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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: July 25, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
July 14, 2012 through July 20, 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 14, 2012 and July 20, 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
- Loaded out soil off site via tarped dump trucks
- Deconned load out dump trucks
- Received delivery of roll off dumpster
- Excavated South of TFS
- Operated hoe-ram attachment inside TFS
- Operated odor suppressant along East side of TFS and along Willow Avenue
- Operated rock crusher
- Transported clean soil into TFS
- Operated hoe-ram to break up concrete slab

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 18, 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.

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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
7/14/2012	0.0	0.1	0.2	0.1	0.1	0.0	52	27	3	3	1	40
7/15/2012	0.1	0.0	ND	0.0	ND	0.0	47	31	4	4	49	38
7/16/2012	0.1	0.1	0.1*	0.1	0.9*	0.0	72	62	9	6	0	58
7/17/2012	0.7	0.4	0.2	0.4	0.2	0.2	73	36	9	23	70	107
7/18/2012	0.1	0.1	0.1	0.5	0.1	0.9	109	64	8	22	35	113
7/19/2012	0.1	0.0	0.3	0.2	0.1	0.2	57	44	4	28	34	63
7/20/2012	0.0	0.0	0.5	0.1	0.1	0.0	52	23	3	24	13	19
Average	0.1	0.1	0.2	0.2	0.1	0.2	66	41	6	16	29	63
Maximum	0.7	0.4	0.5	0.5	0.2	0.9	109	64	9	28	70	113

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

ND - no data available

*Due to equipment malfunction there is no recordable TVOC data for FAM#3 from 00:10 on 7/15/2012 - 7:41 on 7/16/2012.

*Due to equipment malfunction there is no recordable TVOC data for FAM#5 from 10:22 on 7/15/2012 - 7:15 on 7/16/2012.

*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

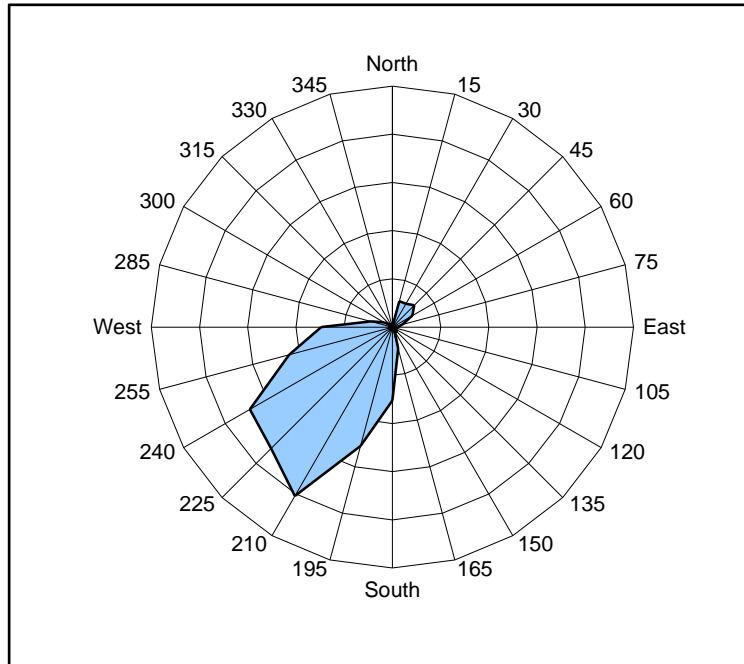


Figure 1. Wind rose for the period 07/14/12 through 07/20/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

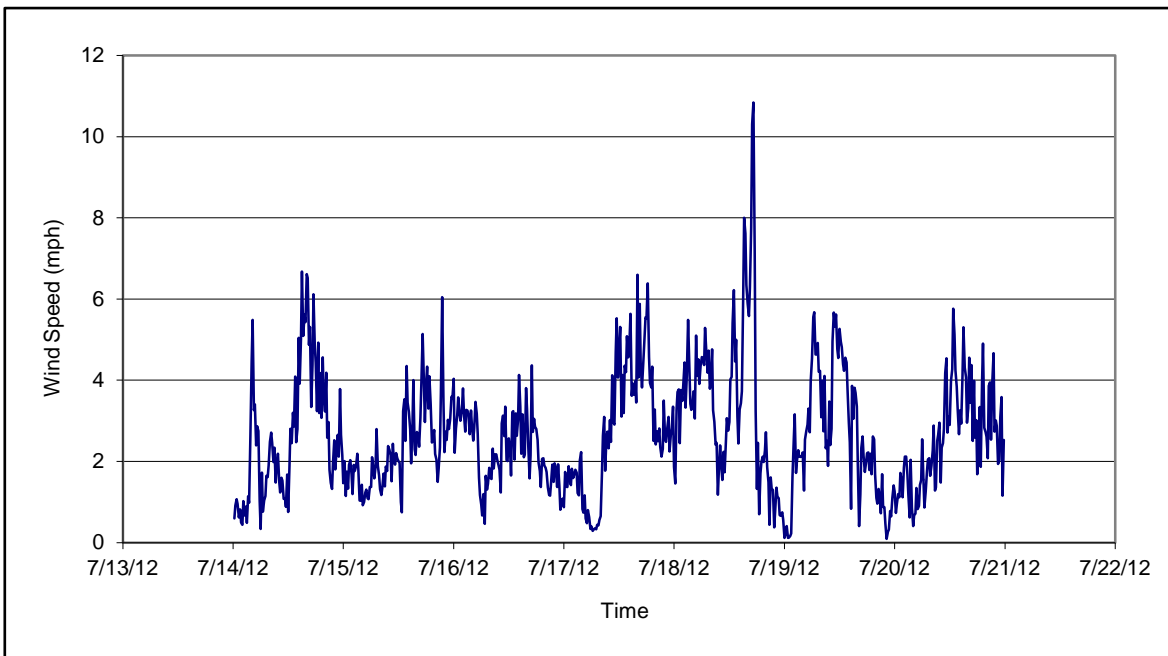


Figure 2. Wind speed for the period 07/14/12 through 07/20/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

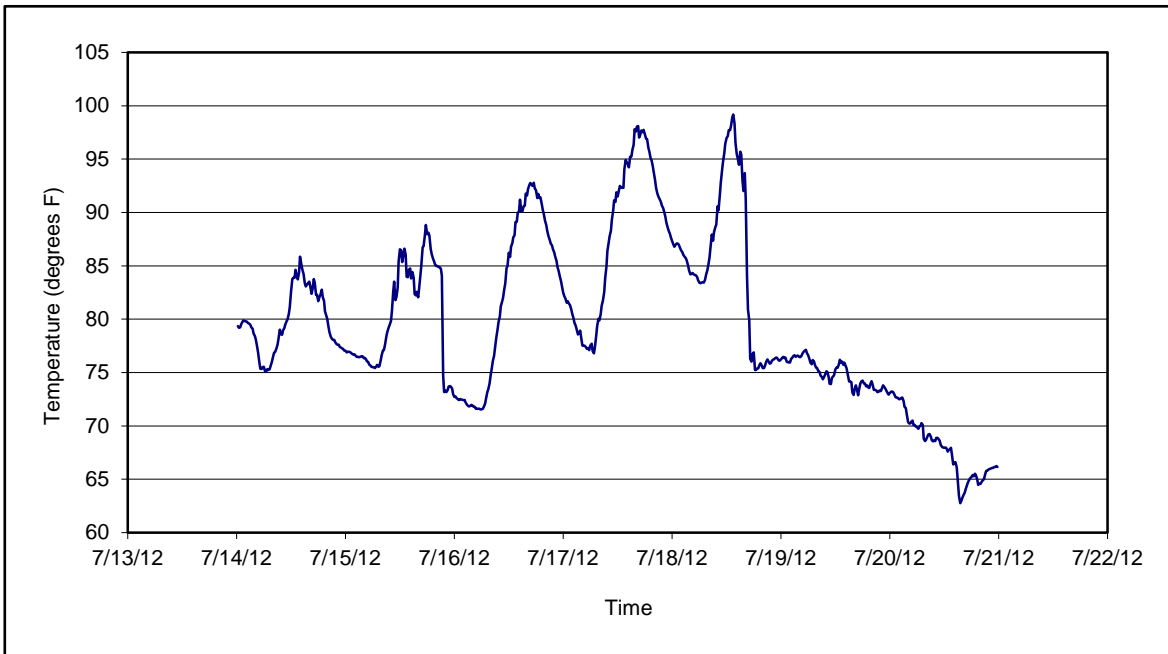


Figure 3. Temperature for the period 07/14/12 through 07/20/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

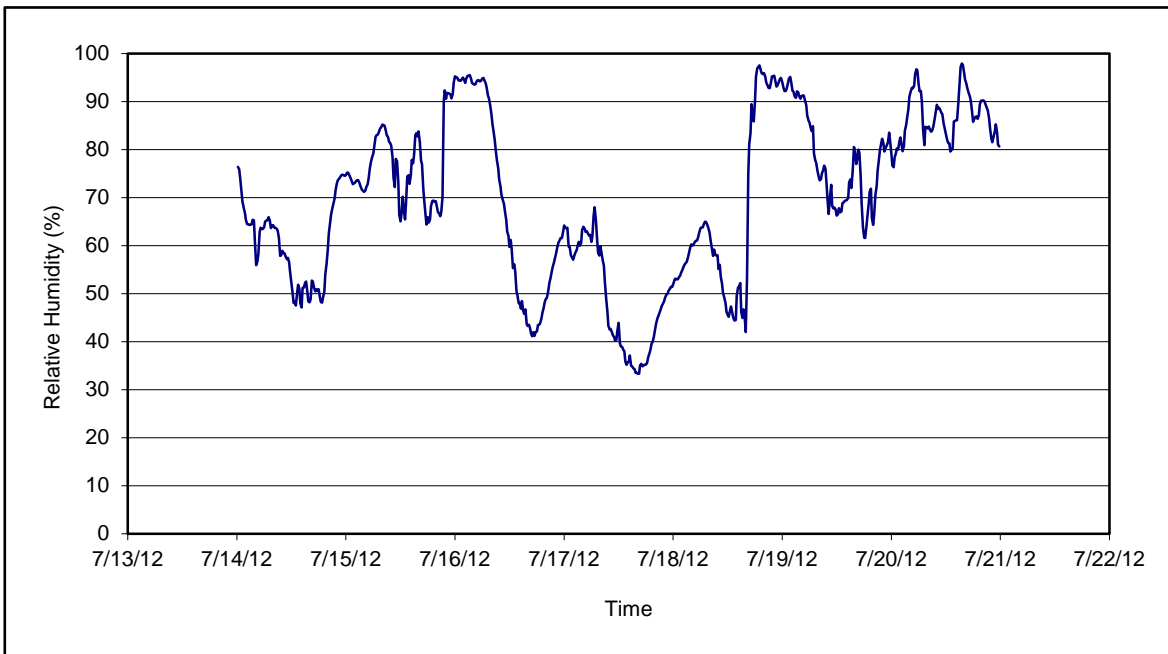


Figure 4. Relative humidity for the period 07/14/12 through 07/20/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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	7/16/2012	General Weather Conditions:			Clear ~78°F- ~93°F							
System Start Time	continuous	General Description of Site Activities:			Health & Safety Meeting							
System Stop Time	continuous	Continuous Air Monitoring			Operated hoe-ram attachment inside TFS							
Total Hrs Monitored	24	Excavated inside TFS			Transported clean soil into TFS				Backfilled in TFS			
System Calibrations (Time/Status)	Ok 0712-0927	Decconned load out dump trucks			Operated rock crusher				Backfilled in TFS			
					Load out soil from site via tarped dumptrucks							

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**			
7/16/2012													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:

<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>Field Representative: R. Marshall</p> <p>Date: 7/16/2012</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 7/17/2012 System Start Time continuous System Stop Time continuous Total Hrs Monitored 24 System Calibrations (Time/Status) Ok 0645-0856					General Weather Conditions: Clear ~77°F - ~97°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 <div style="float: right; width: 50%;"> Delivery of rolloff dumpster Backfilled in TFS Operated rock crusher Backfilled in TFS Operated odor supressant along Willow Avenue </div>									
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	
7/17/2012	PM-10	FAM#6	13:40	13:53	14	WSW	CW/UW	N/A	101	107	1	Vehicle Traffic Additional water was sprayed	Notified construction manager	
Comments:														
Alert Limit:						PM-10 (15-min)		TVOC (15-min)		TVOC (1-min)		Odor Intensity (15-min)		
Action 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:		7/17/2012				
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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	7/18/2012	General Weather Conditions: Clear ~82°F- ~101°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Operated hoe-ram attachment inside TFS Excavated inside TFS Decconned load out dump trucks Load out soil from site via tarped dumptrucks			Backfilled in TFS Operated rock crusher Backfilled in TFS Operated odor supressant along Willow Avenue							
System Start Time	continuous											
System Stop Time	continuous											
Total Hrs Monitored	24											
System Calibrations (Time/Status)	Ok 0648-0841											

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**			
7/18/2012	PM-10	FAM#1	11:36	11:45	30	SW	CW/UW	N/A	100	103	1	Construction vehicles moving along the terrain	Notified construction manager Additional water was sprayed
7/18/2012	PM-10	FAM#1	12:12	12:14	3	SSW	CW	N/A	100	101	1	Construction vehicles moving along the terrain	Notified construction manager Additional water was sprayed
7/18/2012	PM-10	FAM#1	12:21	12:47	27	SSE	DW	FAM#4	83	87	1	Construction vehicles moving along the terrain	Notified construction manager Additional water was sprayed
7/18/2012	PM-10	FAM#1	12:50	12:50	1	SSE	DW	FAM#4	83	83	1	Construction vehicles moving along the terrain	Notified construction manager Additional water was sprayed
7/18/2012	PM-10	FAM#1	13:21	13:22	2	S	DW/CW	FAM#4	84	84	1	Construction vehicles moving along the terrain	Notified construction manager Additional water was sprayed
7/18/2012	PM-10	FAM#1	14:08	14:11	2	SSE	DW/CW	FAM#4	84	86	1	Construction vehicles moving along the terrain	Notified construction manager Additional water was sprayed
7/18/2012	PM-10	FAM#1	14:29	14:32	4	SSE	DW	FAM#4	100	104	2	Construction vehicles moving along the terrain	Notified construction manager Additional water was sprayed
7/18/2012	PM-10	FAM#6	13:11	13:19	9	SSW	CW/UW	N/A	100	113	1	Construction vehicles moving along the terrain	Notified construction manager Additional water was sprayed
7/18/2012	PM-10	FAM#6	13:22	13:22	1	S	CW	N/A	100	100	1	Construction vehicles moving along the terrain	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: 7/18/2012



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 7/19/2012 System Start Time continuous System Stop Time continuous Total Hrs Monitored 24 System Calibrations (Time/Status) Ok 0720-0915					General Weather Conditions: Overcaste ~74°F- ~76°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Excavated inside TFS Deconned load out dump trucks Load out soil from site via tarped dumptrucks Backfilled in TFS Operated rock crusher Excavated South of 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 Min** Max**	Site Condition	Site Activity During the Period (if applicable)	Actions Taken
7/19/2012	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).						PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter						Field Representative: C. John
** Upwind minus downwind concentrations are a time specific comparison.						TVOC - total volatile organic compounds						Date: 7/19/2012
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	7/20/2012	General Weather Conditions:			Clear ~78°F- ~93°F							
System Start Time	continuous	General Description of Site Activities:			Health & Safety Meeting Continuous Air Monitoring Operated odor suppressant along East side of TFS Transported clean soil into TFS Backfilled in TFS Operated rock crusher Backfilled in TFS							
System Stop Time	continuous											
Total Hrs Monitored	24											
System Calibrations (Time/Status)	Ok 0745-0901											

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**			
7/20/2012	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)

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 TVOC - total volatile organic compounds
 NA - not applicable
 ND - no data available

Field Representative: R. Marshall
 Date: 7/20/2012

