.1	0.7	0.4	0.1	0.1	0.0	27	44	25	32	48	93
1/29/2013	0.1	0.6	0.7	0.6	0.5	0.1	14	74	38	50	66	94
1/30/2013	0.1	0.2	0.2	0.2	0.1	0.0	7	53	20	30	43	51
1/31/2013	0.1	0.1	0.2	0.1	0.1	0.0	2	16	4	6	17	12
2/1/2013	0.1	0.1	0.1	0.6	0.1	0.0	4	8	2	43	11	7
Average	0.1	0.4	0.3	0.2	0.2	0.0	22	32	14	25	32	50
Maximum	0.1	0.7	0.7	0.6	0.5	0.1	79	74	38	50	66	94

**Notes:**

FAM - fixed air monitoring station location

ug/m<sup>3</sup> - 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**

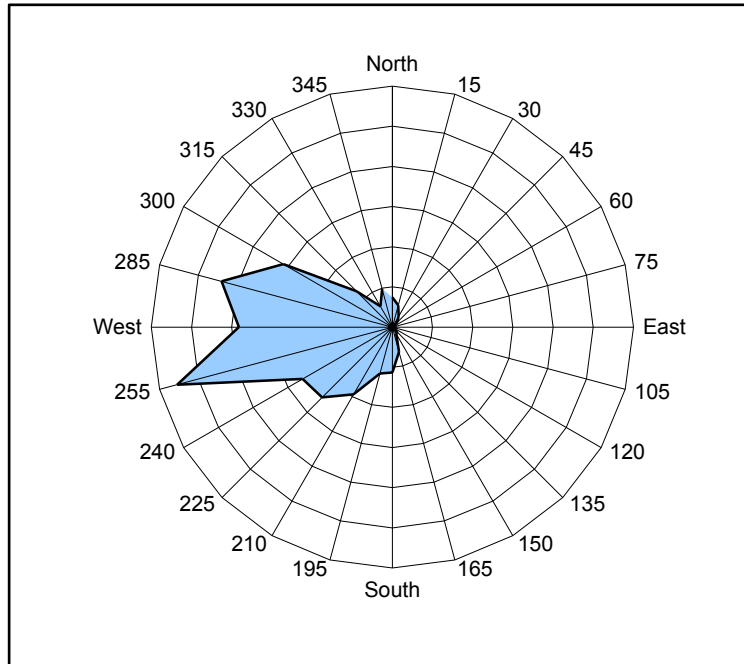


Figure 1. Wind rose for the period 01/26/13 through 02/01/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

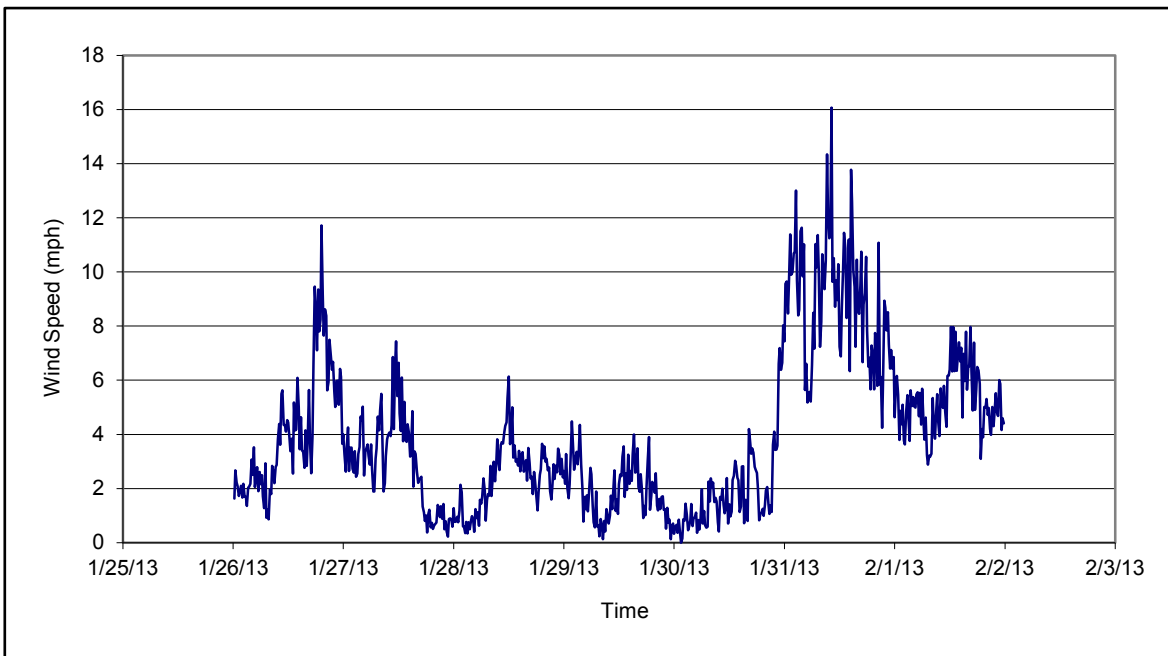


Figure 2. Wind speed for the period 01/26/13 through 02/01/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

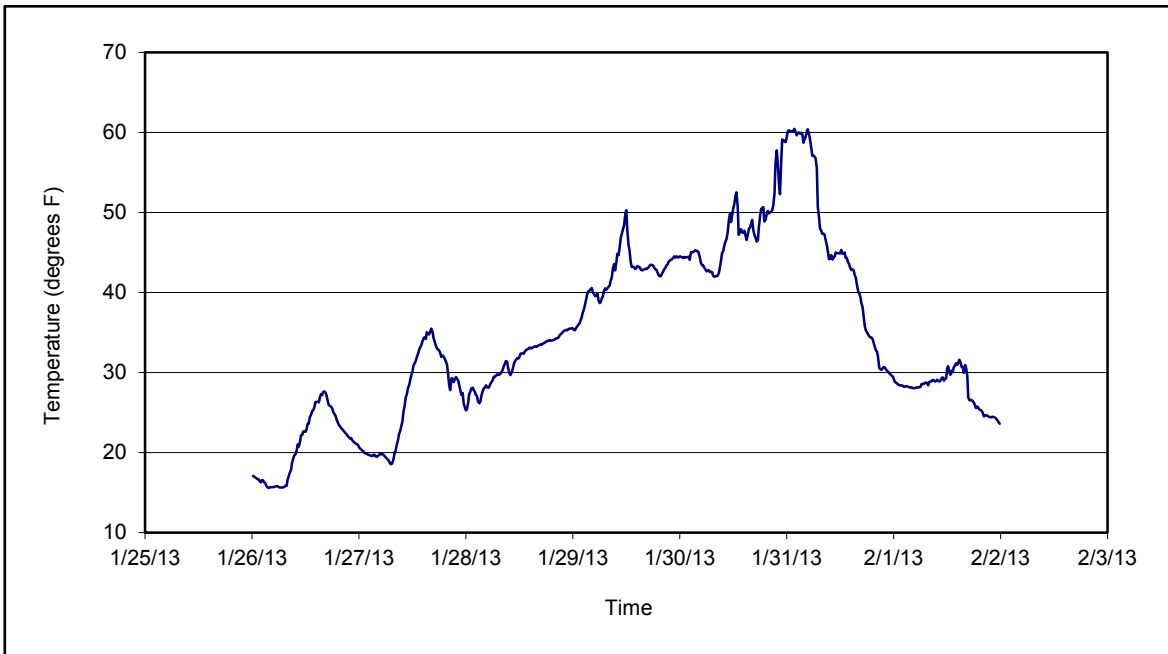


Figure 3. Temperature for the period 01/26/13 through 02/01/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

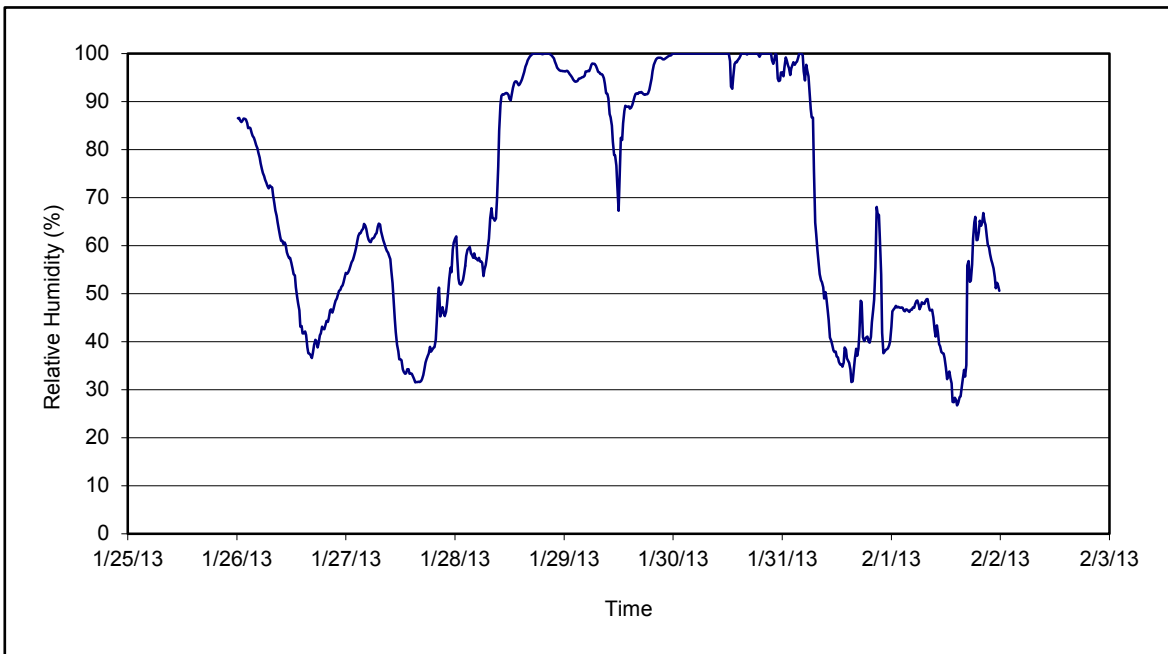


Figure 4. Relative humidity for the period 01/26/13 through 02/01/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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	1/28/2013				General Weather Conditions: Overcast w/snow ~ 26°F - ~34°F									
System Start Time	continuous				General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Excavated in Temporary Fabric Structure (TFS) Received delivery of clean backfill Received delivery of gravel Mobilized sonic drill rig Operated sonic drill rig Decomned dump trucks Tarped dump trucks Stockpiled clean soil Operated hoe-ran in TFS Loaded out soil from TFS Transported soil into TFS Backfilled in TFS Relocated frac tank									
System Stop Time	continuous													
Total Hrs Monitored	24													
System Calibrations (Time/Status)	Ok 0647-0925													
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	
1/28/2013	No exceedances												None taken	
<b>Comments:</b>														
					<b>PM-10 (15-min)</b>				<b>TVOC (15-min)</b>			<b>TVOC (1-min)</b>	<b>Odor Intensity (15-min)</b>	
					Alert Limit:	100 ug/m <sup>3</sup>				3.7 ppm			-	-
					Action Limit:	150 ug/m <sup>3</sup>				5.0 ppm			25 ppm	3 (n-butanol scale)
<b>Notes:</b>														
* 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 <sup>3</sup> - micrograms per cubic meter					ND - no data available					Date: 1/28/2013				
ppmv - parts per million by volume														
												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	1/29/2013				General Weather Conditions: Overcast w/snow ~ 26°F - ~34°F									
System Start Time	continuous				General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Excavated in Temporary Fabric Structure (TFS) Received delivery of clean backfill Received delivery of gravel Surveyed site in OU-2									
System Stop Time	continuous													
Total Hrs Monitored	24													
System Calibrations (Time/Status)	Ok 0742-0909													
						Operated sonic drill rig Deconned dump trucks Tarped dump trucks Stockpiled clean soil Operated hoe-ram in TFS Loaded out soil from TFS		Transported soil into TFS Backfilled in TFS Relocated frac tank						
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	
1/29/2013	No exceedances												None taken	
<b>Comments:</b>														
					<b>PM-10 (15-min)</b>	<b>TVOC (15-min)</b>	<b>TVOC (1-min)</b>	<b>Odor Intensity (15-min)</b>						
					Alert Limit: 100 ug/m <sup>3</sup>	3.7 ppm	-	-						
					Action Limit: 150 ug/m <sup>3</sup>	5.0 ppm	25 ppm	3 (n-butanol scale)						
<b>Notes:</b>														
* 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 <sup>3</sup> - micrograms per cubic meter				ND - no data available										
ppmv - parts per million by volume														
												Field Representative: R. Marshall		
												Date: 1/29/2013		



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 1/30/2013 System Start Time continuous System Stop Time continuous Total Hrs Monitored 24  System Calibrations Ok (Time/Status) 0742-1045					General Weather Conditions: Overcast ~ 48°F - ~53°F  General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Excavated in Temporary Fabric Structure (TFS) Received delivery of clean backfill Received delivery of gravel Surveyed site in OU-2  Loaded out soil from TFS Deconned dump trucks Tarped dump trucks Stockpiled clean soil Operated hoe-ram in TFS Transported support beams near East entrance to TFS.  Transported soil into TFS Backfilled in TFS Relocated frac tank								
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
1/30/2013	No exceedances												None taken
<b>Comments:</b>													
					<b>PM-10 (15-min)</b>	<b>TVOC (15-min)</b>	<b>TVOC (1-min)</b>	<b>Odor Intensity (15-min)</b>					
					Alert Limit: 100 ug/m <sup>3</sup>	3.7 ppm	-	-					
					Action Limit: 150 ug/m <sup>3</sup>	5.0 ppm	25 ppm	3 (n-butanol scale)					
<b>Notes:</b>													
* 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 <sup>3</sup> - micrograms per cubic meter								ND - no data available					
ppmv - parts per million by volume								Field Representative: R. Marshall		Date: 1/30/2013			



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 System Start Time System Stop Time Total Hrs Monitored  System Calibrations (Time/Status)		1/31/2013 continuous continuous 24  Ok 0740-0915			General Weather Conditions: Clear ~ 49°F - ~60°F  General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Excavated in Temporary Fabric Structure (TFS) Received delivery of clean backfill Transported soil into TFS Surveyed site in OU-2  Backfilled in TFS Decanned dump trucks Tarped dump trucks Stockpiled clean soil Operated hoe-ram in TFS Loaded out soil from 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
1/31/2013	No exceedances												None taken
<b>Comments:</b>													
					<b>PM-10 (15-min)</b>		<b>TVOC (15-min)</b>		<b>TVOC (1-min)</b>		<b>Odor Intensity (15-min)</b>		
					Alert Limit: 100 ug/m <sup>3</sup>		3.7 ppm		-		-		
					Action Limit: 150 ug/m <sup>3</sup>		5.0 ppm		25 ppm		3 (n-butanol scale)		
<b>Notes:</b>													
* 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 <sup>3</sup> - micrograms per cubic meter							ND - no data available						
ppmv - parts per million by volume							Field Representative: C. John			Date: 1/31/2013			



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: 2/1/2013 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24  System Calibrations (Time/Status): Ok 0730-0852					General Weather Conditions: Overcast-clear ~ 28°F - ~30°F  General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Backfilled in TFS Welded western entrance gate on TFS Transported soil into TFS Stockpiled clean soil								
					Secured sound barriers along Willow Avenue				Secured sound barriers along on Bay Street				
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
2/1/2013	No exceedances												None taken
<b>Comments:</b>													
					<b>PM-10 (15-min)</b>		<b>TVOC (15-min)</b>		<b>TVOC (1-min)</b>		<b>Odor Intensity (15-min)</b>		
					Alert Limit: 100 ug/m <sup>3</sup>		3.7 ppm		-		-		
					Action Limit: 150 ug/m <sup>3</sup>		5.0 ppm		25 ppm		3 (n-butanol scale)		
<b>Notes:</b>													
* 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 <sup>3</sup> - micrograms per cubic meter					ND - no data available					Date: 2/1/2013			
ppmv - parts per million by volume													

