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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: September 18, 2012

Regarding: Weekly Community Air Monitoring Report

Clifton Former MGP Site - Operable Unit 2 (OU-2) September 8, 2012 through September 14, 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 September 8, 2012 and September 14, 2012.

There were no fifteen-minute exceedances of the Particulate Matter (PM-10) [dust] or odor action levels associated with ground intrusive site activities during this reporting period. There was one fifteen-minute period of Total Volatile Organic Compounds (TVOC) exceedances caused by intrusive work in a trench northwest of the temporary fabric structure. The construction manager was notified and intrusive work in the trench was halted while the bottom of the trench was tarped and foam was sprayed. Levels of TVOC dropped below the action and alert levels within fifteen minutes and work proceeded. 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

Weekly Community Air Monitoring Report Clifton Former MGP Site Operable Unit 2 (OU-2) September 8, 2012 through September 14, 2012 September 18, 2012 Page 2

fixed station

- Elevated concentrations (if any)
- Meteorological data

Site Construction Activities

Construction activities during this reporting period included:

- Backfilled in Temporary Fabric Structure (TFS)
- Completed relocation of TFS
- Deconned dump trucks
- Loaded concrete waste into dump trucks
- Loaded out concrete waste off site
- Loaded out contaminated soil from TFS off site
- Operated hoe-ram on foundation of one-story building
- Operated odor suppressant systems
- Operated street sweeper on Willow Avenue
- Received deliveries of clean soil
- Relocated TFS
- Stockpiled clean backfill

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 September 12, 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) September 8, 2012 through September 14, 2012 September 18, 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/m³	< 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	
9/8/2012	0.1	0.0	0.0	0.2	0.1	0.2	44	9	3	2	12	0	
9/9/2012	0.0	0.0	0.1	0.0	0.1	0.1	26	6	3	0	1	0	
9/10/2012	0.1	0.1	0.1	0.1	0.1	0.2	16	8	3	6	15	0	
9/11/2012	0.1	0.2	0.1	0.1	0.3	0.3	19	8	3	10	25	1	
9/12/2012	0.4	0.2	0.2	0.2	0.3	1.8	35	15	9	28	36	67	
9/13/2012	0.3	0.2	0.2	0.3	0.2	8.0	34	7	2	1	7	22	
9/14/2012	0.1	0.2	0.4	0.3	0.3	0.4	21	6	2	0	5	13	
Average	0.1	0.1	0.2	0.2	0.2	1.6	28	8	4	7	14	15	
Maximum	0.4	0.2	0.4	0.3	0.3	8.0	44	15	9	28	36	67	

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



	System Op	erations									General Observations					
		ampling Date	9/10	/2012	General We	eather Co	onditions:									
	Syste	m Start Time	conti	nuous	Clear- ~	55°F - ~7	3°F									
		m Stop Time		nuous												
		rs Monitored		24	General De	scription	of Site Activities:									
					Health &				Deconned dump trucks							
	System	Calibrations		Ok	Continuo				Transported clean soil into TFS via West door							
	(0641	-0817	Stockpile				Loaded out impacted soil off site via dump trucks								
	,			Loaded o	ut concre	ete waste off site vi	a dumppm trucks	Received de	eliveries of clea	n backfill						
							porary Fabric Struc		Operated ho	e-ram on foun	dation of former one-story	building				
							pressant systems				•	G				
					,				15-	Minute						
_	Alert		Start	End	# of 15-min	Wind	Upwind/	Upwind		nd-Upwind		Site Activity During the Period				
Date	Trigger	Station	Time	Time	15-min Periods	Dir.	Downwind	Station(s)	Conc	entration	Site Condition	(if applicable)	Actions Taken			
	**				Perious				Min**	Max**		,				
9/10/2012	No exceedances															
Comments	:															
							15-min)	TVOC (15-mi	n)	J	VOC (1-min)	Odor Intensity (15-min)				
				lert Limit:		100		3.7 ppm			-	-				
			Act	tion Limit:		150	ıg/m²	5.0 ppm			25 ppm	3 (n-butanol scale)				
Notes:																
	irections are presented					V).					(i.e. dust) less than 10 mid	crons in diameter				
	d minus downwind cor		re a time	specific o	comparison.				TVOC - tota	l volatile organ	ic compounds					
	xed Air Monitoring stat															
-	nicrograms per cubic r						NA - not app									
ppmv - p	arts per million by volu	ime							ND - no data	a available		Field Representative:				
1											Date: 9/10/2012					



	System Op	erations				General Observations									
		ampling Date		/2012	General W										
		m Start Time		inuous	Clear- ~	55°F - ~	73°F								
		m Stop Time		inuous											
	Total H	rs Monitored	2	24			of Site Activities:								
					Health &	Safety N	Meeting		Deconned	dump trucks		Tarped dump trucks			
	System		Ok	Continuo						TFS via West door	Stockpiled concrete waste				
	(0630	0-0724	Stockpile				Loaded out impacted soil off site via dump trucks							
						ete waste off site v		Received deliveries of clean backfill							
							nporary Fabric Stru				dation of former one-story but	ilding			
					Operated	l odor su	ppressant systems			outside near We	est side of TFS				
					# of					-Minute					
Date	Alert	Station	Start	End	15-min	Wind	Upwind/	Upwind		vind-Upwind	Site Condition	Site Activity During the Period	Actions Taken		
Date	Trigger	Otation	Time	Time	Periods	Dir.	Downwind	Station(s)		centration	one container	(if applicable)	7 totiono Tanon		
									Min**	Max**					
9/11/2012	No exceedances														
															
															
	<u> </u>														
-	 			├ ──											
	 														
	—														
Comments	:				•										
							(15-min)	TVOC (15-m	in)		TVOC (1-min)	Odor Intensity (15-min)			
				Nert Limit:			ug/m ³	3.7 ppm			-	-			
			Act	tion Limit:		150	ug/m ³	5.0 ppm			25 ppm	3 (n-butanol scale)			
Notes:															
* Wind d	irections are presented	d by octant (i.	e. N, NE,	, E, SE, S	, SW, W, NV	V).			PM-10 - pa	articulate matter	(i.e. dust) less than 10 micror	ns in diameter			
** Upwin	d minus downwind con	centrations a	re a time	specific o	comparison.				TVOC - tot	al volatile organi	ic compounds				
	xed Air Monitoring stat														
ug/m³ - n	nicrograms per cubic n	neter							NA - not ap	oplicable					
ppmv - p	arts per million by volu	ime							ND - no da	ta available		Field Representative:	R. Marshall		
												Date:	9/11/2012		



	System Op	nerations				General Observations										
		ampling Date	9/12	/2012	General We	eather Co	onditions:				Concrar Observations					
		m Start Time		nuous	Clear- ~ 5											
		m Stop Time		nuous			-									
		Irs Monitored		24	General De	scription	of Site Activities:									
			_		Health &				Deconned	dump trucks		Tarped dump trucks				
	System	C)k							TFS via West door	Stockpiled concrete waste					
	(Time/Status) 062				Continuous Air Monitoring Stockpiled clean soil						off site via dump trucks	Delivery of Clean Backfill				
	(Time/Status) 0025-074					Excavated in Temporary Fabric Structure (TFS)				eliveries of clea		Donvery or Gloan Basian				
							ppressant systems				dation of former one-story b	uilding				
											est side of TFS	and ing				
		1								-Minute	1					
	Alert		Start	End	# of	Wind	Upwind/	Upwind		ind-Upwind		Site Activity During the Period				
Date	Trigger	Station	Time	Time	15-min	Dir.	Downwind	Station(s)		centration	Site Condition	(if applicable)	Actions Taken			
	ggo.		111110		Periods	J	Dominia	Cialion(0)	Min**			(ii applicable)				
9/12/2012	No exceedances															
		1								1						
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Comments:					•		•		•	*	•					
							(15-min)	TVOC (15-m	in)		TVOC (1-min)	Odor Intensity (15-min)				
			Α	lert Limit:		100	ug/m³	3.7 ppm			-	- '				
			Act	ion Limit:		150	ug/m ³	5.0 ppm			25 ppm	3 (n-butanol scale)				
Notes:																
	rections are presented	d by octant (i.e	N NF	F SF S	SW W NV	V)			PM-10 - na	rticulate matter	(i.e. dust) less than 10 micro	ons in diameter				
	I minus downwind cor					- /-				al volatile organ		one in diameter				
	red Air Monitoring stat			Spoomb (pa110011.					a Jidalio organi	compoundo					
	icrograms per cubic r								NA - not ap	nlicable						
-	arts per million by volu								ND - no da			Field Representative:	R. Marshall			
ppinv - p	and per million by voic	anno							14D - 110 Ua	a available		Date:	9/12/2012			
												Date.	3/12/2012			



	System Op	perations									General Observations					
		ampling Date	9/13	/2012	General We	ather C	onditions:									
	Syste	m Start Time	conti	nuous	Clear- ~ 6	3°F - ~7	′6°F									
	Syste	em Stop Time	conti	nuous												
	Total H	Irs Monitored	2	24	General De	scription	of Site Activities:									
					Health & Safety Meeting					Received deliveries of clean backfill						
	System	Calibrations		Ok	Continuous Air Monitoring					Operated hoe-ram on foundation of former one-story building						
		(Time/Status)	0735	-0925						Excavated outside near West side of TFS						
										p trucks						
					Transpor	ed clear	soil into TFS via \	Vest door	Stockpiled of	oncrete waste						
					# of				15	-Minute						
Date	Alert	Station	Start	End	# 01 15-min	Wind	Upwind/	Upwind	Downw	ind-Upwind	Site Condition	Site Activity During the Period	Actions Taken			
Date	Trigger	Station	Time	Time	Periods	Dir.	Downwind	Station(s)	Cond	centration	Site Condition	(if applicable)	Actions Taken			
					i ellous				Min**	Max**						
													The construction manager was notified and			
													intrusive work in the trench was trench			
9/13/2012	TVOC	FAM#6	10:58	11:11	14	S	DW	FAM#4	5.6	8.0	3	Intrusive work in trench NW of TFS	halted while the bottom of the trench was			
													tarped and foam was applied			
		1														
	+ + + + + + + + + + + + + + + + + + + +															
Comments:																
						PM-10	(15-min)	TVOC (15-m	in)		TVOC (1-min)	Odor Intensity (15-min)				
			А	lert Limit:		PM-10 (15-min) TVOC (15-min 100 ug/m ³ 3.7 ppm			,		-					
				tion Limit:			ug/m ³	5.0 ppm			25 ppm	3 (n-butanol scale)				
Notes:			. 101				-	pp			- cr		1			
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	d minus downwind cor					. ,.				I volatile organic						
	ked Air Monitoring sta			-,						301110						
	nicrograms per cubic r								NA - not app	olicable						
-	-								NA - not applicable							

ND - no data available



ppmv - parts per million by volume

Field Representative:

Date:

C. John 9/13/2012

	System Op	erations				General Observations									
	Sa	ampling Date	9/14	/2012	General W	eather C	onditions:								
	Syste	m Start Time	conti	nuous	Clear- ~	61°F - ~	76°F								
		m Stop Time		nuous											
	Total H	rs Monitored		24			of Site Activities:								
					Health &				Tarped dur						
		Calibrations		Ok		Continuous Air Monitoring Stockpiled concrete was									
	(Time/Status)	0624	I-0830	Stockpile				Pewp for T	FS move					
					Deconne										
							es of clean backfill								
					Operated	d hoe-rar	n on foundation of t	former one-story building							
					# of					5-Minute					
Date	Alert	Station	Start	End	15-min	Wind	Upwind/	Upwind		wind-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 Taken		
									Min*	Max**					
9/14/2012	No Exceedances										ļ				
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				tion Limit:			ug/m³	5.0 ppm			25 ppm	3 (n-butanol scale)			
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	d minus downwind cor									rticulate matter (i al volatile organio		III diametei			
	xed Air Monitoring stat		are a uille	Specialc	companison.				1 400 - 101	ai voiatile organit	o compounds				
									NA - not an	nlicable					
-	ug/m³ - micrograms per cubic meter NA - not applicable ND - no data available Field Representative: C. John											C. John			



9/14/2012