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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: November 19, 2012

Regarding: Weekly Community Air Monitoring Report

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

October 20, 2012 through October 26, 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 October 20, 2012 and October 26, 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:

- Backfilled in Temporary Fabric Structure (TFS)
- Operated odor suppressant system at East and West TFS entrances
- Deconned dump trucks
- Excavated in TFS
- Performed shallow excavation near FAM#1
- Leveled terrain along the Willow Ave
- Loaded out soil from TFS
- Loaded out soil from shallow excavation via dump trucks
- Load out clean soil via dump trucks
- Operated hoe-ram in TFS
- Received deliveries of clean backfill
- Relocated FAM#4
- Moved Sound (Jersey) barriers inward along Willow Avenue
- Tarped dump trucks
- Surveyed site near FAM#4 and FAM#5
- Operated hoe-ram at Trench South East of TFS
- Performed Erosion control maintenance

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 October 24, 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		
10/20/2012	1.1	ND	0.1	0.0	0.0	0.4	20	ND	0	0	25	1		
10/21/2012	0.2	ND	0.1	0.0	0.0	0.1	14	ND	0	5	44	0		
10/22/2012	0.2	0.3	0.1	0.1	0.0	0.2	25	17	3	3	9	0		
10/23/2012	0.2	0.5	0.1	0.1	0.0	0.2	28	10	1	15	27	0		
10/24/2012	0.1	0.1	0.1	0.1	0.1	0.1	47	10	61	28	75	1		
10/25/2012	0.1	0.1	0.1	0.4	0.0	0.1	18	10	62	0	10	1		
10/26/2012	0.1	0.2	0.2	0.2	0.0	0.1	24	10	33	5	20	0		
Average	0.3	0.2	0.1	0.1	0.0	0.2	25	11	23	8	30	0		
Maximum	1.1	0.5	0.2	0.4	0.1	0.4	47	17	62	28	75	1		

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

ND - No data

Due an to an equipment radio telemetry malfunction, data are not available at FAM#2 from 17:15 on 10/19/12 through 7:08 on 10/22/12



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

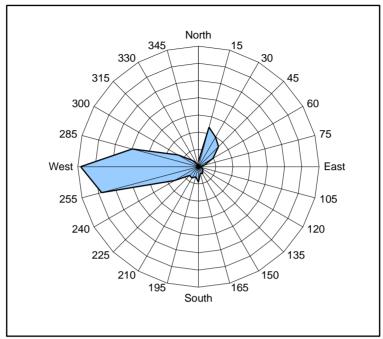


Figure 1. Wind rose for the period 10/20/12 through 10/26/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

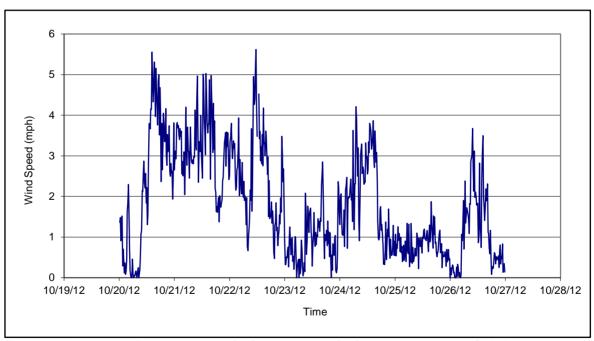


Figure 2. Wind speed for the period 10/20/12 through 10/26/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

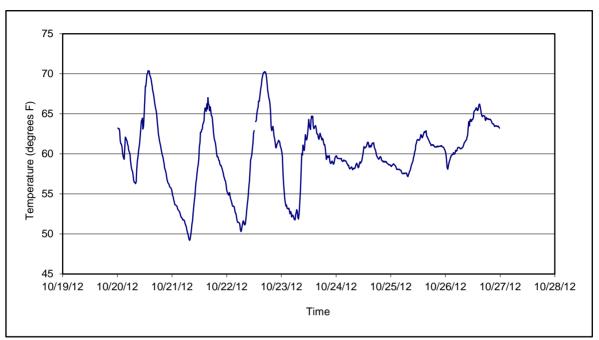


Figure 3. Temperature for the period 10/20/12 through 10/26/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

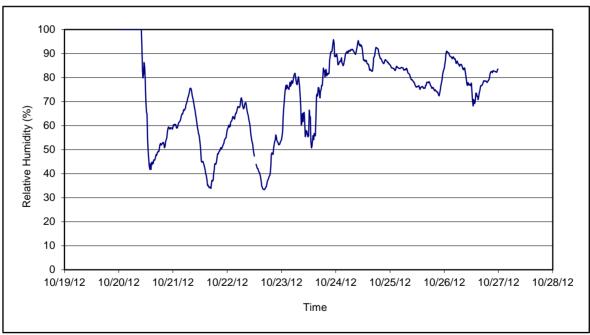


Figure 4. Relative humidity for the period 10/20/12 through 10/26/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

	Syste	m Operation	ıs			General Observations										
		mpling Date	10/22	/2012	General We											
		n Start Time		nuous	Clear - ~	50°F -	-63°F									
		n Stop Time		nuous												
	Total H	s Monitored	2	4			of Site Activities:									
					Health &				Loaded out soil from shallow excavation Relocated FAM#4 15ft North							
	System Calibrations Ok Continuous Air Monitoring									Performed shallow excavation near FAM#1						
	(7	Time/Status)	0645	-1023			nporary Fabric Stru	cture (TFS)	Loaded out soil from TFS							
					Deconne						f clean backfi	II.				
							ong Willow Ave		Deconned							
	1			1	Tarped d	ump tru	cks				inward along	Willow Avenue	I			
			o		# of					linute	0.4	00 4 0 0 5 0 1 5 1				
Date	Alert	Station	Start Time	End Time	15-min	Wind Dir.	Upwind/ Downwind	Upwind Station(s)		d-Upwind ntration	Site Condition	Site Activity During the Period	Actions Taken			
	Trigger		Time	Time	Periods	DII.	Downwind	Station(s)	Min**	Max**	Condition	(if applicable)				
10/22/2012	No excee	dances							IVIIII	iviax			None taken			
	2 2200												Tions taken			
Comments:						l										
Comments.																
						PM-10	(15-min)	TVOC (15-min)		TVO	C (1-min)	Odor Intensity (15-min)				
			Al	ert Limit:			ug/m³	3.7 ppm			-	- 1	-			
			Acti	on Limit:		150	ug/m³	5.0 ppm		25	ppm	3 (n-butanol scale)				
Notes:																
* Wind d	irections a	re presented	by octan	t (i.e. N, I	NE, E, SE, S	, SW, W	⁷ , NW).		PM-10 - pa	articulate m	atter (i.e. dus	t) less than 10 microns in diameter				
		ownwind cond			ime specific	compari	son.		TVOC - to	al volatile o	organic compo	ounds				
		nitoring station		n												
		s per cubic m							NA - not applicable							
ppmv - p	arts per m	illion by volur	ne						ND - no da	ıta available	е	Field Representative:				
												Date:				
													Page 1 of _1_			



	Syste	m Operation	ıs							Gener	ral Observation	ons					
		mpling Date		3/2012	General We	eather C	onditions:										
	Systen	Start Time	contin	nuous	Clear -	- 52°F -	~60°F										
	Systen	Stop Time	contin	nuous													
	Total Hr	s Monitored	2	24	General De	scription	of Site Activities:										
					Health &				Loaded ou	t soil from	shallow excav	Surveyed site near FAM#4					
System Calibrations Ok Continuous Air Monitoring										Performed shallow excavation near Operated hoe-ram in TFS							
		ime/Status)	0629	-0841						Loaded out soil from TFS							
	(-	,			Deconne				Received deliveries of clean backfill								
							ong Willow Ave		Deconned			•					
					Tarped of							Willow Avenue					
		1				I amp ara	5110			inute	l	Trinou 7 (Volido					
	Alert		Start	End	# of	Wind	Upwind/	Upwind		d-Upwind	Site	Site Activity During the Period					
Date	Trigger	Station	Time	Time	15-min	Dir.	Downwind	Station(s)		ntration	Condition	(if applicable)	Actions Taken				
	rrigger		111110	111110	Periods	D	Downwind	Otation(3)	Min**	Max**	Condition	(ii applicable)					
10/23/2012	No exceed	lances							IVIIII	IVIGA			None taken				
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							(15-min)	TVOC (15-min)		TVO	C (1-min)	Odor Intensity (15-min)					
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			Acti	ion Limit:		150	ug/m³	5.0 ppm		25	ppm	3 (n-butanol scale)					
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		e presented										t) less than 10 microns in diameter					
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ppmv - p	oarts per m	llion by volur	ne						ND - no da	ta available	е	Field Representative:	R. Marshall				
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					Deconne			Received deliveries of clean ba	CKTIII				
								Deconned dump trucks					
					Tarped d	ump tru	cks	Moved Sound (Jersey) barriers			Avenue		
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			Acti	on Limit:		150	ug/m³	5.0 ppm		25	5 ppm	3 (n-butanol scale)	
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	* 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.										organic comp		
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								Received deliveries of clean ba	ICKIIII			Performed Erosion control maintenance	
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