



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, 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 (GEI Consultants, Inc.)

Date: May 7, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
April 21, 2012 through April 27, 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 April 21 and April 27, 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. Fifteen-minute averages of TVOC, PM-10, and odor intensity data remained at a Site Condition 1.

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:

- Installing security screening onto rolling gate at Bay Street entrance
- Utility clearance and utility surveying on Willow Avenue to support the wastewater treatment plant
- Jack hammering on Willow Avenue
- Pre-trenching in OU-2 along Willow Avenue and Bay Street
- Pre-trenching inside TFS in OU-2
- Cutting through street asphalt for surveying on Willow Avenue
- Accepting deliveries of bentonite and pipes in OU-2
- Backfilling trenches in OU-2
- Transporting equipment in to the Temporary Fabric Structure (TFS)
- Transporting utility work excavated soil to a stockpile 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). FAM#3 was located in the northeast corner of the 40 Willow Avenue Property during the week. 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. Diesel generators were used to power the four AirLogics Classic stations and will continue 24 hours a day, 7 days per week until 120 volt electrical connections are established onsite.

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 April 26, 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.

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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
4/21/2012	0.1	0.1	0.1	0.2	0.1	0.0	40	14	2	16	6	33
4/22/2012	0.0	0.0	0.2	0.2	0.0	0.0	16	12	2	23	10	11
4/23/2012	0.1	0.1	0.1	0.8	0.0	0.1	26	13	2	22	1	20
4/24/2012	0.1	0.1	0.1	3.2	0.0	0.0	43	27	2	56	7	72
4/25/2012	0.4	0.5	0.1	0.4	0.3	0.2	36	29	2	28	2	68
4/26/2012	0.1	0.1	0.1	0.3	0.1	0.1	53	22	4	10	6	52
4/27/2012	0.3	0.0	0.1	0.3	0.0	0.1	179	37	12	37	21	142
Average	0.2	0.1	0.1	0.7	0.1	0.1	56	22	4	27	8	57
Maximum	0.4	0.5	0.2	3.2	0.3	0.2	179	37	12	56	21	142

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 a radio communications failure, TVOC and PM-10 data are not available from 16:01 on 4/26/12 - 08:38 on 4/27/12. 15-minute averages shown represent data outside of 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

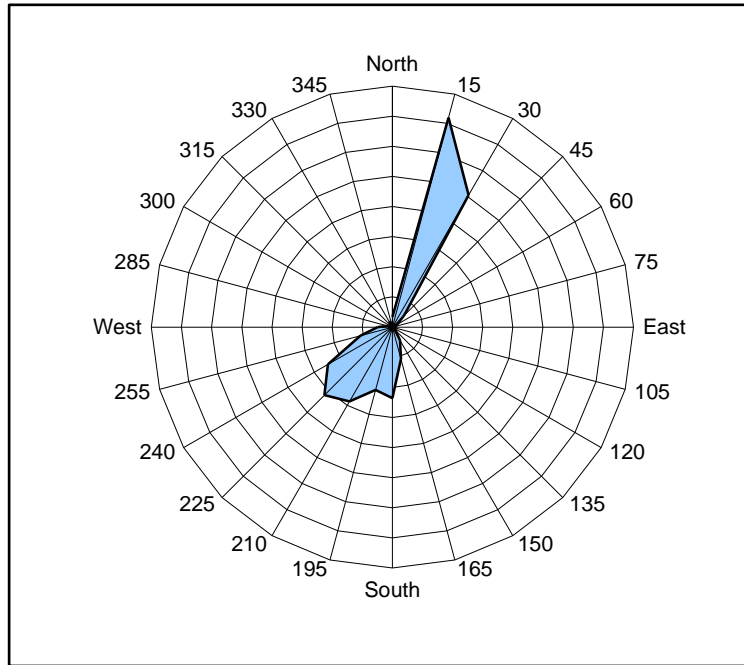


Figure 1. Wind rose for the period 04/21/12 through 04/27/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

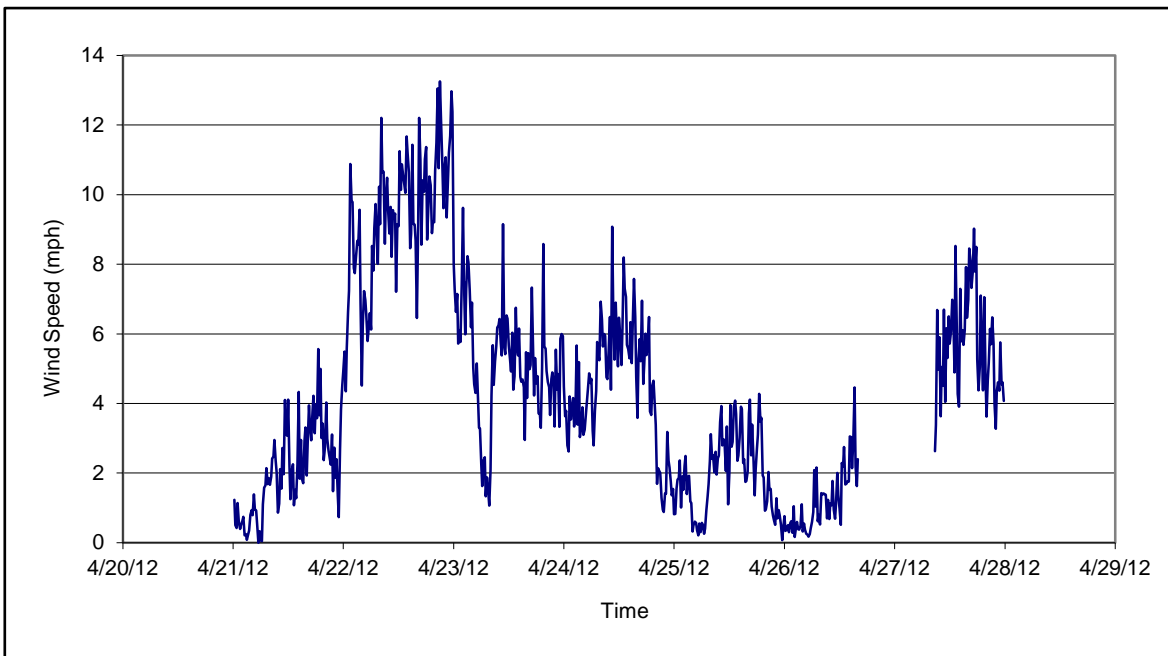


Figure 2. Wind speed for the period 04/21/12 through 04/27/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

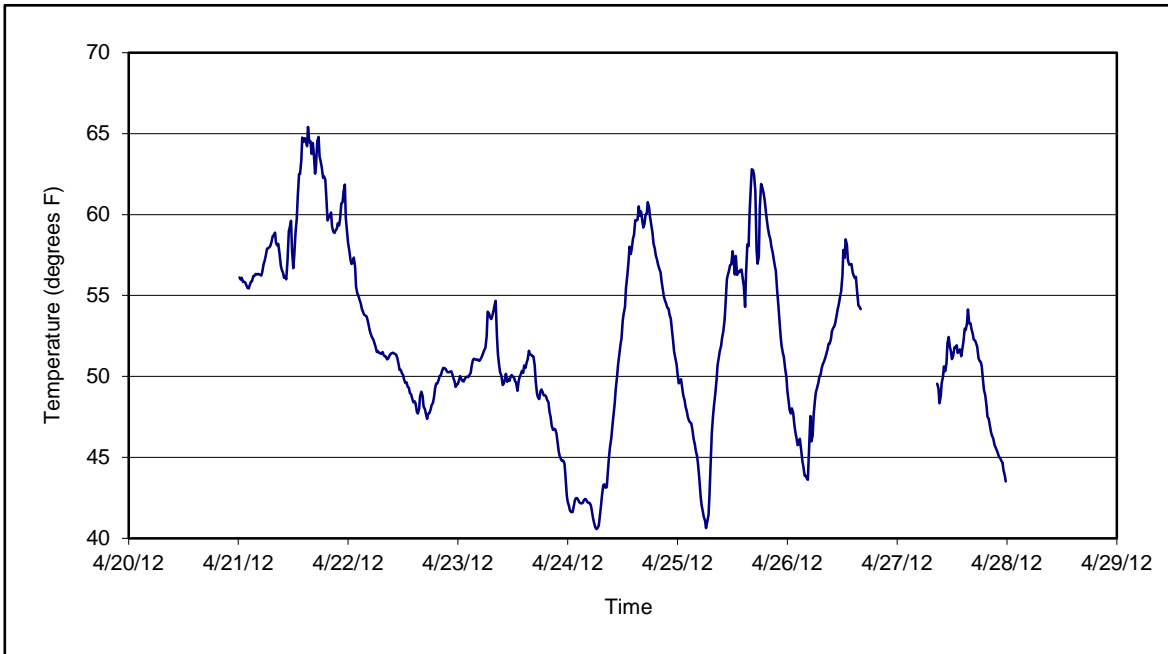


Figure 3. Temperature for the period 04/21/12 through 04/27/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

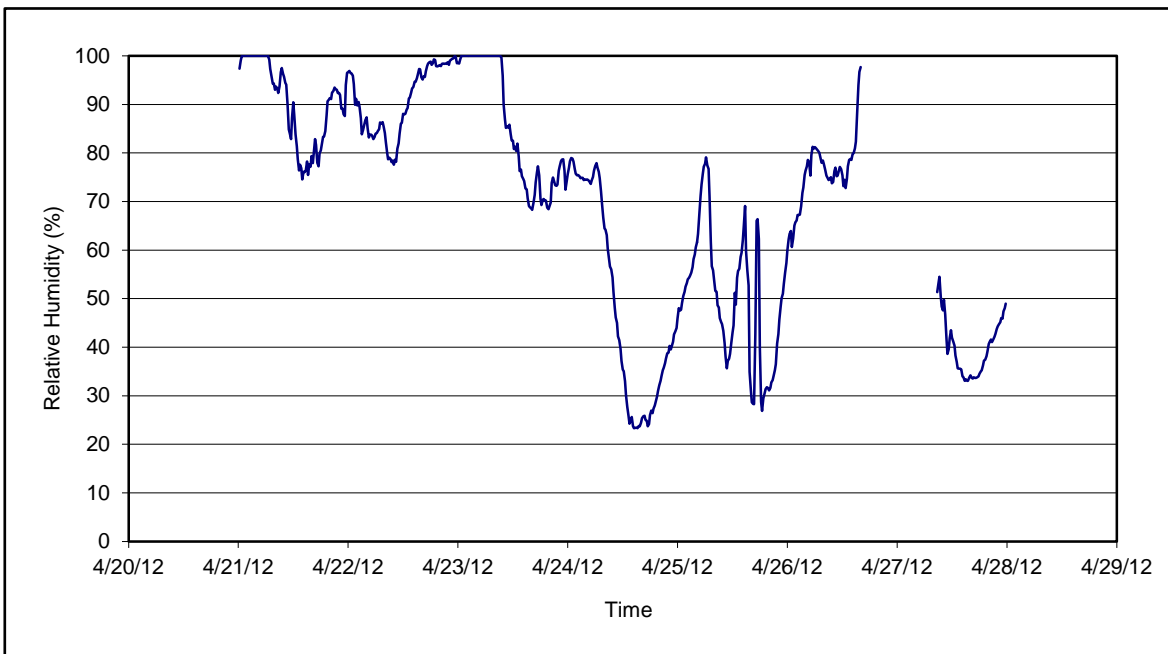


Figure 4. Relative humidity for the period 04/21/12 through 04/27/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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		4/23/2012			General Weather Conditions: Sunny-cloudy w/rain- ~49°F- ~52°F								
System Start Time		continuous			General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Delivery of pipes in OU-2 Pre-trenching in OU-2 along Willow Ave Pre-trenching in OU-2 between the one-story building and perimeter fence along Bay Street Backfilling trenches in OU-2								
System Stop Time		continuous											
Total Hrs Monitored		24											
System Calibrations (Time/Status)		Ok 0605-0721											
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
4/23/2012	None												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							
** 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 ³ - micrograms per cubic meter						ND - no data available						Date: 4/23/2012	
ppmv - parts per million by volume												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: 4/24/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0610-0719					General Weather Conditions: Sunny- ~41°F- ~61°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Delivery of Betonite in OU-2 Utility survey on Willow Avenue Utility clearance on Willow Avenue Jackhammering on Willow Ave Delivery of pipes in OU-2 Pre-trenching in OU-2 along Willow Avenue Pre-trenching in OU-2 between the one-story building and the perimeter fence along Bay Street Backfilling trenches in OU-2								
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
4/24/2012	None												No exceedances
Comments:													
Due to a generator malfunction and power loss at FAM#2, no TVOC data were available at FAM#2 from 15:36 on 4/24/2012 through 06:50 on 4/25/2012.													
					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						Field Representative: R. Marshall	
ug/m ³ - micrograms per cubic meter						ND - no data available						Date: 4/24/2012	
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	4/25/2012	General Weather Conditions: Sunny- ~41°F- ~61°F			General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Delivery of Betonite in OU-2 Utility survey on Willow Ave Utility clearance on Willow Ave Jackhammered on Willow Ave Delivery of pipes in OU-2 Pre-trenching in OU-2 along Willow Ave Pre-trenching in OU-2 between 1-story building and perimeter fence along Bay St. Backfilled trenches in OU-2							
System Start Time	continuous											
System Stop Time	continuous											
Total Hrs Monitored	24											
System Calibrations (Time/Status)	Ok 0610-0719											

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**			
4/25/2012	None												No exceedances

Comments:
 No TVOC data @ FAM#2 from 15:36 on 4/24/2012 - 06:50 on 4/25/2012 due to generator malfunction.

	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:

<p>* Wind directions are presented by octant (i.e. N, NE, E, SE, S, SW, W, NW).</p> <p>** Upwind minus downwind concentrations are a time specific comparison.</p> <p>FAM - Fixed Air Monitoring station location</p> <p>ug/m³ - micrograms per cubic meter</p> <p>ppmv - parts per million by volume</p>	<p>PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter</p> <p>TVOC - total volatile organic compounds</p> <p>NA - not applicable</p> <p>ND - no data available</p> <p style="text-align: right;">Field Representative: R. Marshall</p> <p style="text-align: right;">Date: 4/25/2012</p>
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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	4/26/2012	General Weather Conditions: Sunny- ~49°F- ~54°F			General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Utility work on Willow Avenue to support WWTP Transporting Utility work excavated soil to stockpile OU-2 Pre trenching inside TFS Pre-trenching in OU-2 along Willow Avenue Pre-trenching in OU-2 between the one-story building and the perimeter fence along Bay Street Backfilling trenches in OU-2							
System Start Time	continuous											
System Stop Time	continuous											
Total Hrs Monitored	24											
System Calibrations (Time/Status)	Ok 0609-0846											

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**			
4/26/2012	None												No exceedances

Comments:
Due to a communications failure TVOC and PM-10 data are not available from 16:01 - 00:00.

	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: 4/26/2012



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: 4/27/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0624-0802						General Weather Conditions: Sunny- ~54°F- ~54°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Utility work on Willow Avenue to support WWTP Transporting equipment in to the temporary fabric structure Pre trenching inside TFS Pre-trenching in OU-2 along Willow Avenue Pre-trenching in OU-2 between the one-story building and the perimeter fence along Bay Street Backfilling trenches in OU-2 Installed security screening onto rolling gate at Bay St. 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		Site Condition	Site Activity During the Period (if applicable)	Actions Taken
4/27/12	PM-10	FAM#1	22:33	22:47	15	N	UW/CW	N/A	102	179	1*	No ground intrusive activity. After Hours	None
4/27/12	PM-10	FAM#6	22:36	22:47	12	N	CW/UW	N/A	103	142	1*	No ground intrusive activity. After Hours	None
Comments:													
* No ground intrusive activity was performed during this time period. PM-10 remained at Site Condition 1. Due to a communications failure TVOC and PM-10 data are not available from 00:01 - 08:38.													
		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						Field Representative: R. Marshall	
ug/m ³ - micrograms per cubic meter						ND - no data available						Date: 4/27/2012	
ppmv - parts per million by volume													

