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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 10, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
June 30, 2012 through July 6, 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 June 30 and July 6, 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. There were some elevated levels of dust measured that were attributed to breaking up of the concrete foundation with the hoe-ram attachment on the former one-story building. 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

Site Construction Activities

Construction activities during this reporting period included:

- Decontaminated load out dump trucks
- Received delivery of foam barrels
- Load out soil from site via tarped dump trucks
- Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust
- Operated dust suppressant sprinkler system
- Operated odor suppressant along Willow Avenue
- Operated sweeper to level terrain
- Pre trenched for installation of well points
- Removed contents from frac tank

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.

The site was closed on Wednesday July 4 in observance of Independence Day.

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 6, 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)
June 30, 2012 through July 6, 2012
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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/m ³ , < 150 ug/m ³	≥ 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/m ³ , < 440 ug/m ³	≥ 440 ug/m ³

Notes:

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)

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

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

Date	TVOC						PM-10					
	(ppm)						(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
6/30/2012	0.1	0.1	0.1*	0.1	0.1*	0.1	90	45	3	19	4	71
7/1/2012	0.1	0.1	ND*	0.1	ND*	0.0	83	30	3	10	2	55
7/2/2012	0.1	0.1	0.3*	0.2	0.2*	0.3	34	20	8	14	5	82
7/3/2012	0.0	0.2	0.2	0.2	0.1	0.1	70	30	4	11	20	58
7/4/2012	0.0	0.0	0.0	0.1	0.1	0.1	86	39	4	23	3	44
7/5/2012	0.1	0.0	0.1	0.1	0.2	0.2	82	39	4	25	7	65
7/6/2012	0.0	0.1	0.1	0.1*	0.1	0.1	56	27	3	11	5	208
Average	0.1	0.1	0.1	0.2	0.1	0.1	72	33	4	16	7	83
Maximum	0.1	0.2	0.2	0.2	0.2	0.3	90	45	8	25	20	208

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 TVOC data for FAM#3 from 14:07 on 6/30/2012 - 7:31 on 7/02/2012.

*Due to equipment malfunction there is no recordable TVOC data for FAM#5 from 12:24 on 6/30/2012 - 9:17 on 7/02/2012.

*Due to equipment malfunction there is no recordable TVOC data for FAM#4 from 20:18 on 7/06/2012 - 23:59 on 7/06/2012.

*The listed measurements do not reflect the above mentioned time periods.

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

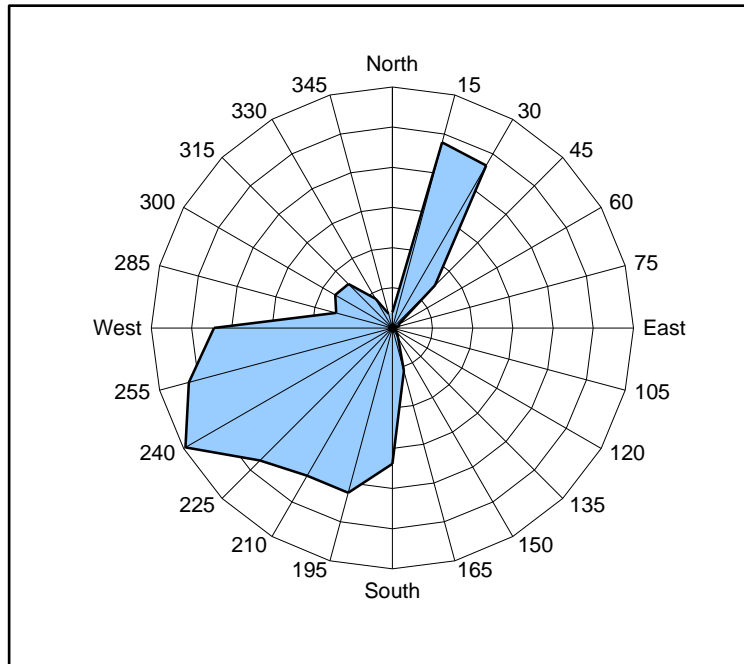


Figure 1. Wind rose for the period 06/30/12 through 07/06/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

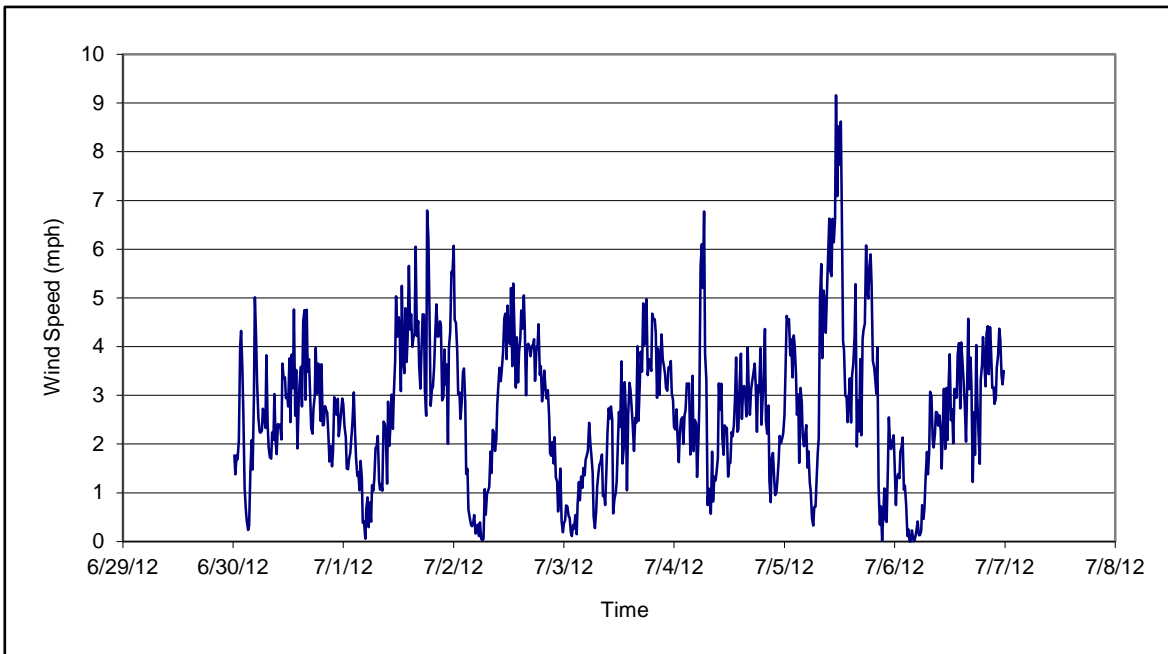


Figure 2. Wind speed for the period 06/30/12 through 07/06/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

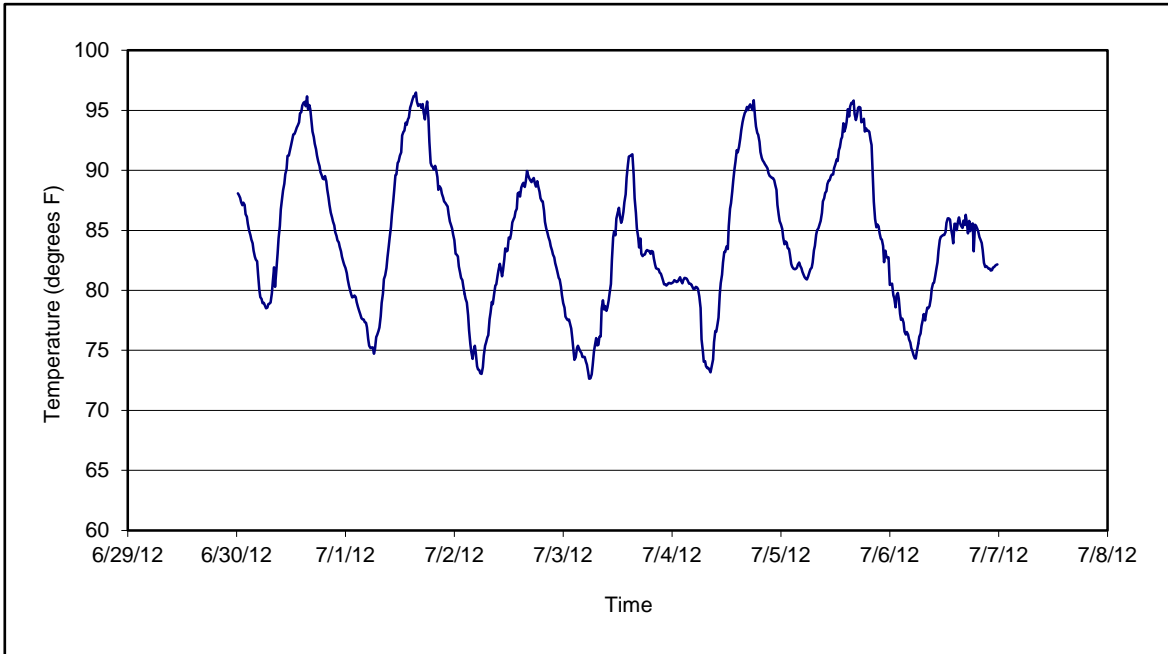


Figure 3. Temperature for the period 06/30/12 through 07/06/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

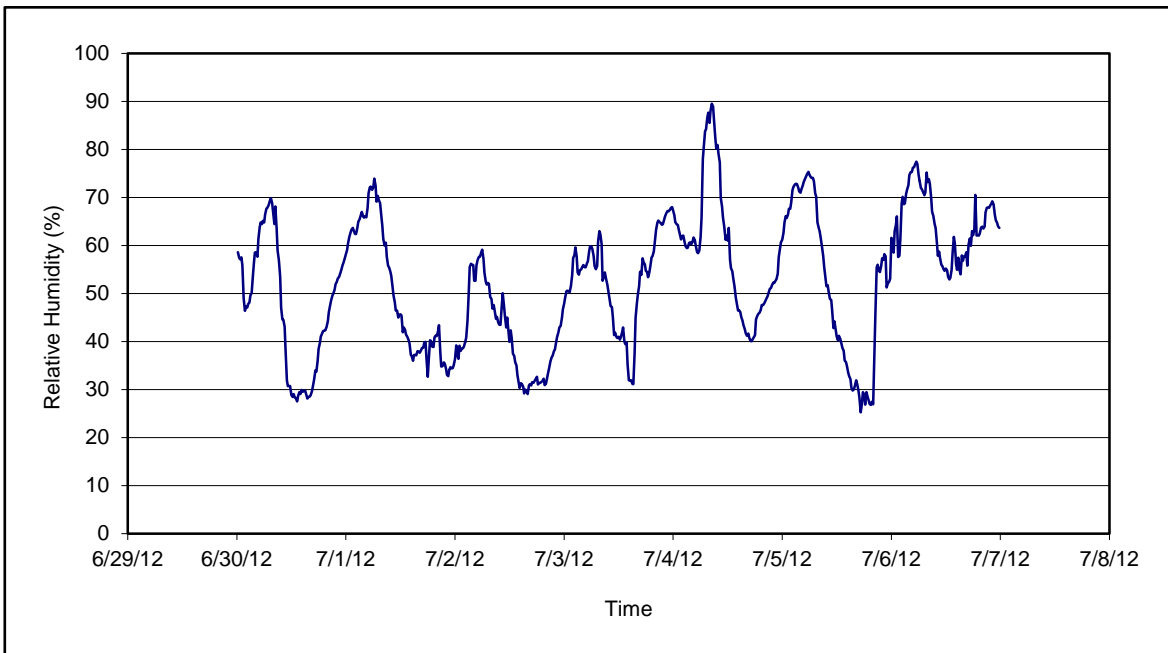


Figure 4. Relative humidity for the period 06/30/12 through 07/06/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

Daily Field Report
 Community Air Monitoring Program
 Clifton Former MGP Site Operable Unit 2
 Borough of Staten Island, New York

System Operations					General Observations									
Sampling Date 7/2/2012 System Start Time continuous System Stop Time continuous Total Hrs Monitored 24 System Calibrations (Time/Status) Ok 0640-0845					General Weather Conditions: Clear ~75°F- ~89°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Pre trenched for installation of well points Delivered foam barrels Decconned load out dump trucks Load out soil from site via tarped dumprucks Operated odor supressant along Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust									
Date	Alert Trigger	Station	Start Time	End Time	# of 15-min Periods	Wind Dir.	Upwind/ Downwind	Upwind Station(s)	15-Minute Downwind-Upwind Concentration Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken	
7/2/2012	None												No exceedances	
Comments:														
					PM-10 (15-min)			TVOC (15-min)			TVOC (1-min)			Odor Intensity (15-min)
					Alert Limit:			100 ug/m ³			3.7 ppm			-
					Action Limit:			150 ug/m ³			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).						PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter								
** Upwind minus downwind concentrations are a time specific comparison.						TVOC - total volatile organic compounds								
FAM - Fixed Air Monitoring station location						NA - not applicable						Field Representative: R. Marshall		
ug/m ³ - micrograms per cubic meter						ND - no data available						Date: 7/2/2012		
ppmv - parts per million by volume														



Daily Field Report
Community Air Monitoring Program
Clifton Former MGP Site Operable Unit 2
Borough of Staten Island, New York

System Operations					General Observations								
Sampling Date	7/3/2012		General Weather Conditions: Clear ~75°F - ~89°F										
System Start Time	continuous		General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Pre trenched for installation of well points Delivered foam barrels Decconned load out dump trucks Load out soil from site via tarped dumprucks										
System Stop Time	continuous												
Total Hrs Monitored	24												
System Calibrations (Time/Status)	Ok 0640-0845		Operated sweeper to level terrain Removed contents from frac tank Operated odor supressant along Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust										
Date	Alert Trigger	Station	Start Time	End Time	# of 15-min Periods	Wind Dir.	Upwind/Downwind	Upwind Station(s)	15-Minute Downwind-Upwind Concentration Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken
7/3/2012	None												No exceedances
Comments:													
					PM-10 (15-min)		TVOC (15-min)		TVOC (1-min)		Odor Intensity (15-min)		
					Alert Limit: 100 ug/m ³		3.7 ppm		-		-		
					Action Limit: 150 ug/m ³		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). ** Upwind minus downwind concentrations are a time specific comparison. FAM - Fixed Air Monitoring station location ug/m ³ - micrograms per cubic meter ppmv - parts per million by volume PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter TVOC - total volatile organic compounds NA - not applicable ND - no data available							
										Field Representative: R. Marshall		Date: 7/3/2012	
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Daily Field Report
 Community Air Monitoring Program
 Clifton Former MGP Site Operable Unit 2
 Borough of Staten Island, New York

System Operations					General Observations								
Sampling Date		7/5/2012		General Weather Conditions:									
System Start Time		continuous		Clear ~82°F- ~96°F									
System Stop Time		continuous		General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Pre-trenched for installation of well points Delivered foam barrels Decconned load out dump trucks Load out soil from site via tarped dumptrucks Operated dust suppressant sprinkler system Removed contents from frac tank Operated odor suppressant along Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust									
Total Hrs Monitored		24											
System Calibrations (Time/Status)		Ok 0632-0903											
Date	Alert Trigger	Station	Start Time	End Time	# of 15-min Periods	Wind Dir.	Upwind/Downwind	Upwind Station(s)	15-Minute Downwind-Upwind Concentration Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken
7/5/2012	None												No exceedances
Comments:													
					PM-10 (15-min)		TVOC (15-min)		TVOC (1-min)		Odor Intensity (15-min)		
					Alert Limit: 100 ug/m ³		3.7 ppm		-		-		
					Action Limit: 150 ug/m ³		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).						PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter							
** Upwind minus downwind concentrations are a time specific comparison.						TVOC - total volatile organic compounds							
FAM - Fixed Air Monitoring station location						NA - not applicable						Field Representative: R. Marshall	
ug/m ³ - micrograms per cubic meter						ND - no data available						Date: 7/5/2012	
ppmv - parts per million by volume													



Daily Field Report
Community Air Monitoring Program
Clifton Former MGP Site Operable Unit 2
Borough of Staten Island, New York

System Operations					General Observations									
Sampling Date 7/6/2012 System Start Time continuous System Stop Time continuous Total Hrs Monitored 24 System Calibrations (Time/Status) Ok 0640-1011					General Weather Conditions: Clear ~76°F- ~86°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Pre trenched for installation of well points Delivered foam barrels Decconned load out dump trucks Load out soil from site via tarped dumptrucks Sprinkler System and hose operational Removed contents from frac tank Operated odor supressant along Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust									
Date	Alert Trigger	Station	Start Time	End Time	# of 15-min Periods	Wind Dir.	Upwind/ Downwind	Upwind Station(s)	15-Minute Downwind-Upwind Concentration Min** Max**		Site Condition	Site Activity During the Period (if applicable)	Actions Taken	
7/6/2012	PM-10	FAM#6	6:55	7:10	16	NNE	UW	N/A	116	207	1	None. Site activities had not yet begun	None taken	
7/6/2012	PM-10	FAM#6	8:28	8:32	5	NE	DW	FAM#1	80	81	1	Operating hoe-ram on former one-story building foundation	Notified construction manager. Water was sprayed.	
Comments:														
					PM-10 (15-min)		TVOC (15-min)		TVOC (1-min)		Odor Intensity (15-min)			
					Alert Limit: 100 ug/m ³		3.7 ppm		-		-			
					Action Limit: 150 ug/m ³		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).					PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter									
** Upwind minus downwind concentrations are a time specific comparison.					TVOC - total volatile organic compounds									
FAM - Fixed Air Monitoring station location					NA - not applicable									
ug/m ³ - micrograms per cubic meter					ND - no data available					Field Representative: C. John				
ppmv - parts per million by volume										Date: 7/6/2012				
												Page 1 of 1		

