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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: August 29, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
August 18, 2012 through August 24, 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 18, 2012 and August 24, 2012.

There were no fifteen-minute exceedances of the Total Volatile Organic Compounds (TVOC) or odor action levels associated with ground intrusive site activities during this reporting period. There were fifteen-minute exceedances for Particulate Matter (PM-10) [dust]. The elevated levels were caused by the hoe-ram attachment operating on the foundation of the former one-story building. The construction manager was notified, water was sprayed and the 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:

- Excavated in Temporary Fabric Structure (TFS)
- Backfilled in TFS
- Cleaned frac tank
- Cleaned Willow Avenue street using sweeper attachment
- Deconned dump trucks
- Deconned load out dump trucks
- Excavated in Temporary Fabric Structure (TFS)
- Load out concrete waste from via dump trucks
- Load out soil from site via tarped dumptrucks
- Loaded concrete waste onto dump trucks
- Operated bucket excavator and claw-ram on foundation of former one-story building
- Operated hoe-ram on foundation of former one-story building
- Operated odor and dust suppressant systems
- Received delivery of clean backfill
- Received delivery of pipes
- Tarped dump trucks
- Transported clean backfill into TFS
- Welding rebar from foundation of one-story building

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 24, 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.

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Due to equipment malfunctioning dust monitor at FAM#2 on August 23 from 9:12 to 12:54, no data are not available for that time period. No visible dust was observed during this time period and concentrations at downwind stations remained below the action level. A Site Condition 1 remained.

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
8/18/2012	0.1	0.1	0.0	0.0	0.1	0.1	35	16	3	2	12	0
8/19/2012	0.1	0.1	0.1	0.1	0.1*	0.1	29	13	3	0	2	0
8/20/2012	0.2	0.4	0.5	0.5	0.3*	0.1	45	328	14	9	28	12
8/21/2012	0.1	0.2	0.1	0.3	0.2	0.1	42	31	9	3	18	29
8/22/2012	0.1	0.3	0.4	0.8	0.3	0.4	49	95	42	20	48	38
8/23/2012	0.3	0.4	0.5	0.4	0.5	0.2	66	49**	3	14	55	0
8/24/2012	0.1	0.1	0.1	0.1	0.1	0.1	68	36	24	32	55	12
Average	0.1	0.2	0.3	0.3	0.2	0.1	48	87	14	11	31	13
Maximum	0.3	0.4	0.5	0.8	0.5	0.4	68	328	42	32	55	38

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 are no recordable data for TVOC's at FAM#5 from 10:09 on 8/19/12 - 07:41 on 8/20/12.

** Due to equipment malfunction there are no recordable data for PM-10 at FAM#2 from 9:12 to 12:54 on 8/23/12.

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

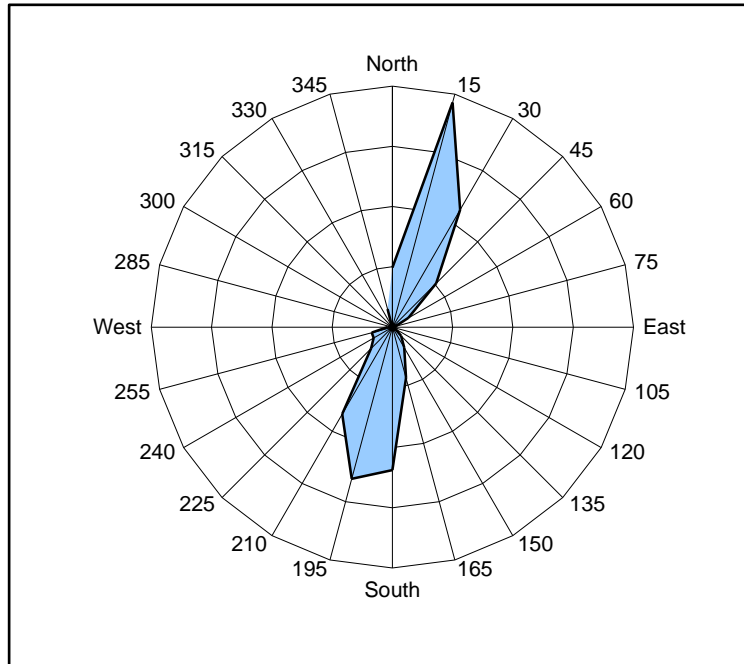


Figure 1. Wind rose for the period 08/18/12 through 08/24/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

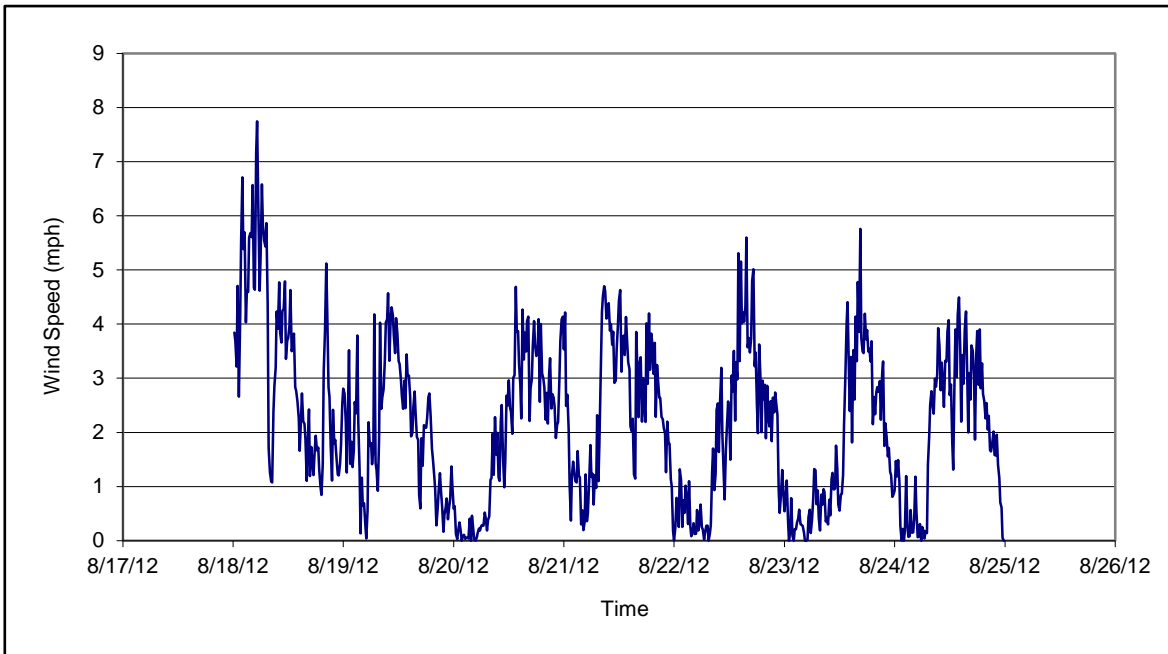


Figure 2. Wind speed for the period 08/18/12 through 08/24/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

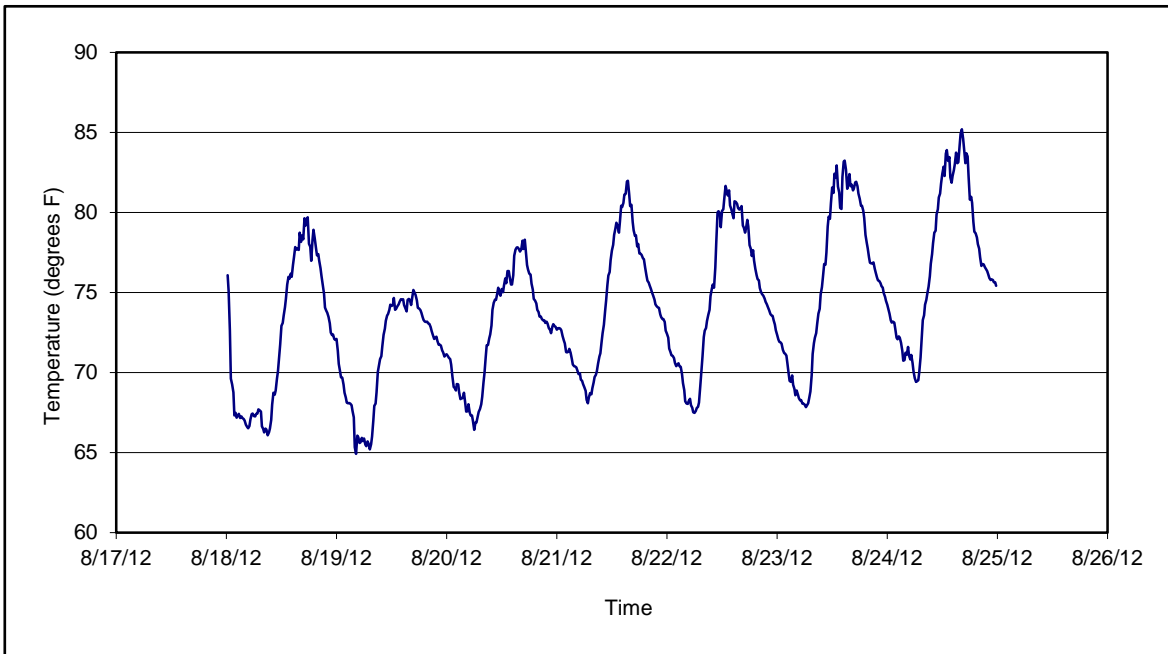


Figure 3. Temperature for the period 08/18/12 through 08/24/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

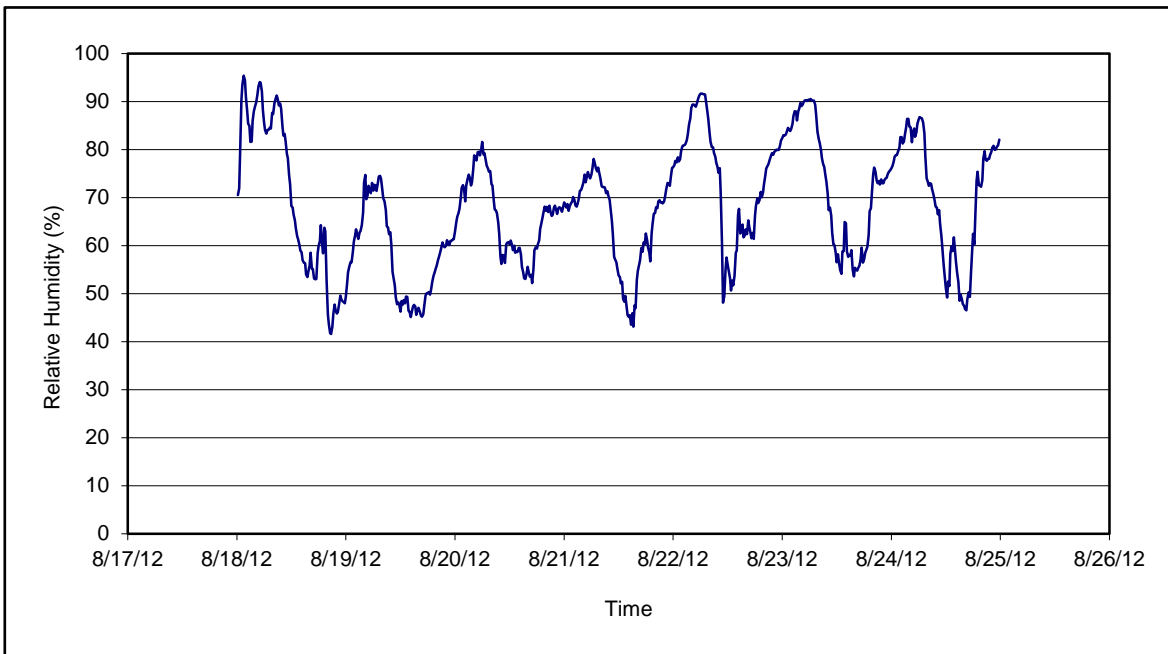


Figure 4. Relative humidity for the period 08/18/12 through 08/24/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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: 8/20/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0646-0845					General Weather Conditions: Clear- ~ 67°F - ~74°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Decanned load out dump trucks Load out soil from site via tarped dumptrucks Transported clean backfill into TFS Load out concrete waste from via dump trucks									
					Decanned 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)					Operated hoe-ram on foundation of former one-story building Loaded concrete waste onto dump trucks				
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	
8/20/2012	PM-10	FAM#2	14:15	14:37	23	S	DW	FAM#3	104	324	3	Hoe-ram breaking up foundation of former one-story building	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.					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: 8/20/2012				



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		8/21/2012		General Weather Conditions: Clear - ~ 71°F - ~75°F									
System Start Time		continuous		General Description of Site Activities:									
System Stop Time		continuous		Health & Safety Meeting				Decommed dump trucks		Loaded concrete waste onto dump trucks			
Total Hrs Monitored		24		Continuous Air Monitoring				Received delivery of clean backfill					
System Calibrations (Time/Status)		Ok 0643-0755		Decommed 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				Operated hoe-ram on foundation of former one-story building					
				Welding reebar from foundation				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 Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken
8/21/2012	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						
** 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: 8/21/2012		



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: 8/22/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0641-0808					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 Transported clean backfill into TFS Welding reebar from foundation Decconned dump trucks Received delivery of clean backfill Operated odor and dust suppressant systems Tarped dump trucks Operated hoe-ram on foundation of former one-story building Excavated in Temporary Fabric Structure (TFS) Loaded concrete waste onto dump trucks Loaded concrete waste onto dump trucks								
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
8/22/2012	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: 8/22/2012			
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										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: 8/23/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0634-0759	General Weather Conditions: Clear - ~ 68°F - ~ 83°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Load out soil from site via tarped dumptrucks Transported clean backfill into TFS Welding rebar from foundation Operated odor and dust suppressant systems Operated bucket excavator and claw-ram on foundation of former one-story building Backfill in Temporary Fabric Structure (TFS) Loaded concrete waste onto dump trucks

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**			
8/23/2012	***No Exceedances												None taken

Comments:
Due to equipment malfunction PM-10 data are not available at FAM#2 from 9:12 to 12:54. No visible dust was observed during this time period and concentrations at downwind stations remained below the action level.

	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
 Date: 8/23/2012



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	8/24/2012	General Weather Conditions:			General Description of Site Activities: Health & Safety Meeting Operated odor and dust suppressant systems Continuous Air Monitoring Operated bucket excavator and claw-ram on foundation of former one-story building Load out soil from site via tarped dumptrucks Backfilled in Temporary Fabric Structure (TFS) Transported clean backfill into TFS Loaded concrete waste onto dump trucks Received delivery of pipes Operated hoe-ram on foundation of former one-story building Cleaned frac tank							
System Start Time	continuous	Clear - ~ 68°F - ~ 83°F										
System Stop Time	continuous											
Total Hrs Monitored	24											
System Calibrations (Time/Status)	Ok 0724-0846											

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**			
8/24/2012	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/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: 8/24/2012

