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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: January 28, 2013

Regarding: Weekly Community Air Monitoring Report

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

January 19, 2013 through January 25, 2013

#### 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 January 19, 2013 and January 25, 2013.

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 15 minute exceedances for PM-10 [dust] at a crosswind station during non-working hours that when compared to the measurements at the upwind station, resulted in a Site Condition 1. 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)

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Meteorological data

### **Site Construction Activities**

Construction activities during this reporting period included:

- Excavated in Temporary Fabric Structure (TFS)
- Backfilled in TFS
- Connected TIGG unit
- Tarped dump trucks
- Deconned dump trucks
- Installed decon pad
- Leveled terrain in OU-2
- Loaded clean backfill into TFS
- Loaded out soil from TFS
- Operated hoe-ram in TFS
- Prepared TFS for relocation
- Received delivery of clean backfill
- Received delivery of gravel
- Relocated bin blocks
- Relocated TFS
- Stockpiled clean soil

#### **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 January 25, 2013. 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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#### 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/m³, < 150 ug/m³	≥ 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/m³, < 440 ug/m³	≥ 440 ug/m <sup>3</sup>

#### Notes:

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



<sup>&</sup>lt;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>&</sup>lt;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)

## 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		
1/19/2013	0.2	0.1	0.2	0.1	0.1	0.0	2	7	1.0	5	8	22		
1/20/2013	0.1	0.1	0.2	0.0	0.1	0.0	3	8	1.0	1	8	21		
1/21/2013	0.2	0.6	0.2	0.0	0.1	0.0	27	11	7	19	10	33		
1/22/2013	0.1	0.4	0.2	0.1	0.2	0.1	19	48	9	38	10	30		
1/23/2013	0.0	0.1	0.2	0.1	0.5	0.0	34	43	20	33	74	172		
1/24/2013	0.0	0.3	0.2	0.2	8.0	0.0	23	83	25	36	27	83		
1/25/2013	0.0	0.5	0.3	0.1	0.2	0.0	25	29	13	41	16	42		
Average	0.1	0.3	0.2	0.1	0.3	0.0	19	33	11	25	22	58		
Maximum	0.2	0.6	0.3	0.2	8.0	0.1	34	83	25	41	74	172		

#### 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

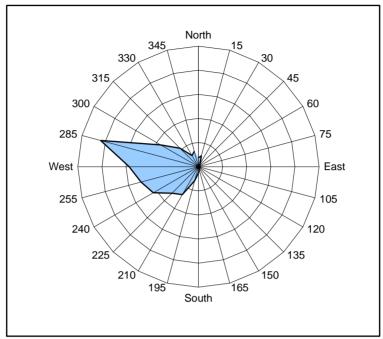


Figure 1. Wind rose for the period 01/19/13 through 01/25/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

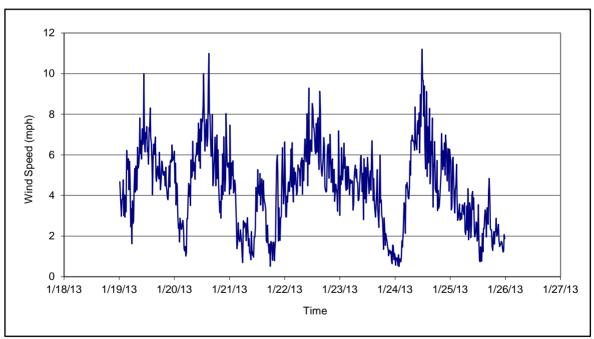


Figure 2. Wind speed for the period 01/19/13 through 01/25/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

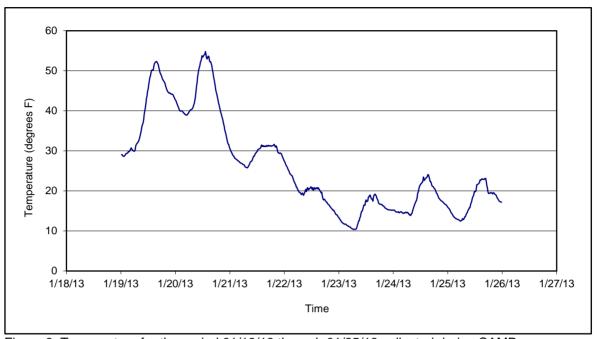


Figure 3. Temperature for the period 01/19/13 through 01/25/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

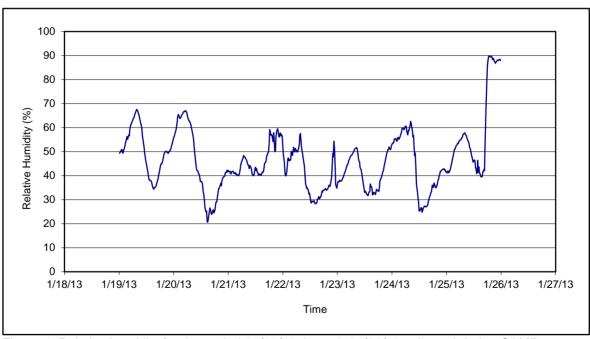


Figure 4. Relative humidity for the period 01/19/13 through 01/25/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

	System Ope	erations									General Observations						
		mpling Date	1/21/	2013	General Weath	ner Cond	itions:										
		n Start Time	contir		Clear- ~	26°F - ~	31°F										
		n Stop Time	contir														
	Total Hr	s Monitored	2	:4	General Descri												
					Health &			Backfilled in TFS									
		Calibrations	C		Continuous Air Monitoring Loaded clean backfill into TFS					Prepared TFS for relocation							
	(Т	ime/Status)	0631	-0807													
					Deconne												
					Relocate		y of clean backfill										
						d bill bic	icks		15 N	linuto							
	Alert		Start End # of Wind Upwind/ Upwind Downwind-Upwind City Countries					Site Activity During the Period									
Date	Trigger	Station	Time	Time	15-min Periods	Dir.	Downwind	Station(s)		Concentration Site Condition		(if applicable)	Actions Taken				
	00				Periods				Min**	Max**		` ,					
01/21/13	No exceedances												None taken				
													<del></del>				
												<u> </u>					
									-								
-																	
Comments:																	
-						DM 10	(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)					
			ΛI	ert Limit:			ug/m³	3.7 ppm			1 VOC (1-IIIII)	Odor Intensity (15-IIIIII)					
				ion Limit:			ug/m³	5.0 ppm			- 25 ppm	3 (n-butanol scale)					
Notes:			7101				- 3	0.0 рр			== FF						
	ections are presented	hy octant (i	e N NF	F SF S	S SW W NW)				PM-10 - no	articulate ma	atter (i.e. dust) less than 10 micr	rons in diameter					
	minus downwind cor										rganic compounds	one in diamoter					
	d Air Monitoring stat										.g						
	crograms per cubic r								NA - not a	oplicable							
	ts per million by volu									ita available		Field Representative:	R. Marshall				
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	Sustam On	aration a			1						General Observations				
	System Ope	mpling Date	1/22/	2013	General Weath	er Cond	itions:				General Observations				
		n Start Time			Clear- ~										
		n Stop Time													
		s Monitored	2	4	General Descri	iption of	Site Activities:								
					Health &	Safety N	Meeting								
	System	Calibrations	C		Continuo										
	(T	ime/Status)	0637	-0807			orary Fabric Structu	ire							
					Connecte										
					Received										
			1		Backfillin	g in TFS									
	Alert		Start	End	# of	Wind	Upwind/	Upwind	15-Minute Downwind-Upwind			Site Activity During the Period			
Date	Trigger	Station	Time	Time	15-min	Dir.	Downwind	Station(s)		ntration	Site Condition	(if applicable)	Actions Taken		
	rrigger		Tillie	Tillie	Periods	Dii.	Downwind	Station(s)	Min**	Max**		(ii applicable)			
01/22/13	No exceedances												None taken		
ſ					1										
					1										
Comments:															
								=======================================							
							(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)			
				ert Limit: on Limit:			ug/m³ ug/m³	3.7 ppm			- 25 nnm	- 2 (n hutanal acala)			
			ACII	OH LIMIT:		150	ug/III	5.0 ppm			25 ppm	3 (n-butanol scale)			
Notes:	·	d b	- NI NIT	- 0-	0 014/ 14/ 14/3				DM 40						
	ections are presented minus downwind cor										atter (i.e. dust) less than 10 micr rganic compounds	rons in diameter			
	minus downwind cor d Air Monitoring stat		are a ume	specific	companson.				1 400 - 10	ıaı volatilê 0	rganic compounds				
	crograms per cubic r								NA - not a	nnlicable					
										ata available		Field Representative:	R. Marshall		
pp pai	opmv - parts per million by volume										ND - no data available Field Representative: R. Marsr  Date: 1/22/20				



	System Op	erations									General Observations					
	Sa	ampling Date	1/23/	2013	General Weath	er Cond	itions:									
	Syster	m Start Time	contir	nuous	Clear- ~	11°F - ~	18°F									
	Syster	m Stop Time	contir	nuous												
	Total H	rs Monitored	2	4	General Descri	ption of	Site Activities:									
					Health &	Safety N	/leeting									
	System	Calibrations	C	k	Continuo	us Air M	onitoring		Deconned dump trucks							
	(	Time/Status)	0656	-0824	Excavate	d in Ter	nporary Fabric Stru	icture (TFS)	Tarped dump trucks							
					Received	deliver	of clean backfill		Installed d	lecon pad						
					Received	deliver	of gravel									
					Backfilled	d in TFS										
					# of				15-N	/linute						
Date	Alert	Station	Start	End	# 01 15-min	Wind	Upwind/	Upwind	Downwir	nd-Upwind	Site Condition	Site Activity During the Period	Actions Taken			
Date	Trigger	Station	Time	Time	Periods	Dir.	Downwind	Station(s)		ntration	Site Condition	(if applicable)	Actions Taken			
									Min**	Max**						
01/23/13	PM-10	FAM#6	18:36	18:36		WNW	CW/UW	N/A	101	101	1	After working hours	No actions taken			
01/23/13	PM-10	FAM#6	21:25	22:29		WNW	CW/UW	N/A	101	172	1	After working hours	No actions taken			
01/23/13	PM-10	FAM#6	23:28	23:41	13	WNW	CW/UW	N/A	103	145	1	After working hours	No actions taken			
		1			-											
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Comments:						<u> </u>			<u> </u>							
Comments:																
						PM-10	(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)				
			ΔΙ	ert Limit:			ug/m <sup>3</sup>	3.7 ppm				-				
				on Limit:			ug/m³	5.0 ppm			25 ppm	3 (n-butanol scale)				
Notes:			01				•	Fb			FF					
	ctions are presente	d by actant (i	o N NE	E 0E 0	2 21A/ 1A/ NIM/)				DM 10 n	articulata ma	atter (i.e. dust) less than 10 micr	one in diameter				
	ninus downwind co										rganic compounds	ons in diameter				
	d Air Monitoring sta		are a ullit	s specific	companson.				1 000 - 10	tai voiatiie 0	iganic compounds					
	rograms per cubic								NA - not a	nnlicable						
	ts per million by vol									pplicable ata available		Field Representative:	R. Marshall			
ppiliv - par	re her million by Aon	une							ואט - ווט מו	ata avallable		Fleid Representative: Date:	1/23/2013			
												Date:	1/23/2013			



	System Op	erations									General Observations				
		mpling Date	1/24/	2013	General Weath	ner Cond	itions:								
		n Start Time	contir		Clear- ~	14°F - ~	21°F								
		n Stop Time	contir												
	Total Hr	s Monitored	2	4	General Descri										
					Health &										
		Calibrations		Ok		ntinuous Air Monitoring  Deconned dump trucks avated in Temporary Fabric Structure (TFS)  Tarped dump trucks									
	(1	ime/Status)	0643	-0944				icture (TFS)	Tarped dump trucks Stockpiled clean soil						
							y of clean backfill y of gravel								
					Backfilled				Operated	noe-ram in 1	155				
					# of					linute					
Date	Alert Trigger	Station	Start Time	End Time	15-min Periods	Wind Dir.	Upwind/ Downwind	Upwind Station(s)	Downwind-Upwind Concentration Site Condition		Site Condition	Site Activity During the Period (if applicable)	Actions Taken		
									Min**	Max**					
1/24/2013	No exceedances					ļ						<del> </del>	None taken		
-	<del>                                     </del>					-			-			+			
Comments:	J				L	1	l	l .	l						
Comments.															
						PM-10	(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)			
			Al	ert Limit:			ug/m <sup>3</sup>	3.7 ppm				-			
				on Limit:			ug/m³	5.0 ppm			25 ppm	3 (n-butanol scale)			
** Upwind FAM - Fixe	* 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								PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter TVOC - total volatile organic compounds						
ug/m³ - mid	crograms per cubic r	neter							NA - not a				R. Marshall		
ppmv - par	ppmv - parts per million by volume										ND - no data available Field Representative:				



	System Ope	erations									General Observations						
		mpling Date	1/25/	2013	General Weath	ner Cond	itions:										
	System	n Start Time	conti	nuous	Clear- ~	14°F - ~	21°F										
		n Stop Time	conti														
	Total Hr	s Monitored	2	4	General Descri												
					Health &				Leveled terrain in OU-2								
		Calibrations		Ok						Deconned dump trucks							
	(Т	ime/Status)	0824	-0936				ucture (TFS)	Tarped du								
							of clean backfill of gravel		Stockpiled	clean soil noe-ram in 1	TEE						
					Backfilled					t soil from T							
					Dackille	111111111111111111111111111111111111111		1		linute	F3						
Date	Alert Trigger	Station	Start Time	End Time	# of 15-min Periods	Wind Dir.	Upwind/ Downwind	Upwind Station(s)	Downwind-Upwind Concentration		Site Condition	Site Activity During the Period (if applicable)	Actions Taken				
1/05/0010									Min**	Max**							
1/25/2013	No exceedances					1			1			+	None taken				
					-	<del>                                     </del>			-								
						1						+					
Comments:								1	l								
Comments:																	
						PM-10	(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)					
			Al	ert Limit:		100	ug/m³	3.7 ppm			-	- ,					
			Acti	ion Limit:		150	ug/m³	5.0 ppm			25 ppm	3 (n-butanol scale)					
** Upwind FAM - Fixe	ections are presented minus downwind cored Air Monitoring stat	ncentrations ion location							TVOC - to	tal volatile o	atter (i.e. dust) less than 10 mic rganic compounds	rons in diameter					
	crograms per cubic r								NA - not a								
ppmv - par	ppmv - parts per million by volume										ND - no data available Field Representative: R. Ma Date: 1/25/						

