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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 3, 2013

Regarding: Weekly Community Air Monitoring Report

Clifton Former MGP Site - Operable Unit 2 (OU-2) December 15, 2012 through December 21, 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 December 15, 2012 and December 21, 2012.

There were no fifteen-minute exceedances of the Total Volatile Organic Compounds (TVOC), or odor action levels associated with ground intrusive site activities during this reporting period. There was an exceedance above the alert level for Particulate Matter (PM-10) [dust] at an upwind station. 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

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Site Construction Activities

Construction activities during this reporting period included:

- Excavated in Temporary Fabric Structure (TFS)
- Backfilled shallow excavation
- Deconned dump trucks
- Installed plywood sound barriers along Bay Street
- Leveled terrain along North Portion of OU-2
- Loaded out soil from TFS
- Moved Jersey blocks
- Operated hoe-ram in TFS
- Performed shallow excavation
- Received deliveries of clean soil
- Restored sidewalk along Bay St
- Stockpiled clean backfill east of TFS eastern entrance
- Tarped dump trucks
- Tested density inside 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 December 19, 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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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		
12/15/2012	0.0	0.1	0.2	0.0	0.0	0.0	28	41	20	42	38	62		
12/16/2012	0.0	0.0	0.1	0.0	0.0	0.0	13	18	7	43	18	32		
12/17/2012	0.0	0.1	0.2	0.1	0.1	0.0	33	15	5	43	15	53		
12/18/2012	0.3	0.1	0.2	0.1	0.1	0.0	44	17	5	42	16	142		
12/19/2012	0.0	0.1	0.2	0.1	0.1	0.0	24	35	2	40	10	34		
12/20/2012	0.1	0.7	0.3	0.2	0.2	0.0	17	18	3	16	12	40		
12/21/2012	0.1	0.1	0.2	0.1	0.1	0.0	16	23	3	20	28	31		
Average	0.1	0.2	0.2	0.1	0.1	0.0	25	24	6	35	20	56		
Maximum	0.3	0.7	0.3	0.2	0.2	0.0	44	41	20	43	38	142		

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



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

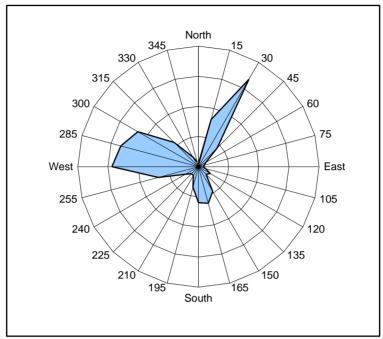


Figure 1. Wind rose for the period 12/15/12 through 12/21/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

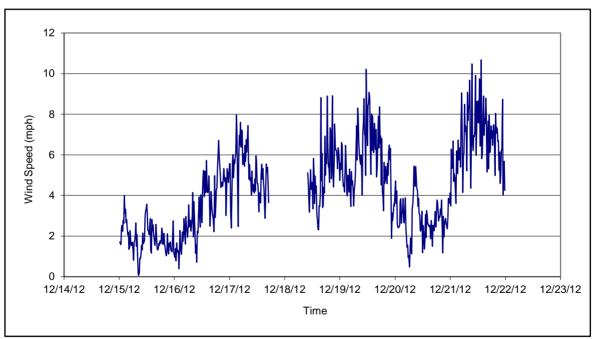


Figure 2. Wind speed for the period 12/15/12 through 12/21/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

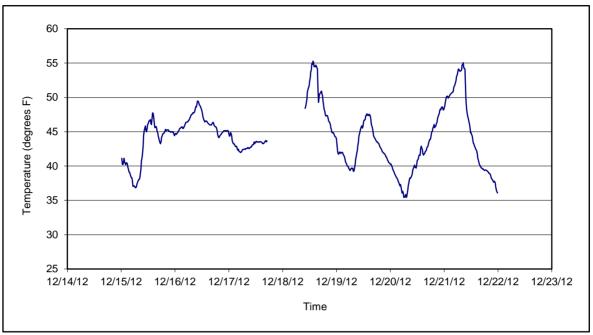


Figure 3. Temperature for the period 12/15/12 through 12/21/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

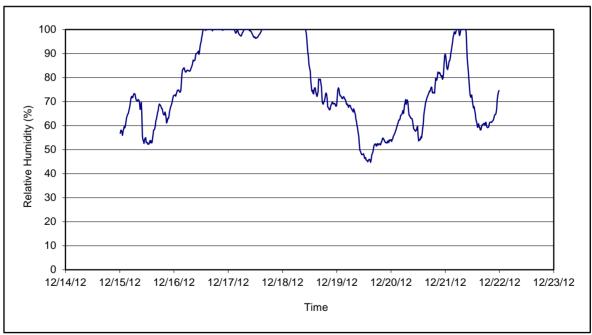


Figure 4. Relative humidity for the period 12/15/12 through 12/21/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

	System Ope	erations								Gene	ral Observations			General Observations										
		mpling Date		7/2012	General Weath																			
		Start Time		nuous	Overcast	- ~ 42°l	F - ~44°F																	
		n Stop Time s Monitored		nuous 24	General Descri	ption of	Site Activities:																	
					Health &																			
		Calibrations		Ok	Continuo				Relocated bin blocks															
	(T	ime/Status)	0732	-1006			orary Fabric Structu			shallow ex														
					Deconne Loaded o				Installed T		ong Bay St.													
					Tarped d				iristalleu i	ioo uiii														
					# of					linute														
Date	Alert	Station	Start	End	15-min	Wind	Upwind/	Upwind		id-Upwind	Site Condition	Site Activity During the Period	Actions Taken											
	Trigger		Time	Time	Periods	Dir.	Downwind	Station(s)	Min**	ntration Max**		(if applicable)												
12/17//2012	No Exceedances					-			IVIIII	ivian			No Action Taken											
	_							_																
					-																			
					-																			
					1																			
Comments:																								
							(15-min)	TVOC (15-min)		TV	OC (1-min)	Odor Intensity (15-min)												
				lert Limit:			ug/m³	3.7 ppm			-													
			Act	ion Limit:		150	ug/m³	5.0 ppm			25 ppm	3 (n-butanol scale)												
Notes:	ctions are presented	l bu aatant "	. NI NI		C C (A/) A/ A/(A/)				DM 40 =	articulate	ottor (i.e. duot) !	s than 10 microns in diameter												
	ctions are presented minus downwind cor										atter (i.e. dust) les organic compound:													
	d Air Monitoring stat			o opound	comparison.					iai roidillo (organio compound													
	rograms per cubic n							NA - not a	pplicable															
ppmv - par	ts per million by volu	ime							ND - no da	ata available	е	Field Representative:	R. Marshall											
												Date:												
													Page 1	i 01 1										



	System O	perations								Gene	ral Observations				
	Syste Syste	ampling Date om Start Time om Stop Time Hrs Monitored	conti	3/2012 nuous nuous 24	General Weath Overcast General Descri	t- ~ 42°f iption of	F - ~44°F Site Activities:								
		n Calibrations (Time/Status)		Ok -1006	Excavated Temporary Fabric Structure (TFS) Deconned dump trucks Loaded out soil from TFS					Installed plywood sound barriers along Bay Street Performed shallow excavation Restored siidewalk along Bay St. Operated hoe-ram in TFS Received deliveries of clean soil					
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 Activity During the Period (if applicable)	Actions Taken		
12/18//2012	PM-10	FAM#	11:12	11:28	17	wsw	UW	N/A	101	142	1	Bulldozer leveling the terrain	Construction manager was notified No action was taken		
Comments:															
** Upwind n FAM - Fixed	ctions are presente ninus downwind co d Air Monitoring sta	oncentrations ation location	Act		S, SW, W, NW).	100 150	(15-min) ug/m³ ug/m³	TVOC (15-min) 3.7 ppm 5.0 ppm	TVOC - to	articulate m tal volatile c	OC (1-min) - 25 ppm atter (i.e. dust) less	Odor Intensity (15-min) 3 (n-butanol scale) s than 10 microns in diameter			
	rograms per cubic s per million by vol								NA - not a ND - no da	pplicable ita available	e	Field Representative: Date:	R. Marshall 12/18/2012 Page 1 of _1_		



	System Op	erations								Gene	ral Observations				
		ampling Date	12/19	9/2012	General Weath	ner Cond	litions:			23110					
	Syster	m Start Time	conti	nuous	Clear- ~	42°F - ~	-46°F								
	Syster	m Stop Time	conti	nuous											
	Total H	rs Monitored	2	24	General Descr	iption of	Site Activities:								
		Health & Safety Meeting													
	System	(Ok	Continuo	us Air M	lonitoring		Installed plywood sound barriers along Bay Street							
	(Time/Status)	0633	3-0802			orary Fabric Struct	ure (TFS)	Backfilled	shallow exc	cavation				
					Deconne						North Portion of O	U-2			
					Loaded				Operated	hoe-ram in	TFS				
					Tarped of	lump tru	cks		Received	deliveries o	f clean soil				
					# of					linute					
Date	Alert	Station	Start	End	15-min	Wind	Upwind/	Upwind		d-Upwind	Site Condition	Site Activity During the Period	Actions Taken		
Date	Trigger	Otation	Time	Time	Periods	Dir.	Downwind	Station(s)		ntration		(if applicable)			
	L								Min**	Max**					
12/19/2012	No Exceedances			_	ļ	<u> </u>			ļ				No Action Taken		
	1			 	1	 									
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Comments:															
							(15-min)	TVOC (15-min)		TV	OC (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:															
	ections are presente											than 10 microns in diameter			
** Upwind	minus downwind co	ncentrations									organic compounds				
	ed Air Monitoring sta														
	crograms per cubic i								NA - not a						
ppmv - pai	ts per million by volu	ume							ND - no da	ata available	Э	Field Representative:	R. Marshall		
												Date:	12/19/2012		
1													Page 1 of 1		



	System Ope	erations							General Observations						
		mpling Date	12/20	/2012	General Weath	ner Cond	itions:								
	System	n Start Time	conti	nuous	Overcast	t- ~ 36°F	- ~43°F								
	Systen	n Stop Time	conti	nuous											
	Total Hr	s Monitored	2	4	General Descri										
					Health &										
	System	Calibrations	C)k	Continuo				Installed p	ywood sour	nd barriers along Bay Street	Stockpilled clean backfill east of TFS eastern	entrance.		
	(T	ime/Status)	0804	-1054	Deconned dump trucks					shallow exc	avation	Tested density inside TFS			
											North Portion of OU-2				
					Loaded of				Moved Jer						
					Tarped d	lump tru	cks		Received	deliveries of	clean soil				
										linute					
Date	Alert	Station	Start	End	# of 15-min	Wind	Upwind/	Upwind		d-Upwind	Site Condition	Site Activity During the Period	Actions Taken		
Date	Trigger	Otation	Time	Time	Periods	Dir.	Downwind	Station(s)	Concentration		one conducti	(if applicable)	Actions raisen		
									Min**	Max**					
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comments.															
						PM-10	(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)			
			Al	ert Limit:			ug/m ³	3.7 ppm			-				
				ion Limit:			ug/m³	5.0 ppm			25 ppm	3 (n-butanol scale)			
Notes:							-	• •			••	,			
	ctions are presented	hy octant (i	e N NF	F SF	S SW W NW)				PM-10 - na	rticulate m	atter (i.e. dust) less than 10 mic	rons in diameter			
	ninus downwind cor										rganic compounds	TOTIS III GIGITIELEI			
	d Air Monitoring stat		a. o a tiirit	o opoomic	o compandon.					a. volatile o	gao copca.ido				
	rograms per cubic r								NA - not a	oplicable					
											1	Field Representative:	C.John		
FF PG.	ppmv - parts per million by volume										ND - no data available Field Representative: Date: 12				



	System Op	erations									General Observations					
		mpling Date	12/21	/2012	General Weath	er Cond	itions:									
	Systen	n Start Time	contir	nuous	Overcast	- ~ 36°F	- ~43°F									
		n Stop Time	contir													
	Total Hr	s Monitored	2	4	General Descri											
					Health &											
		Calibrations	C		Continuo											
	(1	ime/Status)	0804	-1054			orary Fabric Struc	ture (TFS)	Installed plywood sound barriers along Bay Street Relocated equipment							
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					Tarped d						fill east of TFS eastern entrance.					
	1					lump tru	JK3			linute	diffices of 11 5 eastern entrance.					
Date	Alert Trigger	Station	Start Time	End Time	# of 15-min Periods	Wind Dir.	Upwind/ Downwind	Upwind Station(s)	Downwind-Upwind Concentration Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken			
12/21/2012	No Exceedances								IVIII	IVIAX			No Action Taken			
12/21/2012	INO EXCEBUAILES												NO ACTION TAKEN			
									1							
Comments:					•											
						PM-10	(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)				
				ert Limit:			ug/m³	3.7 ppm			-	-				
			Acti	ion Limit:		150	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							
	crograms per cubic r ts per million by volu								NA - not a	oplicable ita available		Field Penrocenteting	Clohn			
ppiliv - par	re her million by Aoir	iiie							אט יווי סמ	ııa avallaDle	ı	Field Representative: C.John Date: 12/21/2012				

