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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: July 31, 2012

Regarding: Weekly Community Air Monitoring Report

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

July 21, 2012 through July 27, 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 July 21, 2012 and July 27, 2012.

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 inside Temporary Fabric Structure (TFS)
- Backfilled in TFS
- Backfilled Willow Avenue excavation
- Deconned load out dump trucks
- Excavated along Willow Avenue
- Load out soil from site via tarped dumptrucks
- Operated hoe-ram attachment inside TFS
- Operated hoe-ram on foundation of former one-story building
- Operated odor and dust suppressant systems
- Operated odor suppressant along West door of TFS
- Operated rock crusher
- Received delivery of Materials
- Received delivery of sheet piles
- Relocated Temporary Fabric Structure (TFS)
- Stockpiled demoed materials
- Stockpiled sheet piles
- Surveyed around OU-2
- Surveyed inside TFS
- Transported clean soil into 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 July 25, 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	
7/21/2012	0.1	0.0	0.5	0.0	0.0	0.1	9	16	3	0	0	6	
7/22/2012	0.1	0.0	0.5	0.1	0.0	0.2	14	21	3	0	0	8	
7/23/2012	0.1	0.1	0.1	0.2	0.1	0.1	78	79	3	27	17	64	
7/24/2012	0.1	0.6	0.1	0.1	0.1	1.4	84	52	6	18	12	57	
7/25/2012	0.0	0.1	0.7	0.2	0.3	0.4	52	18	1	6	5	43	
7/26/2012	0.1	0.1	0.2	0.4	0.1	0.2	69	34	1	36	21	60	
7/27/2012	0.1	0.2	0.5	1.9	0.2	0.1	52	26	0	0	8	26	
Average	0.1	0.2	0.4	0.4	0.1	0.3	51	35	2	12	9	38	
Maximum	0.1	0.6	0.7	1.9	0.3	1.4	84	79	6	36	21	64	

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

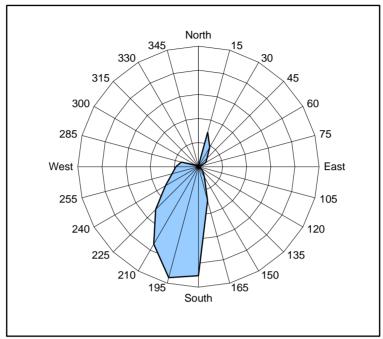


Figure 1. Wind rose for the period 07/21/12 through 07/27/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

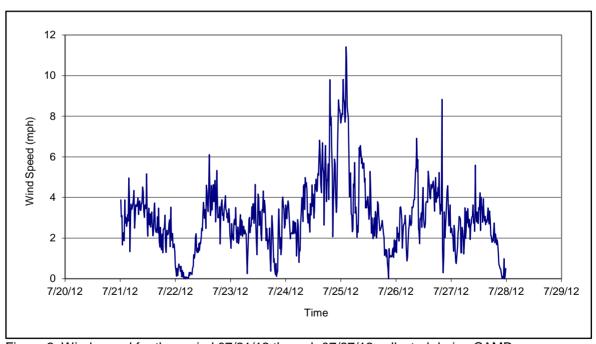


Figure 2. Wind speed for the period 07/21/12 through 07/27/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

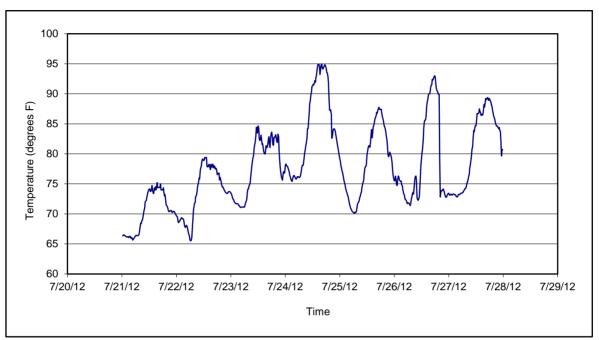


Figure 3. Temperature for the period 07/21/12 through 07/27/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

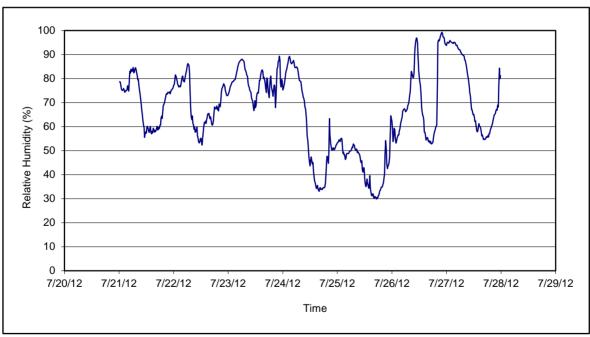


Figure 4. Relative humidity for the period 07/21/12 through 07/27/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

	Syster	n Operation	s			General Observations										
		mpling Date	7/23/	2012	General We	eather Co	onditions:									
		Start Time		nuous			′1°F- ~82°F									
		n Stop Time		nuous												
		s Monitored	2		General De	scription	of Site Activities:									
					Health &											
	System	Calibrations	С)k	Continuo				Operated or	lor suppressan	t along East side of TFS					
		ime/Status)	0632	-0759			n attachment inside	TFS		clean soil into						
	,	,			Excavate				Backfilled in							
					Deconne	Deconned load out dump trucks				ck crusher						
					Load out	soil from	site via tarped dur	nptrucks	Backfilled in	TFS						
								i	15-	Minute						
_	Alert	Station	Start	End	# of	Wind	Upwind/	Upwind		nd-Upwind		Site Activity During the Period				
Date	Trigger		Time	Time	15-min	Dir.	Downwind	Station(s)		entration	Site Condition	(if applicable)	Actions Taken			
	00				Periods			(-)	Min**	Max**		(17 - 11 - 17				
7/23/2012	No Exceed	lances											None taken			
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Comments:		•			•		•	•	•							
							(15-min)	TVOC (15-m	in)	T	VOC (1-min)	Odor Intensity (15-min)				
			Al	ert Limit:		100	ug/m³	3.7 ppm			-	-				
Action Limit: 150 ug/m ³							ug/m³	5.0 ppm			25 ppm	3 (n-butanol scale)				
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	rections an	e presented b	ov octant	(i.e. N. N	NE. E. SE. S.	SW. W.	NW).		PM-10 - par	ticulate matter	(i.e. dust) less than 10 mid	crons in diameter				
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		nitoring statio					-		NA - not app		p					
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	Syste	m Operation	16		1	General Observations											
		mpling Date	7/24/	/2012	General We	eather Co	onditions:				General Observations						
		m Start Time	conti		Clear- ~7												
		m Stop Time		nuous	Oldai - 7	41 50	, ,										
		rs Monitored		24	General De	ecrintion	of Site Activities:		Stockpiled s	neet niles							
	Health & Safety Meeting									Received delivery of sheet piles							
	Systom	Calibrations	C) k								•					
		Time/Status)	0649		Continuous Air Monitoring Excavated inside TFS					Operated odor suppressant along East side of TFS Transported clean soil into TFS							
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					Load out soil from site via tarped dumptrucks Received delivery of sheet piles						dation of former one-sto						
		ı			Received	delivery	or sneet piles				dation of former one-sto	ry building					
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	Action Limit: 150 ug/m ³ 5.0 p										25 ppm	3 (n-butanol scale)					
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	FAM - Fixed Air Monitoring station location ug/m³ - micrograms per cubic meter											Field Representative:	P. Morahall				
									ND - no data	avallable		·	R. Marshall				
ppmv - p	arts per mi	illion by volun	ne									Date:	7/24/2012				



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	Syster	n Stop Time	contin	nuous													
	Total Hrs Monitored 24 General Description of Site Activities:								Stockpiled s	sheet piles		Excavation along Willow Ave					
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					Load out	Load out soil from site via tarped dumptrucks				oe-ram on foun	dation of former one-sto	ry building					
					Received	l delivery	of Materials	•									
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Action Limit: 150 ug/m ³							ug/m ³	5.0 ppm			25 ppm	m 3 (n-butanol scale)					
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ppmv - parts per million by volume												Date:	7/25/2012				
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		m Stop Time		nuous												
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Action Limit: 150 ug/m ³ 5.								5.0 ppm				3 (n-butanol scale)				
Notes:																
* Wind d	irections ar	re presented	by octant	t (i.e. N, N	NE, E, SE, S,	SW, W	NW).		PM-10 - par	ticulate matter	(i.e. dust) less than 10 m	icrons in diameter				
** Upwin	d minus do	wnwind cond	entration	s are a tir	me specific o	comparis	on.		TVOC - tota	al volatile organ	ic compounds					
	FAM - Fixed Air Monitoring station location									plicable						
ug/m³ - r	nicrograms	per cubic m	eter										C. John			
ppmv - p	arts per mi	illion by volur	ne									Date:	7/26/2012			
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				ilert Limit: tion Limit:			ug/m ³	3.7 ppm				3 (n-butanol scale)					
			Act	ion Limit:		150	ug/m	5.0 ppm			25 ppm	3 (n-butanoi scale)					
Notes:																	
					NE, E, SE, S						(i.e. dust) less than 10 mi	crons in diameter					
					me specific o	comparis	ion.			ıl volatile organ	ic compounds						
		nitoring station		'n					NA - not app								
_	ug/m³ - micrograms per cubic meter									a available		Field Representative:	C. John				
ppmv - p	arts per mi	illion by volur	ne									Date:					
													Page 1 of _1_				

