

## Memorandum

To: Andrew Prophete (National Grid NY)

From: Brian Skelly

Copy to: Richard Dana, R. Scott Deyette (NYSDEC), and Chris Schroer (EA Engineering)  
Stephanie Selmer (NYSDOH)  
Dave Boram and Thor Helgason (de maximis)  
Ted Leissing (National Grid NY)  
Shail Pandya (AECOM)  
Ronell Marshall (GEI Consultants, Inc.)

Date: March 16, 2012

Regarding: Weekly Community Air Monitoring Report  
Clifton Former MGP Site - Operable Unit 2 (OU-2)  
March 3, 2012 through March 9, 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 March 3 and March 9, 2012.

There were no fifteen-minute exceedances of the Total Volatile Organic Compounds (TVOC) or odor action levels associated with site activities during this reporting period. Fifteen-minute averages of TVOC and odor intensity data remained at a Site Condition 1.

Some elevated dust measurements occurred during work hours caused by construction vehicle traffic onsite that exceeded the fifteen-minute action level for Particulate Matter (PM-10) [dust] data. GEI informed the construction manager and the contractor applied water to the ground surface to control the dust. After these controls were implemented, concentrations of PM-10 decreased below the alert level and action levels. 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:

- Site wide mobilization in Operable Unit 1 (OU-1) and OU-2
- Temporary fabric structure construction in OU-2
- Removal of internal components in the warehouse in OU-2
- Wastewater treatment plant construction in OU-1

### **Data collection**

Real-time fixed station monitoring for TVOC and PM<sub>10</sub> (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 at during the week.

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. Table 3 depicts a more detailed and time-specific comparison of upwind and downwind measurements that is needed to determine the Site Condition.

Upwind and downwind ambient air verification samples were not collected this week since very little ground intrusive activity took place. Ambient air verification sampling will resume the following week. 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, temperature, relative humidity, and wind speed time series for the period.

A period of elevated concentrations of PM-10 (dust) was recorded at FAM#1, FAM#2, and FAM#4 during work hours on March 8 due to dust from onsite vehicle traffic. GEI informed the construction manager and the contractor applied water to the ground surface to control the dust. After these controls were implemented, concentrations of PM-10 decreased below the alert level and action level. No intrusive activities took place during this time.

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.

Weekly Community Air Monitoring Report  
Clifton Former MGP Site Operable Unit 2 (OU-2)  
March 3, 2012 through March 9, 2012  
March 16, 2012  
Page 3

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<br>(15-minute)        | 3.7 ppm               | 5.0 ppm               | < 3.7 ppm               | ≥ 3.7 ppm,<br>< 5.0 ppm                              | ≥ 5.0 ppm                   |
| TVOC<br>(1-minute)         | NA                    | 25 ppm                | < 25 ppm                | NA   | ≥ 25 ppm                    |
| PM-10<br>(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> ,<br>< 150 ug/m <sup>3</sup> | ≥ 150 ug/m <sup>3</sup>     |
| Odor<br>(15-minute)        | Odors /<br>Complaints | NA                    | No odors                | NA   | 3<br>(n-butanol)            |
| HCN<br>(15-minute)         | Visual Detection      | NA                    | < 0.6 ppm               | ≥ 0.6 ppm<br>(4-gas meter)                           | ≥ 0.6 ppm<br>(Draeger tube) |
| Naphthalene<br>(15-minute) | NA                    | NA                    | < 440 ug/m <sup>3</sup> | ≥ 330 ug/m <sup>3</sup> ,<br>< 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 |
| 3/3/2012 | 0.1   | 0.1   | 0.1   | 0.1   | 0.0   | 0.1   | 56                   | 46    | 47    | 30    | 49    | 39    |
| 3/4/2012 | 0.0   | 0.1   | 0.1   | 0.1   | 0.0   | 0.1   | 6                    | 15    | 16    | 5     | 19    | 13    |
| 3/5/2012 | 0.3   | 0.1   | 0.5   | 0.1   | 0.0   | 0.4   | 16                   | 15    | 33    | 18    | 14    | 17    |
| 3/6/2012 | 0.1   | 0.3   | 0.4   | 0.1   | 0.0   | 0.4   | 28                   | 31    | 65    | 28    | 29    | 18    |
| 3/7/2012 | 0.0   | 0.1   | 0.1   | 0.1   | 0.0   | 0.2   | 56                   | 51    | 36    | 85    | 30    | 47    |
| 3/8/2012 | 0.1   | 0.1   | 0.0   | 0.0   | 0.0   | 0.1   | 307                  | 136   | 25    | 167   | 22    | 62    |
| 3/9/2012 | 0.1   | 0.1   | 0.1   | 0.1   | 0.0   | 0.0   | 30                   | 30    | 42    | 28    | 21    | 18    |
| Average  | 0.1   | 0.1   | 0.2   | 0.1   | 0.0   | 0.2   | 71                   | 46    | 38    | 52    | 26    | 31    |
| Maximum  | 0.3   | 0.3   | 0.5   | 0.1   | 0.0   | 0.4   | 307                  | 136   | 65    | 167   | 30    | 62    |

**Notes:**

FAM - Fixed Air Monitorign 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

**Table 3. Summary of Elevated Concentrations of TVOC and PM-10  
Community Air Monitoring Program  
Clifton Former MGP Site Operable Unit 2  
Borough of Staten Island, New York**

| 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** |                |   |  |
| 3/8/2012 | PM-10         | FAM#1   | 11:00      | 11:14    | 14                  | SW        | DW/CW           | FAM#5             | 80                                      | 116   | 2              | Onsite construction vehicle traffic. No intrusive activity. | Notifications were made and water was sprayed on the group surface to control the dust |
| 3/8/2012 | PM-10         | FAM#1   | 11:44      | 12:33    | 49                  | SW        | DW/CW           | FAM#5             | 85                                      | 285   | 3              | Onsite construction vehicle traffic. No intrusive activity. | Notifications were made and water was sprayed on the group surface to control the dust |
| 3/8/2012 | PM-10         | FAM#1   | 12:49      | -        | 1                   | SW        | DW/CW           | FAM#5             | NA                                      | 120   | 2              | Onsite construction vehicle traffic. No intrusive activity. | Notifications were made and water was sprayed on the group surface to control the dust |
| 3/8/2012 | PM-10         | FAM#1   | 13:48      | 13:55    | 7                   | SW        | DW/CW           | FAM#5             | < 0                                     | < 0   | 1              | Onsite construction vehicle traffic. No intrusive activity. | Notifications were made and water was sprayed on the group surface to control the dust |
| 3/8/2012 | PM-10         | FAM#1   | 15:03      | 15:26    | 23                  | S         | DW/CW           | FAM#5             | < 0                                     | < 0   | 1              | Onsite construction vehicle traffic. No intrusive activity. | Notifications were made and water was sprayed on the group surface to control the dust |
| 3/8/2012 | PM-10         | FAM#2   | 10:46      | 11:00    | 15                  | SW        | DW              | FAM#5             | 82                                      | 100   | 2              | Onsite construction vehicle traffic. No intrusive activity. | Notifications were made and water was sprayed on the group surface to control the dust |
| 3/8/2012 | PM-10         | FAM#2   | 11:56      | 12:03    | 8                   | SSW       | DW              | FAM#5             | 80                                      | 89    | 1              | Onsite construction vehicle traffic. No intrusive activity. | Notifications were made and water was sprayed on the group surface to control the dust |
| 3/8/2012 | PM-10         | FAM#2   | 12:12      | 12:27    | 12                  | SW        | DW              | FAM#5             | 79                                      | 114   | 2              | Onsite construction vehicle traffic. No intrusive activity. | Notifications were made and water was sprayed on the group surface to control the dust |
| 3/8/2012 | PM-10         | FAM#4   | 12:11      | 12:24    | 14                  | SSW       | UW/CW           | FAM#5             | < 0                                     | < 0   | 1              | Onsite construction vehicle traffic. No intrusive activity. | Notifications were made and water was sprayed on the group surface to control the dust |
| 3/8/2012 | PM-10         | FAM#4   | 14:15      | 14:25    | 11                  | SW        | UW/CW           | FAM#5             | < 0                                     | < 0   | 1              | Onsite construction vehicle traffic. No intrusive activity. | Notifications were made and water was sprayed on the group surface to control the dust |

**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 Monitorign 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

NA - not applicable

ND - no data available

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

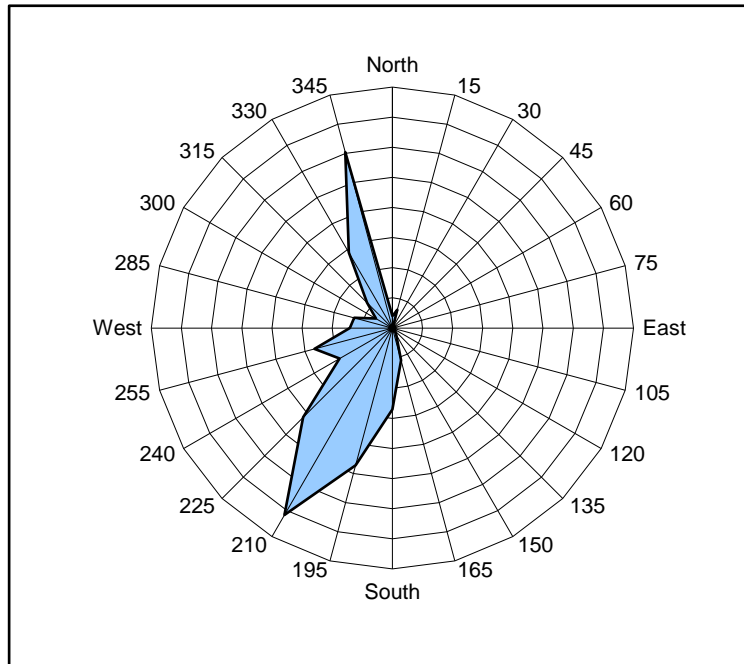


Figure 1. Wind rose for the period 03/03/12 through 03/09/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 15-minute averages.

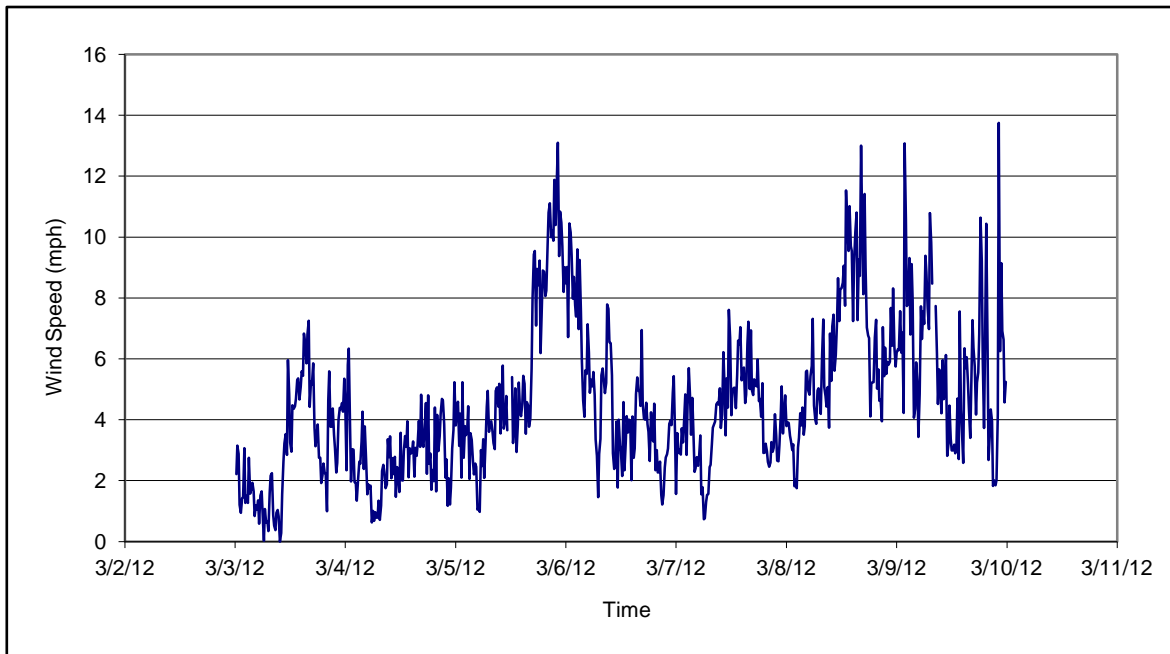


Figure 2. Wind speed for the period 03/03/12 through 03/09/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

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

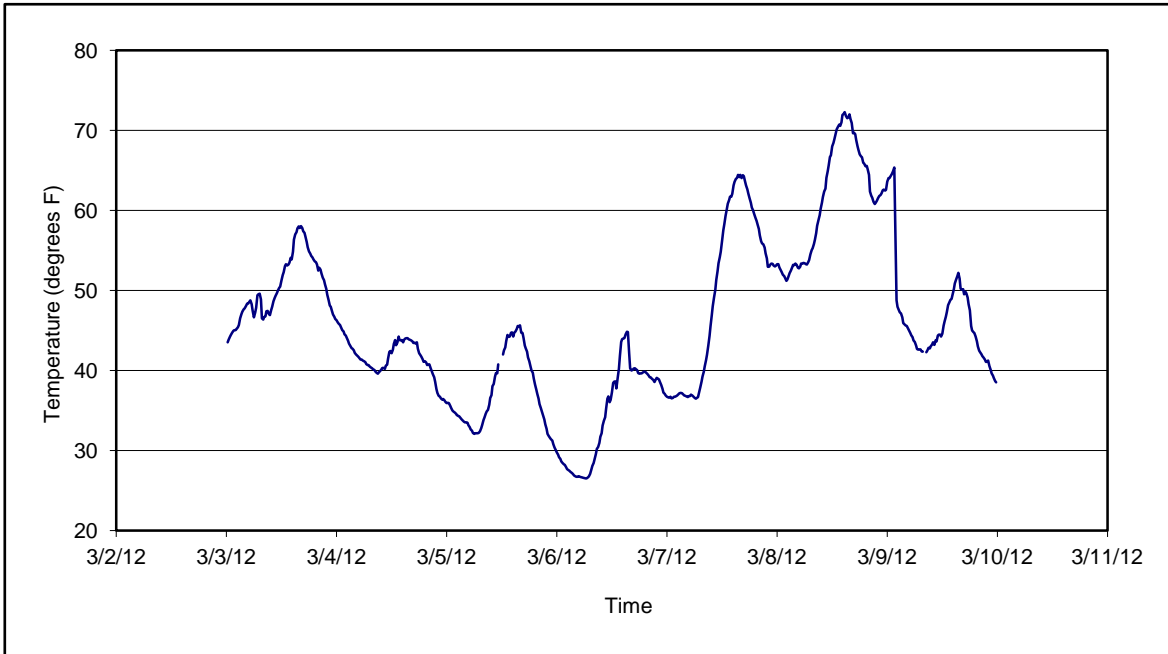


Figure 3. Temperature for the period 03/03/12 through 03/09/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

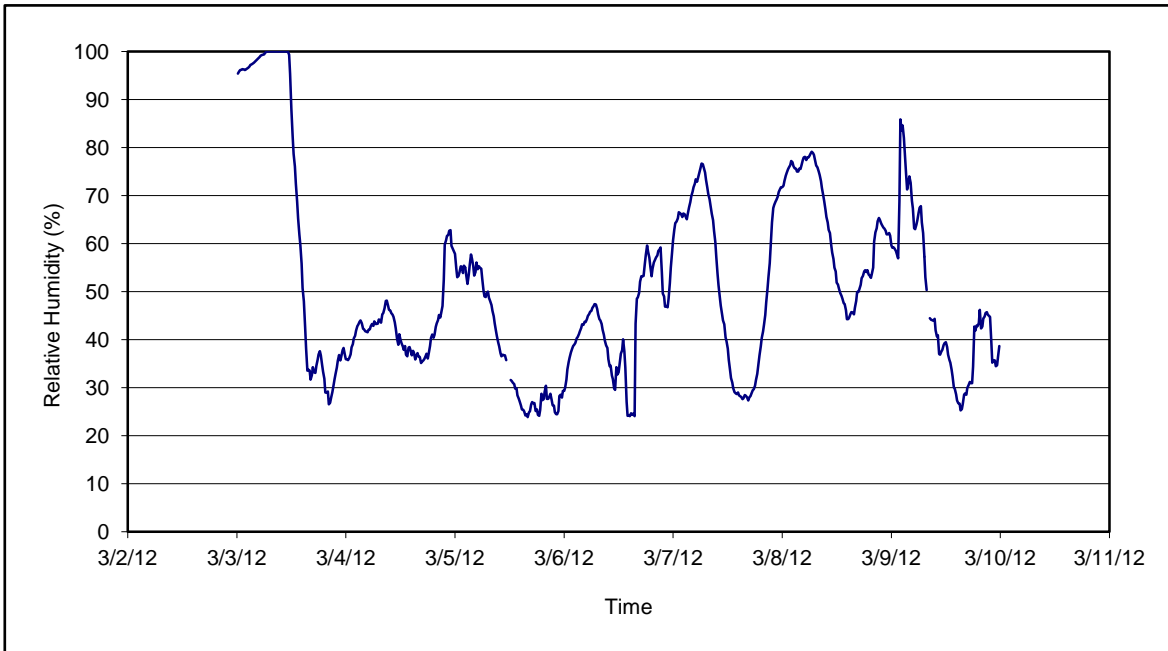


Figure 4. Relative humidity for the period 03/03/12 through 03/09/12 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.