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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: December 17, 2012

Regarding: Weekly Community Air Monitoring Report  
Clifton Former MGP Site - Operable Unit 2 (OU-2)  
November 24, 2012 through November 30, 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 November 24, 2012 and November 30, 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:

- Excavated in Temporary Fabric Structure (TFS)
- Backfilled in TFS
- Deconned dump trucks
- Hoe-ram operated in shallow excavation
- Leveled terrain at East entrance of TFS
- Loaded out soil offsite from TFS
- Performed shallow excavation Northeast of TFS
- Relocated bin-blocks
- Tarped dump trucks
- Transported clean soil to East entrance of TFS
- Welded in OU-2

### **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 November 28, 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)  
November 24, 2012 through November 30, 2012  
December 17, 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 <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
11/24/2012	0.1	0.0	0.0	0.1	0.0	0.3	33	16	6	9	21	44
11/25/2012	0.1	0.0	0.0	0.1	0.0	0.2	35	14	7	8	21	43
11/26/2012	0.7	0.2	0.0	0.5	0.0	0.3	39	42	10	17	34	58
11/27/2012	0.3	0.1	0.2	0.1	0.0	0.5	75	17	11	10	23	84
11/28/2012	0.2	0.1	0.1	0.2	0.0	0.5	76	17	8	19	23	53
11/29/2012	ND*	0.2	0.1	0.1	0.1	0.3	67	27	14	21	37	63
11/30/2012	ND*	0.1	0.2	0.3	0.1	0.0	63	24	43	44	55	103
Average	0.3	0.1	0.1	0.2	0.0	0.3	55	22	14	18	31	64
Maximum	0.7	0.2	0.2	0.5	0.1	0.5	76	42	43	44	55	103

**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

ND: No Data

\*Due to a communication issue caused by a power outage at FAM#1 from 22:24 on 11/28/12 - 15:36:29 on 11/30, there is no recordable data for VOC's at FAM#1 during this time period.

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

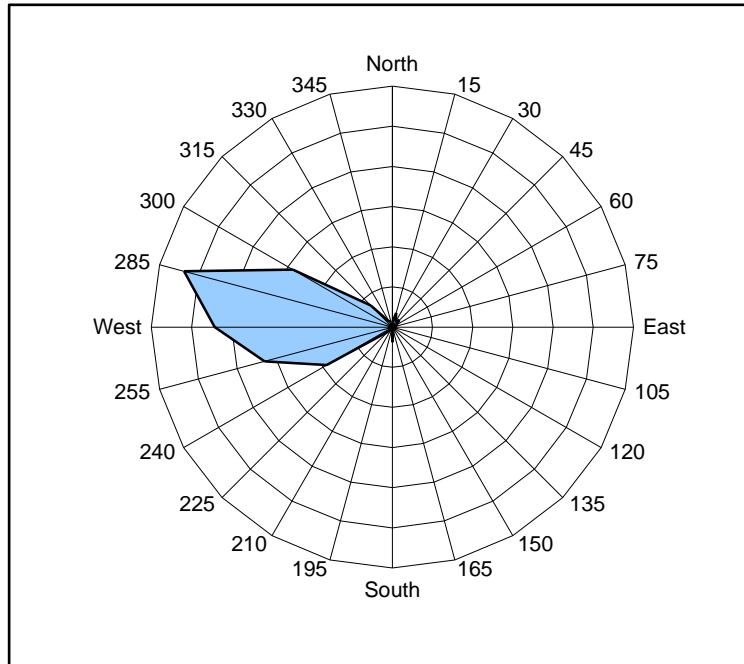


Figure 1. Wind rose for the period 11/24/12 through 11/30/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

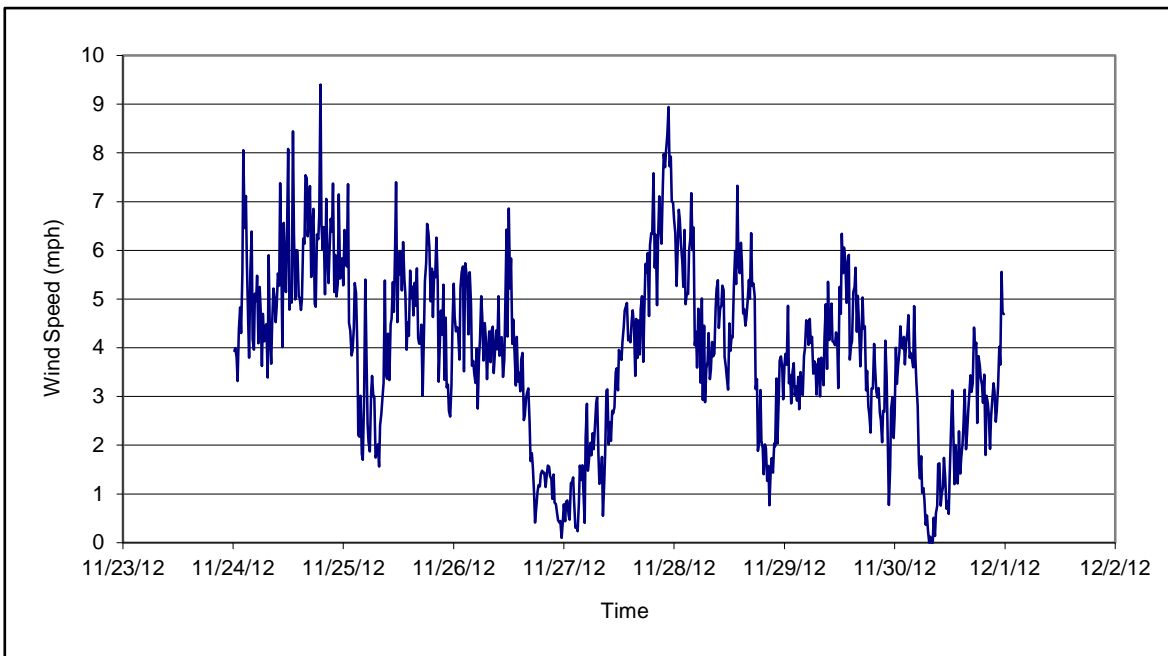


Figure 2. Wind speed for the period 11/24/12 through 11/30/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

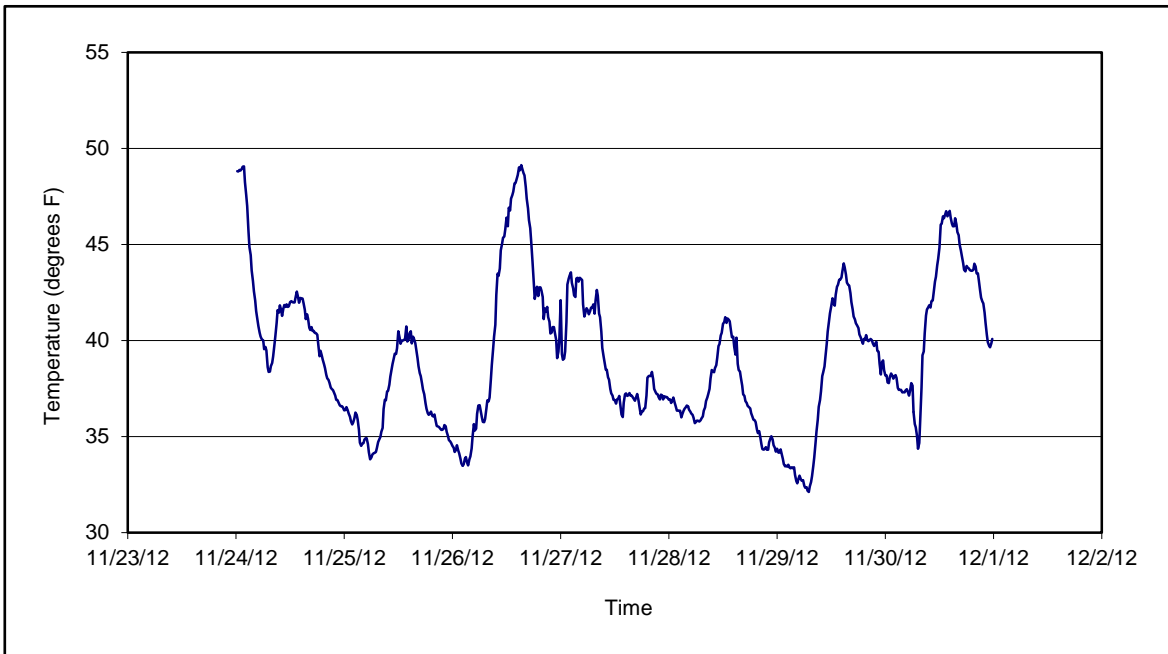


Figure 3. Temperature for the period 11/24/12 through 11/30/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

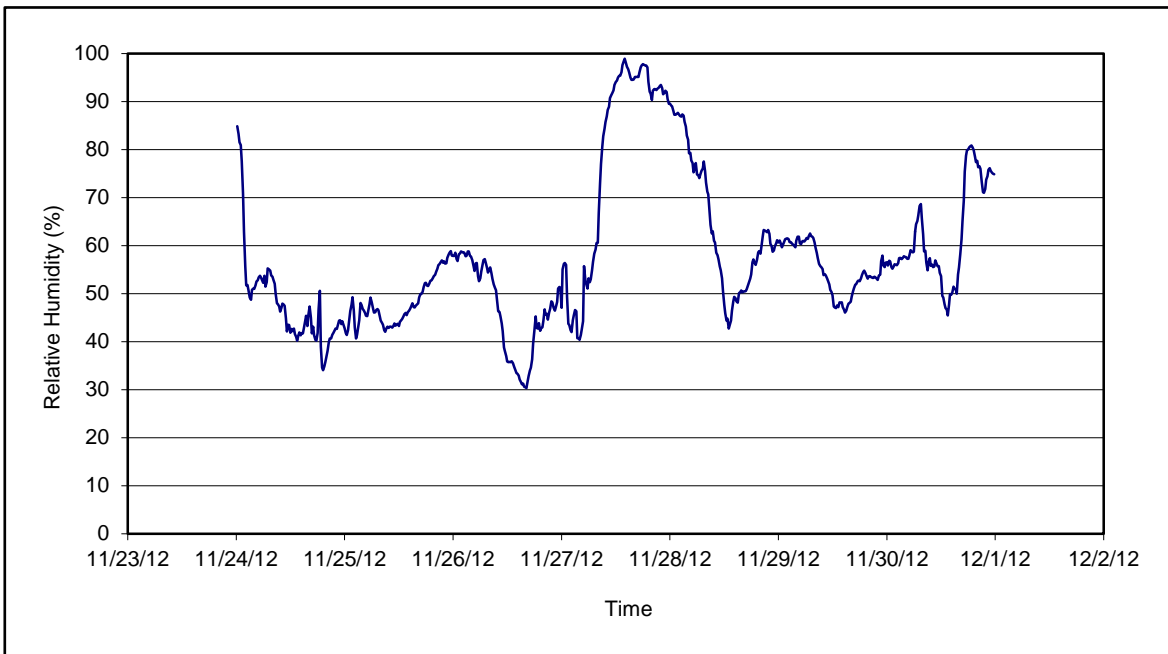


Figure 4. Relative humidity for the period 11/24/12 through 11/30/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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		11/26/2012			General Weather Conditions: Clear - - 38°F - -47°F									
System Start Time		continuous			General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Excavated in Temporary Fabric Structure (TFS) Decommed dump trucks Loaded out soil from TFS Tarped dump trucks									
System Stop Time		continuous												
Total Hrs Monitored		24												
System Calibrations (Time/Status)		Ok 0647-0833			Relocated bin-blocks									
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	
11/26//2012	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: 11/26//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	11/27/2012	General Weather Conditions:			Clear - ~ 37°F - -47°F  General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Excavated in Temporary Fabric Structure (TFS) Decconned dump trucks Loaded out soil from TFS Tarped dump trucks								
System Start Time	continuous	General Description of Site Activities: Welding in OU-2											
System Stop Time	continuous												
Total Hrs Monitored	24												
System Calibrations (Time/Status)	Ok 0634-0754												
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
11/27/2012	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: 11/27/2012	
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		11/28/2012			General Weather Conditions: Clear - ~ 36°F - -42°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 TFS Tarpred dump trucks								
System Stop Time		continuous											
Total Hrs Monitored		24			Loading out soil into the TFS								
System Calibrations (Time/Status)		Ok 0817-0949											
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
11/28/2012	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: 11/28/2012			
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	11/29/2012	General Weather Conditions: Overcaste - ~ 32°F - -42°F			General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Excavated in Temporary Fabric Structure (TFS) Decconned dump trucks Loaded out soil from TFS Tarpded dump trucks								
System Start Time	continuous	Transported clean soil into TFS											
System Stop Time	continuous	Backfilled in TFS											
Total Hrs Monitored	24												
System Calibrations (Time/Status)	Ok 0648-0941												
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
11/29/2012	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:			11/29/2012			
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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		11/30/2012		General Weather Conditions: Overcast - ~ 32°F - ~42°F  General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Backfilled in Temporary Fabric Structure (TFS) Decconned dump trucks Loaded out soil from TFS Tarped dump trucks  Transported clean soil into TFS Hoe-ram operated in shallow excavation Performed shallow excavation NE of TFS Transported clean soil to East entrance of TFS Leveled terrain at East entrance of TFS													
System Start Time		continuous															
System Stop Time		continuous															
Total Hrs Monitored		24															
System Calibrations (Time/Status)		Ok 0751-0849															
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				
11/30/2012	PM-10	FAM#6	10:26	10:43	18	NE	DW	FAM#1	94	97	1	Hoe ram operations	Construction manager was notified No actions taken				
11/30/2012	PM-10	FAM#6	11:23	11:24	2	NE	DW	FAM#1	93	94	1	Hoe ram operations	Construction manager was notified No actions 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. 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: 11/30/2012			

