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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 5, 2012

Regarding: Weekly Community Air Monitoring Report  
Clifton Former MGP Site - Operable Unit 2 (OU-2)  
June 23, 2012 through June 29, 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 23 and June 29, 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 GEO-CON demobilization operations onsite. 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:

- Backfilled trench with slurry
- Batch plant operations
- Deconned load out dump trucks
- Demobilized Batch Plant
- Emptied frac tank
- Excavated along Willow Avenue
- Loaded out scrap metal from site via construction vehicle
- Loaded out soil from site via tarped dumptrucks
- Mixed slurry at batch plant in OU-2
- Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust
- Operated hoe-ram on foundation of one-story building
- Operated mist odor suppressant along Willow Avenue
- Received delivery of bentonite
- Segregated scrap metal from demolition
- Set up jersey blocks in exclusion zone
- Stockpiled clean soil
- Stockpiling scrap metal from demolition
- Surveyed site on Willow Avenue
- Transported soil from excavation operations along Willow Avenue to the TFS via dump trucks
- Installed well points

### **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. Due to work progressing along Willow Avenue, FAM#4 was temporarily relocated on Operable Unit 1 along Willow Avenue west of the wastewater treatment plant near the brick buildings. 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 June 29, 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.

### **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 <sup>3</sup>	150 ug/m <sup>3</sup>	< 100 ug/m <sup>3</sup>	≥ 100 ug/m <sup>3</sup> , < 150 ug/m <sup>3</sup>	≥ 150 ug/m <sup>3</sup>
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 <sup>3</sup>	≥ 330 ug/m <sup>3</sup> , < 440 ug/m <sup>3</sup>	≥ 440 ug/m <sup>3</sup>

**Notes:**

<sup>1</sup> 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

<sup>2</sup> 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/m<sup>3</sup> - 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 <sup>3</sup> )					
	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6
6/23/2012	0.1	0.1	0.1	ND	0.3	0.1	61	46	3	34	2	75
6/24/2012	0.1	0.5	ND	ND	0.2	0.3	23	21	3	3	0	35
6/25/2012	0.1	0.1	0.2	0.8	0.1	0.1	44	28	4	13	3	54
6/26/2012	0.1	0.0	0.2	0.5	0.1	0.1	30	41	4	5	2	13
6/27/2012	0.0	0.1	0.3	0.4	0.1	0.1	34	21	4	3	2	25
6/28/2012	0.0	0.1	0.2	0.3	0.1	0.2	62	23	3	1	0	0
6/29/2012	0.1	0.3	0.2	0.2	0.1	0.2	100	47	3	20	63	88
Average	0.1	0.2	0.2	0.4	0.1	0.2	51	32	3	11	10	41
Maximum	0.1	0.5	0.3	0.8	0.3	0.3	100	47	4	34	63	88

**Notes:**

FAM - fixed air monitoring station location

ug/m<sup>3</sup> - 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 22:24 on 6/23/2012 - 7:37 on 6/25/2012.

Due to equipment malfunction there is no recordable TVOC data for FAM#4 from 4:34 on 6/23/2012 - 7:07 on 6/25/2012.

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

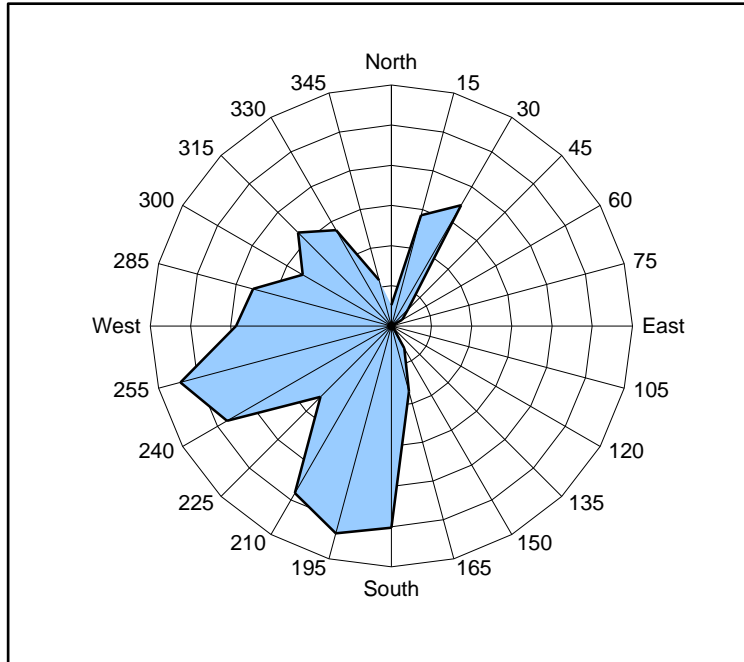


Figure 1. Wind rose for the period 06/23/12 through 06/29/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

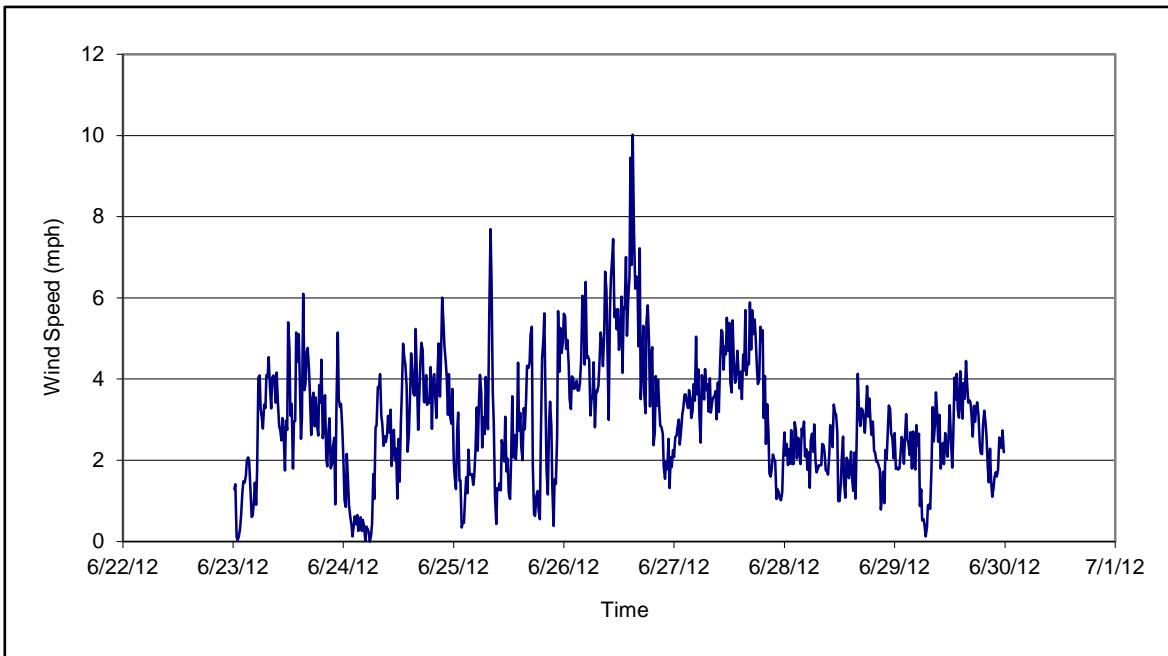


Figure 2. Wind speed for the period 06/23/12 through 06/29/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

**Figures 1-4**  
**Meteorological Data**  
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**Borough of Staten Island, New York**

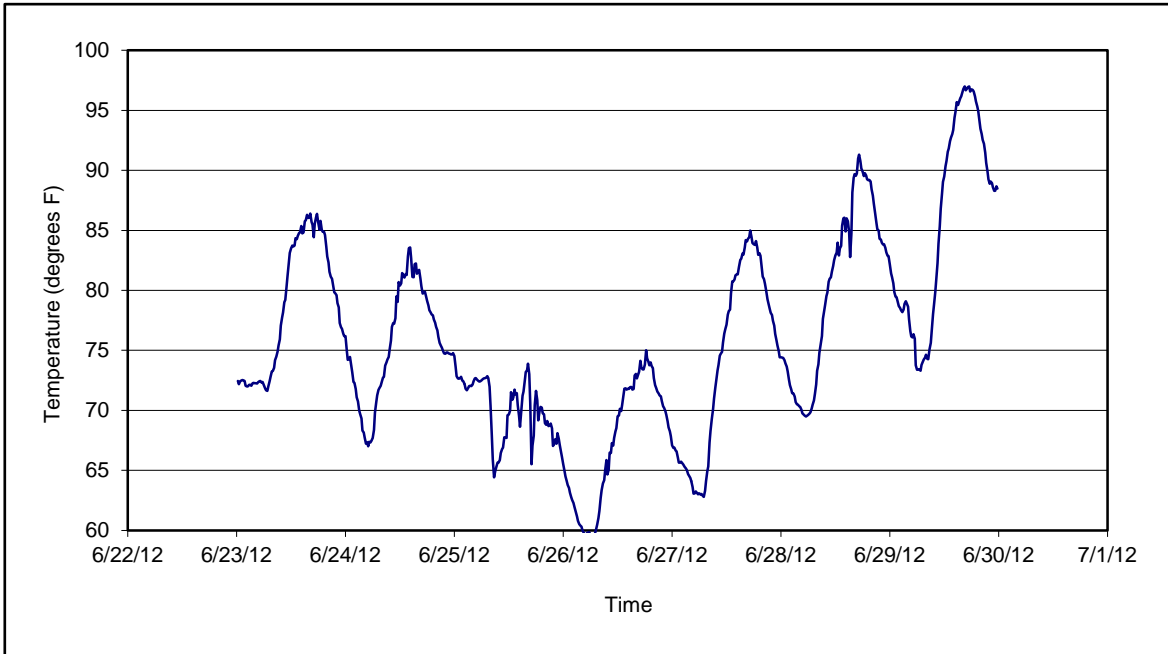


Figure 3. Temperature for the period 06/23/12 through 06/29/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

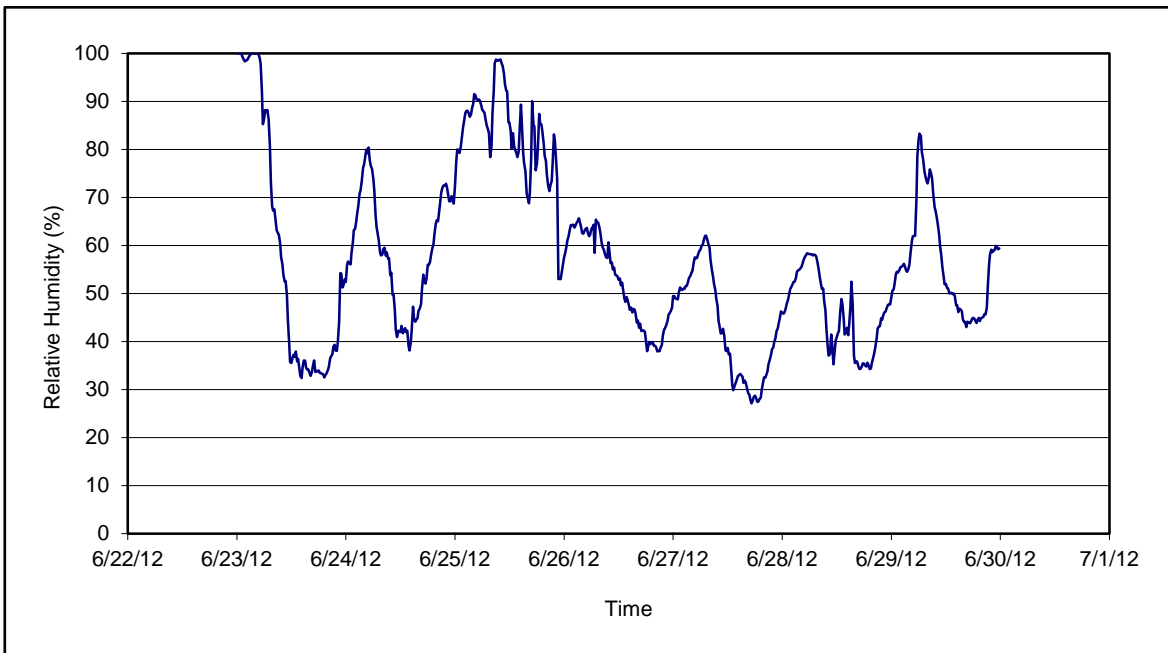


Figure 4. Relative humidity for the period 06/23/12 through 06/29/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.







# 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		6/27/2012			General Weather Conditions: Clear ~63°F- ~83°F								
System Start Time		continuous			General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Segregated scrap metal from demolition Operated hoe-ram on foundation of one-story building Excavated along Willow Avenue Operated mist odor suppressant along Willow Avenue Stockpiled clean soil Decconned load out dump trucks Load out soil from site via tarped dumptrucks Surveyed site on Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust Transported soil from excavation operations along Willow Avenue to the TFS via dump trucks Batch plant operations Load out demoed scrap metal from site via construction vehicle Emptied frac tank								
System Stop Time		continuous											
Total Hrs Monitored		24											
System Calibrations (Time/Status)		Ok 0636-0916											
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
6/27/2012	None												No exceedances

**Comments:**

	PM-10 (15-min)	TVOC (15-min)	TVOC (1-min)	Odor Intensity (15-min)
Alert Limit:	100 ug/m <sup>3</sup>	3.7 ppm	-	-
Action Limit:	150 ug/m <sup>3</sup>	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<sup>3</sup> - 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: 6/27/2012

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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: 6/28/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24 System Calibrations (Time/Status): Ok 0640-0958					General Weather Conditions: Clear ~63°F- ~83°F General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Operated hoe-ram on foundation of one-story building Operated mist odor suppressant along Willow Avenue Demobed Batch Plant Stockpiled clean soil Decconned load out dump trucks Load out soil from site via tarped dumptrucks Surveyed site on Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust Transported soil from excavation operations along Willow Avenue to the TFS via dump trucks								
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
6/28/2012	None												No exceedances
Comments:													
					<b>PM-10 (15-min)</b>		<b>TVOC (15-min)</b>		<b>TVOC (1-min)</b>		<b>Odor Intensity (15-min)</b>		
					Alert Limit: 100 ug/m <sup>3</sup>		3.7 ppm		-		-		
					Action Limit: 150 ug/m <sup>3</sup>		5.0 ppm		25 ppm		3 (n-butanol scale)		
<b>Notes:</b> * 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 <sup>3</sup> - 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: 6/28/2012													



## 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: 6/29/2012 System Start Time: continuous System Stop Time: continuous Total Hrs Monitored: 24  System Calibrations (Time/Status): Ok 0637-0820					General Weather Conditions: Clear ~63°F - ~83°F  General Description of Site Activities: Health & Safety Meeting Continuous Air Monitoring Operated hoe-ram on foundation of one-story building Operated mist odor suppressant along Willow Avenue Demobed Batch Plant Installed well points  Stockpiled clean soil Decconned load out dump trucks Load out soil from site via tarped dumptrucks Surveyed site on Willow Avenue Mixed soil inside the Temporary Fabric Structure (TFS) with kiln-dust Transported soil from excavation operations along Willow Avenue to the TFS via dump trucks									
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	
6/29/2012	PM-10	FAM#1	13:34	13:34	1	NE	UW	N/A	100	100	1	GEOCON demobilizing equipment	None taken	
<b>Comments:</b>														

	PM-10 (15-min)	TVOC (15-min)	TVOC (1-min)	Odor Intensity (15-min)
Alert Limit:	100 ug/m <sup>3</sup>	3.7 ppm	-	-
Action Limit:	150 ug/m <sup>3</sup>	5.0 ppm	25 ppm	3 (n-butanol scale)

**Notes:**

<ul style="list-style-type: none"> <li>* Wind directions are presented by octant (i.e. N, NE, E, SE, S, SW, W, NW).</li> <li>** Upwind minus downwind concentrations are a time specific comparison.</li> <li>FAM - Fixed Air Monitoring station location</li> <li>ug/m<sup>3</sup> - micrograms per cubic meter</li> <li>ppmv - parts per million by volume</li> </ul>	<ul style="list-style-type: none"> <li>PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter</li> <li>TVOC - total volatile organic compounds</li> <li>NA - not applicable</li> <li>ND - no data available</li> </ul>	Field Representative: C. John/R. Marshall Date: 6/29/2012
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