

455 Winding Brook Drive Suite 201 Glastonbury, CT 06033 Ph: (860) 368-5300 Fax: (860) 368-5307

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: December 17, 2012

Regarding: Weekly Community Air Monitoring Report

Clifton Former MGP Site - Operable Unit 2 (OU-2) November 24, 2012 through November 30, 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 November 24, 2012 and November 30, 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 in Temporary Fabric Structure (TFS)
- Backfilled in TFS
- Deconned dump trucks
- Hoe-ram operated in shallow excavation
- Leveled terrain at East entrance of TFS
- Loaded out soil offsite from TFS
- Performed shallow excavation Northeast of TFS
- Relocated bin-blocks
- Tarped dump trucks
- Transported clean soil to East entrance of TFS
- Welded in OU-2

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 November 28, 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		
11/24/2012	0.1	0.0	0.0	0.1	0.0	0.3	33	16	6	9	21	44		
11/25/2012	0.1	0.0	0.0	0.1	0.0	0.2	35	14	7	8	21	43		
11/26/2012	0.7	0.2	0.0	0.5	0.0	0.3	39	42	10	17	34	58		
11/27/2012	0.3	0.1	0.2	0.1	0.0	0.5	75	17	11	10	23	84		
11/28/2012	0.2	0.1	0.1	0.2	0.0	0.5	76	17	8	19	23	53		
11/29/2012	ND*	0.2	0.1	0.1	0.1	0.3	67	27	14	21	37	63		
11/30/2012	ND*	0.1	0.2	0.3	0.1	0.0	63	24	43	44	55	103		
Average	0.3	0.1	0.1	0.2	0.0	0.3	55	22	14	18	31	64		
Maximum	0.7	0.2	0.2	0.5	0.1	0.5	76	42	43	44	55	103		

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 to a communication issue caused by a power outage at FAM#1 from 22:24 on 11/28/12 - 15:36:29 on 11/30, there is no recordable data for VOC's at FAM#1 during this time period.



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

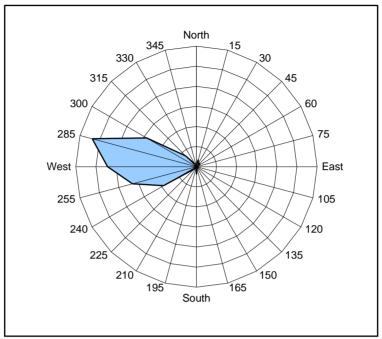


Figure 1. Wind rose for the period 11/24/12 through 11/30/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

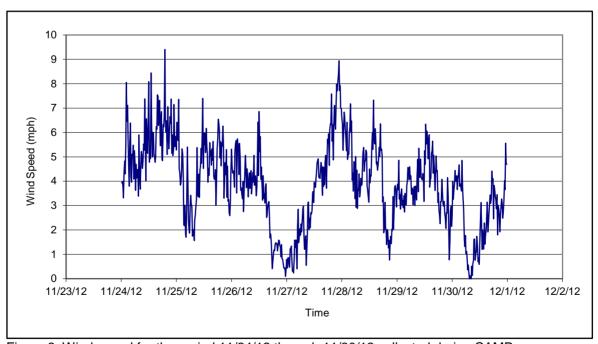


Figure 2. Wind speed for the period 11/24/12 through 11/30/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

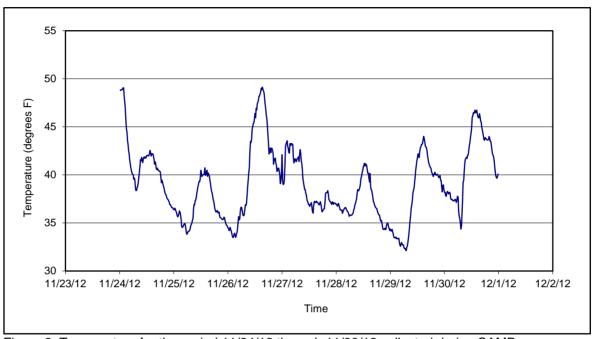


Figure 3. Temperature for the period 11/24/12 through 11/30/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.



Figure 4. Relative humidity for the period 11/24/12 through 11/30/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

	Syster	m Operation	s							Gener	al Observation	ons			
		mpling Date	11/26	/2012	General We	eather C	onditions:								
	Systen	n Start Time	contir	nuous	Clear - ~	- 38°F -	~47°F								
	Systen	n Stop Time	contir	nuous											
		s Monitored		4	General De	scription	of Site Activities:								
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	(1	iiie/Status)	0047	-0033	Deconne			citale (TF3)							
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Date	Alert	Station	Start	End	15-min	Wind	Upwind/	Upwind		d-Upwind	Site	Site Activity During the Period	Actions Taken		
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Comments:		l	1	<u> </u>	1	1			1						
							(15-min)	TVOC (15-min)		TVOC	(1-min)	Odor Intensity (15-min)			
			Al	ert Limit:		100	ug/m³	3.7 ppm			-	-			
			Acti	on Limit:		150	ug/m³	5.0 ppm		25	ppm	3 (n-butanol scale)			
Notes:							•	_	_		•	_	_		
	rections are	e presented b	by octant	(i.e. N. N	IE. E. SE. S.	SW. W	NW).		PM-10 - na	rticulate m	atter (i.e. dust) less than 10 microns in diameter			
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		nitoring statio			,	, , ,	-				J				
		per cubic me		•					NA - not a	onlicable					
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ppinv - p	arra per IIIII	morr by voluit							- 110 Uc	avanable	•	Date:	11/26//2012		
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	System Operations										General Observations							
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		Calibrations																
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					Deconne													
					Loaded of	out soil f	rom TFS											
					Tarped dump trucks													
									15-N	linute								
_	Alert		Start	End	# of	Wind	Upwind/	Upwind		d-Upwind	Site	Site Activity During the Period						
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			Al	ert Limit:			ug/m ³	3.7 ppm			- 1	- , ,						
				on Limit:			ug/m³	5.0 ppm		25	ppm	3 (n-butanol scale)						
** Upwind	otes: * 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. FAM - Fixed Air Monitoring station location								PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter TVOC - total volatile organic compounds									
	ug/m³ - micrograms per cubic meter																	
		on by volume							NA - not ap			Field Representative:	R. Marshall					
ppilly - pai	no per milli	on by volume							14D - 110 da	ia avallable	-	Date:	11/27//2012					
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System Operations										General Observations						
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							ug/m³	3.7 ppm				-				
			Acti	on Limit:		150	ug/m	5.0 ppm		25	ppm	3 (n-butanol scale)				
Notes:																
	* Wind directions are presented by octant (i.e. N, NE, E, SE, S, SW, W, NW).											less than 10 microns in diameter				
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		oring station														
ug/m³ - mid	ug/m³ - micrograms per cubic meter									oplicable						
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		,										Date:				
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	System	n Operations								Gener	al Observation	ns				
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Notes:																
* Wind dire	ections are	presented by	octant (i.	.e. N, NE	, E, SE, S, S	W, W, 1	NW).		PM-10 - pa	rticulate m	atter (i.e. dust)	less than 10 microns in diameter				
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	System	n Operations	3							Gener	al Observatio	ns			
	Sa	mpling Date	11/30	/2012	General We	eather C	onditions:								
	Systen	n Start Time	contir	nuous	Overcast	t - ~ 32°	F - ~42°F								
	Systen	n Stop Time	contir	nuous											
	Total Hr	rs Monitored	2	4	General De	scription	of Site Activities:		Transported clean soil into TFS						
					Health &	Safety N	Meeting		Hoe-ram o	perated in	shallow excava	ation			
	System	Calibrations	C)k	Continuo	us Air M	lonitoring		Performed	shallow ex	cavation NE of	f TFS			
	(T	Fime/Status)	0751	-0849	Backfille	d in Tem	porary Fabric Struc	ture (TFS)	Transporte	d clean soi	il to East entrai	nce of TFS			
					Deconne	ed dump	trucks		Leveled te	rrain at Eas	st entrance of T	rfs .			
					Loaded of	out soil fi	rom TFS								
					Tarped of	dump tru	cks								
					# of				15-N	linute					
Date	Alert	04-4:	Start	End	# 01 15-min	Wind	Upwind/	Upwind	Downwind-Upwind Site			Site Activity During the Period	Actions Taken		
Date	Trigger	Station	Time	Time	Periods	Dir.	Downwind	Station(s)	Conce	ntration	Condition	(if applicable)	Actions raken		
					1 611003				Min**	Max**					
11/30/2012	PM-10	FAM#6	10:26	10:43	18	NE	DW	FAM#1	94	97	1	Hoe ram operations	Construction manager was notified		
11/30/2012	i IVI-10	FAIVI#0	10.20	10.43	10	INE	DVV	FAIVI# I	94	91	<u> </u>	nue ram operations	No actions taken		
11/30/2012	PM-10	FAM#6	11:23	11:24	2	NE	DW	FAM#1	93	94	1	Hoe ram operations	Construction manager was notified No actions taken		
Comments:															
			ΔΙ	ert Limit:			(15-min) ug/m³	TVOC (15-min) 3.7 ppm		TVOC	(1-min)	Odor Intensity (15-min)			
				on Limit:			ug/m³	5.0 ppm		25	ppm	3 (n-butanol scale)			
Notes:															
		presented by										less than 10 microns in diameter			
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ppmv - par	ts per millio	on by volume							ND - no da	ta available	Э	Field Representative:	C. John		
												Date: _	11/30/2012		
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