

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: August 21, 2012

Regarding: Weekly Community Air Monitoring Report Clifton Former MGP Site - Operable Unit 2 (OU-2) August 4, 2012 through August 10, 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 4, 2012 and August 10, 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) August 4, 2012 through August 10, 2012 August 21, 2012 Page 2

# **Site Construction Activities**

Construction activities during this reporting period included:

- Excavated in Temporary Fabric Structure (TFS)
- Backfilled in TFS
- Completed backfilling of TFS area 2
- Deconned delivery dump trucks
- Deconned load out dump trucks
- Installed gravel road near decon pad
- Installed TIGG unit
- Leveled terrain using Sweepster attachment
- Load out soil from site via tarped dumptrucks
- Operated odor and dust suppressant systems
- Received delivery of clean backfill, gravel, equipment, and materials
- Relocated frac tank, TFS, and TIGG unit
- Secured perimeter of TFS with jersey blocks
- Surveyed site near decon pad
- Tarped dump trucks
- Transported jersey blocks around TFS
- Surveyed around OU-2
- Surveyed inside TFS
- Transported clean soil into TFS

# **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 8, 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) August 4, 2012 through August 10, 2012 August 21, 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 <sup>3</sup>	150 ug/m <sup>3</sup>	< 100 ug/m <sup>3</sup>	≥ 100 ug/m <sup>3</sup> , < 150 ug/m <sup>3</sup>	≥ 150 ug/m <sup>3</sup>
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 <sup>3</sup>	≥ 330 ug/m <sup>3</sup> , < 440 ug/m <sup>3</sup>	≥ 440 ug/m <sup>3</sup>

Notes:

<sup>1</sup> 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

<sup>2</sup> 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/m<sup>3</sup> - 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

			ΤV	OC			PM-10						
Date			(pp	om)			(ug/m <sup>3</sup> )						
	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6	
8/4/2012	0.1	0.3	1.0	1.0	0.1	0.1	64	25	1	11	46	35	
8/5/2012	0.1	0.1	0.1	0.1	0.1	0.1	49	129	1	3	47	81	
8/6/2012	0.1	0.1	0.1	0.5	0.1	0.2	51	35	0	8	49	40	
8/7/2012	0.1	0.1	0.2	0.4	0.1	0.1	36	40	0	1	45	39	
8/8/2012	0.1	0.2	0.1	0.0	0.1	0.1	64	36	1	19	47	76	
8/9/2012	0.1	0.0	0.1	0.3	0.0	0.1	74	38	3	12	91	44	
8/10/2012	0.2	0.0	0.1	0.0	0.0	0.1	58	41	2	12	28	41	
Average	0.1	0.1	0.2	0.3	0.1	0.1	57	49	1	9	50	51	
Maximum	0.2	0.3	1.0	1.0	0.1	0.2	74	129	3	19	91	81	

#### Notes:

FAM - fixed air monitoring station location

ug/m<sup>3</sup> - 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



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

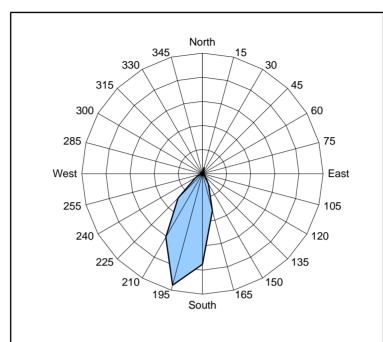


Figure 1. Wind rose for the period 08/04/12 through 08/10/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

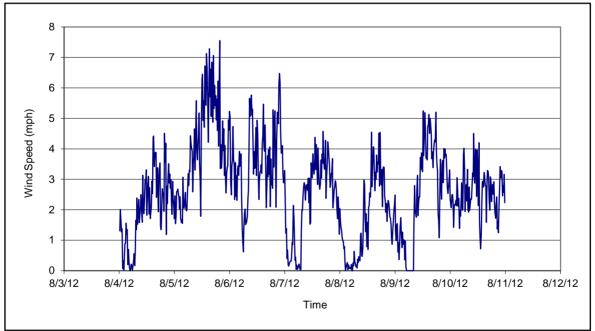
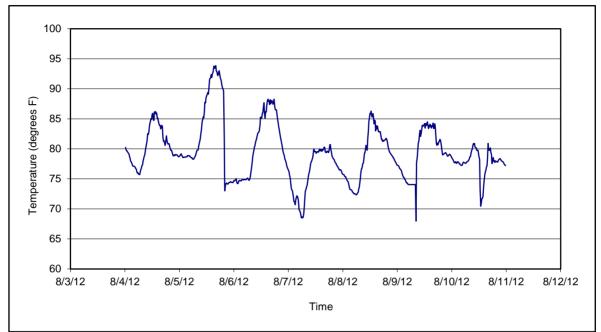
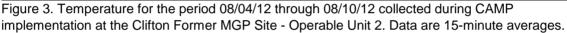


Figure 2. Wind speed for the period 08/04/12 through 08/10/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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





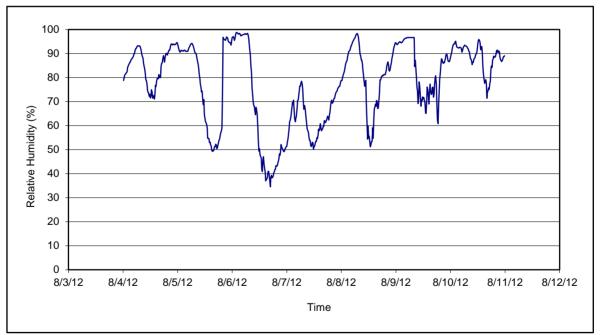


Figure 4. Relative humidity for the period 08/04/12 through 08/10/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

	System (	Operations									General Observations						
	Sa	ampling Date	8/6/	2012	General W	eather C	onditions:										
	Syster	m Start Time	conti	nuous	Clear-~7	73°F - ~8	38°F										
		m Stop Time		nuous													
	Total H	rs Monitored	2	24	General De	escription	of Site Activities:		Excavated	in TFS							
					Health &	& Safety Meeting Deconned dump trucks											
	System	Calibrations	C	Dk						Received delivery of clean backfill							
		Time/Status)		-0937			ut dump trucks				ppressant systems						
	`						site via tarped dur	notrucks	Tarped dun								
							backfill into TFS			ite near decon p	had						
					Backfilled					elivery of mater							
		1		1	Daokine				1	-Minute							
	Alert		Start	End	# of	Wind	Upwind/	Upwind		ind-Upwind		Site Activity During the Period (if applicable)					
Date	Trigger	Station	Time	Time	15-min	Dir.	Downwind	Station(s)		centration	Site Condition		Actions Taken				
	riggei		Time	Time	Periods	DII.	Downwind	Station(S)	Min**			(ii applicable)					
8/6/2012	No exceedance	1			1				IVIIII	IVIAA			None taken				
0/0/2012	NO exceedance	1			1				-				INOTIC LARCET				
		1			1				-								
		1			1				-								
									-								
									-								
		-							-								
<b>.</b>				I	I	1											
Comments	:																
						<b>DM</b> 45	(4	TV00 // -	<u></u>	_							
							(15-min)	TVOC (15-m	in)	Т	VOC (1-min)	Odor Intensity (15-min)					
				lert Limit:			ug/m <sup>3</sup>	3.7 ppm				-					
			Act	tion Limit:		150	ug/m <sup>3</sup>	5.0 ppm			25 ppm	3 (n-butanol scale)					
Notes:																	
	irections are pres										(i.e. dust) less than 10 mi	crons in diameter					
** Upwin	d minus downwin	d concentrat	ions are a	a time spe	ecific compar	rison.			TVOC - tota	al volatile organi	ic compounds						
	ixed Air Monitoring		ation						NA - not ap								
ug/m³ - r	nicrograms per cu	ubic meter							ND - no dat	a available		Field Representative:	R. Marshall				
1	1. A. S. S. S. S. S. M. S. S. B.											Dut	0/0/0010				

ppmv - parts per million by volume

Date: 8/6/2012



	System C	perations									General Observations					
	Sa	ampling Date		2012	General We	eather C	onditions:									
		m Start Time			Sun & Clo	ouds ~8	38°F									
		m Stop Time		nuous												
	Total H	rs Monitored	2	24			of Site Activities:									
					Health &	Safety N	leeting	Deconned dump trucks								
	System	Calibrations	C	0k	Continuo	us Air M	onitoring		Received delivery of clean backfill							
	(	Time/Status)	0717	-0954	Deconne	d load ou	ut dump trucks		Operated odor and dust suppressant systems							
					Load out	soil from	site via tarped dur	nptrucks	Tarped dump trucks							
					Transpor	ted clear	backfill into TFS		Installed gra	vel road near o	decon pad					
					Backfilled	l in TFS			Transported	Jersey blocks						
									15-	Minute						
_	Alert		Start	End	# of	Wind	Upwind/	Upwind		nd-Upwind		Site Activity During the Period				
Date	Trigger	Station	Time	Time	15-min	Dir.	Downwind	Station(s)		entration	Site Condition	(if applicable)	Actions Taken			
	55*		_		Periods				Min**	Max**		( )]]				
8/7/12	No exceedances				1	l I							None taken			
omments	i.															
						PM-10	(15-min)	TVOC (15-m	in)	Т	VOC (1-min)	Odor Intensity (15-min)				
			А	lert Limit:			ug/m <sup>3</sup>	3.7 ppm	,		-	-				
				ion Limit:			ug/m <sup>3</sup>	5.0 ppm			25 ppm	3 (n-butanol scale)				
otes:							0	PP								
	lirections are prese	nted by entry	at (i.a. N						DM 10	tiouloto mottor	(i.e. dust) less than 10 mid	arono in diamotor				
	nd minus downwind			ime spec	and comparis	011.					ic compounds					
	ixed Air Monitoring		on						NA - not app			Field Desserve (111)	D. Marshall			
-	micrograms per cut								ND - no data	a available		Field Representative:	R. Marshall			
ppmv - p	parts per million by	voiume										Date:	8/7/2012 Dana 4 af			



	Syster	n Operations	5								General Observations		
		mpling Date		2012	General We	eather Co	onditions:						
		m Start Time		nuous	Sun & Cl	ouds ~8	34°F						
		m Stop Time		nuous									
	Total Hr	rs Monitored	2	24			of Site Activities:						
					Health &				Deconned d				
		Calibrations		)k	Continuo					livery of clean			
	(7	Time/Status)	0922	-1123			ut dump trucks				ppressant systems		
							site via tarped dur	nptrucks	Tarped dump	o trucks			
							h backfill into TFS						
					Backfilled	l in TFS							
					# of					Ainute			
Date	Alert	Station	Start	End	15-min	Wind	Upwind/	Upwind		nd-Upwind	Site Condition	Site Activity During the Period	Actions Taken
	Trigger		Time	Time	Periods	Dir.	Downwind	Station(s)		entration		(if applicable)	
	<u> </u>								Min**	Max**			
8/8/2012	No exceeda	ances											
	<u>├</u> ────												
Comments	:												
i													
							(15-min)	TVOC (15-mi	n)	т	VOC (1-min)	Odor Intensity (15-min)	
				lert Limit: ion Limit:			ug/m <sup>3</sup> ug/m <sup>3</sup>	3.7 ppm			-	-	
			Act	ion Limit:		150	ug/m	5.0 ppm			25 ppm	3 (n-butanol scale)	
Notes:													
		presented by									(i.e. dust) less than 10 mid	crons in diameter	
		nwind conce			ne specific co	mpariso	n.			volatile organ	ic compounds		
		itoring station							NA - not app				
		per cubic met							ND - no data	available		Field Representative:	S. Ou
ppmv - p	arts per milli	ion by volume	•									Date:	8/8/2012 Page 1 of 1



	Syster	n Operation	s								General Observations					
		mpling Date		2012	General We	eather C	onditions:									
		n Start Time		nuous	Clear - ~	74°F - ~8	84°F									
		m Stop Time	conti	nuous												
	Total H	s Monitored	2	24			of Site Activities:									
					Health &				Received delivery of gravel							
		Calibrations		Ok	Continuo			Received delivery of clean backfill								
	(	Fime/Status)	0922	2-1123			orary Fabric Structu				ppressant systems					
							er of TFS with jerse		Deconned d	elivery dump tr	rucks					
							ey blocks around TF									
	r			-	Leveling	terrain u	sing Sweepster att	achment			1					
					# of					Minute						
Date	Alert	Station	Start	Start End 15-min Wind Upwind/ Upwind Downwin		nd-Upwind	Site Condition	Site Activity During the Period	Actions Taken							
	Trigger		Time	Time	Periods	Dir.	Downwind	Station(s)		entration		(if applicable)				
									Min**	Max**						
8/9/2012	No exceeda	ances											None taken			
Comments	1				4				1 1							
oonnenta																
						PM-10	(15-min)	TVOC (15-mi	n)	Т	VOC (1-min)	Odor Intensity (15-min)				
			А	lert Limit:			ug/m <sup>3</sup>	3.7 ppm	,		-	-				
	Action Limit: 150 ug/m <sup>3</sup>							5.0 ppm			25 ppm	3 (n-butanol scale)				
Notes:							-	· · · · · · ·								
	lirections are	presented b	voctant	(io N NI		SW/ W/ I			PM-10 - part	ticulate matter	(i.e. dust) less than 10 mi	crops in diameter				
		nwind conce								l volatile organi						
		itoring statior				mpansu			NA - not app		io compoundo					
		per cubic met							ND - no data			Field Representative:	R. Marshall			
-		on by volume							no data			Date:	8/9/2012			
I bbuy - F		s. by toluine	-									Date.	Page 1 of 1			



	Syste	n Operation	s								General Observations					
	Sa	ampling Date	8/10	/2012	General W	eather C	onditions:									
		m Start Time	conti	nuous	Clear - cl	oudy w/r	rain - ~74°F - ~80°I	=								
		m Stop Time	conti	nuous												
	Total H	rs Monitored	2	24			n of Site Activities:									
					Health &											
		Calibrations		Эk	Continuo											
	(	Time/Status)	0740	)-0920			lling of TFS area 2		Received delivery of gravel							
					Relocate				Installed Tig unit							
					Relocate						ppressant systems					
			-		Leveling	terrain u	sing Sweepster atta	achment		elivery dump tr	ucks					
					# of					Vinute						
Date	Alert	Station	Start	End	15-min	Wind	Upwind/	Upwind		nd-Upwind	Site Condition	Site Activity During the Period	Actions Taken			
Dute	Trigger	Otation	Time	Time	Periods	Dir.	Downwind	Station(s)		entration	One contaition	(if applicable)				
									Min**	Max**						
8/10/2012	No exceed	ances				1						ļ ļ	None taken			
	I	ļ	l	1	<u> </u>	I			1		L					
Comments	:															
						DM 42	(45	TV00 (15		-	(00 (4 min)	Oden Internetty (45 min)				
							(15-min)	TVOC (15-m	in)	T	VOC (1-min)	Odor Intensity (15-min)				
	Alert Limit: 100 ug/m <sup>3</sup> Action Limit: 150 ug/m <sup>3</sup>							3.7 ppm			-	· · · ·				
			Ac	tion Limit:		150	ug/m-	5.0 ppm			25 ppm	3 (n-butanol scale)				
Notes:																
		presented b									(i.e. dust) less than 10 mi	crons in diameter				
		nwind conce			ne specific co	mpariso	n.			volatile organ	ic compounds					
		itoring statior		n					NA - not app							
-	-	per cubic met							ND - no data	available		Field Representative:	R. Marshall			
ppmv - p	oarts per mill	ion by volume	e									Date:	8/10/2012			
													Dens 4 of 4			

