

## 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: January 3, 2013

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

There were no fifteen-minute exceedances of the Total Volatile Organic Compounds (TVOC), or odor action levels associated with ground intrusive site activities during this reporting period. There was an exceedance above the alert level for Particulate Matter (PM-10) [dust] at an upwind station. 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 shallow excavation
- Deconned dump trucks
- Installed plywood sound barriers along Bay Street
- Leveled terrain along North Portion of OU-2
- Loaded out soil from TFS
- Moved Jersey blocks
- Operated hoe-ram in TFS
- Performed shallow excavation
- Received deliveries of clean soil
- Restored sidewalk along Bay St
- Stockpiled clean backfill east of TFS eastern entrance
- Tarped dump trucks
- Tested density inside 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 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.

## **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
12/15/2012	0.0	0.1	0.2	0.0	0.0	0.0	28	41	20	42	38	62
12/16/2012	0.0	0.0	0.1	0.0	0.0	0.0	13	18	7	43	18	32
12/17/2012	0.0	0.1	0.2	0.1	0.1	0.0	33	15	5	43	15	53
12/18/2012	0.3	0.1	0.2	0.1	0.1	0.0	44	17	5	42	16	142
12/19/2012	0.0	0.1	0.2	0.1	0.1	0.0	24	35	2	40	10	34
12/20/2012	0.1	0.7	0.3	0.2	0.2	0.0	17	18	3	16	12	40
12/21/2012	0.1	0.1	0.2	0.1	0.1	0.0	16	23	3	20	28	31
Average	0.1	0.2	0.2	0.1	0.1	0.0	25	24	6	35	20	56
Maximum	0.3	0.7	0.3	0.2	0.2	0.0	44	41	20	43	38	142

**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**

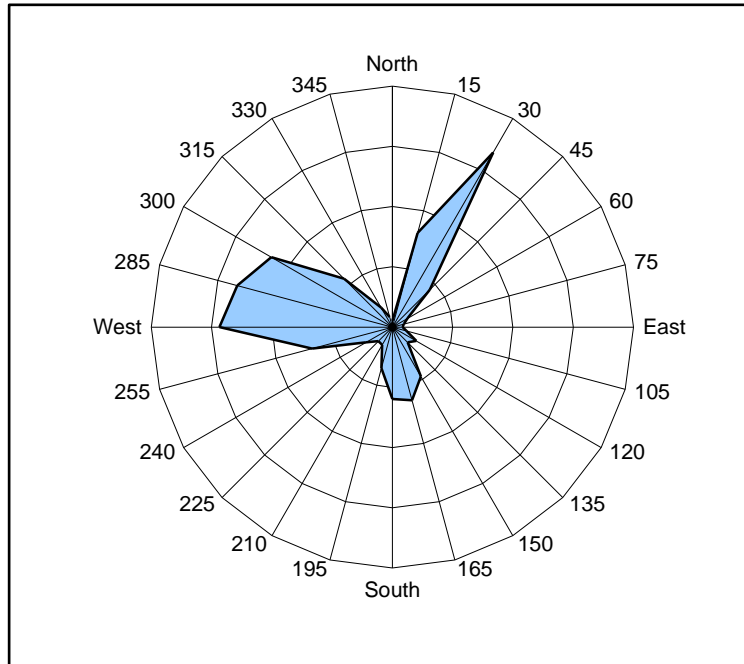


Figure 1. Wind rose for the period 12/15/12 through 12/21/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

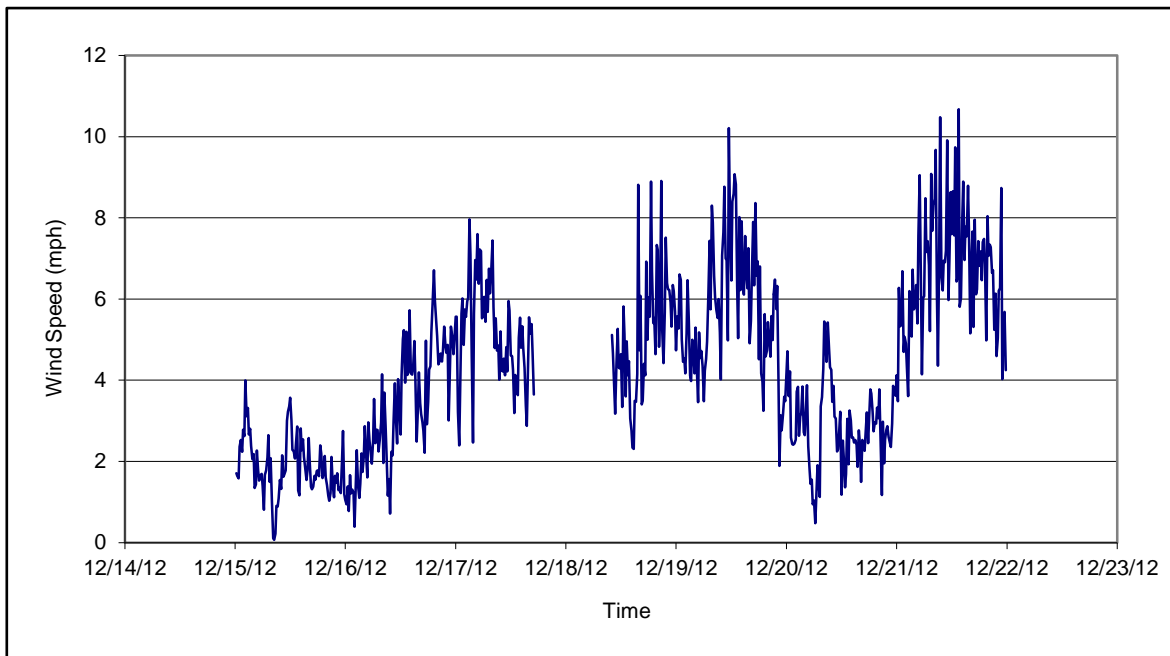


Figure 2. Wind speed for the period 12/15/12 through 12/21/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

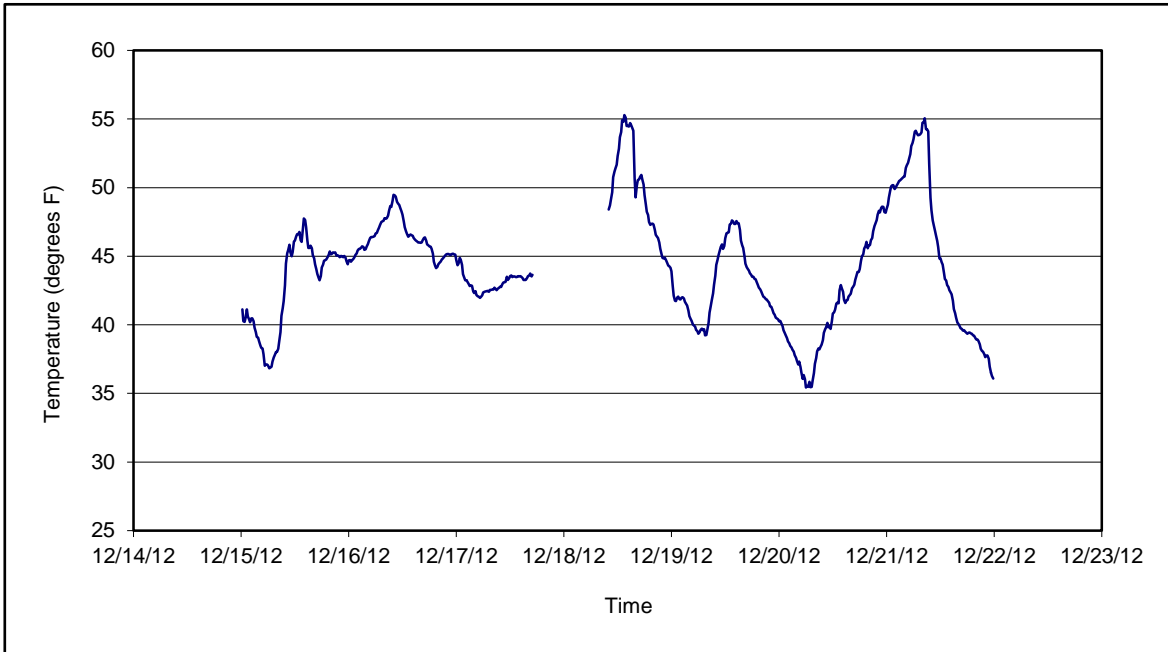


Figure 3. Temperature for the period 12/15/12 through 12/21/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

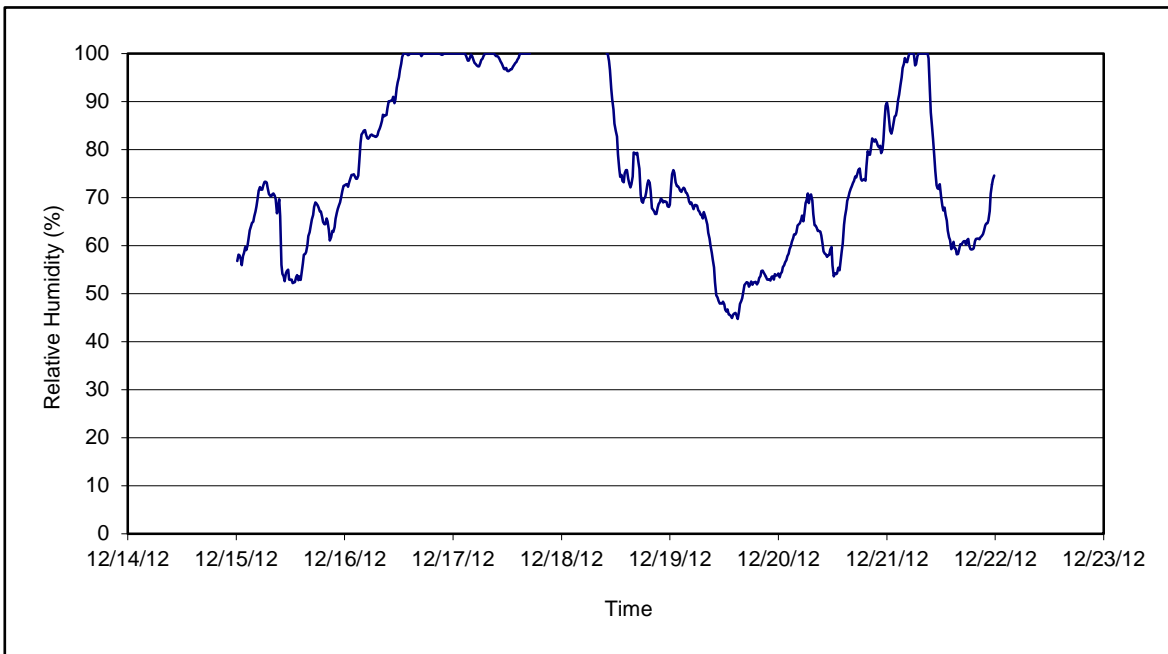


Figure 4. Relative humidity for the period 12/15/12 through 12/21/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

### 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	12/17/2012				General Weather Conditions: Overcast- ~ 42°F - ~44°F  General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Relocated Temporary Fabric Structure (TFS) Deconned dump trucks Loaded out soil from TFS Tarped dump trucks									
System Start Time	continuous													
System Stop Time	continuous													
Total Hrs Monitored	24													
System Calibrations (Time/Status)	Ok 0732-1006				Relocated bin blocks Performed shallow excavation Restored sidewalk along Bay St. Installed TIGG unit									
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	
12/17/2012	No Exceedances												No Action Taken	
<b>Comments:</b>														
					PM-10 (15-min)		TVOC (15-min)		TVOC (1-min)		Odor Intensity (15-min)			
					Alert Limit:		3.7 ppm		-		-			
					Action Limit:		5.0 ppm		25 ppm		3 (n-butanol scale)			
<b>Notes:</b>														
<ul style="list-style-type: none"> <li>* Wind directions are presented by octant (i.e. N, NE, E, SE, S, SW, W, NW).</li> <li>** Upwind minus downwind concentrations are a time specific comparison.</li> </ul>					<ul style="list-style-type: none"> <li>PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter</li> <li>TVOC - total volatile organic compounds</li> </ul>									
<ul style="list-style-type: none"> <li>FAM - Fixed Air Monitoring station location</li> <li>ug/m<sup>3</sup> - micrograms per cubic meter</li> <li>ppmv - parts per million by volume</li> </ul>					<ul style="list-style-type: none"> <li>NA - not applicable</li> <li>ND - no data available</li> </ul>									
					Field Representative:				R. Marshall					
					Date:				12/17/2012					





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 12/18/2012 System Start Time continuous System Stop Time continuous Total Hrs Monitored 24 System Calibrations Ok (Time/Status) 0732-1006					General Weather Conditions: Overcast - ~ 42°F - -44°F  General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Excavated Temporary Fabric Structure (TFS) Decconned dump trucks Loaded out soil from TFS Tarped dump trucks  Installed plywood sound barriers along Bay Street Performed shallow excavation Restored sidewalk along Bay St. Operated hoe-ran in TFS Received deliveries of clean soil									
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	
12/18/2012	PM-10	FAM#	11:12	11:28	17	WSW	UW	N/A	101	142	1	Bulldozer leveling the terrain	Construction manager was notified No action was taken	
Comments:														
					<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: 12/18/2012		
ppmv - parts per million by volume														



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		12/19/2012			General Weather Conditions: Clear - 42°F - 46°F								
System Start Time		continuous			General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Excavated Temporary Fabric Structure (TFS) Decommed dump trucks Loaded out soil from TFS Tarped dump trucks								
System Stop Time		continuous											
Total Hrs Monitored		24			Installed plywood sound barriers along Bay Street Backfilled shallow excavation Levelled terrain along North Portion of OU-2 Operated hoe-ram in TFS Received deliveries of clean soil								
System Calibrations (Time/Status)		Ok 0633-0802											
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
12/19/2012	No Exceedances												No Action 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).				** Upwind minus downwind concentrations are a time specific comparison.				PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter TVOC - total volatile organic compounds					
FAM - Fixed Air Monitoring station location				ug/m <sup>3</sup> - micrograms per cubic meter				NA - not applicable ND - no data available					
ppmv - parts per million by volume				Field Representative:				R. Marshall					
				Date:				12/19/2012					



**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: 12/20/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0804-1054					<b>General Weather Conditions:</b> Overcast- ~ 36°F - -43°F  <b>General Description of Site Activities:</b> Health & Safety Meeting Continuous Air Monitoring Excavated Temporary Fabric Structure (TFS) Deconned dump trucks Loaded out soil from TFS Tarped dump trucks									
					Installed plywood sound barriers along Bay Street Backfilled shallow excavation Levelled terrain along North Portion of OU-2 Moved Jersey blocks Received deliveries of clean soil			Stockpiled clean backfill east of TFS eastern entrance. Tested density inside 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	
12/20/2012	No Exceedances												No Action Taken	
<b>Comments:</b> <div style="border: 1px solid black; padding: 5px; min-height: 100px;"></div>														
					<b>PM-10 (15-min)</b>			<b>TVOC (15-min)</b>			<b>TVOC (1-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			
										<b>Odor Intensity (15-min)</b>				
<b>Notes:</b> * 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 <sup>3</sup> - 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  <div style="float: right;">                         Field Representative: C.John                          Date: 12/20/2012                     </div>														



**Daily Field Report**  
**Community Air Monitoring Program**  
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**Borough of Staten Island, New York**

System Operations					General Observations										
Sampling Date: 12/21/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24  System Calibrations (Time/Status): Ok 0804-1054					General Weather Conditions: Overcast- ~ 36°F - ~43°F  General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Backfilled in Temporary Fabric Structure (TFS) Deconned dump trucks Loaded out soil from TFS Tarped dump trucks Installed plywood sound barriers along Bay Street Relocated equipment Levelled terrain along North Portion of OU-2 Stockpiled clean backfill east of TFS eastern entrance.										
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		
12/21/2012	No Exceedances												No Action Taken		
<b>Comments:</b>															
					<b>PM-10 (15-min)</b> Alert Limit: 100 ug/m <sup>3</sup> Action Limit: 150 ug/m <sup>3</sup>		<b>TVOC (15-min)</b> 3.7 ppm 5.0 ppm		<b>TVOC (1-min)</b> - 25 ppm			<b>Odor Intensity (15-min)</b> - 3 (n-butanol scale)			
<b>Notes:</b> * 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 <sup>3</sup> - 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: 12/21/2012															

