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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 17, 2012

Regarding: Weekly Community Air Monitoring Report

Clifton Former MGP Site - Operable Unit 2 (OU-2) September 1, 2012 through September 7, 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 1, 2012 and September 7, 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 were fifteen-minute exceedances for Particulate Matter (PM-10) [dust]. The elevated levels were caused by stockpiling clean backfill in near the former one-story building area. The construction manager was notified, water was sprayed, and the levels dropped below the action and alert levels. 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

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- 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 5, 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/m ³)									
	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6				
9/1/2012	0.1	0.1	0.1	0.0	0.1	0.1	66	192	4	8	46	0				
9/2/2012	0.1	0.0	0.1	ND*	0.1	0.0	63	16	3	8	14	0				
9/3/2012	0.0	0.1	0.1	ND*	0.1	0.0	26	12	4	29	7	1				
9/4/2012	0.1	0.1	0.1	0.1	0.1	0.1	137	7	13	18	17	3				
9/5/2012	0.1	0.0	1.0	0.1	0.1	0.1	58	10	3	17	20	0				
9/6/2012	0.1	0.1	0.1	0.1	0.1	0.1	27	6	3	9	15	28				
9/7/2012	0.2	0.1	0.1	0.2	0.2	0.4	57	17	3	30	61	106				
Average	0.1	0.1	0.2	0.1	0.1	0.1	62	37	5	17	26	20				
Maximum	0.2	0.1	1.0	0.2	0.2	0.4	137	192	13	30	61	106				

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

Due to equipment malfunction there is no recordable data for PM-10 @ FAM#4 on 9/2/12 or 9/3/12.



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

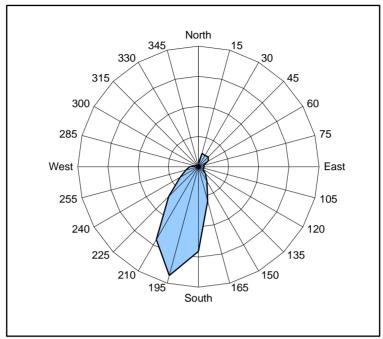


Figure 1. Wind rose for the period 09/01/12 through 09/07/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

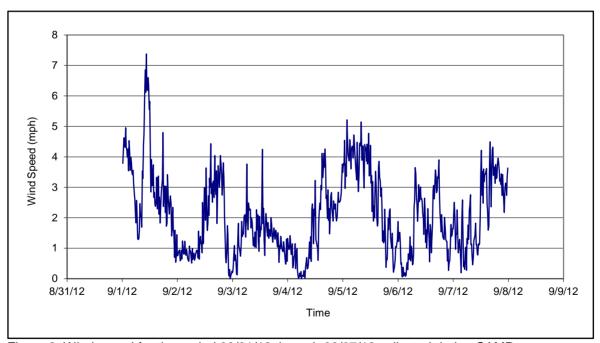


Figure 2. Wind speed for the period 09/01/12 through 09/07/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

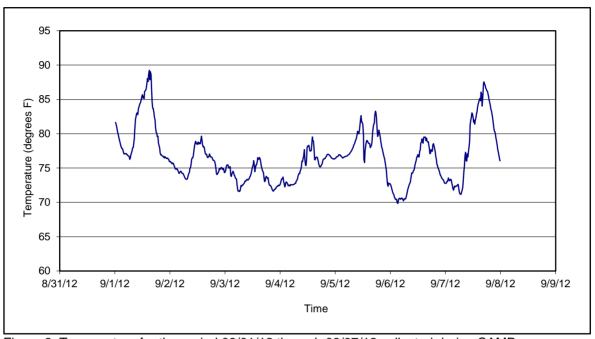


Figure 3. Temperature for the period 09/01/12 through 09/07/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

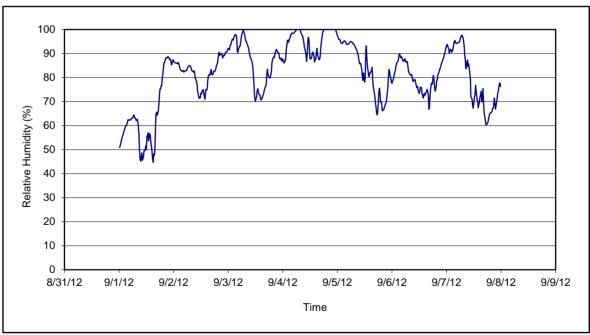


Figure 4. Relative humidity for the period 09/01/12 through 09/07/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

		perations									General Observations				
		Sampling Date tem Start Time		2012	General We	ather Co	onditions:								
		nuous	Clear- ~ 73°F - ~79°F												
		tem Stop Time		nuous											
	Total	Hrs Monitored	2	24		General Description of Site Activities:									
					Health &				Stockpiled of	oncrete waste					
	Syste	m Calibrations		Ok	Continuous Air Monitoring Operated hoe-ram on foundation of one-story by				Relocated T	FS					
		(Time/Status)	0646	-0820				one-story building		lor suppressan					
							es of clean soil.			materials throu					
					Stockpiled		soil		Transported	clean soil into	TFS via West door				
					Backfilled	in TFS						,			
Date	Alert	Station	Start	End	# of 15-min	Wind	Upwind/	Upwind	Downw	Minute nd-Upwind	Site Condition	Site Activity During the Period	Actions Taken		
	Trigger		Time	Time	Periods	Dir.	Downwind	Station(s)	Min**	entration Max**		(if applicable)	risione ranon		
9/4/2012	PM-10	FAM#1	21:01	21:01	1	SSE	DW	FAM#3	101	101 101 1		None After hours	None taken		
9/4/2012	PM-10	FAM#1	21:30	21:43	14	SSE	DW	FAM#3	106	133	1	None After hours	None taken		
		1							1						
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mments:			Ja												
ground if	ntrusive activies were	e periormea tod	зау.												
						PM-10 /	(15-min)	TVOC (15-m	in\	T	VOC (1-min)	Odor Intensity (15-min)			
			Δ	lert Limit:			ug/m³	3.7 ppm	,		-	- (13-11111)			
				tion Limit:			ug/m³	5.0 ppm			25 ppm	3 (n-butanol scale)			
4			AU	uon Linill.			-a,	о.о ррпп			20 ppiii	o (II-bularioi scale)			
otes:			- NI NIT	F 0F 0	C)A/ \A/ \$!!A				DM 40		(;t				
	irections are present					1).				ticulate matter i I volatile organi	(i.e. dust) less than 10 mi	CIONS IN GIAMETER			
	d minus downwind co		ue a ume	specific	companson.				i voc - tota	i voiatile organi	ic compounds				
	xed Air Monitoring st nicrograms per cubic								NA - not app	diaabla					
-												Field December	D. Masakall		
ppmv - parts per million by volume									ND - no data	available		Field Representative:	R. Marshall		



Date:

9/4/2012

	System Op	erations									General Observations					
		ampling Date	9/5/	2012	General We	eather Co	onditions:									
		m Start Time		nuous	Clear- ~	77°F - ~8	1°F									
		m Stop Time		nuous												
		rs Monitored		24	General De	scription	of Site Activities:									
					Health &				Transported materials throughout OU-2							
	System	Calibrations	(Ok	Continuo			Transported clean soil into TFS via West door								
		Time/Status)		-0835	Stockpile					crete waste into						
	,	, , , , , , , , , , , , , , , , , , , ,			Stockpile					ing repairs for						
							ion of TFS			3 1						
							opressant systems									
			1		,				15-	Minute						
	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)		entration	Site Condition	(if applicable)	Actions Taken			
	99				Periods			(-)	Min**	Max**		(арригаата)				
9/5/2012	No exceedances															
Comments: No ground in	trusive activies were	performed to	day.		•					•						
						PM-10 (15-min)	TVOC (15-mir	n)	т	VOC (1-min)	Odor Intensity (15-min)				
			А	lert Limit:		100		3.7 ppm	••		-	-				
		tion Limit:		150		5.0 ppm			25 ppm	3 (n-butanol scale)						
Notes:			. 10					pp			- 1.6					
	rections are presented	hy octont (o N NE	E 0E 0	C/V/ /V/ VI/	W)			DM 10	ticulate matter	(i.e. dust) less than 10 mic	erons in diameter				
	rections are presented I minus downwind con					v).				ticulate matter Il volatile organ		ions in diaffeter				
			ne a time	specific (companson.				i voc - tota	ii voiailie organ	ic compounds					
	ked Air Monitoring stat nicrograms per cubic n								NIA not	aliaahla						
_	· ·								NA - not app			Field Deep 1 1 2	D. Massahall			
ppmv - p	arts per million by volu	me							ND - no data	a avallable		Field Representative:				
												Date:	9/5/2012			



System Operations General Observations Sampling Date 9/6/2012 General Weather Conditions:																
		ampling Date														
		m Start Time		nuous	Clear- ~ 7	/3°F - ~8	310°F									
		m Stop Time		nuous												
	Total H	rs Monitored	2	24		eral Description of Site Activities:										
				,	Health &					l materials thro						
		Calibrations)k	Continuo					crete waste into	o dump trucks					
	(Time/Status)	0650	-0813	Stockpile				Tarped dump trucks							
				,	Stockpile				Loaded out	contaminated s	soil from TFS off site					
				,	Deconnec	d dump t	rucks.		Loaded out	concrete waste	off site					
				,	Operated	odor su	ppressant systems									
					# of				15-	Minute						
Dete	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)	Conc	entration	Site Condition	(if applicable)	Actions Taken			
	<u> </u>			<u> </u>	1 Criods	<u> </u>			Min**	Max**						
9/6/2012	No exceedances															
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Comments:					•											
No ground in	ntrusive activies were p	performed too	lay.													
						PM-10	(15-min)	TVOC (15-mi	n)	т,	VOC (1-min)	Odor Intensity (15-min)				
			ΔΙ	lert Limit:			ug/m ³	3.7 ppm	,		-	-				
				tion Limit:			ug/m ³	5.0 ppm			25 ppm	3 (n-butanol scale)				
Notes:							-				. 1	,				
	rections are presented	l by octant (i	N NE	E SE S	SW W NW	W			PM-10 - par	ticulate matter	(i.e. dust) less than 10 mid	crone in diameter				
	d minus downwind con					1).				I volatile organi		orono in diameter				
	xed Air Monitoring stat		io a time	opcome o	inpanson.				1 4 0 0 - 1018	ii voidine organi	io compounds					
	nicrograms per cubic m								NA - not app	nlicable						
	arts per million by volu								ND - no data			Field Representative:	C.John			
ppini - p	and por million by volu								110 uau	a a a a a a a a a a a a a a a a a a a		Date:				



									General Observations				
		Sampling Date		2012	General We	eather Co	onditions:						
		em Start Time		nuous	Clear- ~ 7	76°F - ~8	5°F						
		em Stop Time		nuous									
	Total I	Hrs Monitored	2	24			of Site Activities:						
					Health &					materials thro			
		n Calibrations		Ok	Continuous Air Monitoring Stockpiled clean soil Stockpiled concrete waste						o dump trucks		
		(Time/Status)	0712	-0845						ion Operation	al		
									Loaded out				
					Stockpile				Operated st	reet sweeper o	n Willow Avenue		
				1	Operated	oaor su	ppressant systems				T	Т	
Date	Alert Station Start Time		End Time	# of 15-min Periods	Wind Dir.	Upwind/ Downwind	Upwind Station(s)	15-Minute Downwind-Upwind Concentration		Site Condition	Site Activity During the Period (if applicable)	Actions Taken	
									Min**	Max**		Stockpiling clean backfill in	
9/7/2012	PM-10	FAM#6	9:14	9:21	8	N/E	DW	FAM#1	76	82	1	former one-story building area	None taken
		+											
		+											
		1											
					 								
omments:		1		1	1	ı	1		1		•	1	
						PM-10	(15-min)	TVOC (15-mi	n)	т	VOC (1-min)	Odor Intensity (15-min)	
			Α	lert Limit:			ug/m³	3.7 ppm			-		
			Act	tion Limit:		150	ug/m³	5.0 ppm			25 ppm	3 (n-butanol scale)	
** Upwind	irections are presented minus downwind co	ncentrations a				V).					(i.e. dust) less than 10 mi	crons in diameter	
ug/m³ - m	xed Air Monitoring sta nicrograms per cubic arts per million by vol	meter							NA - not app			Field Representative:	C.John



9/7/2012