

Memorandum

To: Andrew Prophete (National Grid NY)

From: Brian Skelly

Copy to: Richard Dana, 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 (GEI Consultants, Inc.)

Date: June 1, 2012

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
May 19, 2012 through May 25, 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 May 19 and May 25, 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:

- Backfilling excavated area along Bay Street with slurry
- Con Ed connecting power lines in OU-2
- Receiving delivery of bentonite sacks
- Excavating along Willow Avenue for buttress wall installation
- GEO-CON mobilizing along Willow Avenue excavation area.
- Installing slurry wall in OU-2 along Bay Street
- Loading soil offsite via dump trucks
- Mixing slurry using mixing plant in OU-2
- Mixing soil inside the TFS
- Relocating air monitoring station FAM#4
- Site surveying on Bay Street and on Willow Avenue
- Installing tarps on dump trucks at the tarping station
- Transporting bentonite sacks to the west wall of outside the TFS
- Transporting soil from excavation operations along Willow Ave into the TFS via dump trucks
- Transporting soil from slurry operations into the TFS via dump trucks

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). FAM#3 was located in the northeast corner of the 40 Willow Avenue Property during the week. 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. Diesel generators were used to power the four AirLogics Classic stations and will continue 24 hours a day, 7 days per week until 120 volt electrical connections are established onsite.

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 May 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.

Weekly Community Air Monitoring Report
Clifton Former MGP Site Operable Unit 2 (OU-2)
May 19, 2012 through May 25, 2012
June 1, 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
5/19/2012	0.1	0.1	0.2	0.3	0.1	0.2	37	35	2	46	0	74
5/20/2012	0.1	0.1	0.3	0.3	0.1	0.1	37	29	2	46	2	40
5/21/2012	0.2	0.1	0.2	0.2	0.1	0.4	43	17	2	20	4	43
5/22/2012	0.3	0.1	0.1	0.4	0.1	0.1	35	74	4	22	38	59
5/23/2012	0.2	0.1	0.2	0.2	0.4	0.1	90	86	5	39	11	52
5/24/2012	0.0	0.1	0.1	0.2	0.1	0.1	53	20	2	28	12	51
5/25/2012	0.0	0.1	0.2	0.2	0.1	0.1	61	25	3	63	11	81
Average	0.1	0.1	0.2	0.3	0.1	0.1	51	41	3	38	11	57
Maximum	0.3	0.1	0.3	0.4	0.4	0.4	90	86	5	63	38	81

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 an to equipment malfunction, TVOC are not available at FAM#1 from 15:36 on 5/22/12 - 6:04 on 5/23/12.

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

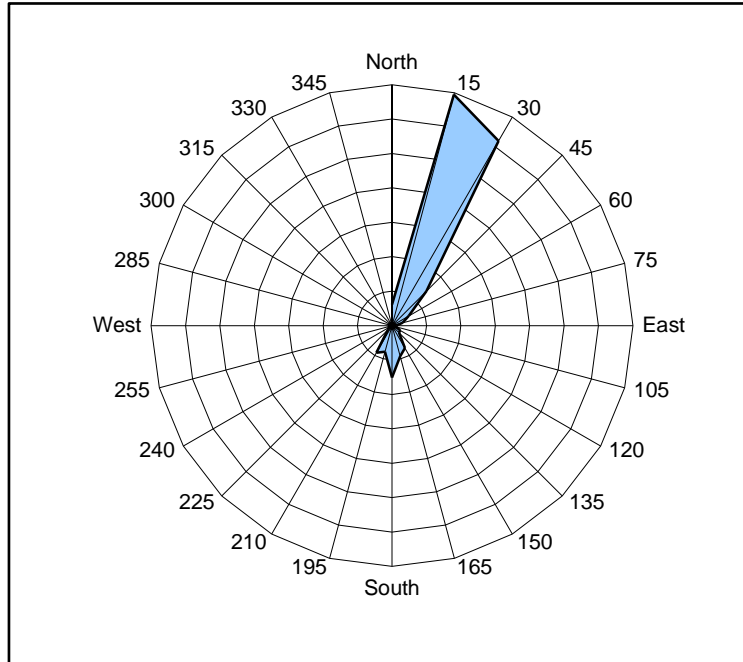


Figure 1. Wind rose for the period 05/19/12 through 05/25/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

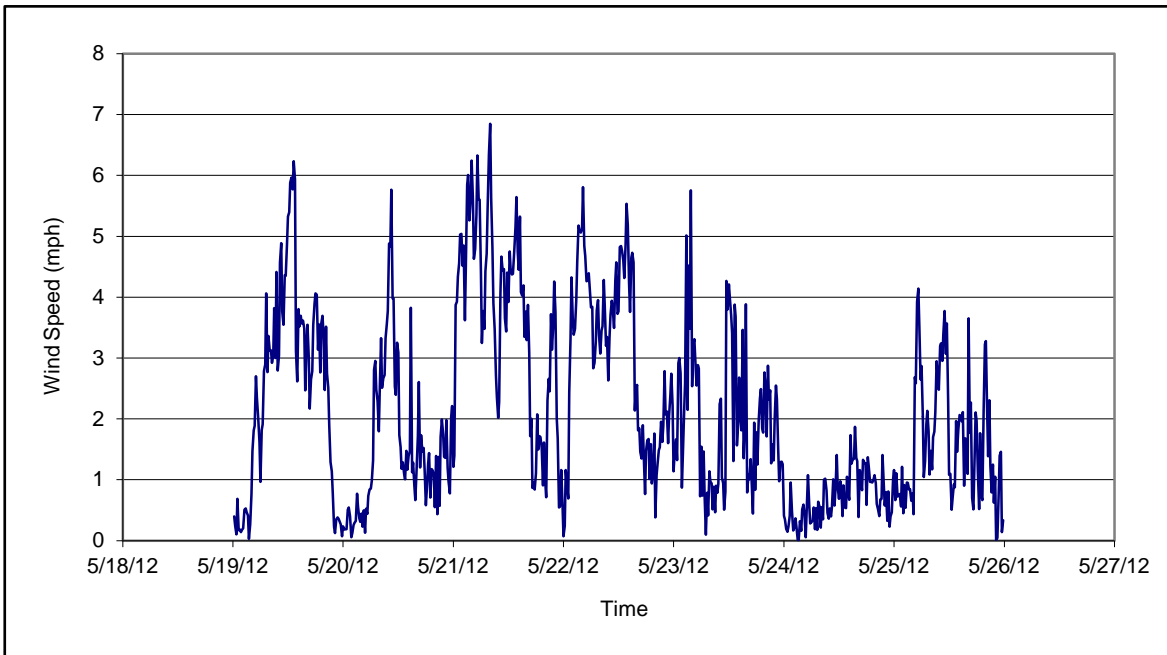


Figure 2. Wind speed for the period 05/19/12 through 05/25/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

Figures 1-4
Meteorological Data
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Clifton Former MGP Site Operable Unit 2
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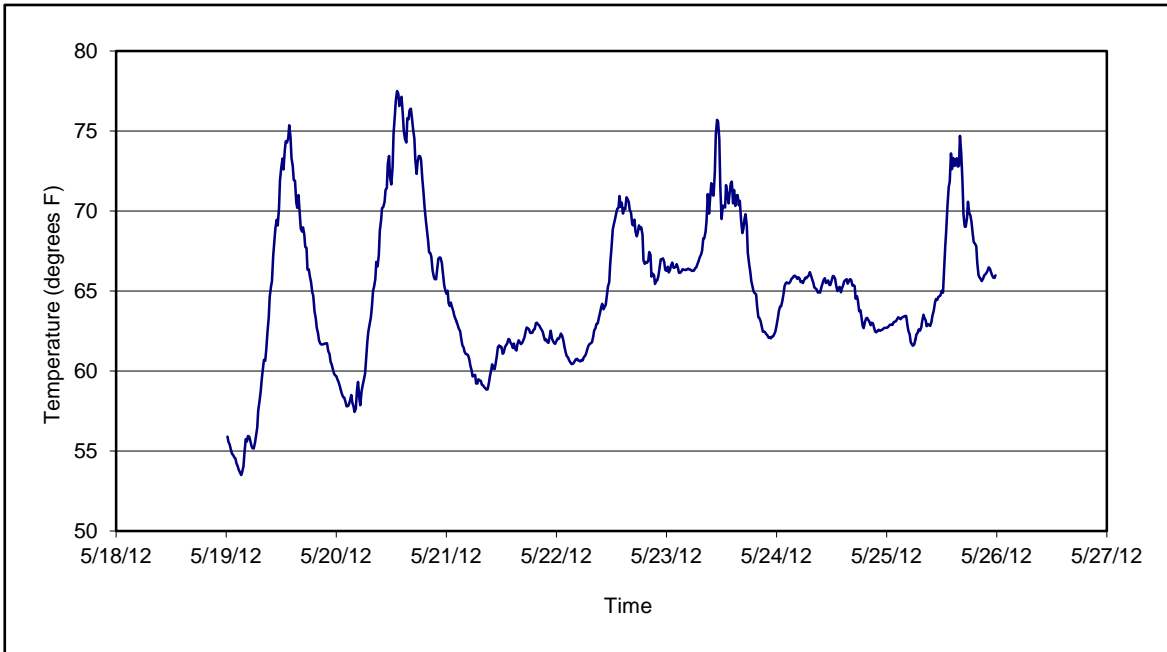


Figure 3. Temperature for the period 05/19/12 through 05/25/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

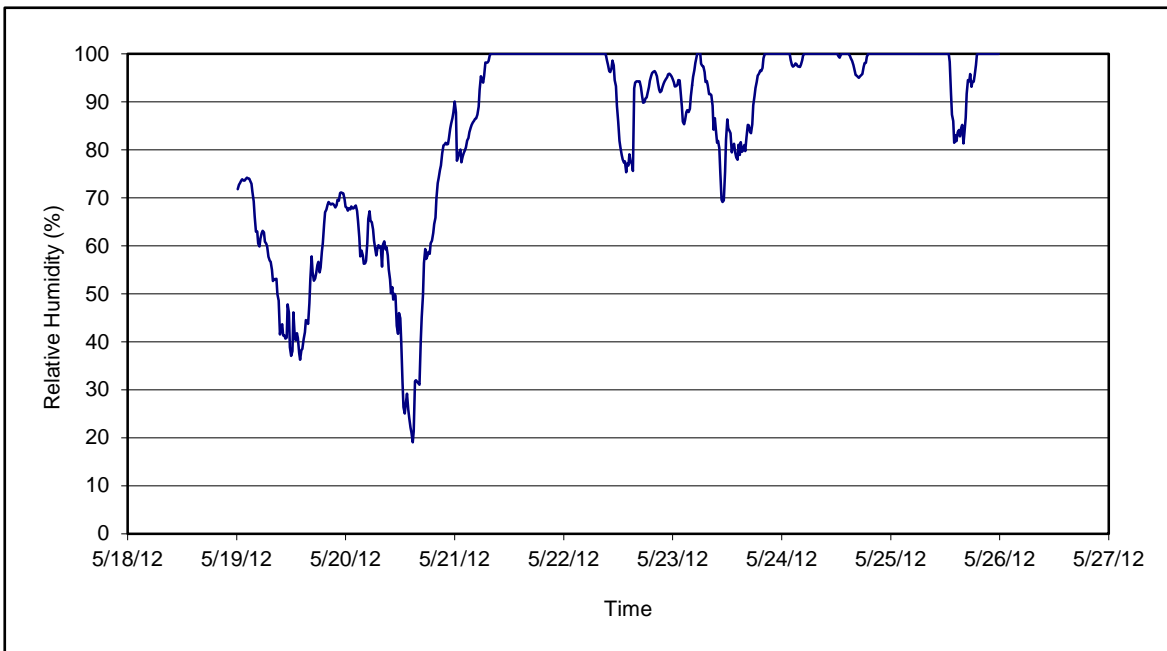


Figure 4. Relative humidity for the period 05/19/12 through 05/25/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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	5/21/2012	General Weather Conditions:			Overcast w/rain- ~60°F- ~62°F							
System Start Time	continuous	General Description of Site Activities:			Transporting soil from slurry operations into the TFS via dump trucks							
System Stop Time	continuous	Health & Safety Meeting			Mixing slurry using mixing plant in OU-2							
Total Hrs Monitored	24	Continuous Air Monitoring			Backfilling excavated area along Bay Street with slurry							
System Calibrations (Time/Status)	Ok 0623-0734	Installing slurry wall in OU-2 along Bay Street			Site survey on Willow Ave							

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**			
5/21/2012	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/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: 5/21/2012

Page 1 of 1

**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	5/22/2012	General Weather Conditions: Overcast w/rain - clear - ~61°F- ~70°F											
System Start Time	continuous	General Description of Site Activities: Health & Safety Meeting											
System Stop Time	continuous	Transporting soil from slurry operations into the TFS via dump trucks											
Total Hrs Monitored	24	Mixed slurry using mixing plant in OU-2											
System Calibrations (Time/Status)	Ok 0624-0743	Backfilling excavated area along Bay Street with slurry											
		Transported bentonite sacks to the west wall of outside the TFS											
		Tarpred dump trucks at the tarping station											
		Installed slurry wall in OU-2 along Bay Street											
		Site survey on Willow Ave											
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
5/22/2012	None												No exceedances
Comments: No recordable data for TVOC @ FAM#1 from 15:36 - 23:59 due to equipment malfunction													
		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					
ppmv - parts per million by volume								Field Representative:		R. Marshall			
								Date:		5/22/2012			
												Page 1 of 1	

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: 5/24/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0643-0716					General Weather Conditions: Clear - overcast w/heavy rain- -66°F- -70°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Mixed soil inside the TFS Site survey on Willow Ave Excavation along Willow ave for buttress wall installation Mixed slurry using mixing plant in OU-2 Backfilled excavated area along Bay Street with slurry Loaded soil offsite via dumptrucks Transported soil from excavation operations along Willow Ave into the TFS via dump trucks Con Ed tied into power lines in OU-2									
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	
5/24/2012	None												No exceedances	
Comments: No recordable data for TVOC @ FAM#1 from 15:36 on 5/22/12 - 6:04 on 5/23 due to equipment malfunction														
					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								
ppmv - parts per million by volume						Field Representative: R. Marshall								
						Date: 5/24/2012								



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	5/25/2012				General Weather Conditions: Clear - overcast w/heavy rain- ~62°F- ~73°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Mixed soil inside the TFS Site survey on Willow Ave Excavated along Willow ave for buttress wall installation Mixed slurry using mixing plant in OU-2 Delivery of bentonite sacks Loaded soil offsite via dumptrucks Transported soil from excavation operations along Willow Ave into the TFS via dump trucks Relocated FAM#4								
System Start Time	continuous												
System Stop Time	continuous												
Total Hrs Monitored	24												
System Calibrations (Time/Status)	Ok 0627-0751												
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
5/25/2012	None								Min**	Max**			No exceedances
Comments: No recordable data for TVOC @ FAM#1 from 15:36 on 5/22/12 - 6:04 on 5/23 due to equipment malfunction													
			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: R. Marshall			
ppmv - parts per million by volume										Date: 5/25/2012			
												Page 1 of 1	

