



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: April 1, 2013

Regarding: Weekly Community Air Monitoring Report
Clifton Former MGP Site - Operable Unit 2 (OU-2)
March 23, 2013 through March 29, 2013

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 March 23, 2013 to March 29, 2013.

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:

- Disassembled waste water treatment plant in OU1
- Disassembled temporary perimeter fence
- Emptied waste drums into tarped roll off dumpster
- Fueled construction Vehicles with fuel truck onsite
- Installed NAPL recovery wells
- Installed perimeter fence around OU2
- Removed construction vehicle offsite via flatbed truck
- Cut jersey barriers using circular saw
- Removed jersey barriers along Willow Avenue
- Removed jersey barriers along Bay Street
- Stockpiled former perimeter fence
- Dismantled girder base support for TFS via cutting torch

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 Air Logics Classic stations equipped with gas chromatographs (GCs) were operated at FAM#2, FAM#3, FAM#4, and FAM#5 and two Air Logics 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.

On Friday March 22, 2013 at 3:33 pm to Monday, March 25, 2013 at 6:35 am, FAM#5 was shut down as requested by the client, National Grid. There was no data collected during this time period. No TVOC or PM10 exceedances were noted from adjacent stations.

On Thursday, March 25, 2013 at 5:30pm to Friday March 25, 2013 at 7:50am, FAM# 2 loss power due to a tripped circuit breaker. Limited data was recovered during this time period. De maximis was informed on the incident and Severson worked with the GEI Tech to remedy the problem.

Upwind and downwind ambient air verification samples were collected on March 27-28, 2013. 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)
March 23, 2013 through March 29, 2013
April 1, 2013
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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
3/23/2013	0.0	0.3	0.0	0.3	ND	0.3	22	6	1	1	ND	19
3/24/2013	0.0	0.3	0.3	0.4	ND	0.3	32	7	1	1	ND	13
3/25/2013	0.0	0.4	0.1	0.4	0.2	0.9	32	12	15	22	56	24
3/26/2013	0.2	0.5	0.1	0.3	0.2	4.0	32	13	6	9	8	15
3/27/2013	0.5	0.3	0.1	0.2	0.1	2.7	22	6	2	5	88	7
3/28/2013	0.4	0.4	0.2	0.2	0.2	2.9	28	7	1	3	12	6
3/29/2013	0.2	0.4	0.1	0.2	0.2	1.5	33	13	1	2	87	6
Average	0.2	0.4	0.1	0.3	0.2	1.8	29	9	4	6	50	13
Maximum	0.5	0.5	0.3	0.4	0.2	4.0	33	13	15	22	88	24

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 recorded for TVOC at FAM# 5 due to agreed shut down post intrusive work cessation

**Figures 1-4. Meteorological Data
Clifton Former MGP Site
Clifton, NY**

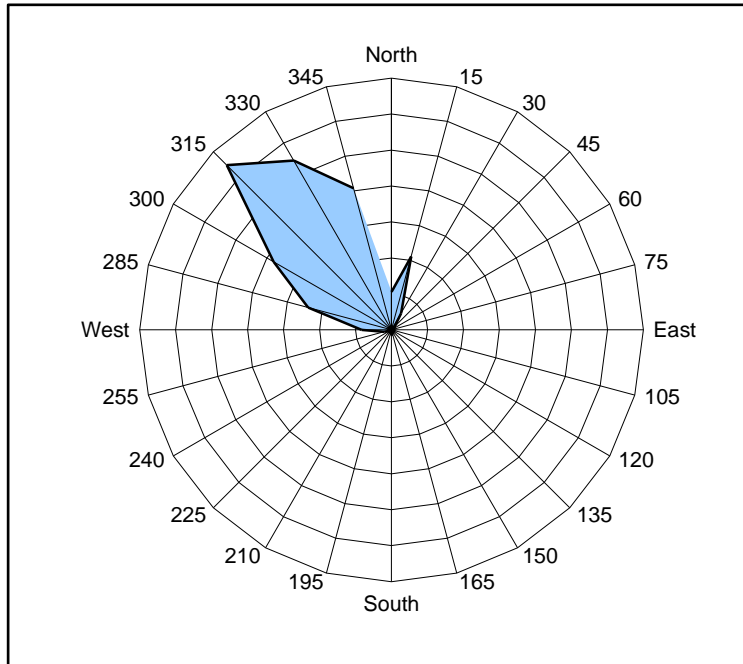


Figure 1. Wind rose for the period 03/23/13 through 03/29/13 collected at the Glen Cove Former MGP Site in Glen Cove, NY. Wind direction data used to create the wind rose were calculated from 15-minute averages.

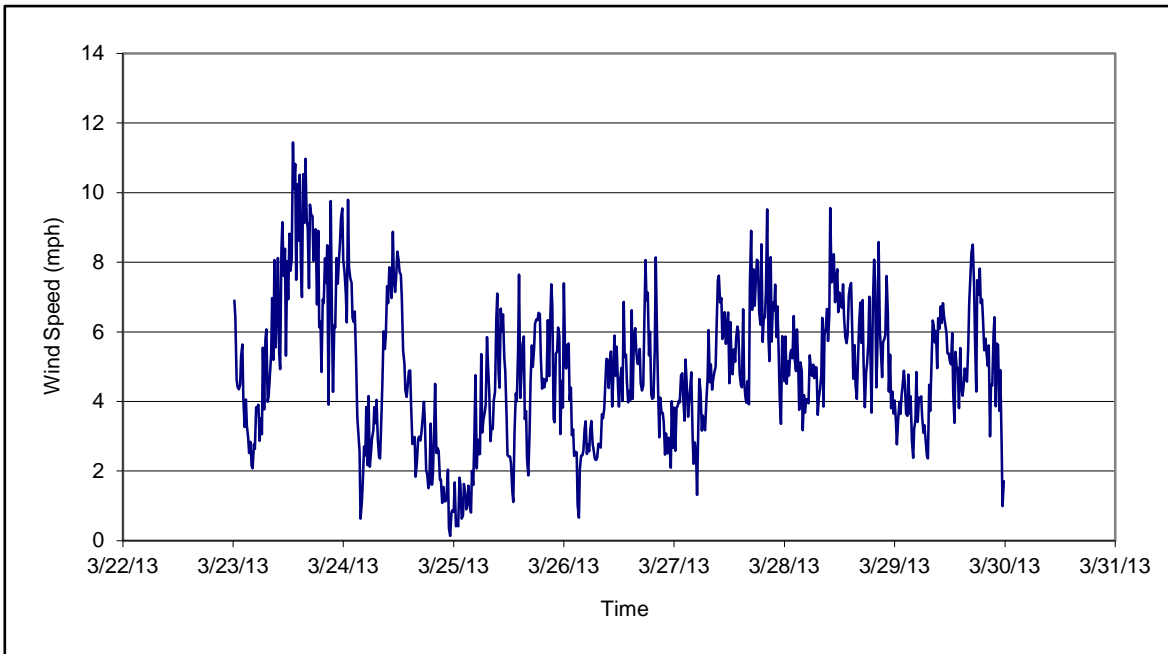


Figure 2. Wind speed for the period 03/23/13 through 03/29/13 collected at the Glen Cove Former MGP Site in Glen Cove, NY. Data are 15-minute averages.

**Figures 1-4. Meteorological Data
Clifton Former MGP Site
Clifton, NY**

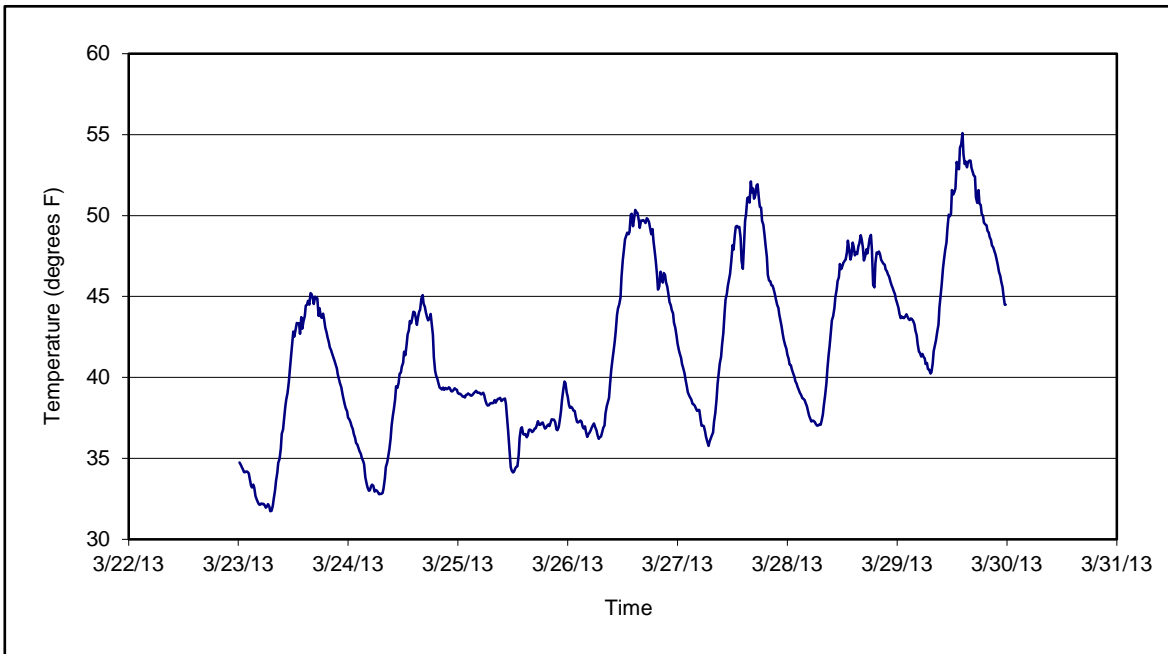


Figure 3. Temperature for the period 03/23/13 through 03/29/13 collected at the Glen Cove Former MGP Site in Glen Cove, NY. Data are 15-minute averages.

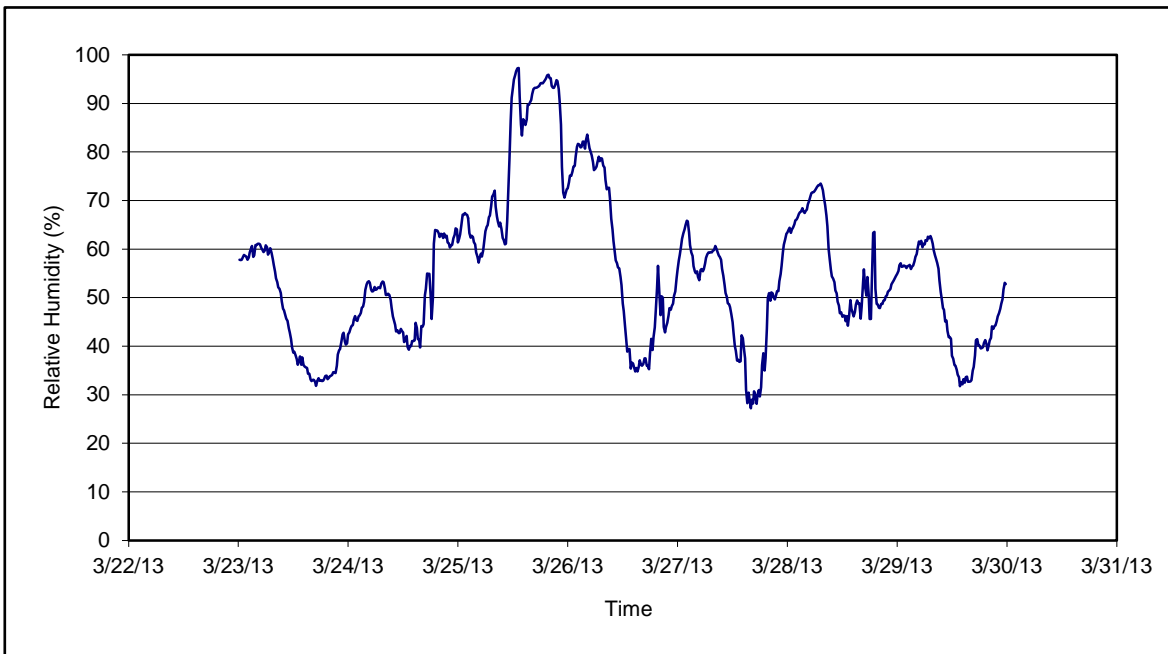


Figure 4. Relative humidity for the period 03/23/13 through 03/29/13 collected at the Glen Cove Former MGP Site in Glen Cove, NY. Data are 15-minute averages.

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	3/25/2013	General Weather Conditions: Overcast w/ Rain and Snow - ~ 31°F - ~36°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Stockpiled former perimeter fence Installed NAPL recovery wells Disassembled waste water treatment plant in OU1															
System Start Time	continuous																
System Stop Time	continuous																
Total Hrs Monitored	24																
System Calibrations (Time/Status)	Ok 0702-0900																
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				
3/25/13	No exceedances												None taken				
Comments:																	
					PM-10 (15-min)			TVOC (15-min)			TVOC (1-min)			Odor Intensity (15-min)			
					Alert Limit:			3.7 ppm			-			-			
					Action Limit:			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: 3/25/2013					
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	3/26/2013	General Weather Conditions: Partly Cloudy - ~ 36°F - ~50°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Removed and Stockpiled former perimeter fence Installed NAPL recovery wells Disassembled waste water treatment plant in OU1 Cutting torch being used on Ibeam base structure of former TFS																										
System Start Time	continuous																											
System Stop Time	continuous																											
Total Hrs Monitored	24																											
System Calibrations (Time/Status)	Ok 0801-0953																											
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															
3/26/13	TVOC	FAM#6	6:56	6:58	3	West	CW/UW	N/A	N/A	N/A	none	No Site activity taken place dureing this time	Offsite source, No Action Taken															
Comments:																												
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 15%;">PM-10 (15-min)</td> <td style="width: 15%;">TVOC (15-min)</td> <td style="width: 15%;">TVOC (1-min)</td> <td style="width: 22%;">Odor Intensity (15-min)</td> </tr> <tr> <td style="text-align: right;">Alert Limit:</td> <td>100 ug/m³</td> <td>3.7 ppm</td> <td>-</td> <td>-</td> </tr> <tr> <td style="text-align: right;">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)
	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: C. John																
ug/m ³ - micrograms per cubic meter						ND - no data available						Date: 3/26/2013																
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 3/27/2013 System Start Time continuous System Stop Time continuous Total Hrs Monitored 24 System Calibrations Ok (Time/Status) 0801-0953					General Weather Conditions: Clear -- ~ 36°F - ~50°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Removed and Stockpiled former perimeter fence Installed NAPL recovery wells Disassembled waste water treatment plant in OU1 Cutting torch being used on Ibeam base structure of former TFS Stockpiled soundbarriers, equipment, and iron girders on Flatbed to prep for removal. Excavator cleared and leveled ground where well installation was previously taking place.								
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
3/27/13	No Exceedances												Non 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.					PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter TVOC - total volatile organic compounds								
FAM - Fixed Air Monitoring station location ug/m ³ - micrograms per cubic meter ppmv - parts per million by volume					NA - not applicable ND - no data available					Field Representative: C. John Date: 3/27/2013			



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: 3/28/2013 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0801-1032					General Weather Conditions: Clear - ~ 44°F - ~47°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Removed and Stockpiled former perimeter fence Installed NAPL recovery wells Disassembled waste water treatment plant in OU1 Waste material loaded out from roller container to tarped dump truck Front end loader leveled roadways Roll Gate installed at eastern entrance to 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		Site Condition	Site Activity During the Period (if applicable)	Actions Taken	
3/28/13	No Exceedances								Min**	Max**			Non Taken	
Comments:														
Alert Limit:					PM-10 (15-min)	TVOC (15-min)	TVOC (1-min)	Odor Intensity (15-min)						
Action Limit:					100 ug/m ³	3.7 ppm	-	-						
					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: C. John Date: 3/28/2013						
													Page 1 of 1	



