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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: February 11, 2013

Regarding: Weekly Community Air Monitoring Report

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

February 2, 2013 through February 8, 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 February 2, 2013 and February 8, 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. 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 in TFS
- Deconned dump trucks
- Leveled soil in TFS
- Loaded out soil from TFS
- Operated hoe-ram in TFS
- Operated roller in TFS
- Performed shallow excavation in OU-2
- Received delivery of clean backfill and gravel
- Relocated Bin-Blocks
- Relocated skid plates
- Relocated TFS
- Removed TIGG unit from TFS
- Stockpiled clean soil
- Tarped dump trucks
- Tested soil for density TFS
- Transported clean soil from inside of TFS
- Transported soil into TFS
- Attached TIGG unit to 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 February 6, 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 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		
2/2/2013	0.1	0.0	0.2	0.0	0.1	0.0	1	6	4	46	13	8		
2/3/2013	0.0	0.0	0.2	0.0	0.1	0.0	1	6	13	48	29	15		
2/4/2013	0.1	0.1	0.4	0.3	0.2	0.0	34	26	15	49	31	30		
2/5/2013	0.1	0.4	0.3	0.2	0.3	0.3	87	35	18	27	37	72		
2/6/2013	0.1	0.1	0.2	0.1	0.3	0.0	98	59	38	43	60	64		
2/7/2013	0.1	0.2	0.3	0.1	0.3	0.0	45	30	15	42	22	37		
2/8/2013	0.1	3.5	0.4	0.5	0.5	0.0	30	13	9	44	13	53		
Average	0.1	0.6	0.3	0.2	0.3	0.1	42	25	16	43	29	40		
Maximum	0.1	3.5	0.4	0.5	0.5	0.3	98	59	38	49	60	72		

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

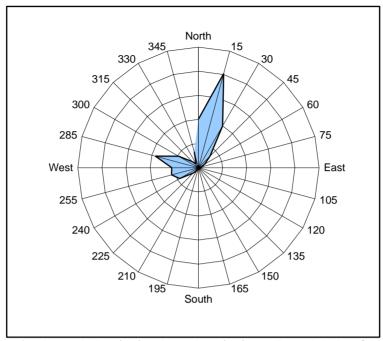


Figure 1. Wind rose for the period 02/02/13 through 02/08/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

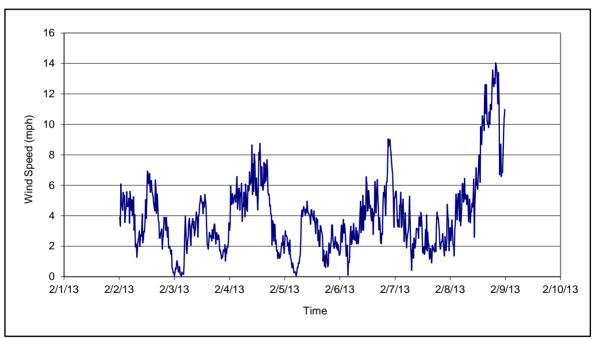


Figure 2. Wind speed for the period 02/02/13 through 02/08/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

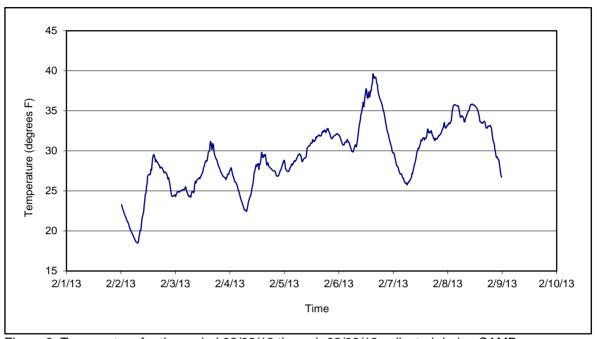


Figure 3. Temperature for the period 02/02/13 through 02/08/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

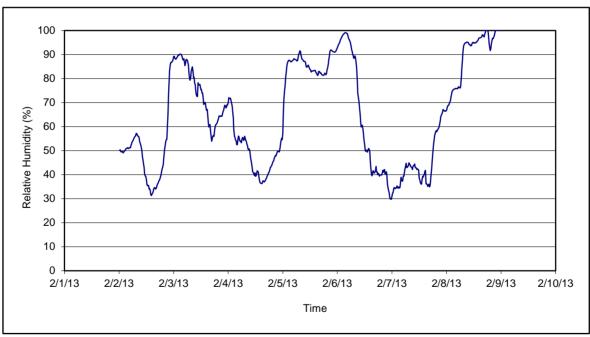


Figure 4. Relative humidity for the period 02/02/13 through 02/08/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

	System Op	erations									General Observations						
	Sa	mpling Date	2/4/2	2013	General Weath	ner Cond	ditions:										
	Syster	n Start Time	contir	nuous	Clear ~ 2	22°F - ~2	28°F										
		n Stop Time	contir	nuous													
	Total H	rs Monitored	2	24	General Descr	iption of	Site Activities:										
					Health &	Safety I	Meeting										
	System Calibrations Ok Continuous Air Monitoring																
	(Γime/Status)	0635	-0924	Excavate	ed in Ter	mporary Fabric Stru	icture (TFS)	Deconned dump trucks Tarped dump trucks								
		•			Received	d deliver	y of clean backfill		Stockpiled clean soil								
					Transpo	rted soil	into TFS		Operated I	noe-ram in TFS	•						
					Backfille	d in TFS	;		Loaded ou	t soil from TFS							
									15-	Minute							
5.	Alert	0:	Start	End	# of 15-min	Wind	Upwind/	Upwind		ind-Upwind	011 0 1111	Site Activity During the Period	A # . T .				
Date	Trigger	Station	Time	Time	Periods	Dir.	Downwind	Station(s)		entration	Site Condition	(if applicable)	Actions Taken				
					Pellous				Min**	Max**							
2/4/2013	No exceedances												None taken				
i																	
Comments:	1				·												
						PM-10	(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)					
			Al	ert Limit:			ug/m ³	3.7 ppm			-	- '					
Action Limit: 150 ug/m ³ 5.0 ppm											25 ppm	3 (n-butanol scale)					
Notes:																	
	ections are presented	d by octant (i	e N NF	F SF S	S SW W NW)				PM-10 - na	articulate matte	r (i.e. dust) less than 10 micron	s in diameter					
	* 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.										nic compounds	o d.d					
	d Air Monitoring stat		u uiiit	o opcome	. compandon.					oidiic oiga	copourido						
	crograms per cubic i								NA - not applicable								
	ts per million by volu								NA - not applicable ND - no data available Field Representative: R. Marshall								
ppiliv - pai	to per million by voit	U							יים - ווט עמ	na avallable		Date:	2/4/2013				
												Date.	2/4/2013				



	System Op	erations									General Observations					
		mpling Date	2/5/2	2013	General Weath	ner Cond	ditions:									
	Systen	n Start Time	contir	nuous	Overcast	t w/snov	v ~ 25°F - ~32°F									
	Syster	n Stop Time	contir	nuous												
Total Hrs Monitored 24 General Description of Site Activit																
					Health &	Safety I	Meeting									
	System	Calibrations	C)k	Continuo	ous Air M	Monitoring		Deconned dump trucks							
	(1	Γime/Status)	0635	-0924	Operated	d hoe-ra	m in TFS		Tarped du	mp trucks						
					Received	d deliver	y of clean backfill		Stockpiled	clean soil						
					Transpor	rted soil	into TFS		Loaded ou	t soil from TFS						
					Backfille	d in TFS	3									
					# of				15-	Minute						
Date	Alert	Station	Start	End	# 01 15-min	Wind		Upwind	Downw	ind-Upwind	Site Condition	Site Activity During the Period	Actions Taken			
Date	Trigger	Station	Time	Time	Periods	Dir.	Downwind	Station(s)	Concentration		Site Condition	(if applicable)	Actions Taken			
					1 Cilous				Min**	Max**						
2/5/2013	No exceedances							-					None taken			
													<u> </u>			
Comments:									1							
Comments:																
						DM-10	(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)				
			ΔΙ	ert Limit:			ug/m ³	3.7 ppm			1 100 (1-11111)	out intensity (13-11111)				
				on Limit:			ug/m ³	5.0 ppm			25 ppm	3 (n-butanol scale)				
Netoo			71011	O. Lillin.			-5	о.о ррпі			20 pp	o (ii balanoi soale)				
Notes:	ations are pres	d bu oatart /:	. NI NI	F 6F	C C/A/ /A/ N/!A/\				DM 10	untiquilata na - ++ -	r (i.e. duet) less than 10!	a in diameter				
	ections are presented minus downwind cor										er (i.e. dust) less than 10 micron unic compounds	s in diameter				
			are a time	specific	companson.				1 VOC - 101	ai voiaille orga	inic compounds					
	ed Air Monitoring stat								NIA not -	nliaahla						
	ug/m³ - micrograms per cubic meter ppmv - parts per million by volume								NA - not ap	opiicable ita available		Field Beautation	R. Marshall			
ppmv - pai	ts per million by volu	ıme							אט - no da	ita available		Field Representative:				
l												Date:	2/5/2013			



	System Op	erations									General Observations						
	Sa	mpling Date	2/6/	2013	General Weath	ner Conc	litions:										
		n Start Time		nuous	Overcast	t ~ 28°F	- ~38°F										
		n Stop Time		nuous													
	Total Hi	s Monitored	2	24	General Descr												
										Performed shallow excavation in OU-2							
		Calibrations)k						soil from TFS							
	(1	Time/Status)	0657	-0830	Relocate												
					Transpor												
					Backfille	d in TFS											
	1			l			I		15.1	Minute		T					
	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				
	1119901			1	Periods	J	Domining	Otalion(b)	Min**	Max**		(ii applicable)					
2/6/2013	No exceedances												None taken				
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Comments:	•				•							'					
						DM 40	(45!)	T)(00 (45i)			T)(00 (4i)	Odes Interesity (45 min)					
			Λ.	ort Limit			(15-min) ug/m ³	TVOC (15-min) 3.7 ppm			TVOC (1-min)	Odor Intensity (15-min)					
	Alert Limit: Action Limit:						ug/m ³	5.0 ppm			25 ppm	3 (n-butanol scale)					
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Notes:	ctions are presented	hy octort /:	0 NI NIT	E 0E 1	C C/A/ /A/ N//A/)				DM 10	rticulata matta	er (i.e. dust) less than 10 microns	in diameter					
	minus downwind cor										inic compounds	s in diameter					
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	crograms per cubic r								NA - not applicable								
	omy - parts per million by volume								NA - not applicable ND - no data available Field Representative: R. Marshall								
ppiiiv pai	to per minion by voic											Date:	2/6/2013				



	System Op	erations									General Observations					
	Sa	mpling Date	2/7/2	2013	General Weath	ner Cond	ditions:									
	Syster	n Start Time	contin	nuous	Overcas	t ~ 26°F	- ~32°F									
	Syster	m Stop Time	contin	nuous												
	Total H	rs Monitored	2	4	General Descr	iption of	Site Activities:									
					Health &	Safety I	Meeting		Shallow Excavation performed in OU-2							
	System	Calibrations	C	k	Continuo	Monitoring		Roller operated in TFS								
	. (1	Fime/Status)	0809	-0911	Relocate	d Bin-Bl	locks		Bulldozer spread backfill in TFS							
					Transpo	rted soil	into TFS		Delivery of							
					Backfille	d in TFS	3		Density tes	t performed in	TFS					
									,	•						
					# of				15-	Minute						
Date	Alert	Station	Start	End	# or 15-min	Wind		Upwind	Downwind-Upwind Site Condit		Sita Candition	Site Activity During the Period	Actions Taken			
Date	Trigger	Station	Time	Time	Periods	Dir.	Downwind	Station(s)			Site Condition	(if applicable)	Actions Taken			
					1 enous				Min**	Max**						
2/7/2013	No exceedances									•			None taken			
										•						
Comments:																
						DM 40	(45!)	T)(00 (45i)			T/(00 (4!)	Oden Interesity (45 min)				
				ert Limit:			(15-min) ug/m ³	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)				
				ert Limit: on Limit:			ug/m³	3.7 ppm 5.0 ppm			- 25 ppm	3 (n-butanol scale)				
t			Acti	OH LIMIL		130	ug/III	5.0 ppm			20 ррш	3 (II-buidHol scale)				
Notes:																
	ections are presente								PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter							
	minus downwind cor		are a time	e specific	comparison.				I VOC - tot	al volatile orga	nic compounds					
	d Air Monitoring star															
	ug/m³ - micrograms per cubic meter								NA - not applicable							
ppmv - par	ppmv - parts per million by volume								ND - no da	ta available		Field Representative:	C.John			
												Date:	2/7/2013			



	System Op	erations									General Observations						
		mpling Date	2/8/2	2013	General Weath	ner Cond	litions:										
	Systen	n Start Time	contir	nuous	Overcas	t w/snov	/ ~ 31°F - ~41°F										
	Syster	n Stop Time	contir	nuous													
	Total Hi	rs Monitored	2	4	General Descr	iption of	Site Activities:										
					Health &	Safety I	Meeting		Relocated TFS								
	System	Calibrations	С)k						Operated roller in TFS							
	, (1	Γime/Status)	0720-	-0924						Leveled soil in TFS							
	•	•			Transpo	rted clea	n soil from inside o	of TFS	Received delivery of gravel								
					Backfille	d in TFS			Removed 7	TIGG unit from	TFS						
					Relocate	d bin blo	ocks										
					u - t				15-	Minute							
D-4-	Alert	04-4:	Start	End	# of 15-min	Wind	Upwind/	Upwind	Downwind-Unwind		Oit - O diti	Site Activity During the Period	Astions Tolon				
Date	Trigger	Station	Time	Time	Periods	Dir.	Downwind	Station(s)	Conc	entration	Site Condition	(if applicable)	Actions Taken				
					1 enous				Min**	Max**							
2/8/2013	No exceedances												None taken				
						<u> </u>											
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0																	
Comments:																	
						DM 10	(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)					
			Α1	ert Limit:			ug/m ³	3.7 ppm			1 VOC (1-min)	Odor intensity (15-min)					
				ert Limit: on Limit:			ug/m ³	3.7 ppm 5.0 ppm			- 25 ppm	3 (n-butanol scale)					
h			AUI	OH EHHIL		130	-g,	3.0 ррпі			20 ppiii	3 (II-butailoi scale)					
Notes:				- 0-					D14.40								
											r (i.e. dust) less than 10 micron	s in diameter					
	minus downwind cor		are a time	specific	comparison.				I VOC - tot	aı volatile orga	nic compounds						
	d Air Monitoring stat								NIA								
	crograms per cubic r						NA - not ap			5.115	0.1.1						
ppmv - par	ts per million by volu	ıme							ND - no da	ta available		Field Representative:	C.John				
l												Date: _	2/8/2013				

