

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: October 23, 2012

Regarding: Weekly Community Air Monitoring Report

Clifton Former MGP Site - Operable Unit 2 (OU-2)

October 13, 2012 through October 19, 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 October 13, 2012 and October 19, 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. 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

Weekly Community Air Monitoring Report Clifton Former MGP Site Operable Unit 2 (OU-2) October 13, 2012 through October 19, 2012 October 23, 2012 Page 2

Site Construction Activities

Construction activities during this reporting period included:

- Backfilled in Temporary Fabric Structure (TFS)
- Deconned dump trucks
- Excavated in TFS
- Excavated near FAM#4 along Willow Avenue
- Leveled terrain South of TFS
- Leveled terrain along the Willow Ave
- Loaded out soil from TFS
- Loaded out soil from shallow excavation via dump trucks
- Received deliveries of clean backfill
- Relocated Equipment
- Relocated FAM#3, FAM#4, and FAM#6
- Stockpiled clean backfill
- Tarped 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. 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 October 17, 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) October 13, 2012 through October 19, 2012 October 23, 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/m³, < 150 ug/m³	≥ 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/m³, < 440 ug/m³	≥ 440 ug/m ³

Notes:

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



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)

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

			TV	ОС			PM-10						
Date			(pp	om)			(ug/m³)						
	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6	
10/13/2012	0.3	0.2	0.1	0.0	0.1	0.2	17	6	0	0	6	0	
10/14/2012	0.2	0.0	0.1	0.0	0.1	0.1	17	9	0	0	8	0	
10/15/2012	0.1	0.7	0.3*	0.1	0.1	0.1	9	9	0	1	14	1	
10/16/2012	0.1	0.5	0.2	0.1	0.1	0.1	9	10	62	0	9	0	
10/17/2012	0.1	0.1	0.2	0.1	0.1	0.1	31	10	0	13	55	1	
10/18/2012	0.2	0.6	0.2	0.1	0.1	0.2	36	10	0	6	19	1	
10/19/2012	0.1	0.1	0.0	0.0	0.0	0.2	19	10	0	5	22	0	
Average	0.2	0.3	0.1	0.1	0.1	0.1	20	9	9	4	19	0	
Maximum	0.3	0.7	0.2	0.1	0.1	0.2	36	10	62	13	55	1	

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



^{*} No recordable data for TVOC at FAM#3 from 06:48 - 17:48 on 10/15/2012 due to performing maintenance on the equipment.

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

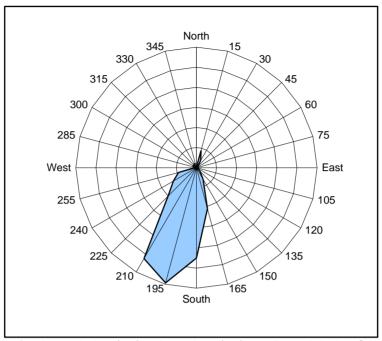


Figure 1. Wind rose for the period 10/13/12 through 10/19/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

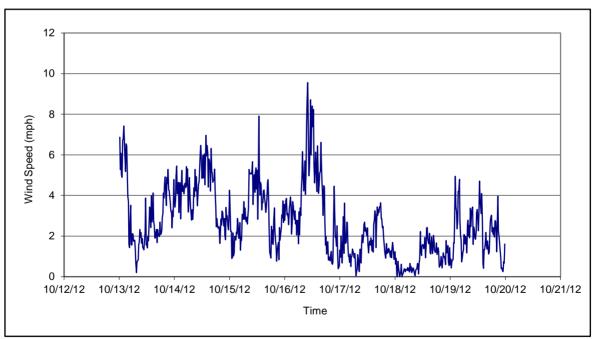


Figure 2. Wind speed for the period 10/13/12 through 10/19/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

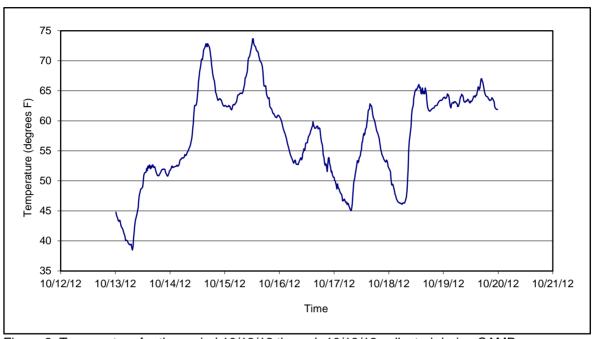


Figure 3. Temperature for the period 10/13/12 through 10/19/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

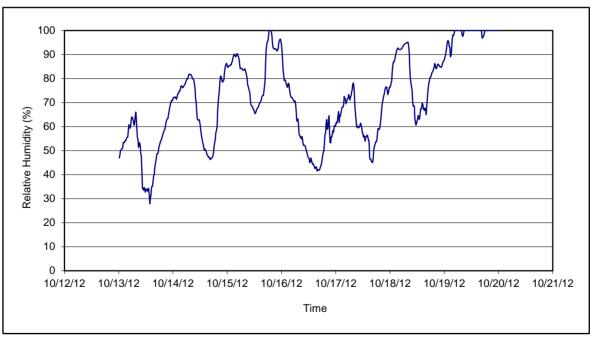


Figure 4. Relative humidity for the period 10/13/12 through 10/19/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

	System Ope	erations								Gene	ral Observations		
		mpling Date	10/15	/2012	General We	eather C	onditions:						
		Start Time			Clear - ~								
		Stop Time		nuous									
		s Monitored			General De	scription	of Site Activities:						
					Health &								
	System	Calibrations	C	k	Continuo				Excavated	near FAM#4 alon	g Willow Avenue		
		ime/Status)		-0902			porary Fabric Stru	cture (TFS)		soil from TFS	J		
	(.	,			Deconne					leliveries of clean	backfill		
								v excavation via dump trucks		dump trucks			
					Tarped d			rid damp damo		clean backfill			
						 			_ ·	5-Minute			
	Alert		Start	End	# of	Wind	Upwind/	Upwind		wind-Upwind		Site Activity During the Period	
Date	Trigger	Station	Time	Time	15-min	Dir.	Downwind	Station(s)		centration	Site Condition	(if applicable)	Actions Taken
	1119901				Periods	J	20111111111	Gialion(e)	Min*			(ii applicable)	
10/15/2012	No exceedances									I III			None taken
									-				
-									-				
-									-				
h +									+				
 						 			+				
Comments:	l l			1				L	1	1		1	
							(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)	
				ert Limit:			ug/m³	3.7 ppm			-	-	
			Acti	on Limit:		150	ug/m ³	5.0 ppm			25 ppm	3 (n-butanol scale)	
Notes:													
* Wind di	rections are presented	by octant (i.	e. N, NE	, E, SE, S	S, SW, W, N	W).					e. dust) less than 10 microns	in diameter	
** Upwind	d minus downwind con	centrations a	are a time	e specific	comparison	١.			TVOC - tot	al volatile organic	compounds		
	ked Air Monitoring stati												
	nicrograms per cubic n								NA - not applicable				
ppmv - pa	ppmv - parts per million by volume												R.Marshall
												Date:	10/15/2012
l													Page 1 of _



	System Op									Gene	ral Observations				
		mpling Date		6/2012	General We					•					
		n Start Time		nuous	Clear - ~	- 51°F	-60°F								
		m Stop Time	conti	nuous											
	Total H	rs Monitored	2	24			of Site Activities:								
					Health &										
		Calibrations)k	Continuo				Leved terrain South of TFS						
	(Γime/Status)	0809	-0926			nporary Fabric Stru	cture (TFS)		t soil from TFS					
					•				deliveries of clean	backfill					
								v excavation via dump trucks		dump trucks					
	•				Tarped d	lump truc	ks			clean backfill	1				
					# of					5-Minute					
Date	Alert	Station	Start	End	15-min	Wind	Upwind/	Upwind	Downwind-Upwind Site		Site Condition	Site Activity During the Period	Actions Taken		
	Trigger		Time	Time	Periods	Dir.	Downwind	Station(s)		ncentration		(if applicable)			
	L								Min*	* Max**					
10/16/2012	No exceedances					<u> </u>				1			None taken		
						<u> </u>				1					
	 				ļ	ļ			-	1		+			
									-						
									+						
									_						
									_						
						1			+						
									+	+					
									_						
						1			_						
Comments	:	1				1						<u> </u>			
							(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)			
				lert Limit:			ug/m ³	3.7 ppm			-	-			
			Act	ion Limit:		150	ug/m ³	5.0 ppm			25 ppm	3 (n-butanol scale)			
Notes:															
* Wind d	directions are presente	d by octant (i	.e. N, NE	, E, SE, S	S, SW, W, N	IW).			PM-10 - pa	articulate matter (i	.e. dust) less than 10 microns	in diameter			
** Upwin	nd minus downwind co	ncentrations	are a tim	e specific	comparison	١.			TVOC - to	tal volatile organic	compounds				
	ixed Air Monitoring sta														
	micrograms per cubic i								NA - not a						
ppmv - p	pmv - parts per million by volume								ND - no da	ata available		Field Representative:	C. John		
												Date:	10/16/2012		
													Page 1 of _		



	System Or	perations			1	General Observations										
		ampling Date	10/17	7/2012	General We	eather Co	onditions:			200.						
		m Start Time			Clear - ~											
		m Stop Time		nuous												
		rs Monitored		24	General De	scription	of Site Activities:									
					Health &				Relocated Equipment							
	System	Calibrations	C	Ok	Continuo				Back Filled							
		Time/Status)		-0858			porary Fabric Stru	cture (TFS)		soil from TFS						
	,	,			Deconne				Received de	eliveries of clean b	ackfill					
							long the Willow Av	9	Deconned of	lump trucks						
					Tarped d				Stockpiled of	lean backfill						
		1								5-Minute						
	Alert		Start	End	# of	Wind	Upwind/	Upwind	Downwind-Howind			Site Activity During the Period				
Date	Trigger	Station	Time	Time	15-min	Dir.	Downwind	Station(s)		ncentration	Site Condition	(if applicable)	Actions Taken			
	33				Periods			(3)	Min*			(111 - 111 - 111				
10/17/20	2 No exceedances												None taken			
												1	2 2 22 2			
Commen	s:															
							(15-min)	TVOC (15-min)		٦	TVOC (1-min)	Odor Intensity (15-min)				
				lert Limit:			ug/m³	3.7 ppm			-	- 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4				
			Acti	ion Limit:		150 (ug/m³	5.0 ppm			25 ppm	3 (n-butanol scale)				
Notes:																
	directions are presente								PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter							
	ind minus downwind co		are a time	e specific	comparison	١.			TVOC - tota	al volatile organic c	compounds					
	Fixed Air Monitoring sta															
	micrograms per cubic								NA - not applicable							
ppmv	parts per million by vol	ume							ND - no dat	a available		Field Representative:	R. Marshall			
												Date:	10/17/2012			



Page 1 of _1_

	System Op	erations				General Observations									
		ampling Date	10/18	3/2012	General We	eather C	onditions:			20					
		m Start Time		nuous	Clear - ~	46°F - ~	-65°F								
		m Stop Time		nuous											
		rs Monitored		24	General De	scription	of Site Activities:								
					Health &	Safety M	1eetina								
	System	Calibrations	C	Ok	Continuo				Relocated F	AM#s 3.4.6					
		Time/Status)		-0913			porary Fabric Stru	cture (TFS)		soil from TFS					
	,	,			Deconne				Received de	liveries of clean b	ackfill				
							ong the Willow Ave		Deconned d						
					Tarped d				Stockpiled of						
					i .	1				5-Minute	I				
	Alert		Start	End	# of	Wind	Upwind/	Upwind	Downwind Unwind			Site Activity During the Period			
Date	Trigger	Station	Time	Time	15-min	Dir.	Downwind	Station(s)		centration	Site Condition	(if applicable)	Actions Taken		
	99				Periods			J(c)	Min*			(" 577)			
10/18/2012	No exceedances												None taken		
						1									
1						i –									
Comments:		•													
							(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)			
			Al	lert Limit:			ug/m³	3.7 ppm				-			
			Act	ion Limit:		150	ug/m³	5.0 ppm			25 ppm	3 (n-butanol scale)			
Notes:	<u> </u>														
	rections are presente	d by octant (i	.e. N, NE	, E, SE.	S, SW, W. N	W).			PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter						
	d minus downwind co									I volatile organic o					
	ed Air Monitoring sta										•				
	nicrograms per cubic								NA - not applicable						
	arts per million by vol								ND - no data available Field Representative: C. John						
		-							ND - no data available Field Representative: Date:				10/18/2012		



	System Op	erations								Gener	ral Observations					
		ampling Date	10/19	9/2012	General We	eather C	onditions:			20						
		m Start Time			Clear - ~											
		m Stop Time		nuous												
		rs Monitored		24	General De	scription	of Site Activities:									
					Health &	Safety N	leeting									
	System	Calibrations	C	Ok	Continuo	us Air M	onitoring									
		Time/Status)	0655	-0855	Backfilled	d in Tem	oorary Fabric Struc	ture (TFS)	Loaded out soil from TFS							
					Deconne	d dump	rucks		Received de	liveries of clean b	packfill					
					Levelled	tarrain a	long the Willow Av	е	Deconned d	ump trucks						
					Tarped d	ump truc	ks		Stockpiled of	lean backfill						
					# of				15	-Minute						
Date	Alert	Station	Start	End	# 01 15-min	Wind	Upwind/	Upwind	Down	vind-Upwind	Site Condition	Site Activity During the Period	Actions Taken			
Date	Trigger	Station	Time	Time	Periods	Dir.	Downwind	Station(s)	Con	centration	Site Condition	(if applicable)	Actions Taken			
					1 chods				Min*	Max**						
10/19/2012	No exceedances												None taken			
									_							
									_							
									-			<u> </u>				
		1							_							
		1							_							
		1		-		1			+							
									1							
Comments:		l .		l	l	ı			-		1					
Comments.																
						PM-10	(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)				
			Al	ert Limit:			ug/m³	3.7 ppm				- ` `				
				ion Limit:			ug/m³	5.0 ppm			25 ppm	3 (n-butanol scale)				
Notes:																
	rections are presente	d by octant (i	.e. N. NE	. E. SE.	S. SW. W. N	W).			PM-10 - par	ticulate matter (i.e	e. dust) less than 10 microns in	diameter				
	d minus downwind co									I volatile organic o						
	ed Air Monitoring sta			.,	,						•					
	nicrograms per cubic								NA - not applicable							
	arts per million by vol												C. John			
												Date:	10/19/2012			

