

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: August 24, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
August 11, 2012 through August 17, 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 August 11, 2012 and August 17, 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)
- Cleaned Willow Avenue street using sweeper attachment
- Deconned load out dump trucks
- Installed vents on South side of TFS
- Installed and leveled gravel roadway near exit at 25 Willow Avenue
- Load out soil from site via tarped dumptrucks
- Mobilized and installed TIGG units
- Operated hoe-ram in TFS
- Operated odor and dust suppressant systems
- Received delivery of clean backfill
- Relocated frac tanks
- Tarped dump trucks
- Transported clean backfill 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 August 15, 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)
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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
8/11/2012	0.1	0.0	0.0	0.0	0.0	0.0	60	22	0	5	56	31
8/12/2012	0.1	0.0	0.0	0.0	0.0	0.1	64	19	0	1	14	26
8/13/2012	0.2	0.1	0.1	0.1	0.1	0.0	34	17	5	4	21	23
8/14/2012	1.3	0.6	0.9	0.8	0.4	0.4	61	25	5	11	35	0
8/15/2012	0.1	0.1	0.1	0.4	0.2	0.1	74	20	8	89	67	1
8/16/2012	0.1	0.1	0.4	0.1	0.1	0.1	47	22	5	17	40	1
8/17/2012	0.1	0.1	0.2	0.4	0.2	0.1	70	24	5	11	94	0
Average	0.3	0.2	0.3	0.3	0.2	0.1	59	21	4	20	47	12
Maximum	1.3	0.6	0.9	0.8	0.4	0.4	74	25	8	89	94	31

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

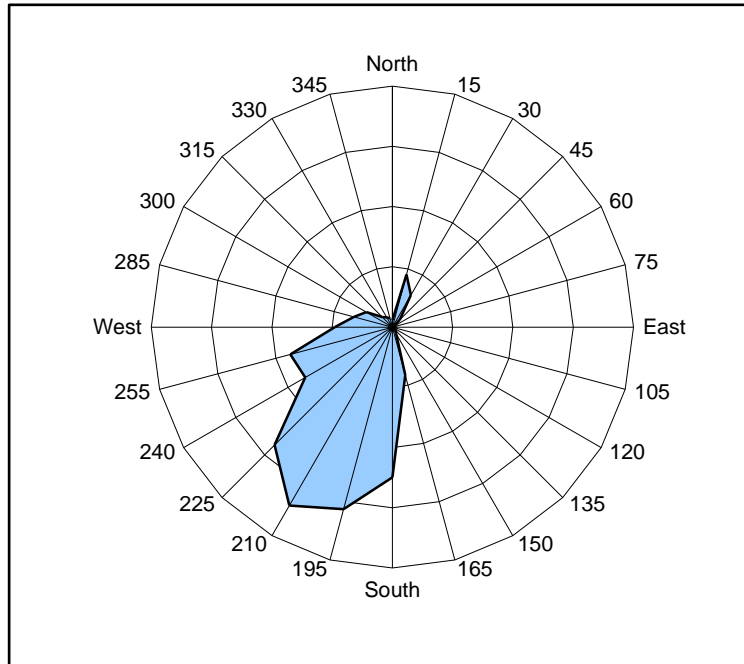


Figure 1. Wind rose for the period 08/11/12 through 08/17/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

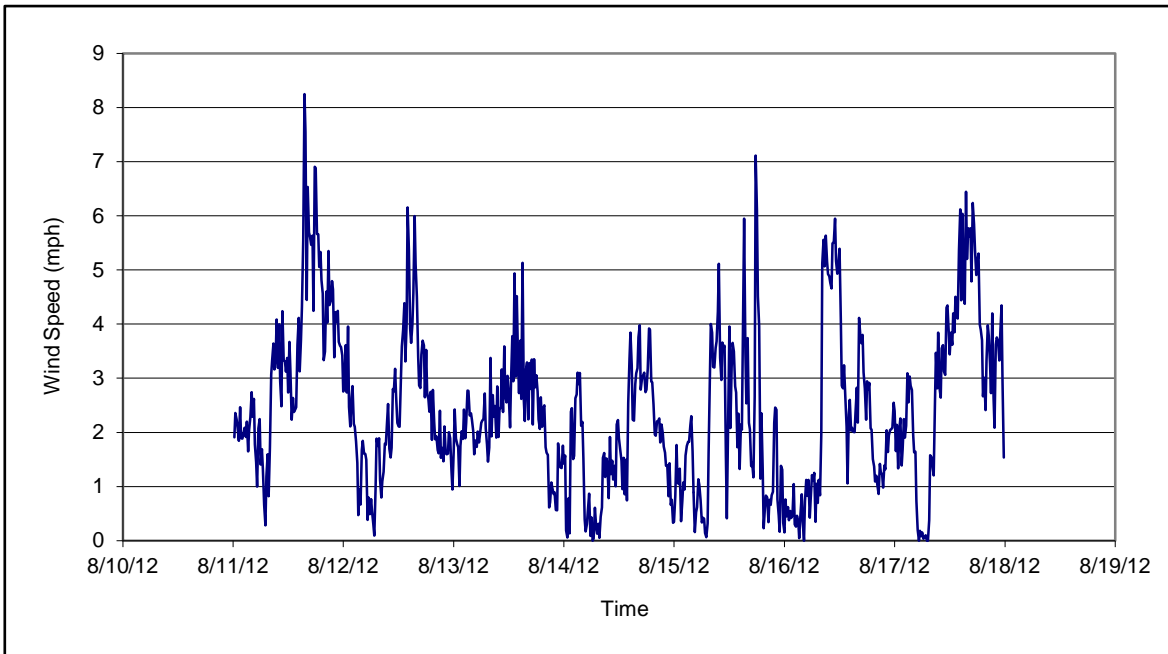


Figure 2. Wind speed for the period 08/11/12 through 08/17/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

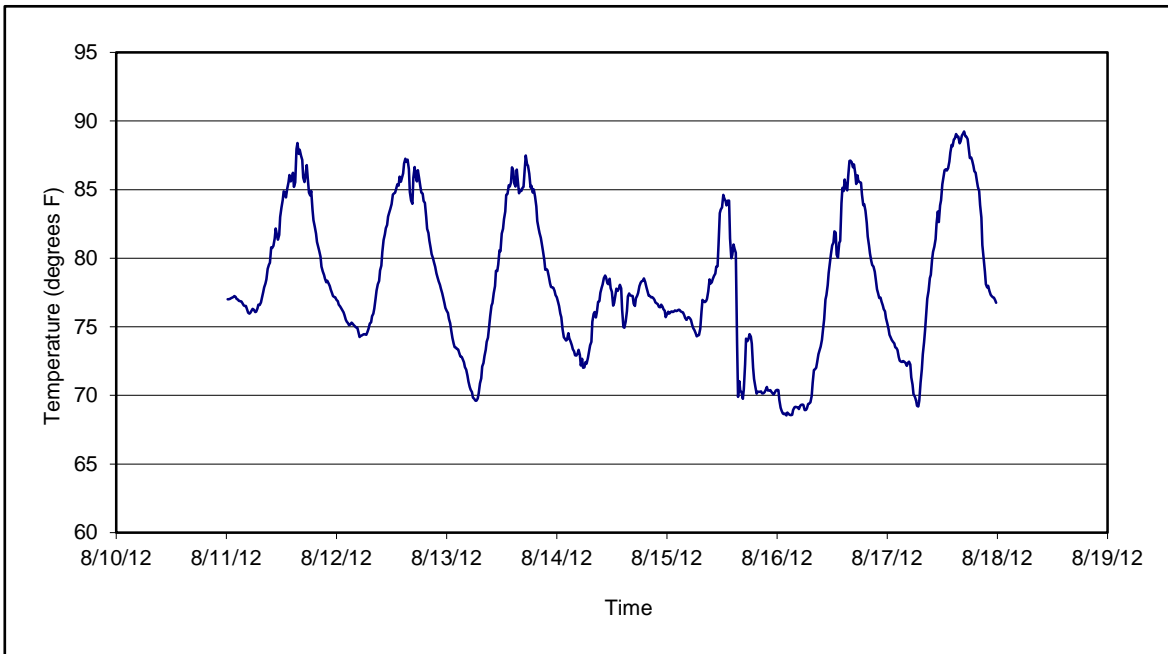


Figure 3. Temperature for the period 08/11/12 through 08/17/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

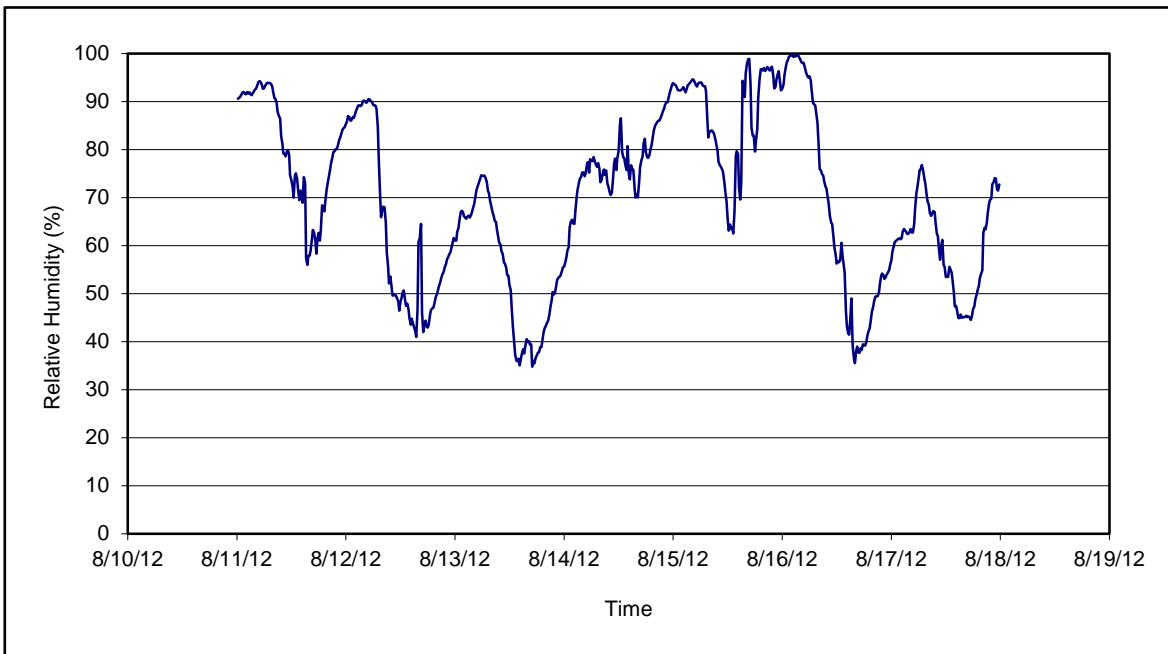


Figure 4. Relative humidity for the period 08/11/12 through 08/17/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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	8/13/2012	General Weather Conditions: Clear - ~ 71°F - ~85°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Deconned load out dump trucks Load out soil from site via tarped dumptrucks Transported clean backfill into TFS Operated hoe-ram in TFS			Excavated in Temporary Fabric Structure (TFS) Deconned dump trucks Received delivery of clean backfill Operated odor and dust suppressant systems Tarped dump trucks Cleaned Willow Avenue street using sweeper attachment									
System Start Time	continuous													
System Stop Time	continuous													
Total Hrs Monitored	24													
System Calibrations (Time/Status)	Ok 0626-0828													
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	
8/13/2012	No exceedances													
Comments:														
					PM-10 (15-min)			TVOC (15-min)			TVOC (1-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: R. Marshall Date: 8/13/2012		



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		8/14/2012		General Weather Conditions: Clear - ~ 72°F - ~77°F									
System Start Time		continuous		General Description of Site Activities:									
System Stop Time		continuous		Health & Safety Meeting			Deconned dump trucks			Leveling gravel roadway near exit at 40 Willow avenue			
Total Hrs Monitored		24		Continuous Air Monitoring			Received delivery of clean backfill			Excavated in Temporary Fabric Structure (TFS)			
System Calibrations (Time/Status)		Ok 0626-0828		Deconned load out dump trucks			Operated odor and dust suppressant systems						
				Load out soil from site via tarped dumptrucks			Tarped dump trucks						
				Transported clean backfill into TFS			Cleaned Willow Avenue street using sweeper attachment						
				Operated hoe-ram in TFS			Mobilized and installed second Tig 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
8/14/2012	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: R. Marshall
 Date: 8/14/2012



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		8/15/2012		General Weather Conditions:		Clear - ~ 78°F - -85°F									
System Start Time		continuous		General Description of Site Activities:		Health & Safety Meeting Decconned dump trucks Leveling gravel roadway near exit at 25 Willow avenue Received delivery of clean backfill Excavated in Temporary Fabric Structure (TFS) Operated odor and dust suppressant systems Health & Safety Meeting Decconned dump trucks Tarped dump trucks Cleaned Willow Avenue street using sweeper attachment Mobilized and installed second Tig unit Continuous Air Monitoring Received delivery of clean backfill Operated odor and dust suppressant systems Decconned load out dump trucks Tarped dump trucks Load out soil from site via tarped dumptrucks Transported clean backfill into TFS Operated hoe-ram in TFS									
Total Hrs Monitored		24		System Calibrations (Time/Status)		Ok 0747-0906									
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		
8/15/2012	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: R. Marshall
 Date: 8/15/2012



**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	8/16/2012				General Weather Conditions: Clear ~ 78°F - ~81°F										
System Start Time	continuous				General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Decconned load out dump trucks Load out soil from site via tarped dumptrucks Transported clean backfill into TFS Relocated frac tank Decconned dump trucks Received delivery of clean backfill Operated odor and dust suppressant systems Tarped dump trucks Cleaned Willow Avenue street using sweeper attachment Stockpiled received delivery of frac tank Installed vents on South side of TFS										
System Stop Time	continuous														
Total Hrs Monitored	24														
System Calibrations (Time/Status)	Ok 0734-0850														
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		
8/16/2012	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).						PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter						Field Representative: C. John		Date: 8/16/2012	
** Upwind minus downwind concentrations are a time specific comparison.						TVOC - total volatile organic compounds						Date: _____		8/16/2012	
FAM - Fixed Air Monitoring station location						NA - not applicable						Date: _____		8/16/2012	
ug/m ³ - micrograms per cubic meter						ND - no data available						Date: _____		8/16/2012	
ppmv - parts per million by volume												Date: _____		8/16/2012	
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: 8/17/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0647-0801					General Weather Conditions: Clear - ~ 78°F - -87°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Deconned load out dump trucks Load out soil from site via tarped dumptucks Transported clean backfill into TFS Relocated frac tanks Deconned dump trucks Received delivery of clean backfill Operated odor and dust suppressant systems Tarped dump trucks Cleaned Willow Avenue street using sweeper attachment Excavated in Temporary Fabric Structure (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
									Min**	Max**			
8/17/2012	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:

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- TVOC - total volatile organic compounds
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Field Representative: C. John
Date: 8/17/2012

