

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: June 18, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
June 2, 2012 through June 8, 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 June 2 and June 8, 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 batch plant operations, demolition of one story-building, and onsite truck traffic. 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:

- Installed and operated mist odor suppressant along Willow Avenue
- Cut pipes inside Temporary Fabric Structure (TFS)
- Deconned dump trucks on decontamination pad
- Received delivery of kiln-dust sacks
- Demolition of one-story building
- Excavated along Willow Avenue for buttress wall installation
- Operated the hoe-ram at Willow Avenue excavation
- Installed and operated mist odor suppressant along Willow Avenue
- Loaded out roll off dumpsters from the site via flatbed truck
- Loaded out soil offsite via tarped dump trucks
- Mixed slurry at batch plant in OU-2
- Mixed soil with kiln-dust
- Relocated FAM#4
- Surveyed site on Bay St.
- Transported equipment around OU-2 using construction vehicles
 - Transported soil from excavation operations along Willow Avenue into the TFS via dump trucks

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.

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 June 6, 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.

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Clifton Former MGP Site Operable Unit 2 (OU-2)
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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
6/2/2012	0.1	ND ^(a)	0.0	0.2	0.1	0.1	145	16	4	2	0	26
6/3/2012	0.1	ND ^(a)	0.1	0.2	0.1	0.1	16	14	3	0	0	24
6/4/2012	0.1	0.1	0.2	0.3	0.2	0.1	16	13	17	2	10	31
6/5/2012	0.1	0.1	0.1	0.3	0.1	0.1	24	14	7	3	3	20
6/6/2012	0.2	0.1	0.1	0.4	0.1	0.1	77	35	4	16	22	60
6/7/2012	0.1	0.1	0.1	0.3	0.1	0.1	103	46	4	225	1	38
6/8/2012	0.4	0.2	0.1	0.4	0.2	0.2	45	80	42	11	1	83
Average	0.2	0.1	0.1	0.3	0.1	0.1	61	31	12	37	5	40
Maximum	0.4	0.2	0.2	0.4	0.2	0.2	145	80	42	225	22	83

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

^(a) Due to an equipment malfunction, no TVOC data are available for FAM#2 from 00:01 on 6/2/12 through 06:57 on 6/4/12.

**Figures 1-4. Meteorological Data
Clifton Former MGP Site
Staten Island, NY**

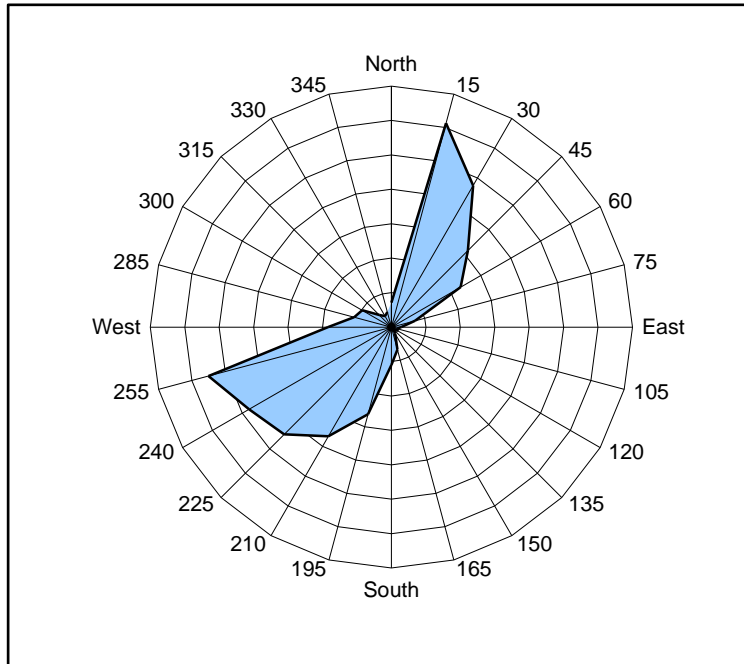


Figure 1. Wind rose for the period 06/02/12 through 06/08/12 collected at the Clifton Former MGP Site in Staten Island, NY. Wind direction data used to create the wind rose were calculated from 15-minute averages.

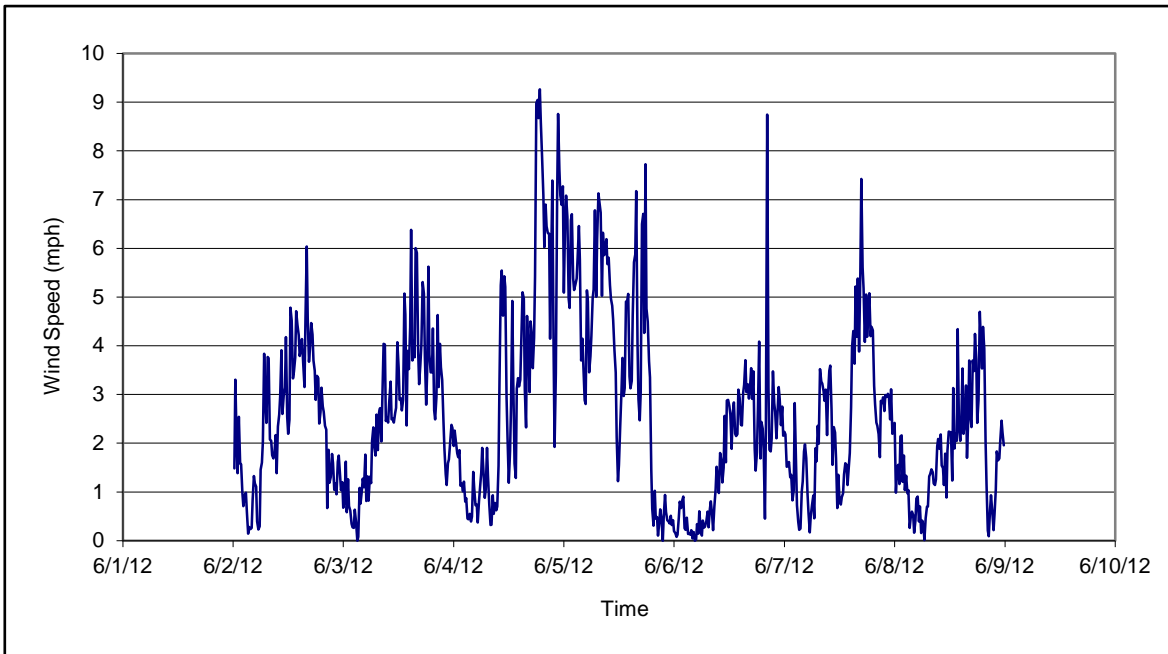


Figure 2. Wind speed for the period 06/02/12 through 06/08/12 collected at the Clifton Former MGP Site in Staten Island, NY. Data are 15-minute averages.

**Figures 1-4. Meteorological Data
Clifton Former MGP Site
Staten Island, NY**

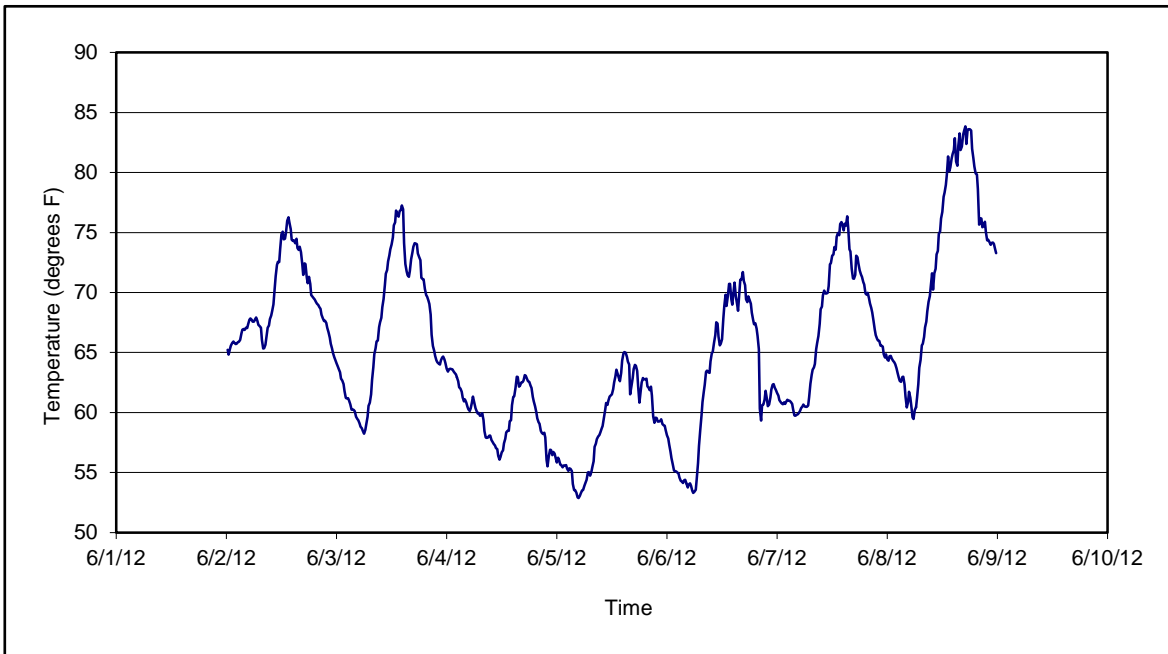


Figure 3. Temperature for the period 06/02/12 through 06/08/12 collected at the Clifton Former MGP Site in Staten Island, NY. Data are 15-minute averages.

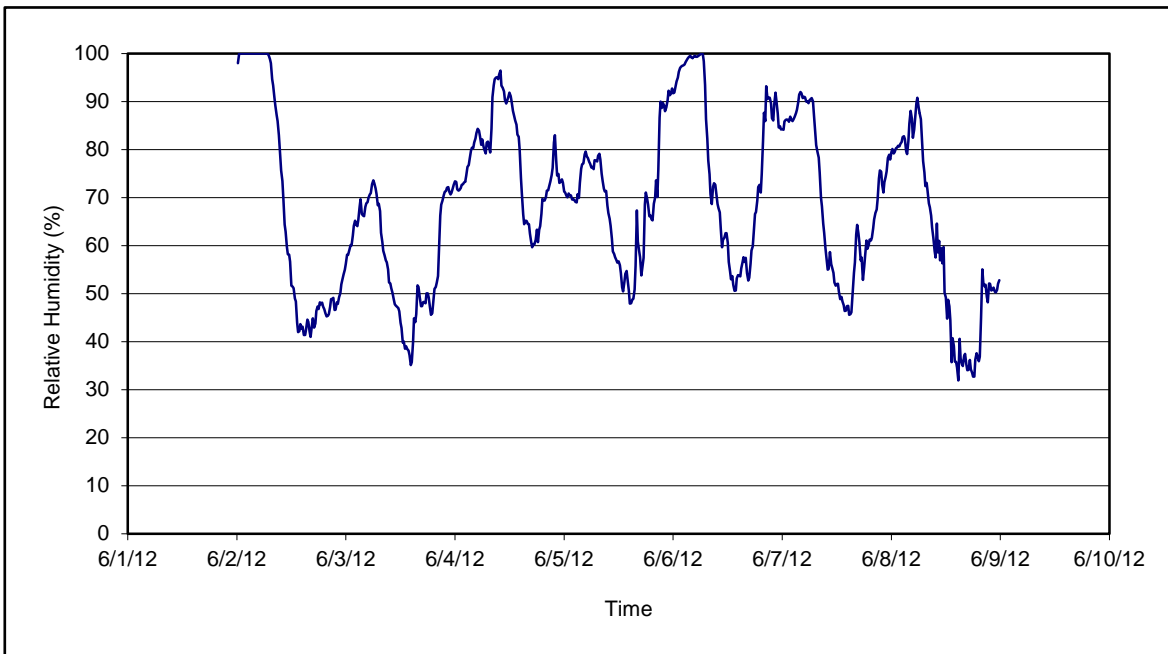


Figure 4. Relative humidity for the period 06/02/12 through 06/08/12 collected at the Clifton Former MGP Site in Staten Island, NY. Data are 15-minute averages.

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: 6/4/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0646-0917	General Weather Conditions: Clear - ~65°F- ~72°F General Description of Site Activities: Operated hoe-ram at Willow Avenue excavation Deconned dump trucks on decon pad Mixed slurry at batch plant in OU-2 Load out soil from site via tarped dumptrucks Transported equipment around OU-2 using construction vehicle Health & Safety Meeting Continuous Air Monitoring Surveyed site on Bay St. Mixed soil inside the TFS with kiln-dust Excavated along Willow Avenue for buttress wall installation Transported soil from excavation along Willow Ave to the TFS via 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**			
6/4/2012	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).
 ** 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: 6/4/2012

Due to an equipment malfunction, no TVOC data are available for FAM#2 from 00:01 - 06:57.



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	6/5/2012	General Weather Conditions: Clear-overcast w/rain- ~55°F- ~70°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Surveyed site on Bay St. Mixed soil inside the TFS with kiln-dust Excavation along Willow Avenue for buttress wall installation Installed and operated mist odor surpressant along Willow Ave			Operated hoe-ram at Willow Avenue excavation Delivery of Kil-dust sacks Deconned dump trucks on decon pad Load out speed boat from site via flatbed truck Received delivery of kiln-dust sacks Relocated FAM#4 Mixed slurry at batch plant in OU-2 Loaded out soil from site via tarped dumptrucks Transported equipment around OU-2 using construction vehicle Transported soil from excavation along Willow Avenue to the TFS via dump trucks							
System Start Time	continuous											
System Stop Time	continuous											
Total Hrs Monitored	24											
System Calibrations (Time/Status)	Ok 0630-0815											

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**			
6/5/2012	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).
 ** 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: 6/5/2012



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: 6/6/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations: Ok (Time/Status): 0610-0747					General Weather Conditions: Clear - ~53°F - ~69°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Surveyed site on Bay St. Mixed soil inside the TFS kiln-dust Excavation along Willow ave for buttress wall installation Transported soil from excavation along Willow Ave to the TFS via dump trucks Operated hoe-ram at Willow Avenue excavation Deconned dump trucks on decon pad Received delivery of kiln-dust sacks Mixed slurry at batch plant in OU-2 Loaded out soil offsite via tarped dumptrucks Transported equipment around OU-2 using construction vehicle Load out roll off dumpsters fromf site via flatbed truck Mist odor surpressant 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
6/6/2012	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).													
** 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: R. Marshall	
												Date: 6/6/2012	



**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	6/7/2012	General Weather Conditions: Clear- ~60°F- ~80°F		General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Operated hoe-ram at Willow Ave excavation Mixed soil inside the TFS w/ Kil-dust Excavated along Willow ave for buttress wall installation Transported soil from excavation along Willow Ave to the TFS via dump trucks			
System Start Time	continuous	Demolition of one-story building Relocated FAM#4					
System Stop Time	continuous	Operated Mist odor suppressant along Willow Avenue					
Total Hrs Monitored	24	Transported equipment around OU-2 using construction vehicle					
System Calibrations (Time/Status)	Ok 0626-0848	Cut pipes inside 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		Site Condition	Site Activity During the Period (if applicable)	Actions Taken
									Min**	Max**			
6/7/2012	PM-10	FAM#1	14:46	14:46	1	S	DW	FAM#2	77	77	1	Batch plant operations	Notified construction manager None taken
6/7/2012	PM-10	FAM#4	13:10	13:19	10	NESE	DW	FAM#6	85	101	2	Demolition of 1-story building	Notified construction manager Water was sprayed
6/7/2012	PM-10	FAM#4	13:51	14:00	9	SE	UW	N/A	103	115	1	Demolition of 1-story building	Notified construction manager Water was sprayed
6/7/2012	PM-10	FAM#4	14:45	15:04	20	SW	UW/CW	N/A	100	159	1	Demolition of 1-story building/ Pre-trenching along Willow Ave	Notified construction manager Water was sprayed
6/7/2012	PM-10	FAM#4	15:37	15:51	15	S	UW	N/A	101	159	1	Demolition of 1-story building/ Pre-trenching along Willow Ave	Notified construction manager Water was sprayed
6/7/2012	PM-10	FAM#4	16:45	17:14	34	SSW	UW	N/A	109	225	1	Demolition of 1-story building/ Pre-trenching along Willow Ave	Notified construction manager 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:

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** 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

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

Field Representative: C. John
Date: 6/7/2012

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	6/8/2012				General Weather Conditions: Clear- overcast- ~60°F- ~82°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Operated hoe-ram at Willow Avenue excavation Mixed soil inside the TFS w/ Kil-dust Excavated along Willow ave for buttress wall installation Operated mist odor suppressant along Willow Avenue Hoe-ram operations at Willow Ave excavation Relocated FAM#4 Mixed slurry at batch plant in OU-2 Loaded soil offsite via dumptrucks Demolition of one-story building Hauled demo waste to dumpster Transported soil from excavation along Willow Avenue to the TFS via dump trucks							
System Start Time	continuous											
System Stop Time	continuous											
Total Hrs Monitored	24											
System Calibrations (Time/Status)	Ok 0628-0830											

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**			
6/8/2012	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	-	-
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 NA - not applicable
 ND - no data available

Field Representative: C. John
 Date: 6/8/2012

