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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: October 17, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
October 6, 2012 through October 12, 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 6, 2012 and October 12, 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

Site Construction Activities

Construction activities during this reporting period included:

- Performed excavation in Temporary Fabric Structure (TFS)
- Backfilled in TFS
- Cleaned street of Willow Avenue using Street Sweeper
- Deconned dump trucks
- Installed gravel road along Willow Avenue in OU-2
- Loaded out soil from TFS
- Loaded out soil off site from shallow excavations via dump trucks
- Moved Jersey barriers inward along Willow Avenue
- Operated dust suppressant system South of TFS
- Operated hoe-ram in shallow excavation near FAM#6
- Performed shallow excavation along Bay Street
- Performed shallow excavation near FAM#4 along Willow Avenue, and near FAM#6
- Received deliveries of clean backfill and gravel
- Relocated FAM#6
- Relocated sheet piles
- Relocated TFS
- Removed TIGG unit from TFS
- Stockpiled clean backfill
- Tarped dump trucks
- Tarped stockpiled backfill and clean excavated soil

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 10, 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)
October 6, 2012 through October 12, 2012
October 17, 2012
Page 3

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
10/6/2012	0.1	0.0	0.0	0.0	0.0	0.1	60	15	2	8	24	1
10/7/2012	0.2	0.1	0.1	0.0	0.1	0.1	14	5	2	0	7	0
10/8/2012	0.1	0.1	0.1	0.1	0.1	0.6	21	9	2	0	9	25
10/9/2012	0.2	0.0	0.3	0.4	0.3	0.7	20	12	46	0	20	10
10/10/2012	0.1	0.1	0.1	0.1	0.1	2.2	48	14	47	0	12	0
10/11/2012	0.3	0.3	0.1	0.1	0.1	0.4	21	10	0	0	6	0
10/12/2012	0.2	0.2	0.2	0.3	0.1	0.1	17	18	0	12	12	0
Average	0.2	0.1	0.1	0.1	0.1	0.6	29	12	14	3	13	5
Maximum	0.3	0.3	0.3	0.4	0.3	2.2	60	18	47	12	24	25

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

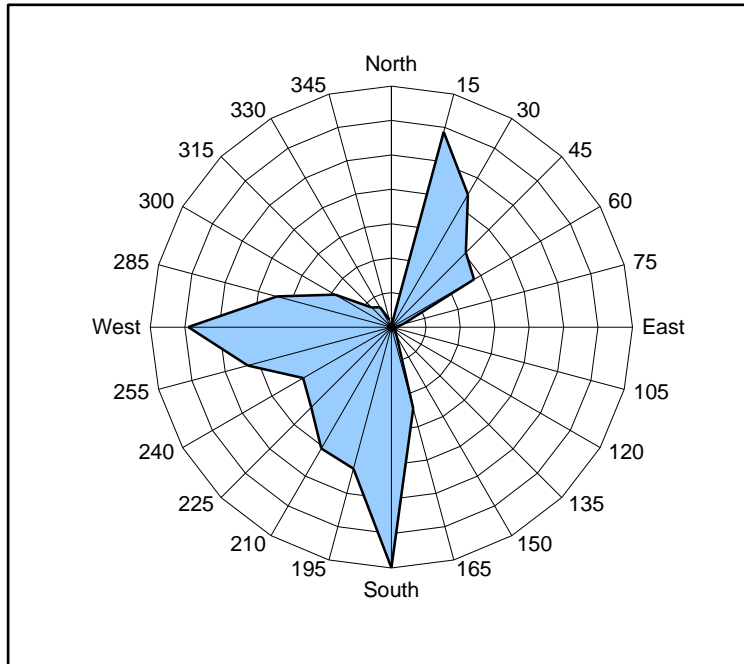


Figure 1. Wind rose for the period 10/06/12 through 10/12/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

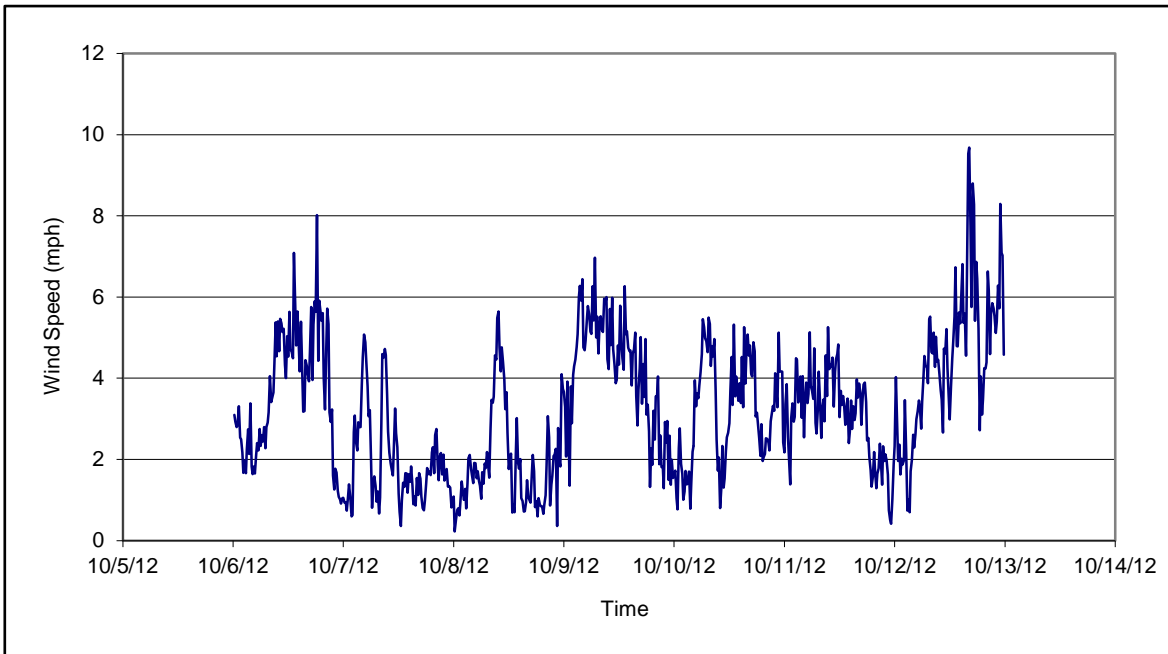


Figure 2. Wind speed for the period 10/06/12 through 10/12/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

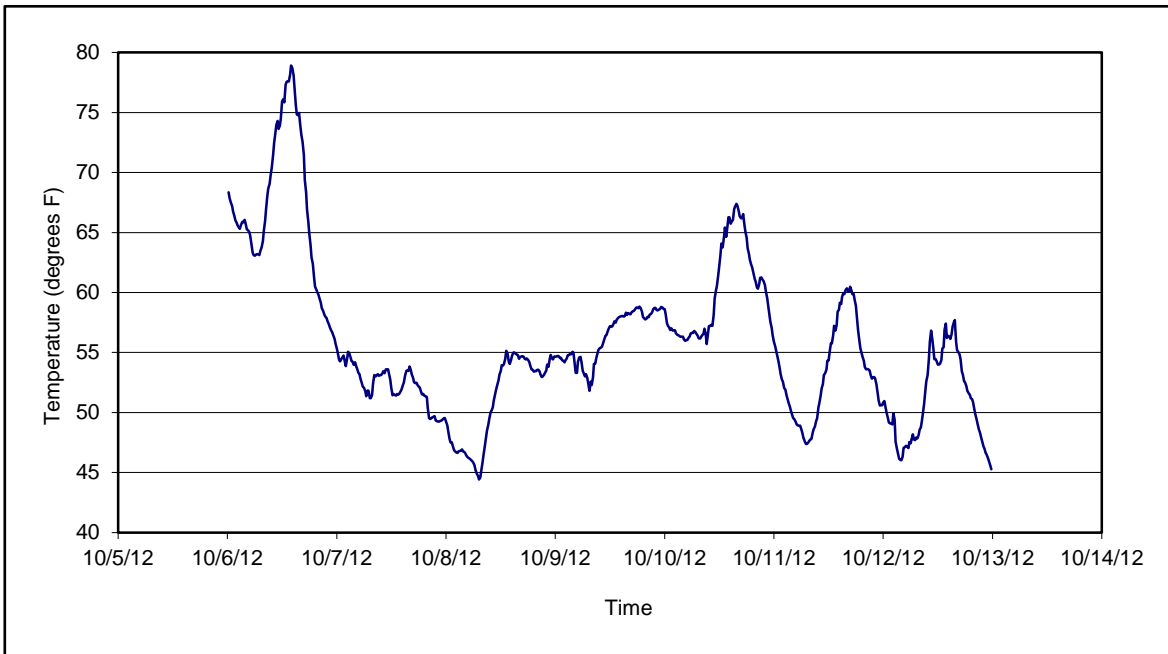


Figure 3. Temperature for the period 10/06/12 through 10/12/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

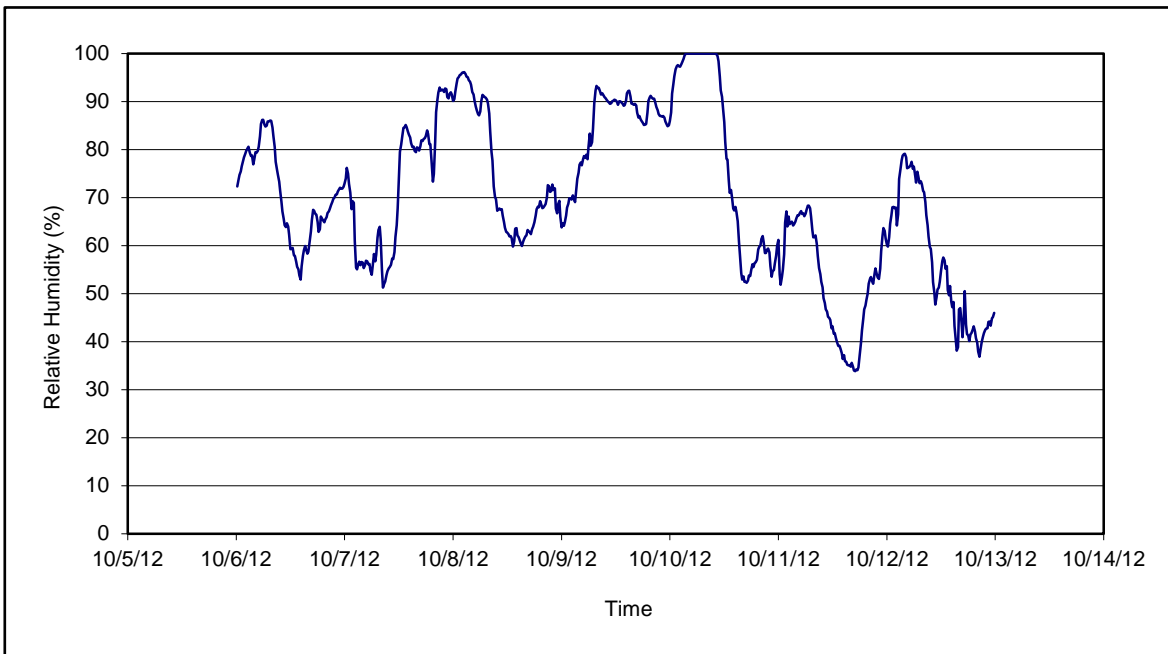


Figure 4. Relative humidity for the period 10/06/12 through 10/12/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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	10/8/2012	General Weather Conditions:			Clear - - 45°F - -54°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Stockpiled clean soil Decanned dump trucks Loaded out soil off site from shallow excavations via dump trucks Tarped stockpiled backfill and clean excavated soil Tarped dump trucks Backfilled in Temporary Fabric Structure (TFS) Operated hoe-ram in shallow excavations Operated dust suppressant system South of TFS Performed shallow excavation along Bay Street							
System Start Time	continuous	General Description of Site Activities:										
System Stop Time	continuous	Health & Safety Meeting										
Total Hrs Monitored	24	Continuous Air Monitoring										
System Calibrations (Time/Status)	Ok 0646-0942	Stockpiled clean soil										

Date	Alert Trigger	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**			
10/8/2012	No exceedances												None taken

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/m³ - 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: 10/8/2012



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		10/9/2012			General Weather Conditions:											
System Start Time		continuous			Cloudy w/rain - ~ 45°F - -58°F											
System Stop Time		continuous			General Description of Site Activities:											
Total Hrs Monitored		24			Health & Safety Meeting				Tarped dump trucks				Installed gravel road terrain along Willow Avenue			
System Calibrations (Time/Status)		Ok 0639-0810			Continuous Air Monitoring				Relocated Jersey barriers inward along Willow Avenue							
					Backfilled in Temporary Fabric Structure (TFS)				Operated hoe-ram in shallow excavation near FAM#6							
					Deconned dump trucks				Received deliveries of gravel							
					Loaded out soil off site from shallow excavation via dump trucks				Performed shallow excavation near FAM#6							
					Removed TIGG unit from TFS				Relocated FAM#6							
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			
10/9/2012	No exceedances												None taken			
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					TVOC - total volatile organic compounds						
** Upwind minus downwind concentrations are a time specific comparison.					NA - not applicable					Field Representative: R.Marshall						
FAM - Fixed Air Monitoring station location					ND - no data available					Date: 10/9/2012						
ug/m ³ - micrograms per cubic meter																
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		10/11/2012			General Weather Conditions: Clear - ~ 47°F - ~59°F																										
System Start Time		continuous			General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Decommed dump trucks Loaded out soil off site from shallow excavation via dump trucks Tarped dump trucks																										
System Stop Time		continuous																													
Total Hrs Monitored		24																													
System Calibrations		Ok																													
(Time/Status)		0650-0744																													
								Performed shallow excavation near FAM#6 Moved Jersey barriers inward along Willow Avenue Loaded out soil from TFS Received deliveries of clean backfill Decommed dump trucks Stockpiled clean backfill																							
Date	Alert Trigger	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																		
10/11/2012	No exceedances								Min**	Max**			None taken																		
Comments:																															
<table style="width:100%; border: none;"> <tr> <td style="width: 10%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;">PM-10 (15-min)</td> <td style="width: 20%;">TVOC (15-min)</td> <td style="width: 20%;">TVOC (1-min)</td> <td style="width: 20%;">Odor Intensity (15-min)</td> </tr> <tr> <td></td> <td>Alert Limit:</td> <td>100 ug/m³</td> <td>3.7 ppm</td> <td>-</td> <td>-</td> </tr> <tr> <td></td> <td>Action Limit:</td> <td>150 ug/m³</td> <td>5.0 ppm</td> <td>25 ppm</td> <td>3 (n-butanol scale)</td> </tr> </table>																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)
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** 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: C. John																					
ug/m ³ - micrograms per cubic meter					ND - no data available					Date: 10/11/2012																					
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	10/12/2012				General Weather Conditions: Clear - ~ 48°F - ~55°F									
System Start Time	continuous				General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Performed excavation in Temporary Fabric Structure (TFS) Deconned dump trucks Loaded out soil off site from shallow excavation via dump trucks Tarped dump trucks Cleaned street of Willow Avenue using Street Sweeper Performed shallow excavation near FAM#6 Performed shallow excavation near FAM#4 along Willow Avenue Loaded out soil from TFS Received deliveries of clean backfill Deconned dump trucks Stockpiled clean backfill									
System Stop Time	continuous													
Total Hrs Monitored	24													
System Calibrations (Time/Status)	Ok 0650-0744													

Date	Alert Trigger	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**			
10/12/2012	No exceedances												None taken

Comments:

	PM-10 (15-min)	TVOC (15-min)	TVOC (1-min)	Odor Intensity (15-min)
Alert Limit:	100 ug/m ³	3.7 ppm	-	-
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Notes:
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 FAM - Fixed Air Monitoring station location
 ug/m³ - 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: T. Landgraf
 Date: 10/12/2012

