



455 Winding Brook Drive
Suite 201
Glastonbury, CT 06033

Ph: (860) 368-5300
Fax: (860) 368-5307

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)
July 28, 2012 through August 3, 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 July 28, 2012 and August 3, 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. There were fifteen-minute exceedances of the Total Volatile Organic Compounds (TVOC) at an upwind station that were attributed to offsite source. There were fifteen-minute exceedances of Particulate Matter (PM-10) [dust] caused by vehicular traffic. Additional water was sprayed and the PM-10 levels dropped below the action and alert levels. 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:

- Excavation in Temporary Fabric Structure (TFS)
- Backfilled in TFS
- Backfilled shallow excavation
- Backfilled Willow Avenue excavation
- Deconned dump trucks
- Deconned load out dump trucks
- Load out soil from site via tarped dump trucks
- Operated odor and dust suppressant systems
- Performed erosion control along Willow Avenue using “Sweepster”
- Received delivery of clean backfill
- Received delivery of roll off dumpster
- 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 1, 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

Weekly Community Air Monitoring Report
Clifton Former MGP Site Operable Unit 2 (OU-2)
July 28, 2012 through August 3, 2012
August 24, 2012
Page 3

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
7/28/2012	0.1	0.2	1.1	2.4	0.1	0.0	71	42	1	0	35	56
7/29/2012	0.0	0.0	0.1	0.2	0.1	0.0	41	16	0	0	0	16
7/30/2012	0.1	0.1	0.1	9.1	0.1	0.3	51	24	0	5	2	41
7/31/2012	0.1	0.2	0.3	2.1	0.7	1.1	29	16	0	2	6	29
8/1/2012	0.2	1.1	0.3	1.1	0.5	1.5	37	29	2	5	12	152
8/2/2012	0.1	0.6	0.5	3.4	0.4	0.3	102	33	30	21	51	56
8/3/2012	0.2	3.5	1.1	0.9	0.2	0.6	96	65	0	41	72	101
Average	0.1	0.8	0.5	2.8	0.3	0.6	61	32	5	11	25	64
Maximum	0.2	3.5	1.1	9.1	0.7	1.5	102	65	30	41	72	152

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

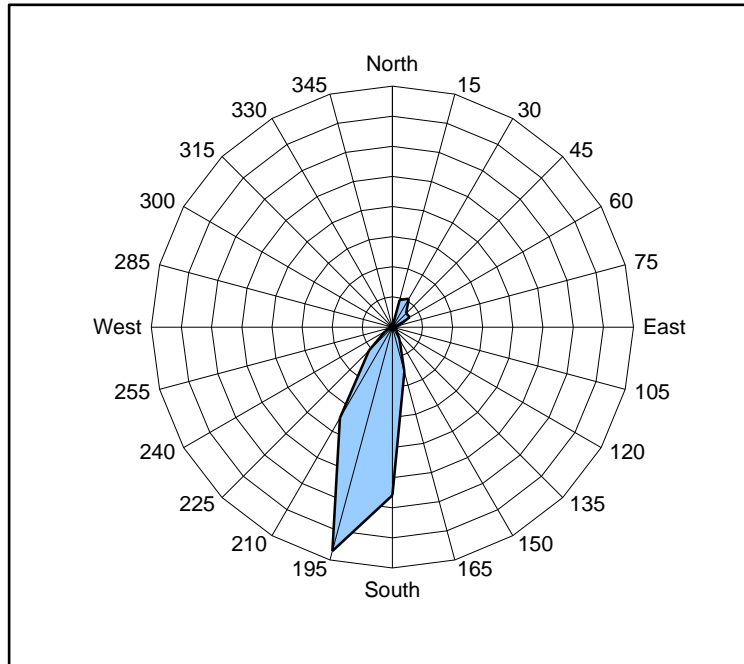


Figure 1. Wind rose for the period 07/28/12 through 08/03/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

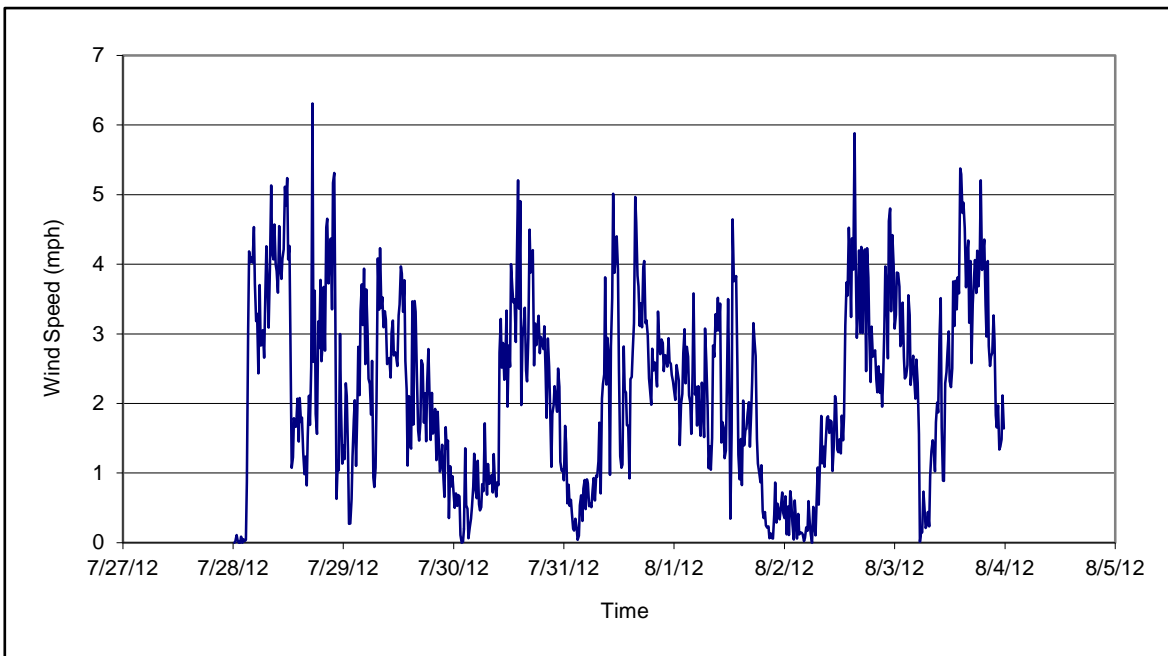


Figure 2. Wind speed for the period 07/28/12 through 08/03/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

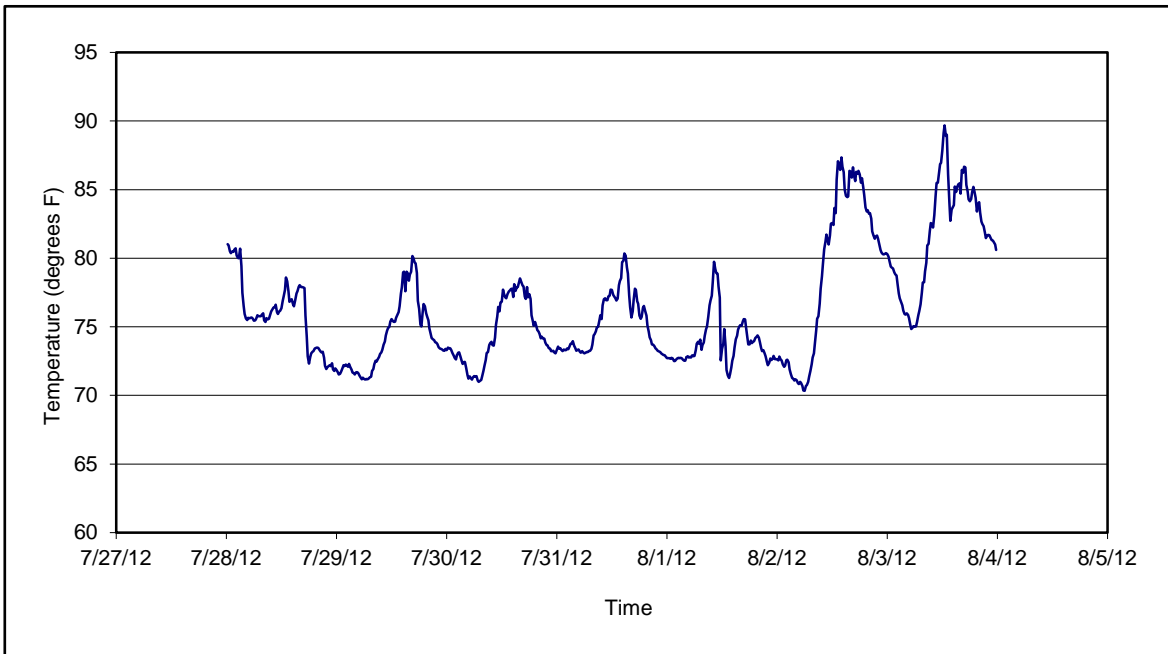


Figure 3. Temperature for the period 07/28/12 through 08/03/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

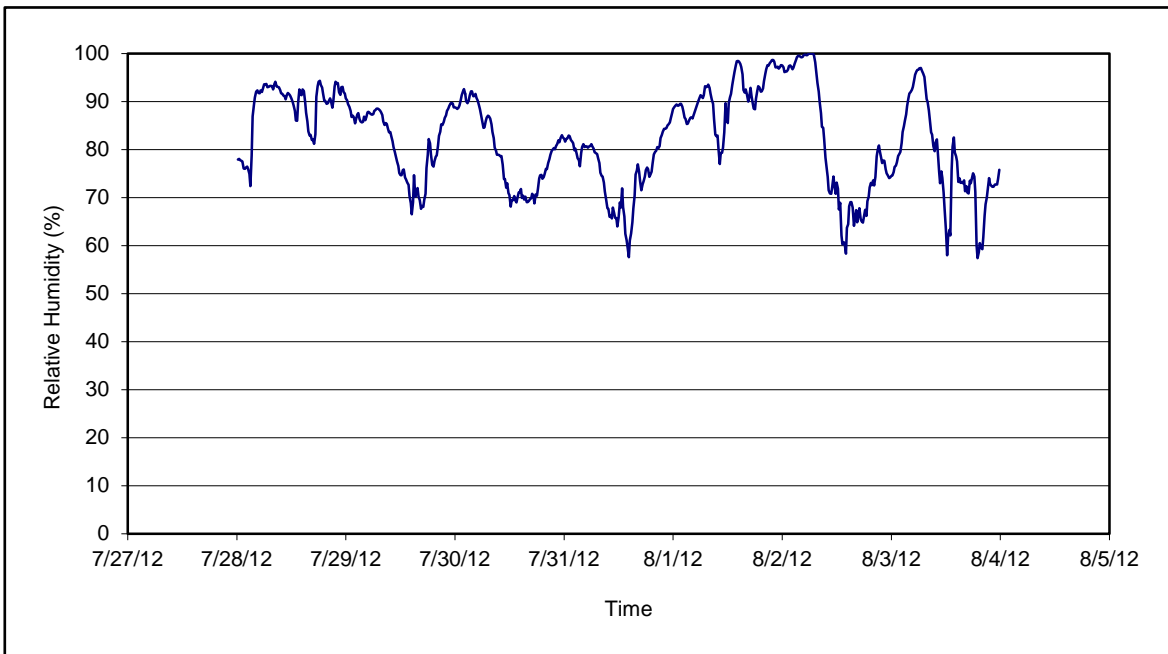


Figure 4. Relative humidity for the period 07/28/12 through 08/03/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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: 7/30/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0640-0813					General Weather Conditions: Clear- ~71°F- ~78°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Decconned load out dump trucks Load out soil from site via tarped dumptrucks Backfilled Willow Avenue excavation Backfilled in TFS Tarped dump trucks Decconned dump trucks Received delivery of clean backfill Operated odor and dust suppressant systems										
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		
7/30/2012	TVOC	FAM#4	16:12	16:29	28	SSE	UW	N/A	3.76	9.08	1	Excavation inside temporary fabric structure (TFS). FAM#4 was on the upwind portion of the site.	Notified construction manager and contractor		
Comments:															
FAM#4 was on the upwind portion of the site with wind from the south-southeast. TZOVOC conceantrations at downwind stations FAM#5 and FAM#6 remained below the alert limit of 3.75 ppm so a at Site Condition 1 remained.															
						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: R. Marshall	
** Upwind minus downwind concentrations are a time specific comparison.						TVOC - total volatile organic compounds								Date: 7/30/2012	
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															



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	7/31/2012	General Weather Conditions:			Clear- ~75°F- ~78°F										
System Start Time	continuous	General Description of Site Activities:			Health & Safety Meeting Continuous Air Monitoring Deconned load out dump trucks Load out soil from site via tarped dumptrucks Backfilled Willow Avenue excavation Backfilled in TFS										
System Stop Time	continuous	Delivery of rolloff dumpster Tarped dump trucks Deconned dump trucks Received delivery of clean backfill Operated odor and dust suppressant systems													
Total Hrs Monitored	24														
System Calibrations (Time/Status)	Ok 656-0832														
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		
7/31/2012	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				TVOC - total volatile organic compounds				Field Representative: R. Marshall			
** Upwind minus downwind concentrations are a time specific comparison.				NA - not applicable				ND - no data available				Date: 7/31/2012			
FAM - Fixed Air Monitoring station location															
ug/m ³ - micrograms per cubic meter															
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	8/1/2012	General Weather Conditions:			Clear - ~71°F - ~78°F							
System Start Time	continuous	General Description of Site Activities:			Health & Safety Meeting							
System Stop Time	continuous	Continuous Air Monitoring			Performed erosion control along Willow Avenue using Sweepster							
Total Hrs Monitored	24	Deconned load out dump trucks			Tarped dump trucks							
System Calibrations (Time/Status)	Ok 0640-0813	Load out soil from site via tarped dumptrucks			Deconned dump trucks							
		Backfilled shallow excavation			Received delivery of clean backfill							
		Backfilled in TFS			Operated odor and dust suppressant systems							

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**			
8/01/2012	PM-10	FAM#6	11:22	11:36	15	ESE	DW	FAM#4	101	152	3	Vehicle traffic	Notified construction manager Additional water was sprayed

Comments:

Alert Limit:	PM-10 (15-min) 100 ug/m ³	TVOC (15-min) 3.7 ppm	TVOC (1-min) -	Odor Intensity (15-min) -
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: 8/1/2012



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	8/2/2012	General Weather Conditions:			Clear- -73°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 dumptrucks Backfilled shallow excavation Backfilled in TFS Tarped dump trucks Deconned dump trucks Received delivery of clean backfill Operated odor and dust suppressant systems								
System Start Time	continuous	Clear- -73°F- -87°F											
System Stop Time	continuous												
Total Hrs Monitored	24												
System Calibrations (Time/Status)	Ok 0739-0902												
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
8/02/2012	No Exceedances												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). ** 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: 8/2/2012			



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: 8/3/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0710-0926					General Weather Conditions: Clear- -80°F- -92°F 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 Backfilled in TFS								
					Tarped dump trucks Decconned dump trucks Received delivery of clean backfill Operated odor and dust suppressant systems								
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
8/03/2012	PM-10	FAM#6	12:31	12:32	2	SE	DW	FAM#4	78	79	1	Vehicle traffic	Notified Construction manager Additional water was sprayed

Comments:

PM-10 (15-min) **TVOC (15-min)** **TVOC (1-min)** **Odor Intensity (15-min)**
 Alert Limit: 100 ug/m³ 3.7 ppm - -
 Action Limit: 150 ug/m³ 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: 8/3/2012

