



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: June 19, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
June 9, 2012 through June 15, 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 9 and June 15, 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, and onsite vehicular 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:

- Deconned dump trucks for soil load out
- Demolition of one-story building
- Excavated along Bay St.
- Excavated along Willow Avenue for buttress wall installation
- Load out demolished scrap metal from site via construction vehicle
- Load out soil from site via tarped dump trucks
- Loaded demolished waste into roll off dumpster
- Mixed slurry at batch plant in OU-2
- Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust
- Operated mist odor suppressant along Willow Avenue
- Removed demolition debris from site via construction vehicle
- Stockpiled clean soil on North side of TFS
- Surveyed site on Willow Avenue
- Transported soil from excavation operations along Willow Avenue to 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. Due to work progressing along Willow Avenue, FAM#4 was temporarily relocated on Operable Unit 1 along Willow Avenue west of the wastewater treatment plant near the brick buildings. 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 13, 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.

Weekly Community Air Monitoring Report
Clifton Former MGP Site Operable Unit 2 (OU-2)
June 9, 2012 through June 15, 2012
June 19, 2012
Page 3

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
6/9/2012	0.1	0.2	ND	0.1	0.1	0.1	44	17	4	0	2	37
6/10/2012	0.1	0.1	ND	0.0	0.7	0.2	66	28	6	9	7	66
6/11/2012	0.0	0.1	0.2	0.2	0.1	0.1	78	22	3	8	2	75
6/12/2012	0.1	0.1	0.0	0.5	0.0	0.1	87	44	3	1	0	51
6/13/2012	0.1	0.2	0.2	0.3	0.2	0.1	32	18	37	14	4	87
6/14/2012	0.2	0.8	0.7	0.6 ^(a)	0.4	0.1	52	22	11	7	4	76
6/15/2012	0.5	0.2	3.4	ND ^(a)	1.0	0.2	73	26	6	13	6	120
Average	0.1	0.2	0.9	0.2	0.4	0.1	62	25	10	7	4	73
Maximum	0.5	0.8	3.4	0.5	1.0	0.2	87	44	37	14	7	120

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 were recorded @ FAM#4 from 10:26 on 6/14/2012 through 6:14 on 6/15/2012.

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

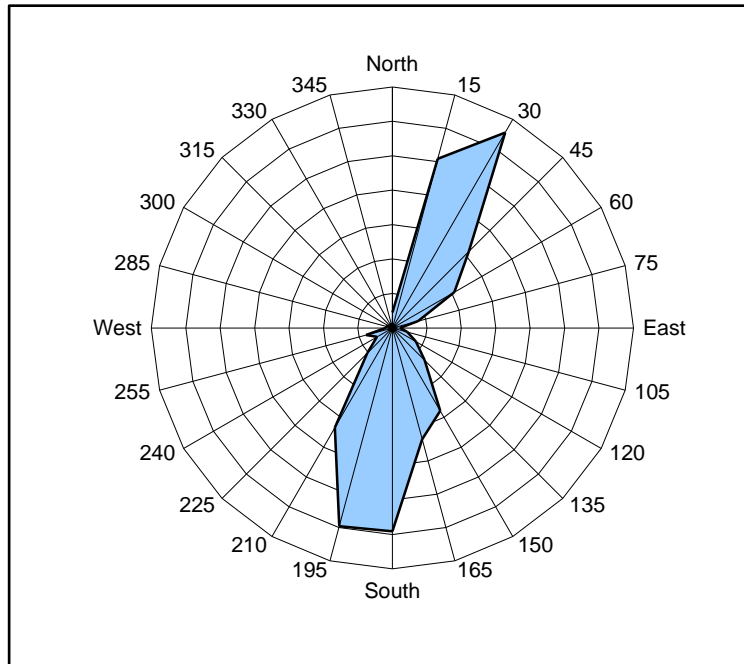


Figure 1. Wind rose for the period 04/07/12 through 04/13/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

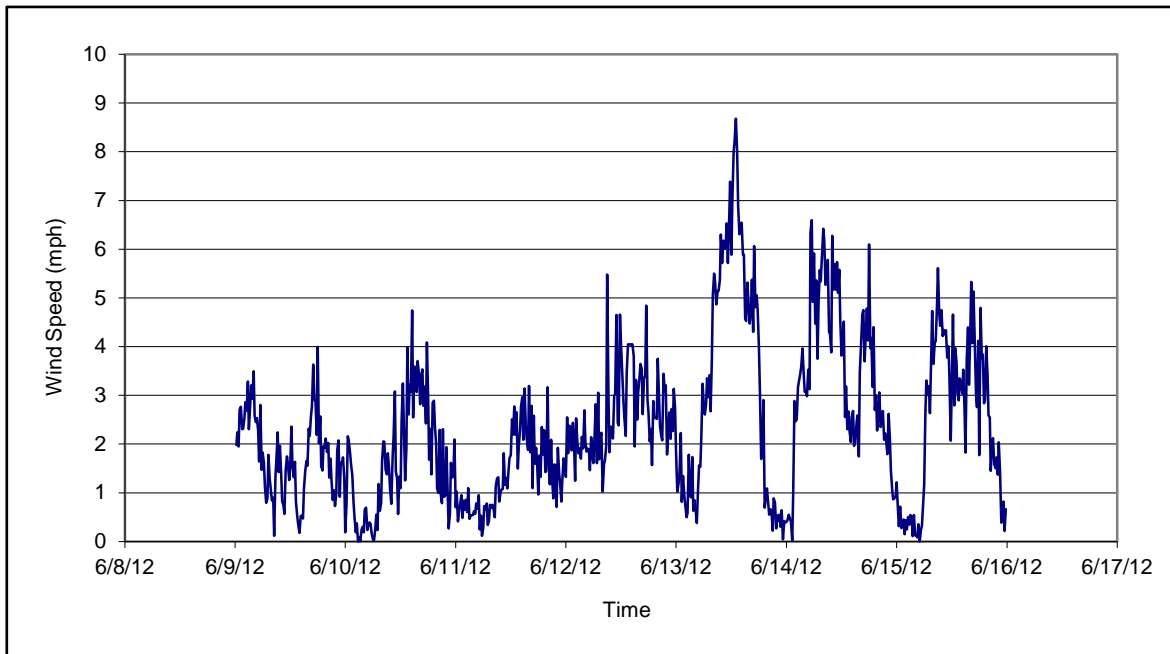


Figure 2. Wind speed for the period 04/07/12 through 04/13/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

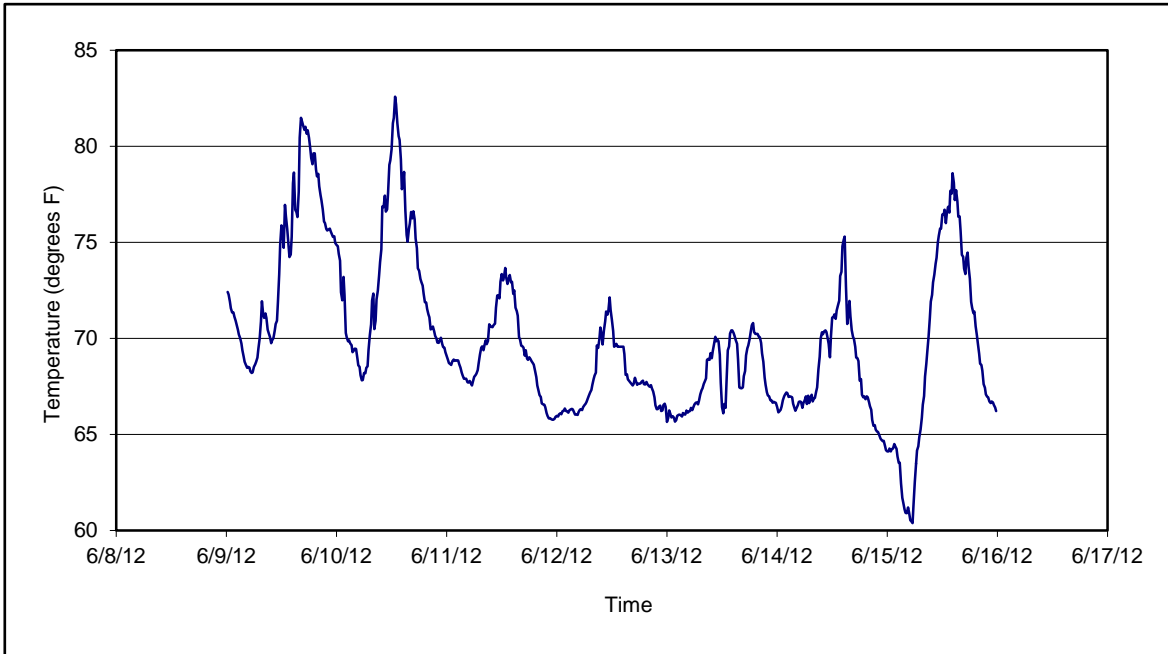


Figure 3. Temperature for the period 04/07/12 through 04/13/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

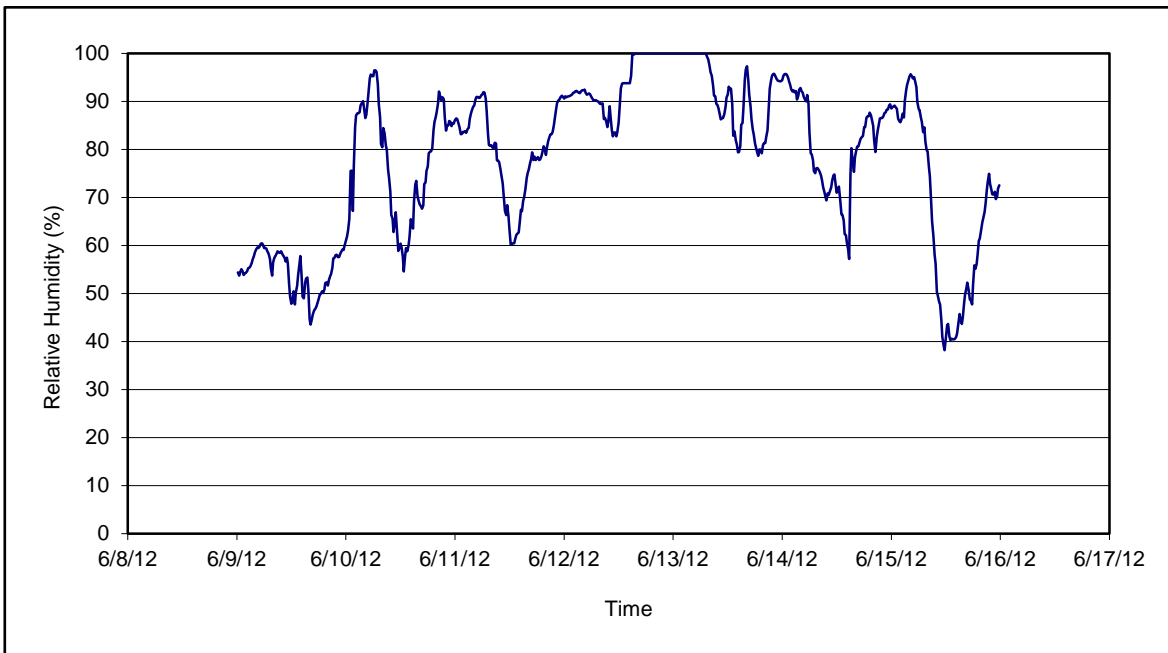


Figure 4. Relative humidity for the period 04/07/12 through 04/13/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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 6/11/2012 System Start Time continuous System Stop Time continuous Total Hrs Monitored 24 System Calibrations (Time/Status) Ok 0715-0937					General Weather Conditions: Clear- ~68°F- ~71°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Operated hoe-ram at Willow Avenue excavation Mixed slurry at batch plant in OU-2 Excavated along Willow ave for buttress wall installation Operated mist odor suppressant along Willow Avenue Load out soil from site via tarped dumptrucks Demolition of one-story building Surveyed site on Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust Transported soil from excavation operations along Willow Avenue 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 Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken
6/11/2012	None												No exceedances
Comments:													
Alert Limit:					PM-10 (15-min) 100 ug/m ³	TVOC (15-min) 3.7 ppm			TVOC (1-min) -		Odor Intensity (15-min) -		
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: 6/11/2012	



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: 6/12/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0611-0755					General Weather Conditions: Overcats w/rain- ~67°F- ~72°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Demolition of one-story building Mixed slurry at batch plant in OU-2 Excavated along Willow ave for buttress wall installation Operated mist odor suppressant along Willow Avenue Stockpiled clean soil Deconned load out dump trucks Load out soil from site via tarped dumptrucks Surveyed site on Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust Transported soil from excavation operations along Willow Avenue 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			
6/12/2012	None								Min**	Max**			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: 6/12/2012



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: 6/13/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0611-0755					General Weather Conditions: Overcast - -67°F - -69°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Demolition of one-story building Mixed slurry at batch plant in OU-2 Excavated along Willow ave for buttress wall installation Operated mist odor suppressant along Willow Avenue Loading demolished waste into rolloff dumpster Stockpiled clean soil Decconned load out dump trucks Load out soil from site via tarped dumptrucks Surveyed site on Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust Transported soil from excavation operations along Willow Avenue 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
6/13/2012	None								Min**	Max**			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: 6/13/2012



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 6/14/2012 System Start Time continuous System Stop Time continuous Total Hrs Monitored 24 System Calibrations (Time/Status) Ok 0622-0815					General Weather Conditions: Overcast - -65°F - -72°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Demolition debris removed via construction vehicle Mixed slurry at batch plant in OU-2 Excavated along Willow ave for buttress wall installation Operated mist odor suppressant along Willow Avenue Loadout demolished scrap metal from site via construction vehicle Excavated along Bay St. Decconned load out dump trucks Load out soil from site via tarped dumptrucks Surveyed site on Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust Transported soil from excavation operations along Willow Avenue 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 Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken
6/14/2012	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: C. John
 Date: 6/14/2012

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 6/15/2012 System Start Time continuous System Stop Time continuous Total Hrs Monitored 24 System Calibrations (Time/Status) Ok 0618-1030					General Weather Conditions: Overcast - -62°F- -77°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Demolition debris removed via construction vehicle Mixed slurry at batch plant in OU-2 Excavated along Willow ave for buttress wall installation Operated mist odor suppressant along Willow Avenue Loadout demolished scrap metal from site via construction vehicle Excavated along Bay St. Decconned load out dump trucks Load out soil from site via tarped dumptrucks Surveyed site on Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust Transported soil from excavation operations along Willow Avenue 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 Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken	
6/15/2012	PM-10	FAM#6	8:34	8:50	17	NNE	DW	FAM#1	51	81	1	Batch plant operations	Notified construction manager Water was sprayed	
6/15/2012	PM-10	FAM#6	15:46	15:59	4	SSE	DW	FAM#4	106	106	2	Onsite vehicular traffic	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:														
* 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: 6/15/2012				
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														

