



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: July 17, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
July 7, 2012 through July 13, 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 7 and July 13, 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 some elevated levels of dust measured that were attributed to vehicular traffic moving along the terrain. 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 inside Temporary Fabric Structure (TFS)
- Backfilled in TFS
- Deconned dump trucks
- Loaded out soil from site via tarped dumptrucks
- Operated hoe-ram attachment inside TFS
- Operated dust suppressant sprinkler system
- Received delivery of equipment in OU-2
- Transported foam barrels into TFS
- Pumped out shallow excavation along Willow Avenue

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 July 11, 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 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
7/7/2012	0.1	0.1	0.1	ND	ND	0.1	87	32	4	14	1	69
7/8/2012	0.1	0.0	0.0	ND	ND	0.0	63	29	8	8	3	41
7/9/2012	0.0	0.1	0.6	0.1	0.1	0.3	29	23	3	70	47	104
7/10/2012	0.1	0.1	0.6	0.2	0.2	0.2	33	18	18	7	48	125
7/11/2012	0.0	0.2	0.2	0.5	0.1	0.1	42	23	7	5	0	111
7/12/2012	0.1	0.1	0.1	0.3	0.2	0.2	43	19	3	4	2	114
7/13/2012	0.1	0.2	0.1	0.6	0.1	0.2	71	29	3	3	0	60
Average	0.1	0.1	0.2	0.3	0.1	0.2	53	25	7	16	14	89
Maximum	0.1	0.2	0.6	0.6	0.2	0.3	87	32	18	70	48	125

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

*Due to equipment malfunction there is no recordable TVOC data for FAM#3 from 17:49 on 7/8/2012 - 8:25 on 7/09/2012.

*Due to equipment malfunction there is no recordable TVOC data for FAM#4 from 00:01 on 7/7/2012 - 8:46 on 7/09/2012.

*Due to equipment malfunction there is no recordable TVOC data for FAM#5 from 00:01 on 7/7/2012 - 14:10 on 7/09/2012.

*The listed measurements do not reflect the above mentioned time periods.

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

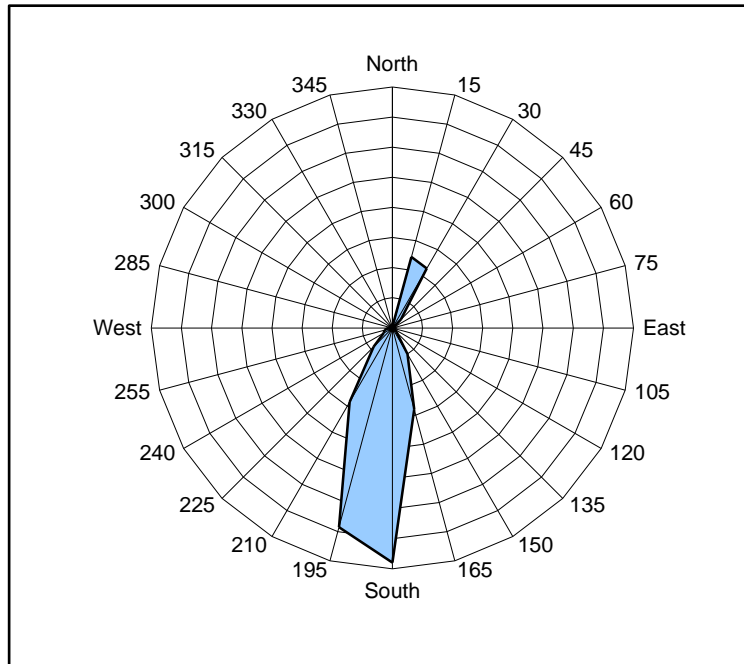


Figure 1. Wind rose for the period 07/07/12 through 07/13/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

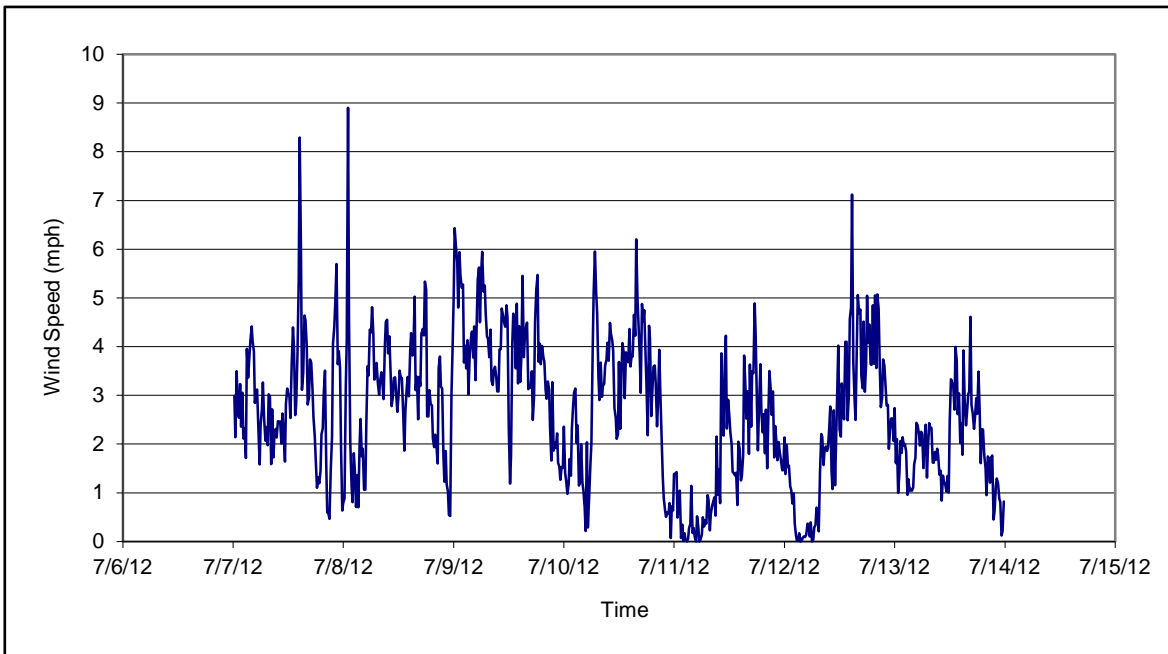


Figure 2. Wind speed for the period 07/07/12 through 07/13/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

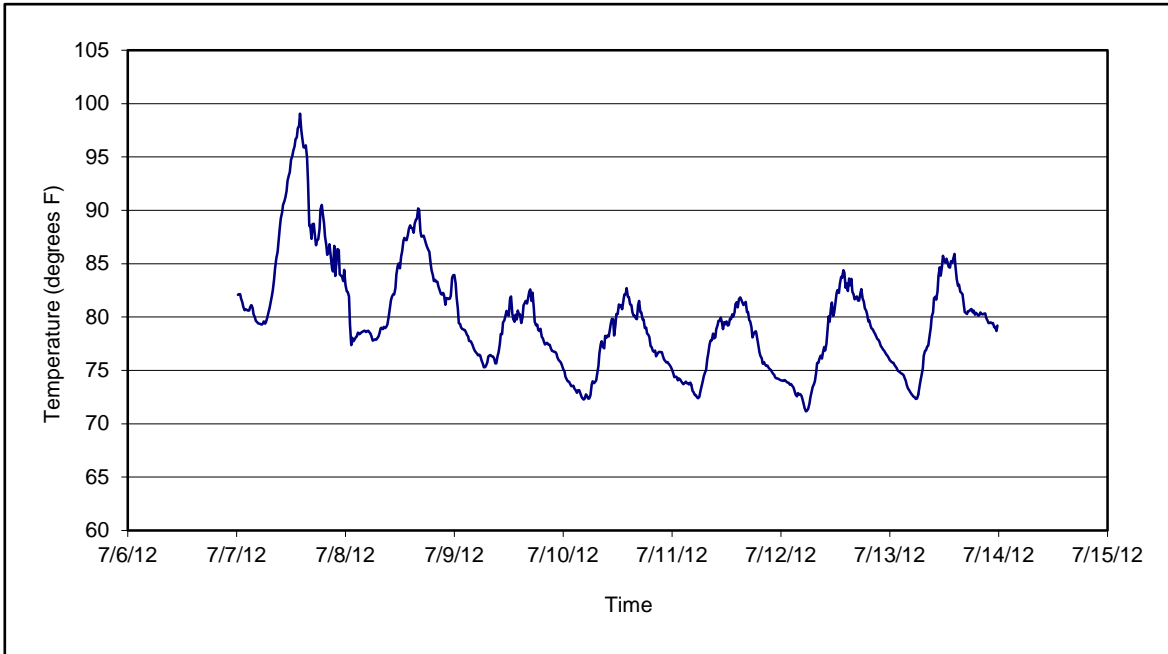


Figure 3. Temperature for the period 07/07/12 through 07/13/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

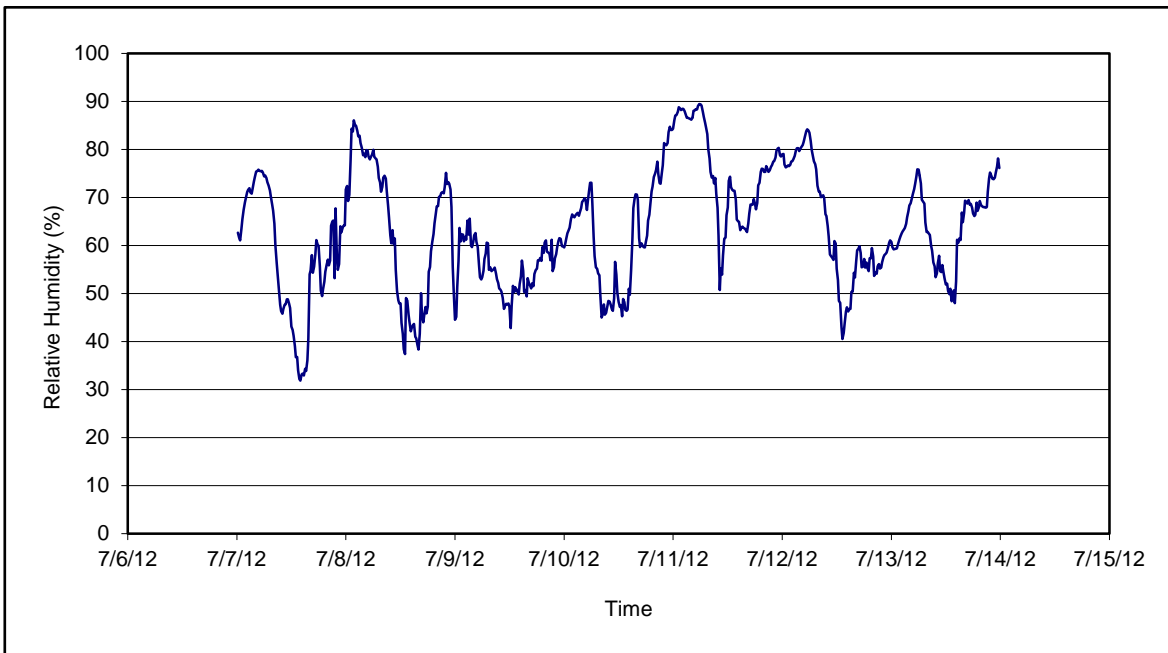


Figure 4. Relative humidity for the period 07/07/12 through 07/13/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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: 7/9/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0825-1035	General Weather Conditions: Clear ~70°F - ~80°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Operated ho-ram attachment inside TFS Excavated inside TFS Decconned load out dump trucks Load out soil from site via tarped dumptrucks Received delivery of equipment in OU-2 Operated odor supressant along Willow Avenue

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**			
7/9/2012	PM-10	FAM#6	7:52	7:52	1	NNW	CW/UW	N/A	104	104	1	Vehicle traffic	Notified construction manager additional water was sprayed
7/9/2012	PM-10	FAM#6	8:26	8:33	8	NE	DW	FAM#2	89	92	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/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: C. John/R. Marshall
 Date: 7/9/2012



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: 7/10/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0637-0835					General Weather Conditions: Clear ~74°F- ~81°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Operated ho-ram attachment inside TFS Excavated inside TFS Decconned load out dump trucks Load out soil from site via tarped dumptrucks Received delivery of equipment in OU-2 Transported foam barrels into TFS Operated odor supressant along Willow Avenue									
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	
7/10/2012	PM-10	FAM#6	14:31	14:36	6	SSW	UW	N/A	104	107	1	Vehicle traffic	Notified construction manager additional water was sprayed	
7/10/2012	PM-10	FAM#6	14:53	15:01	9	ESE	DW	FAM#2	104	125	2	Vehicle traffic	Notified construction manager additional water was sprayed	
7/10/2012	PM-10	FAM#6	15:04	15:06	3	SSE	DW	FAM#2	100	101	2	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/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								
** 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 ³ - micrograms per cubic meter						ND - no data available						Field Representative: R. Marshall		
ppmv - parts per million by volume												Date: 7/10/2012		



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	7/11/2012	General Weather Conditions:	
System Start Time	continuous	Clear ~72°F- ~83°F	
System Stop Time	continuous		
Total Hrs Monitored	24	General Description of Site Activities:	
System Calibrations (Time/Status)	Ok 0635-0718	Health & Safety Meeting Continuous Air Monitoring Operated ho-ram attachment inside TFS Excavated inside TFS Decconned load out dump trucks Load out soil from site via tarped dumptrucks	
		Pumped out trench along Willow Ave Backfilled in TFS Received delivery of equipment in OU-2 Transported foam barrels into TFS Operated odor supressant along Willow Avenue	

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**			
7/11/2012	PM-10	FAM#6	10:47	10:54	8	SSE	DW	FAM#4	101	11	2	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/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: 7/11/2012



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: 7/12/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0618-0756					General Weather Conditions: Clear ~72°F- ~83°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Operated ho-ram attachment inside TFS Excavated inside TFS Decconned load out dump trucks Load out soil from site via tarped dumptrucks Backfilled in TFS Received delivery of equipment in OU-2 Transported foam barrels into TFS Operated odor supressant along Willow Avenue								
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
7/12/2012	PM-10	FAM#6	11:15	11:26	12	SSE	DW	FAM#4	101	107	2	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/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						
** 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 ³ - micrograms per cubic meter							ND - no data available						
ppmv - parts per million by volume							Field Representative: R. Marshall						
							Date: 7/11/2012						
												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		7/13/2012			General Weather Conditions: Clear ~73°F- ~85°F								
System Start Time		continuous			General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Operated ho-ram attachment inside TFS Excavated inside TFS Decconned load out dump trucks Load out soil from site via tarped dumptrucks								
System Stop Time		continuous											
Total Hrs Monitored		24											
System Calibrations (Time/Status)		Ok 0656-0920			Pumped out trench along Willow Ave Backfilled in TFS Received delivery of equipment in OU-2 Transported foam barrels into TFS Operated odor supressant along Willow Avenue								
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

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: 7/13/2012

