**FINAL**

# SOIL VAPOR INTRUSION STUDY/ GROUNDWATER SAMPLING LETTER REPORT

## FORMER GRIFFIN TECHNOLOGY FACILITY
## FARMINGTON, NEW YORK

Prepared for
Diebold, Inc.
Canton, Ohio

July 2010

URS
1375 Euclid Avenue, Suite 600
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216-622-2400
Project No. 13813319.00000

URS

July 15, 2010

Mr. Gary E. Bonarski, P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 8
6274 East Avon-Lima Road
Avon, New York 14414-9519

**RE: Soil Vapor Intrusion Study and Groundwater Sampling Letter Report-Revised Final**
**Former Griffin Technology Facility (Site No. 8-35-008)**
**Farmington, New York**

Dear Mr. Bonarski:

On behalf of Diebold, Inc., URS Corporation (URS) has prepared this Final Letter Report to summarize field activities as part of the Soil Vapor Intrusion and groundwater sampling investigation performed in the vicinity of the former Griffin Technology Facility located in Farmington, New York (Figure 1). This submittal incorporates revisions based upon your January 8, 2010 comment letter on the October 30, 2009 submittal, and your April 28, 2010 e-mail. The former Griffin Technology Facility site is currently owned by S & W Redevelopment of North America, LLC (SWRNA). Since SWRNA acquired the property in 2007, they have implemented an in-situ chemical oxidation (ISCO) groundwater remediation strategy that included the injection of potassium permanganate into the groundwater which breaks down and extinguishes chlorinated solvent contamination. SWRNA's groundwater remediation was successful in remediating the groundwater at and in the vicinity of the source and was completed in approximately six months. SWRNA received a Certificate of Completion under New York State's Brownfield Cleanup Program for the site in 2009. Under the terms of the Order on Consent Index # B8-0315-90-01, Diebold, Inc. is obligated for off-site groundwater monitoring and off-site soil vapor monitoring. This work was performed in accordance with the Soil Vapor Intrusion Study Work Plan (URS, October 2006) with the following modifications:

- In a letter dated April 22, 2008, the New York State Department of Environmental Conservation (NYSDEC) revised the locations of the seventeen proposed soil vapor implants and added one additional soil vapor implant point for a total of eighteen soil vapor implant locations. In addition, it was recommended that the soil vapor samples be collected over a period of 4 hours instead of the 2 hour initially suggested. A copy of NYSDEC's correspondence documenting these changes is included in Attachment 1.

- In a letter dated June 18, 2009, the NYSDEC approved a request by Diebold, Inc. for a reduction in the required analytical list of volatile organic compounds (VOCs) for soil vapor testing. The NYSDEC approved of an abbreviated EPA TO-15 analytical list containing minimally the following compounds: Trichloroethene, 1,1,1 Trichlororethane, cis-1, 2 Dichloroethene, 1,1 Dichloroethene, trans-1,2 Dichloroethene, Methylene Chloride, Vinyl Chloride, Ethane and Ethene. A copy of this letter may be found in Attachment 1. In an e-mail date July 27, 2009, the NYSDEC eliminated ethane and ethene from the abbreviated EPA TO-15 analytical list because these compounds could not be analyzed as part of the T0-15 method. A copy of this e-mail may be found in Attachment 1.

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- During a site visit conducted on July 9, 2008, the NYSDEC requested that URS collect a round of groundwater samples from nine existing off site monitoring wells (MW-06S, MW-06D, MW-07S, MW-07D, MW-09S, MW-09D, MW-10S, MW-10D, and MW-11D). Diebold, Inc. agreed to conduct the sampling. The wells were to be sampled for Target Compound List (TCL) VOCs by United States Environmental Protection Agency (USEPA) Method 8260B.

The fieldwork associated with this investigation consisted of the installation and sampling of eighteen new soil vapor implants and collecting groundwater samples from nine existing monitoring wells. URS personnel supervised the installation of the soil vapor implants between July 27, 2009 and July 28, 2009 and conducted the soil vapor sampling between July 28, 2009 and July 31, 2009. URS collected groundwater samples from the nine existing monitoring wells on August 3, 2009.

## Soil Vapor Implant Installation and Construction

A total of eighteen soil vapor implants (SG-01 through SG-18) were installed at the locations shown on Figure 2. The soil vapor implant locations were approved by a representative of the NYSDEC. Prior to the commencement of work, URS obtained access agreements with the local property owners to install the soil vapor implants and to collect groundwater samples on their respective properties. As part of an access agreement the installation and sampling of four soil vapor implants (SG-15, SG-16, SG-17, and SG-18) was completed after the business operation closed for the day (i.e., after 11 pm) to minimize disturbance to business activity. In addition, an environmental consultant (i.e., Day Environmental, Inc. of Rochester, New York), representing the owner, was present during the installation and sampling of the four soil vapor implants closest to the facility.

The soil vapor implants were installed by Nature's Way Environmental Consultants & Contractors, Inc. of Crittenden, New York, using a truck-mounted Geoprobe® unit. URS personnel supervised the installation of the soil vapor implants, which were constructed in accordance with the procedures outlined in the Soil Vapor Intrusion Study Work Plan (URS, October 2006). Fourteen soil vapor implants were constructed as temporary locations (as directed by the NYSDEC) and as such, a flush-mount protective casing was not installed. The three points in front of the facility and the location on the easterly side of the building (i.e., SG-15, SG-16, SG-17, and SG-18) were constructed as permanent soil vapor implants. Following their installation, a hand held GPS unit was utilized to locate the position of all eighteen soil vapor implants. The soil vapor implant construction details are included in Attachment 2. A photograph of each of the soil vapor implants is provided in Attachment 3.

## Soil Vapor Sampling, Analysis and Data Usability

Soil vapor samples were collected between July 28 and July 31, 2009. URS collected sixteen 4-hour soil vapor samples plus two field duplicate samples. Two outdoor air samples were collected from upwind locations, one for each 24 hour period that sampling occurred (072809-AA-1 and 073009-AA-1). As noted, URS collected the soil vapor samples from the four cited locations (SG-15, SG-16, SG-17, and SG-18) after business hours (i.e., after 11 pm). Successful soil vapor samples could not be obtained from two locations, SG-06 and SG-15. At SG-06 a sample could not be collected due to shallow water at this location, probably as a result of the proximity to Route 96. At SG-15 a sample could not be collected due to the nature of the impervious clayey soil. At the request of the NYSDEC, two separate attempts were made to collect a sample from SG-15 (July 29 and July 30, 2009).

All samples were collected using six-liter SUMMA canisters, in accordance with the procedures outlined in the Soil Vapor Intrusion Study Work Plan (URS, October 2006) and subsequent recommendations by the NYSDEC. A helium tracer gas was used during the collection of the soil-gas samples and no elevated concentrations of helium (>10%) were detected prior to or following the sample collection at any soil vapor implant location. The outdoor air samples were collected from approximately 2 feet above the ground surface by placing the Summa canisters on an elevated platform. Completed sampling logs are provided in Attachment 4. A photographic log of the sampling activities is included in Attachment 3.

Following the collection of the soil vapor samples, fourteen of the soil vapor implants were removed as directed by the NYSDEC. The four permanent soil vapor implants (SG-15, SG-16, SG-17, and SG-18) were allowed to remain intact following consultation with Day Environmental, Inc. and the owner to permit future sampling, if required.

After the sampling was completed, the samples were transported under chain-of-custody (COC) control for VOC analysis via EPA Method TO-15 to Columbia Analytical Services (Columbia) located in Rochester, New York. Columbia is a New York State Department of Health (NYSDOH) ELAP approved laboratory.

The data packages were prepared by the laboratory in accordance with the NYSDEC's Category B Deliverables requirements. These deliverables were reviewed by a URS chemist for compliance with the referenced method, following the guidelines in United States Environmental Protection Agency (USEPA) Region II's *Validating Canisters of Volatile Organics in Ambient Air, Rev. 0,* April 1994. A Data Usability Summary Report (DUSR) was prepared by a URS chemist following the guidelines provided in NYSDEC Division of Environmental Remediation Guidance for the Development of Data Usability Summary Reports, dated June 1999. The DUSR may be found in Attachment 5.

**Soil Vapor Analytical Summary/Contamination Assessment**

The validated analytical results from the soil vapor samples are summarized in Table 1. Reported concentrations of the NYSDEC abbreviated EPA TO-15 analytical list plus tetrachloroethene (PCE) at each sample location are shown on Figure 3. The following is a summary of the analytical results from the soil vapor implant sampling.

- Total chlorinated VOCs from the abbreviated list were detected at every soil vapor implant location sampled, ranging from 4.16 to 185.86 micrograms per cubic meter ($\mu g/m^3$). Detected chlorinated VOC's included 1,1,1-trichloroethane, vinyl chloride, methylene chloride, (cis) 1,2-trichloroethene, and tetrachloroethane. The highest contaminant concentration detected in every case, however, was PCE with the maximum concentrations found at SG-01 (180 $\mu g/m^3$ out of 185.86 $\mu g/m^3$ total VOCs) and SG-02 (100 $\mu g/m^3$ out of 103.75 $\mu g/m^3$ total VOCs).

A copy of the laboratory report is included in Attachment 5.

There are currently no promulgated criteria for contaminants in soil vapor samples and PCE is not a chemical of concern associated with the Former Griffin Technology Site. The remaining low level concentrations of volatile organic chemicals found at the soil implant locations may be attributable to the the diffusion of the VOCs from the residual diffuse groundwater plume that originated from the Griffin Site.

The detected concentrations of chlorinated VOCs from the soil vapor implant locations are situated in areas beyond the area remediated by SWRNA. Because the source of chlorinated VOCs has been remediated by SWRNA via ISCO, the remaining off-site diffuse groundwater plume may continue to degrade and collapse over time.

## Groundwater Sampling, Analysis and Data Usability

On August 3, 2009 URS collected a round of groundwater samples from nine existing monitoring wells (MW-06S, MW-06D, MW-07S, MW-07D, MW-09S, MW-09D, MW-10S, MW-10D, and MW-11D) plus QA/QC samples (i.e., duplicate samples and matrix spike/matrix spike duplicate). Prior to sample collection, standing water was purged from each well with a peristaltic pump or Whale submersible pump using dedicated/disposable high-density polyethylene (HDPE) tubing. During the purging of the well, water quality parameters (pH, specific conductivity, temperature, dissolved oxygen, and turbidity) were measured and documented. These parameters were measured utilizing a flow-through cell until they stabilized. The wells were purged at a rate of 1-liter per minute or less and the purge rate was adjusted to prevent the water level in the well from dropping more that 0.3 feet from the static water level. A minimum of 1 well volume was purged until the water quality parameters stabilized for a minimum of three readings. The water level measurements obtained from the wells sampled are provided in Table 2. Figure 4 shows the shallow groundwater potentiometric surface on August 3, 2009. Figure 5 shows the deep groundwater potentiometric surface on August 3, 2009. Low Flow Purge Logs can be found in Attachment 6.

The groundwater samples collected were transported under COC control to Columbia, for the analysis of TCL VOCs by USEPA Method 8260B. A summary table listing the detected results is provided in Table 3 with results exceeding Division of Water Technical and Operational Guidance Series (TOGS) No. 1.1.1 Class GA groundwater criteria indicated with a circle. The complete validated analytical results are presented in the DUSR in Attachment 5.

## Groundwater Analytical Summary/ Contamination Assessment

The groundwater flow in the overburden wells is to the south to southwest towards Beaver Creek (Figure 4). This is consistent with past groundwater flow direction in the overburden wells. The groundwater flow in the bedrock wells is to the west to northwest (Figure 5). This is consistent with past groundwater flow direction in the bedrock wells.

The validated analytical results from the groundwater samples are summarized in Table 3. The locations of detected VOCs that have exceeded their respective criteria are shown on Figure 6. The following is a summary of the analytical results from the groundwater sampling.

- Two compounds, trichloroethene and (cis) 1,2-dichloroethene were detected at concentrations exceeding Class GA groundwater criteria in the groundwater samples collected.
- Trichloroethene was detected in the samples collected from MW-06S, MW-06D, MW-07S, MW-07D and MW-10D at concentrations ranging from 5.6 to 77 micrograms per Liter (µg/L). The highest concentration was found at MW-07S (77 µg/L).

- (Cis)1,2-dichloroethene was only detected in the sample collected from MW-07D at a concentration of 24 µg/L.

A copy of the laboratory report is included in Attachment 5.

The detected concentrations of the chlorinated VOCs in the groundwater samples are generally lower to approximately similar to the concentrations detected in the respective wells during the July 2005 sampling event. In monitoring wells nearest to the former Griffin Technology Facility (i.e., MW-06S, MW-07S, and MW-07D), the detected concentrations have decreased by up to half. The reduced concentrations of chlorinated VOCs detected in the groundwater samples may be attributable to the implementation of the on site Interim Remedial Measures and source remediation via ISCO. It is anticipated that over time, with the source remediated, the residual off-site diffuse groundwater plume will continue to diminish and collapse. It is anticipated that the concentrations of chlorinated VOCs in the off-site wells will also decrease over time.

## Conclusions

### Soil Vapor

Based on the relatively low concentration of chlorinated VOCs in the soil vapor, No Further Action is recommended. With the remediation of the source area, it is anticipated that the low soil vapor concentrations will decrease.

### Groundwater

The concentration of chlorinated VOCs in the groundwater are lower in the off-site wells closest to the former source area due to the ISCO remediation. It is anticipated the concentrations of chlorinated VOCs in the off-site wells will decrease over time. URS recommends continued annual monitoring and evaluation.

## References

New York State Department of Health (NYSDOH). October 2006. *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*

The following tables, figures and attachments are included as part of this field investigation letter report:

| | |
|---|---|
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| Table 1 | Summary of Detected Compounds in Soil Vapor Samples |
| Table 2 | Groundwater Elevations – August 3, 2009 |
| Table 3 | Summary of Detected Compounds in Groundwater Samples |
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| Figure 2 | Soil Vapor Implant Locations |
| Figure 3 | Soil Vapor Sampling Results |
| Figure 4 | Shallow Groundwater Potentiometric Surface – August 3, 2009 |
| Figure 5 | Deep Groundwater Potentiometric Surface – August 3, 2009 |
| Figure 6 | Groundwater Sample Results |
| Attachments | |
| Attachment 1 | Correspondence |
| Attachment 2 | Soil Vapor Implant Construction Details |
| Attachment 3 | Photographic Log |
| Attachment 4 | Summa Canister Sampling Filed Data Sheet |
| Attachment 5 | Data Usability Summary Report |
| Attachment 6 | Purge Logs |

Should you have any questions or comments, please do not hesitate to contact me at 716-856-5636.

Sincerely,

**URS Corporation**

Michael Gutmann
Sr. Project Manager

Jack Wilcox, V.P., P.E.
Registered Professional Engineer
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# TABLES

# TABLE 1
# SOIL VAPOR SAMPLING ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | OUTDOOR AIR | OUTDOOR AIR | SG-01 | SG-02 | SG-03 |
|---|---|---|---|---|---|---|
| Sample ID | | 072809-AA-1 | 073009-AA-1 | SG-01 | SG-02 | SG-03 |
| Matrix | | Outdoor Air | Outdoor Air | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/28/09 | 07/30/09 | 07/28/09 | 07/28/09 | 07/28/09 |
| Parameter | Units | | | | | |
| **Volatile Organic Compounds** | | | | | | |
| 1,1,1-Trichloroethane | UG/M3 | 0.071 J | 0.066 J | 0.16 J | | 6.8 J |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/M3 | 0.72 | 0.61 | 0.72 | 0.70 | 0.84 J |
| 1,2-Dichlorobenzene | UG/M3 | | | | | |
| 1,2-Dichloroethane | UG/M3 | 0.051 J | 0.047 J | | | |
| 1,2-Dichloroethene (cis) | UG/M3 | 0.15 J | 0.061 J | | | |
| 1,3-Dichlorobenzene | UG/M3 | | | 21 | 15 | 9.8 J |
| 1,4-Dichlorobenzene | UG/M3 | | | 0.32 J | 0.25 J | |
| 2-Hexanone | UG/M3 | | | 4.2 | 1.8 | |
| 4-Methyl-2-pentanone | UG/M3 | | 0.095 J | 2.4 J | 6.5 | 1.6 J |
| Acetone | UG/M3 | 8.6 J | 6.0 J | 1,900 DJ | 990 J | 1,500 J |
| Benzene | UG/M3 | 0.43 J | 0.20 J | 69 | 43 | 7.7 |
| Bromomethane | UG/M3 | | 0.047 J | | | |
| Carbon disulfide | UG/M3 | 0.078 J | 0.050 J | 60 | 35 | 3.0 J |
| Carbon tetrachloride | UG/M3 | 0.69 | 0.47 | 0.55 | 0.75 | |
| Chlorobenzene | UG/M3 | | | 0.42 J | 0.36 J | 0.45 J |
| Chloroethane | UG/M3 | | | 0.71 J | 0.61 J | 0.66 J |
| Chloroform | UG/M3 | 0.091 J | 0.076 J | 0.78 J | 0.88 J | 0.54 J |
| Chloromethane | UG/M3 | 1.0 | 1.1 | 1.9 | 1.8 | 2.3 J |
| Ethylbenzene | UG/M3 | 0.13 J | 0.050 J | 12 | 14 | 0.84 J |
| Methyl ethyl ketone (2-Butanone) | UG/M3 | 1.0 J | 0.83 J | 93 | 100 | 70 |
| Methyl tert-butyl ether | UG/M3 | | | 8.6 | 14 | |
| Methylene chloride | UG/M3 | | | 5.5 | 3.5 | |
| Styrene | UG/M3 | | | | | |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis. Blank Cell - Not Detected.

Only Detected Results Reported.

# TABLE 1
# SOIL VAPOR SAMPLING ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | OUTDOOR AIR | OUTDOOR AIR | SG-01 | SG-02 | SG-03 |
|---|---|---|---|---|---|---|
| Sample ID | | 072809-AA-1 | 073009-AA-1 | SG-01 | SG-02 | SG-03 |
| Matrix | | Outdoor Air | Outdoor Air | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/28/09 | 07/30/09 | 07/28/09 | 07/28/09 | 07/28/09 |
| **Parameter** | **Units** | | | | | |
| **Volatile Organic Compounds** | | | | | | |
| Tetrachloroethene | UG/M3 | 0.15 J | | 180 | 100 | 15 |
| Toluene | UG/M3 | 1.5 | 0.72 J | 160 D | 110 | 17 |
| Trichloroethene | UG/M3 | 0.055 J | | 2.7 | 1.7 | 2.9 |
| Trichlorofluoromethane | UG/M3 | 1.6 | 1.5 | 1.6 J | 1.5 J | 1.8 J |
| Vinyl chloride | UG/M3 | | | 0.20 J | 0.25 | 0.27 J |
| Xylene (total) | UG/M3 | 0.49 J | 0.19 J | 49 | 83 | 3.4 J |

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Only Detected Results Reported.

# TABLE 1
# SOIL VAPOR SAMPLING ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-04 | SG-05 | SG-07 | SG-08 | SG-08 |
|---|---|---|---|---|---|---|
| Sample ID | | SG-04 | SG-05 | SG-07 | 072809-FD-1 | SG-08 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/28/09 | 07/28/09 | 07/28/09 | 07/28/09 | 07/28/09 |
| Parameter | Units | | | | Field Duplicate (1-1) | |
| **Volatile Organic Compounds** | | | | | | |
| 1,1,1-Trichloroethane | UG/M3 | 0.20 J | 0.20 J | 0.094 J | 0.13 J | 0.11 J |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/M3 | 0.70 | 0.73 | 0.63 | 0.54 | 0.64 |
| 1,2-Dichlorobenzene | UG/M3 | | | | | |
| 1,2-Dichloroethane | UG/M3 | | | | | |
| 1,2-Dichloroethene (cis) | UG/M3 | | | | 0.26 J | |
| 1,3-Dichlorobenzene | UG/M3 | 14 | 12 | 3.1 J | | 0.87 J |
| 1,4-Dichlorobenzene | UG/M3 | 0.20 J | 0.21 J | | | |
| 2-Hexanone | UG/M3 | | 1.3 J | 0.72 J | | |
| 4-Methyl-2-pentanone | UG/M3 | 2.7 J | 2.3 J | 3.5 | 1.6 J | 3.9 |
| Acetone | UG/M3 | 910 J | 1,100 J | 640 J | 240 J | 290 J |
| Benzene | UG/M3 | 25 | 53 | 19 | 11 | 13 |
| Bromomethane | UG/M3 | | | | | |
| Carbon disulfide | UG/M3 | 29 | 35 | 32 | 9.0 | 10 |
| Carbon tetrachloride | UG/M3 | 0.41 | 0.49 | 0.36 | 0.33 | 0.47 |
| Chlorobenzene | UG/M3 | 0.36 J | 0.38 J | | | |
| Chloroethane | UG/M3 | 0.71 J | 0.69 J | | | |
| Chloroform | UG/M3 | 0.86 J | 5.3 | 0.93 J | 2.4 | 2.7 |
| Chloromethane | UG/M3 | 2.5 | 2.4 | 0.43 J | 1.3 | 1.5 J |
| Ethylbenzene | UG/M3 | 8.8 | 1.8 J | 3.8 | 0.14 J | 0.15 J |
| Methyl ethyl ketone (2-Butanone) | UG/M3 | 52 | 60 | 32 | 7.1 | 8.1 |
| Methyl tert-butyl ether | UG/M3 | 9.2 | 1.2 J | 11 | 6.5 | 8.0 |
| Methylene chloride | UG/M3 | 2.2 | 3.8 | 2.3 | 1.4 | 1.6 |
| Styrene | UG/M3 | | | | | |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis. Blank Cell - Not Detected.

Only Detected Results Reported.

# TABLE 1
# SOIL VAPOR SAMPLING ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-04 | SG-05 | SG-07 | SG-08 | SG-08 |
|---|---|---|---|---|---|---|
| Sample ID | | SG-04 | SG-05 | SG-07 | 072809-FD-1 | SG-08 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/28/09 | 07/28/09 | 07/28/09 | 07/28/09 | 07/28/09 |
| Parameter | Units | | | | Field Duplicate (1-1) | |
| **Volatile Organic Compounds** | | | | | | |
| Tetrachloroethene | UG/M3 | 42 | 43 | 22 | 3.4 | 0.46 |
| Toluene | UG/M3 | 47 | 62 | 36 | 3.0 | 7.8 |
| Trichloroethene | UG/M3 | 0.78 | 1.3 | 0.63 | 0.77 | 0.23 |
| Trichlorofluoromethane | UG/M3 | 1.6 J | 1.5 J | 1.3 J | 1.3 J | 1.5 J |
| Vinyl chloride | UG/M3 | 0.24 | 0.22 J | 0.080 J | 0.064 J | |
| Xylene (total) | UG/M3 | 59 | 6.8 J | 27 | 0.54 J | 0.67 J |

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Only Detected Results Reported.

# TABLE 1
# SOIL VAPOR SAMPLING ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-09 | SG-09 | SG-10 | SG-11 | SG-12 |
|---|---|---|---|---|---|---|
| Sample ID | | 073009-FD-1 | SG-09 | SG-10 | SG-11 | SG-12 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/30/09 | 07/30/09 | 07/30/09 | 07/30/09 | 07/30/09 |
| Parameter | Units | Field Duplicate (1-1) | | | | |
| **Volatile Organic Compounds** | | | | | | |
| 1,1,1-Trichloroethane | UG/M3 | 0.46 J | 0.33 J | 0.13 J | 0.12 J | 0.12 J |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/M3 | 0.73 | 0.72 | 0.79 | 0.87 | 0.76 |
| 1,2-Dichlorobenzene | UG/M3 | | | 0.17 J | | |
| 1,2-Dichloroethane | UG/M3 | | | | | |
| 1,2-Dichloroethene (cis) | UG/M3 | | | 0.24 J | | 1.2 J |
| 1,3-Dichlorobenzene | UG/M3 | 13 | 10 | 8.5 | 5.1 | 6.8 |
| 1,4-Dichlorobenzene | UG/M3 | 0.20 J | 0.17 J | 0.20 J | | 0.15 J |
| 2-Hexanone | UG/M3 | | | 2.0 | | |
| 4-Methyl-2-pentanone | UG/M3 | 33 | 26 | 15 | | |
| Acetone | UG/M3 | 750 J | 730 J | 1,200 J | 940 J | 960 J |
| Benzene | UG/M3 | 9.7 | 6.7 | 28 | 29 | 19 |
| Bromomethane | UG/M3 | | | | | |
| Carbon disulfide | UG/M3 | 10 | 8.2 | 23 | 53 | 97 |
| Carbon tetrachloride | UG/M3 | 0.49 | 0.30 | 0.23 J | 0.45 | 0.55 |
| Chlorobenzene | UG/M3 | 0.29 J | 0.28 J | 0.23 J | 0.21 J | 0.32 J |
| Chloroethane | UG/M3 | 0.81 J | 1.0 J | 0.43 J | 0.32 J | 0.46 J |
| Chloroform | UG/M3 | 0.77 J | 0.58 J | 0.42 J | 0.48 J | 0.53 J |
| Chloromethane | UG/M3 | 3.4 | 4.6 | 1.0 J | 1.2 J | 1.5 J |
| Ethylbenzene | UG/M3 | 0.54 J | 0.60 J | 5.2 | 0.68 J | 0.70 J |
| Methyl ethyl ketone (2-Butanone) | UG/M3 | 19 | 15 | 69 | 47 | 34 |
| Methyl tert-butyl ether | UG/M3 | 4.4 | 3.0 J | 6.7 | 6.6 | 3.4 |
| Methylene chloride | UG/M3 | 1.4 | 1.6 J | 1.4 J | 1.7 | 1.4 J |
| Styrene | UG/M3 | 0.24 J | 0.31 J | | | |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis. Blank Cell - Not Detected.

Only Detected Results Reported.

# TABLE 1
# SOIL VAPOR SAMPLING ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-09 | SG-09 | SG-10 | SG-11 | SG-12 |
|---|---|---|---|---|---|---|
| Sample ID | | 073009-FD-1 | SG-09 | SG-10 | SG-11 | SG-12 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/30/09 | 07/30/09 | 07/30/09 | 07/30/09 | 07/30/09 |
| Parameter | Units | Field Duplicate (1-1) | | | | |
| **Volatile Organic Compounds** | | | | | | |
| Tetrachloroethene | UG/M3 | 1.7 | 1.5 | 58 | 21 | 14 |
| Toluene | UG/M3 | 19 | 16 | 82 | 41 | 26 |
| Trichloroethene | UG/M3 | 0.32 | 0.14 J | 0.90 | 0.83 | 1.8 |
| Trichlorofluoromethane | UG/M3 | 1.8 J | 1.8 J | 2.1 J | 2.2 J | 2.1 J |
| Vinyl chloride | UG/M3 | 0.31 | 0.40 | 0.18 J | 0.18 J | 0.34 |
| Xylene (total) | UG/M3 | 2.5 J | 2.8 J | 30 | 2.3 J | 3.0 J |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis. Blank Cell - Not Detected.

Only Detected Results Reported.

# TABLE 1
# SOIL VAPOR SAMPLING ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-13 | SG-14 | SG-16 | SG-17 | SG-18 |
|---|---|---|---|---|---|---|
| Sample ID | | SG-13 | SG-14 | SG-16 | SG-17 | SG-18 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/30/09 | 07/29/09 | 07/29/09 | 07/29/09 | 07/29/09 |
| Parameter | Units | | | | | |
| **Volatile Organic Compounds** | | | | | | |
| 1,1,1-Trichloroethane | UG/M3 | | 0.12 J | 2.5 | 5.8 J | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/M3 | 0.93 J | 0.60 | 0.62 J | 0.82 J | 0.64 |
| 1,2-Dichlorobenzene | UG/M3 | | | | | |
| 1,2-Dichloroethane | UG/M3 | | | | | |
| 1,2-Dichloroethene (cis) | UG/M3 | 0.35 J | | | | |
| 1,3-Dichlorobenzene | UG/M3 | 6.1 J | 0.60 J | | | 2.3 J |
| 1,4-Dichlorobenzene | UG/M3 | | | | | |
| 2-Hexanone | UG/M3 | | | | | |
| 4-Methyl-2-pentanone | UG/M3 | 36 | 1.9 J | 0.42 J | 2.0 J | 2.6 J |
| Acetone | UG/M3 | 1,300 J | 210 J | 31 | 93 | 650 J |
| Benzene | UG/M3 | 18 | 11 | 2.7 | 27 | 37 |
| Bromomethane | UG/M3 | | | | | |
| Carbon disulfide | UG/M3 | 15 | 4.1 | 3.0 | 14 | 28 |
| Carbon tetrachloride | UG/M3 | 0.47 J | 0.51 | 0.30 | 0.45 J | 0.52 |
| Chlorobenzene | UG/M3 | 0.18 J | | | | |
| Chloroethane | UG/M3 | 0.76 J | | | | |
| Chloroform | UG/M3 | 0.33 J | 17 | 1.9 J | 0.69 J | 0.98 J |
| Chloromethane | UG/M3 | 3.2 J | 0.30 J | | 0.30 J | 0.31 J |
| Ethylbenzene | UG/M3 | 2.6 J | 9.2 | 0.42 J | 4.4 J | 7.5 |
| Methyl ethyl ketone (2-Butanone) | UG/M3 | 16 | 6.3 | 3.8 | 9.3 J | 22 |
| Methyl tert-butyl ether | UG/M3 | 3.7 J | 4.7 | | 5.6 J | 13 |
| Methylene chloride | UG/M3 | 1.4 J | 0.60 J | | | 1.9 |
| Styrene | UG/M3 | | | | | |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis. Blank Cell - Not Detected.

Only Detected Results Reported.

# TABLE 1
# SOIL VAPOR SAMPLING ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-13 | SG-14 | SG-16 | SG-17 | SG-18 |
|---|---|---|---|---|---|---|
| Sample ID | | SG-13 | SG-14 | SG-16 | SG-17 | SG-18 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/30/09 | 07/29/09 | 07/29/09 | 07/29/09 | 07/29/09 |
| Parameter | Units | | | | | |
| **Volatile Organic Compounds** | | | | | | |
| Tetrachloroethene | UG/M3 | 17 | 36 | 9.2 | 34 | 45 |
| Toluene | UG/M3 | 30 | 45 | 8.6 | 45 | 69 |
| Trichloroethene | UG/M3 | 0.55 | 0.51 | 0.20 J | 0.48 J | 0.77 |
| Trichlorofluoromethane | UG/M3 | 2.4 J | 1.8 J | 1.0 J | 2.7 J | 5.1 |
| Vinyl chloride | UG/M3 | 0.31 J | 0.28 | | | |
| Xylene (total) | UG/M3 | 18 | 57 | 2.4 J | 33 J | 49 |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis. Blank Cell - Not Detected.

Only Detected Results Reported.

**TABLE 2**
**GROUNDWATER ELEVATIONS**
**AUGUST 3, 2009**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**

| Well ID | Top of Casing Elevation (ft) | Date | Depth to Groundwater (ft) | Groundwater Elevation (ft) |
|---|---|---|---|---|
| MW-06S | 636.61 | 8/3/2009 | 10.25 | 626.36 |
| MW-06D | 636.83 | 8/3/2009 | 10.27 | 626.56 |
| MW-07S | 634.29 | 8/3/2009 | 10.54 | 623.75 |
| MW-07D | 634.16 | 8/3/2009 | 34.2 | 599.96 |
| MW-09S | 630.16 | 8/3/2009 | 12.12 | 618.04 |
| MW-09D | 630.29 | 8/3/2009 | 33.00 | 597.29 |
| MW-10S | 629.00 | 8/3/2009 | 15.86 | 613.14 |
| MW-10D | 626.80 | 8/3/2009 | 16.44 | 610.36 |
| MW-11D | 641.89 | 8/3/2009 | 13.30 | 628.59 |

# TABLE 3
# GROUNDWATER SAMPLING ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | | MW-06D | MW-06S | MW-07D | MW-07S | MW-07S |
|---|---|---|---|---|---|---|---|
| Sample ID | | | MW-6D | MW-6S | MW-7D | 080309-FD-1 | MW-7S |
| Matrix | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Depth Interval (ft) | | | - | - | - | - | - |
| Date Sampled | | | 08/03/09 | 08/03/09 | 08/03/09 | 08/03/09 | 08/03/09 |
| Parameter | Units | Criteria* | | | | Field Duplicate (1-1) | |
| **Volatile Organic Compounds** | | | | | | | |
| 1,1,1-Trichloroethane | UG/L | 5 | 1.9 J | 1.0 J | | 1.4 J | 1.4 J |
| 1,2-Dichloroethene (cis) | UG/L | 5 | 0.62 J | | 24 | 2.3 J | 2.3 J |
| Dichlorodifluoromethane | UG/L | 5 | | | | | |
| Trichloroethene | UG/L | 5 | 46 | 26 | 74 | 77 | 76 |
| Vinyl chloride | UG/L | 2 | | | 0.65 J | | |

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

J - The reported concentration is an estimated value. Blank Cell - Not Detected.

Only Detected Results Reported.

J:\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 10/22/2009 3:01:26 PM
[SITEID] = '13807296' AND [MATRIX] = 'WG

# TABLE 3
# GROUNDWATER SAMPLING ANALYTICAL RESULTS (DETECTED COMPOUNDS ONLY)
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | | MW-09D | MW-09S | MW-10D | MW-10S | MW-11D |
|---|---|---|---|---|---|---|---|
| Sample ID | | | MW-9D | MW-9S | MW-10D | MW-10S | MW-11D |
| Matrix | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Depth Interval (ft) | | | - | - | - | - | - |
| Date Sampled | | | 08/03/09 | 08/03/09 | 08/03/09 | 08/03/09 | 08/03/09 |
| **Parameter** | **Units** | **Criteria*** | | | | | |
| **Volatile Organic Compounds** | | | | | | | |
| 1,1,1-Trichloroethane | UG/L | 5 | | | | | |
| 1,2-Dichloroethene (cis) | UG/L | 5 | | | | | |
| Dichlorodifluoromethane | UG/L | 5 | | | 0.69 J | | |
| Trichloroethene | UG/L | 5 | | | 5.6 | 4.6 J | |
| Vinyl chloride | UG/L | 2 | | | | | |

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

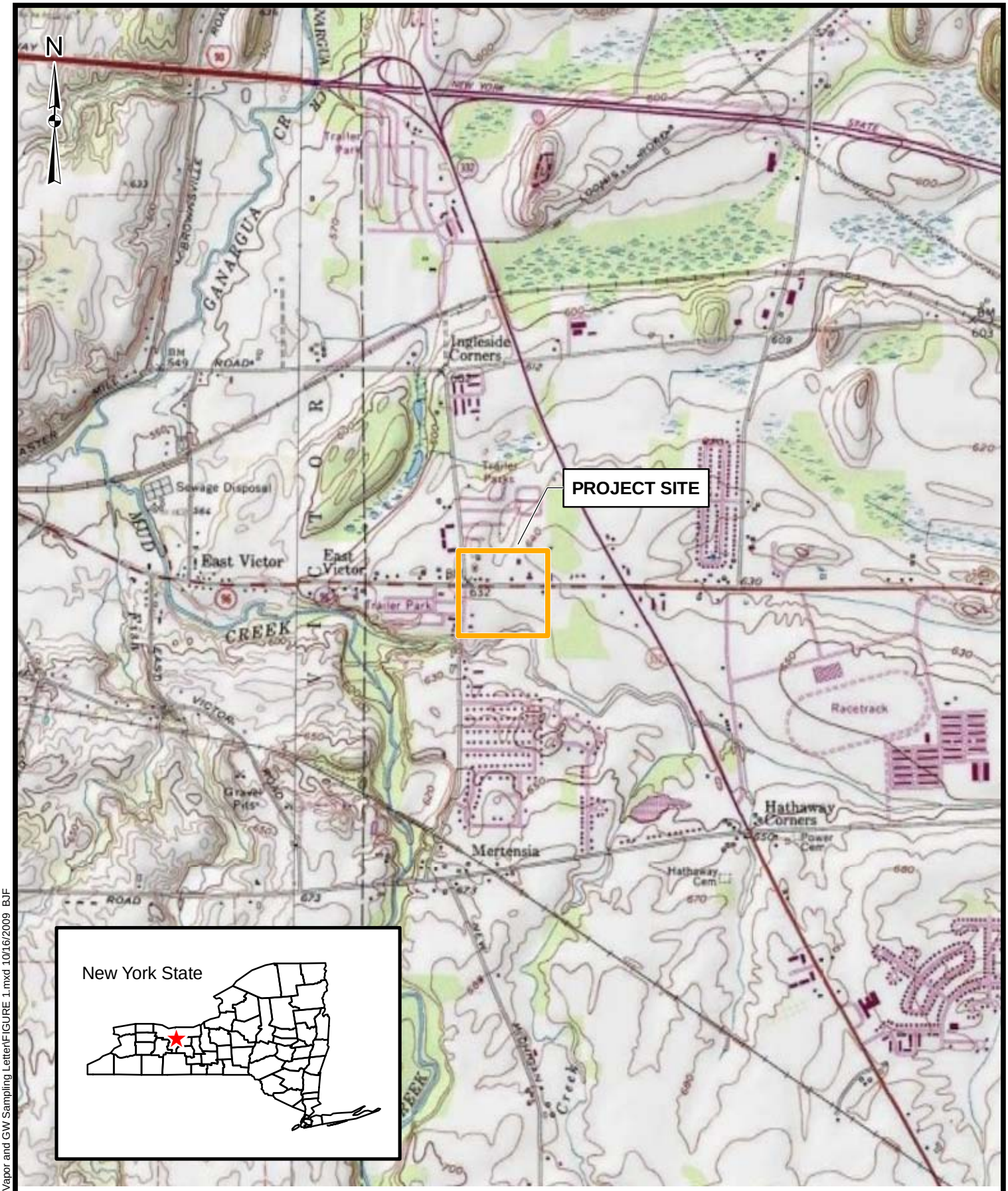
Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

J - The reported concentration is an estimated value. Blank Cell - Not Detected.

Only Detected Results Reported.

# FIGURES




Source:
- National Geographic TOPO! via ArcGIS online data services.

2,000 0 2,000 Feet

URS

GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK
PROJECT SITE

FIGURE 1

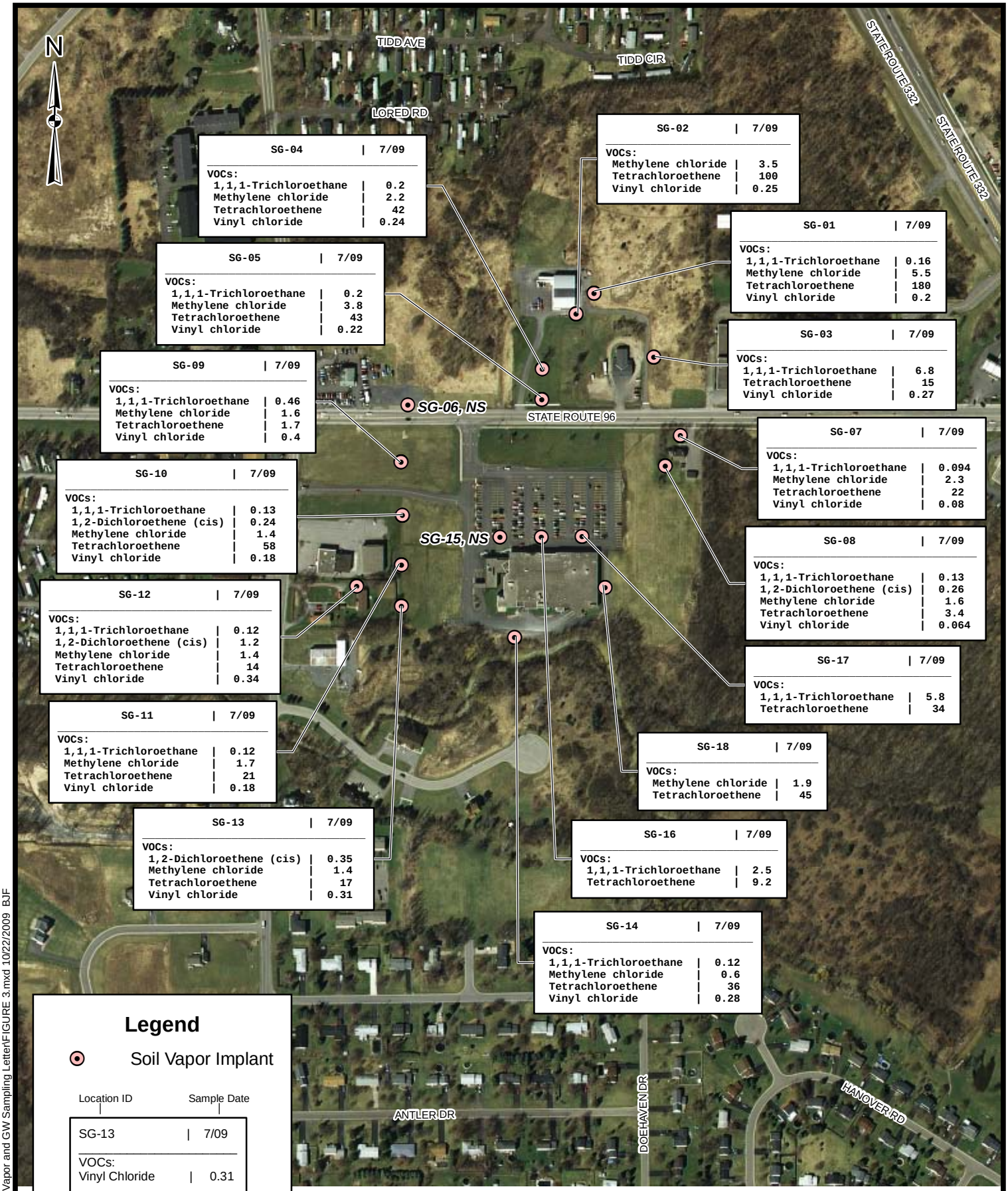
J:\13807296.00000\DB\GIS\Soil Vapor and GW Sampling Letter\FIGURE 1.mxd 10/16/2009 BJF


J:\13807296.00000\DB\GIS\Soil Vapor and GW Sampling Letter\FIGURE 2.mxd 10/22/2009 BJF

URS

GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK
SOIL VAPOR IMPLANT LOCATIONS

FIGURE 2




J:\13807296.00000\DB\GIS\Soil Vapor and GW Sampling Letter\FIGURE 3.mxd 10/22/2009 BJF

URS

GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK
SOIL VAPOR SAMPLING RESULTS

FIGURE 3


J:\13807296.00000\DB\GIS\Soil Vapor and GW Sampling Letter\FIGURE 4.mxd 10/22/2009 BJF

URS

GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK
SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE
AUGUST 3, 2009

FIGURE 4


**Legend**

Groundwater Monitoring Well

600 Groundwater Contours (FT AMSL)

FT AMSL = Feet above mean sea level.

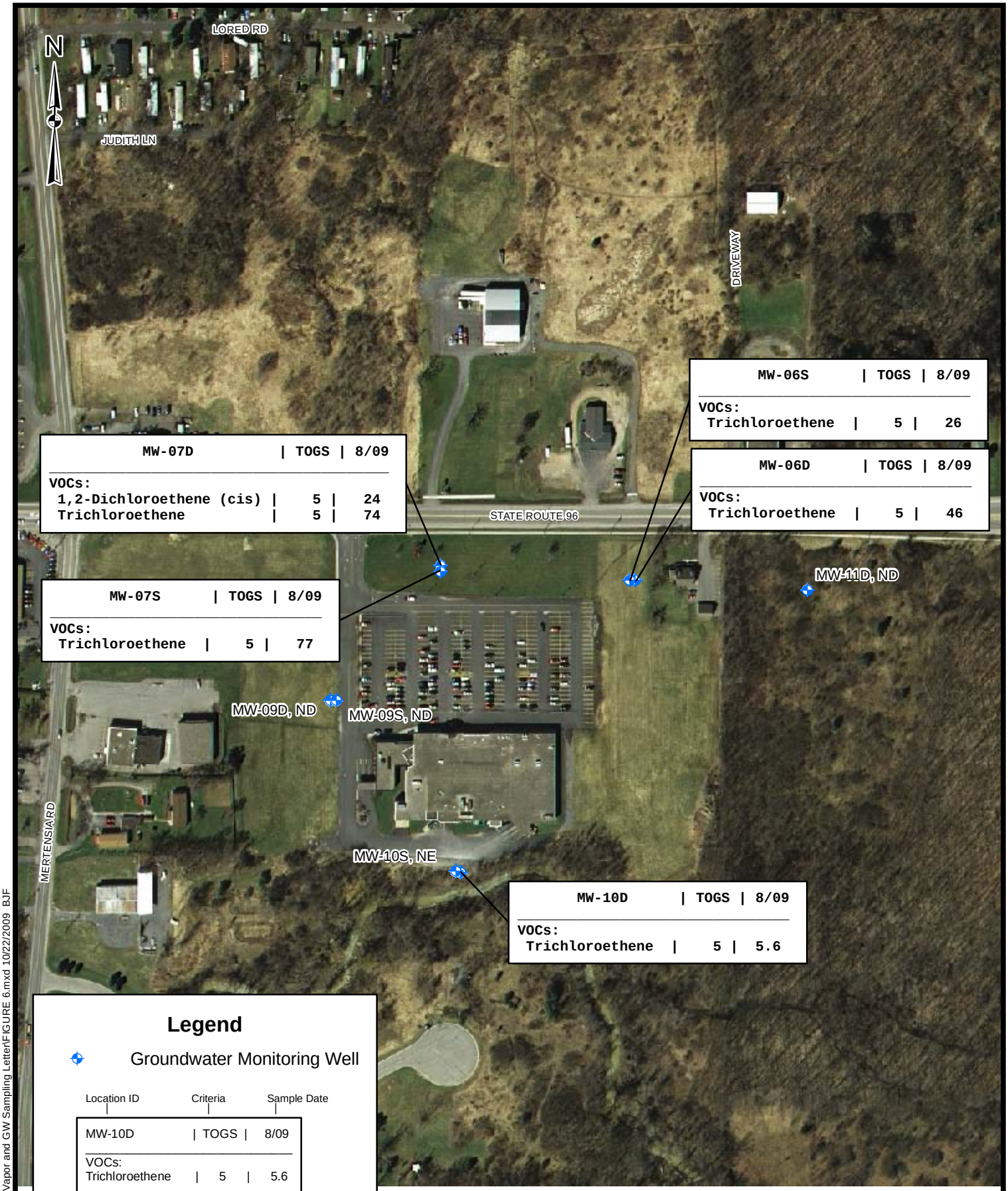
250 0 250 Feet

URS

GRIFFIN TECHNOLOGY, INC. - FARMINGTON, NEW YORK
DEEP GROUNDWATER POTENTIOMETRIC SURFACE
AUGUST 3, 2009

FIGURE 5

J:\13807296.00000\DB\GIS\Soil Vapor and GW Sampling Letter\FIGURE 5.mxd 10/22/2009 BJF




J:\13807296.00000\DB\GIS\Soil Vapor and GW Sampling Letter\FIGURE 6.mxd 10/22/2009 BJF

URS

GRIFFIN TECHNOLOGY, INC.
FARMINGTON, NEW YORK
GROUNDWATER SAMPLE RESULTS

FIGURE 6

# ATTACHMENT 1

# CORRESPONDENCE

**New York State Department of Environmental Conservation**
**Division of Environmental Remediation, Region 8**
6274 East Avon-Lima Road, Avon, New York 14414-9519
**Phone:** (585) 226-2466 • **FAX:** (585) 226-8696
**Website:** www.dec.state.ny.us

Alexander B. Grannis
Commissioner

April 22, 2008

Mr. David Rinehart
Sr. Environmental Engineer
Diebold, Incorporated
9 - C - 27
5995 Mayfair Road
North Canton, Ohio 44720

Re: Griffin Technology
Soil Vapor Implant Locations
Farmington (T), New York
Site #835008

Dear Mr. Rinehart:

Please find attached a revised version of the ortho view of Figure 5 "Proposed Soil Vapor Implant Locations" of the June 2006 **Soil Vapor Intrusion Study Work Plan**. This work plan was approved by the New York State Department of Environmental Conservation on November 15, 2006.

As you are aware, the revisions to the soil vapor implant locations, portrayed on the projection, are being requested as a result of input and comments gathered from the Public Meeting of March 26, 2008, a collective review of the site with New York State Department of Health representatives, and efficacy of the originally chosen locations.

Please incorporate these newly chosen locations in the Work Plan Figure 5 and proceed with obtaining permission for relocation of the vapor implants as per this document. Noting the present status of this project, we would also request you keep this department informed of your anticipated project schedule.

In cursory review of the approved Work Plan, we are requesting that the 6_L Summa canister Task 1 Soil Vapor Samples be collected for a period of four (4) hours instead of the listed two hour time period as described in your Table 3. Please reflect this in your plan and operation. Also be reminded that outdoor ambient air samples are to be collected on the day of the sampling as noted in Section 3.1.3.3.

Should you require further explanation, assistance, or have any additional questions related to these changes, please do not hesitate to contact me at 585/ 226-5328.

Very truly yours,

Gary E. Bonarski, P.E.
Environmental Engineer

cc: M. Gutmann, URS
B. Soares, Esq.
J. Kenney, NYSDOH
ec: S. Shearer, NYSDOH
T. Caffoe, NYSDEC
J. Charles, NYSDEC
B. Putzig, NYSDEC

# Proposed Soil Gas Sampling Locations

**New York State Department of Environmental Conservation**
**Division of Environmental Remediation, Region 8**
6274 East Avon-Lima Road, Avon, New York 14414-9519
**Phone:** (585) 226-2466 • **Fax:** (585) 226-8696
**Website:** www.dec.state.ny.us

Alexander B. Grannis
Commissioner

June 18, 2009

Mr. David Rinehart
Sr. Environmental Engineer
Diebold, Incorporated
5995 Mayfair Road
North Canton, OH 44720

Re: Former Griffin Technology Facility
Soil Vapor Intrusion Study Work Plan October 2006
To-15 Analysis Listing

Dear Mr. Rinehart:

This agency has been requested to consider a reduction in the required analytical laboratory list of volatile organic chemicals (VOCs), previously approved in the referenced project Final Soil Vapor Intrusion Study Work Plan. This listing is associated with Soil Vapor testing, to be completed in compliance with provisions of Order on Consent Index #B8-315-90-01.

Based on groundwater investigation work previously completed in the area, the designated compound of concern is recognized to be trichloroethene. In consideration of this fact, this Department, in cooperation with the NYS Department of Health, is allowing a reduction in the listing of compounds requiring analysis, as noted in Table 4 "Laboratory List of VOCs USEPA Method TO-15 Trace Analyses".

The abbreviated EPA TO-15 analytical listing must now minimally include the following compounds: Trichloroethene, 1,1,1 Trichloroethane, cis- 1,2 Dichloroethene, 1,1 Dichloroethene, trans-1,2-Dichloroethene, Methylene Chloride, Vinyl Chloride, Ethene and Ethane.

Please be aware that laboratory detection limits for these compounds do not change, remaining as specified in Table 4, and that depending on the results of the soil vapor investigation, structure sampling (i.e., paired indoor air and sub-slab soil vapor, and ambient air samples) may be necessary to evaluate the potential for soil vapor intrusion to occur into nearby structures.

Should you have any questions or concerns regarding this change, please do not hesitate to contact me at 585-226-5328.

Very truly yours,

Gary E. Bonarski, P. E.
Environmental Engineer

Cc: J. Kenney, NYSDOH
Ec: M. Gutmann, URS
T. Caffoe, NYSDEC
J. Charles, NYSDEC
B. Putzig, NYSDEC
D. Day, Day Eng

URS

Mike Gutmann/Buffalo/URSCorp
10/22/2009 10:38 AM

To Scott McCabe
cc
bcc
Subject Fw: Grif Tech.- Diebold SV Testing

Michael Gutmann
Project Manager
URS Corporation
77 Goodell Street
Buffalo, New York 14203
Telephone: (716) 856-5636
Fax: (716) 856-2545
email: Mike_Gutmann@urscorp.com



---- Forwarded by Mike Gutmann/Buffalo/URSCorp on 10/22/2009 10:38 AM -----

"Gary Bonarski"
<gebonars@gw.dec.state.ny.us>
07/27/2009 10:07 AM

To <Jim_Lehnen@URSCorp.com>
cc "Julia Kenney" <jmg07@health.state.ny.us>, "Mike Gutmann" <Mike_Gutmann@URSCorp.com>
Subject Grif Tech.- Diebold SV Testing

Jim,
You may remove ethane and ethene from the analyte listing for the Griffin Technology-Diebold
project. Should you have any questions, please do not hesitate to call.
Please confirm receipt of this message.
Thank you,
Gary

Gary E. Bonarski, P.E.
Environmental Engineer I
Division of Environmental Remediation
New York State Department of Environmental Conservation
Region 8
6274 East Avon - Lima Road
Avon, NY 14414

(585) 226-5328
gebonars@gw.dec.state.ny.us

# ATTACHMENT 2

# SOIL VAPOR IMPLANT CONSTRUCTION DETAILS

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

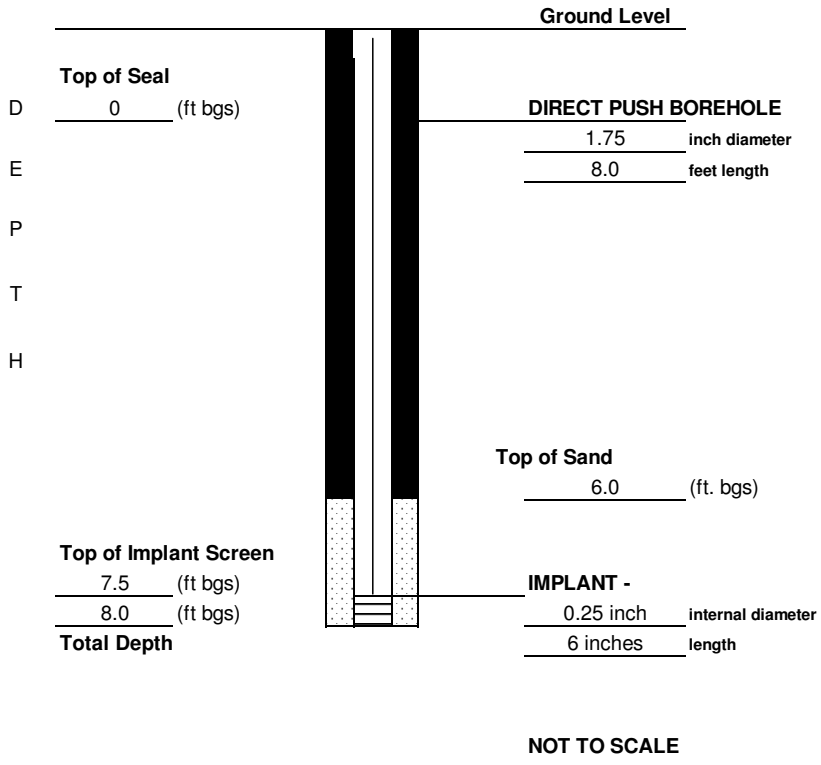
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




**WELL DESIGN**

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
|---|---|---|
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-1** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

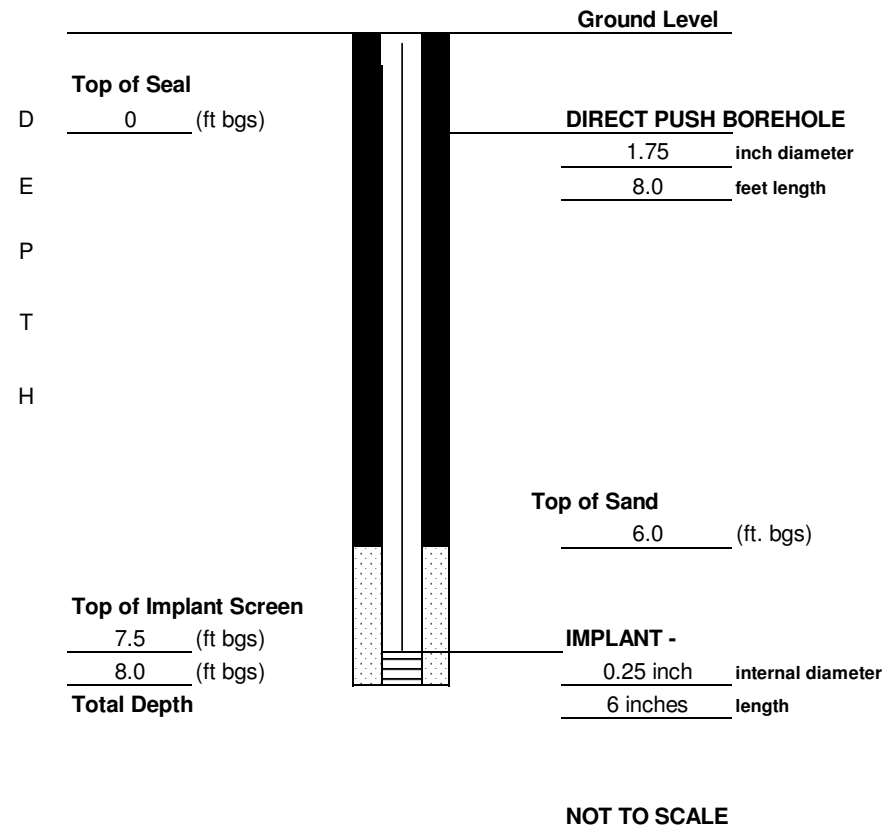
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




## WELL DESIGN

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-2** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

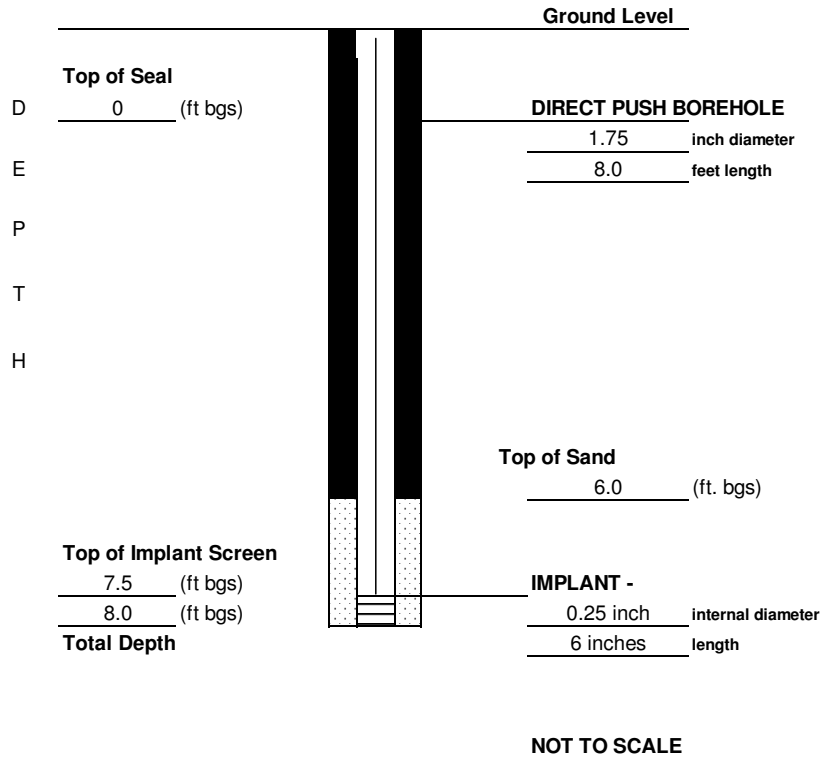
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




**WELL DESIGN**

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-3** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

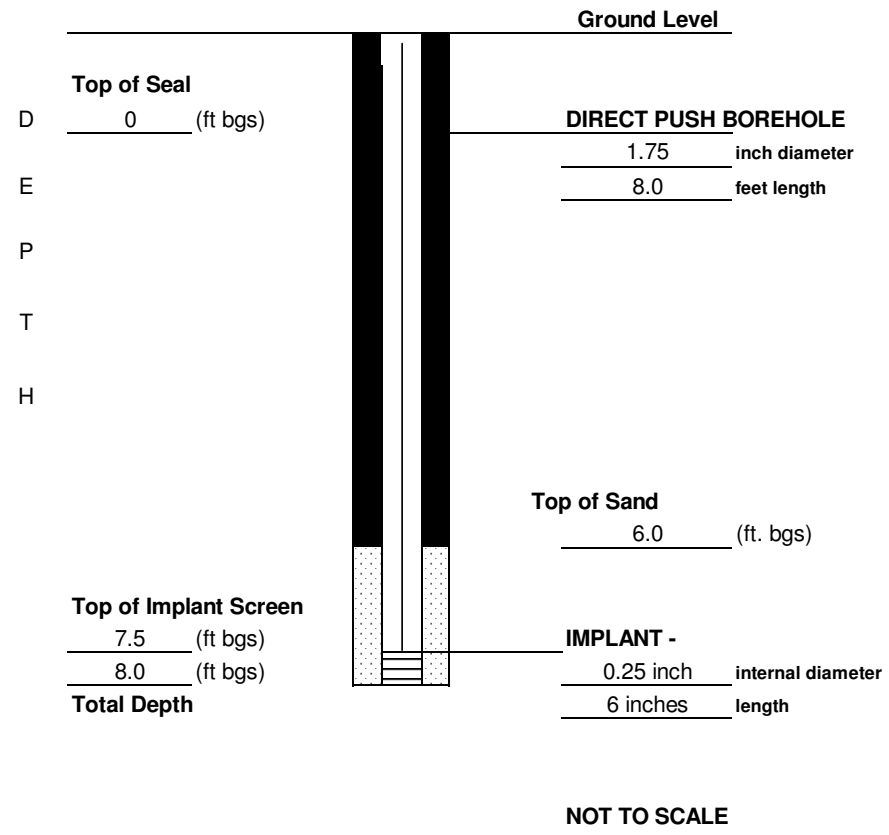
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




**WELL DESIGN**

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-4** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

Driller:
Steve Gengrich

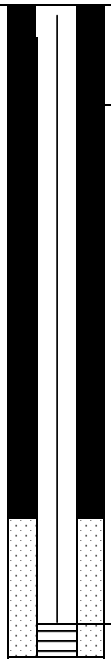
Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

## GEOLOGIC LOG

| Depth(ft.) | Description |
|---|---|
| 0-1.0 | Dark brown, moist, Sandy SILT |
| 1.0-6.0 | Brown, moist, fine Sandy SILT |
| 6.0-8.0 | Reddsih brown, moist, Silty CLAY, some gravel |

DEPTH



**Ground Level**

**Top of Seal**
0 (ft bgs)

**DIRECT PUSH BOREHOLE**
1.75 **inch diameter**
8.0 **feet length**

**Top of Sand**
6.0 (ft. bgs)

**Top of Implant Screen**
7.5 (ft bgs)
8.0 (ft bgs)
**Total Depth**

**IMPLANT -**
0.25 inch **internal diameter**
6 inches **length**

**NOT TO SCALE**

## WELL DESIGN

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-5** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

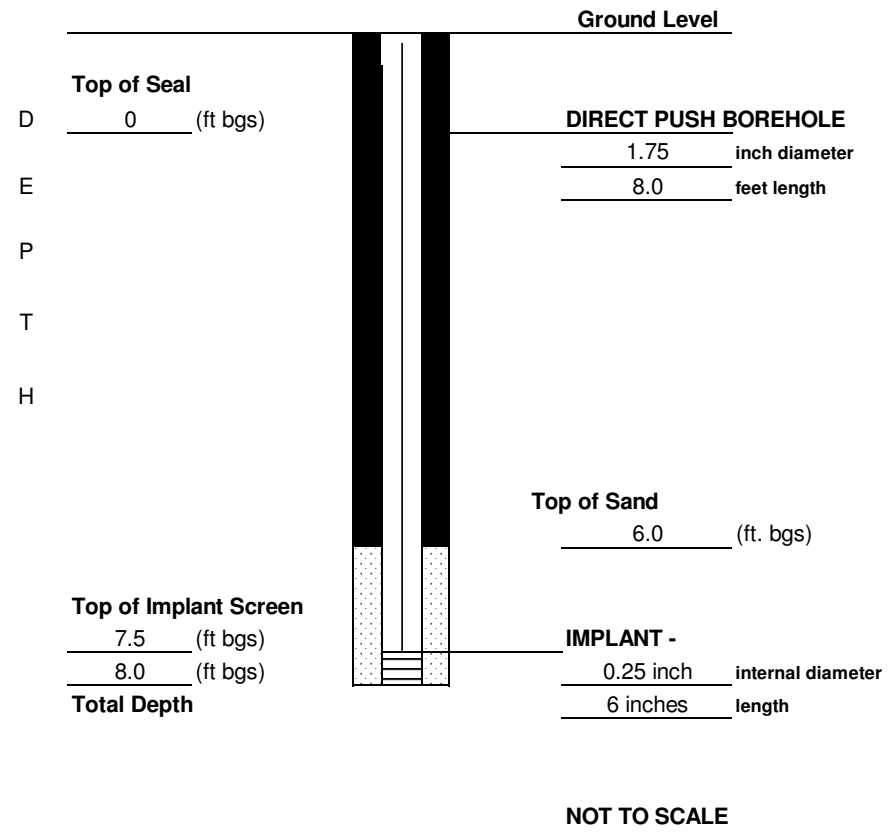
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




## WELL DESIGN

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-6** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

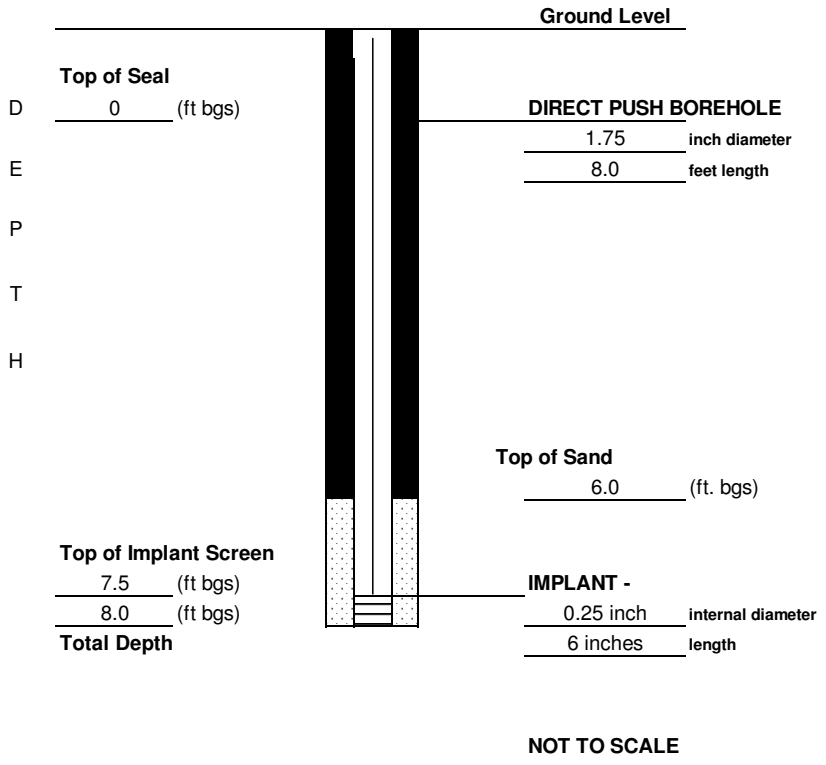
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




**WELL DESIGN**

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-7** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

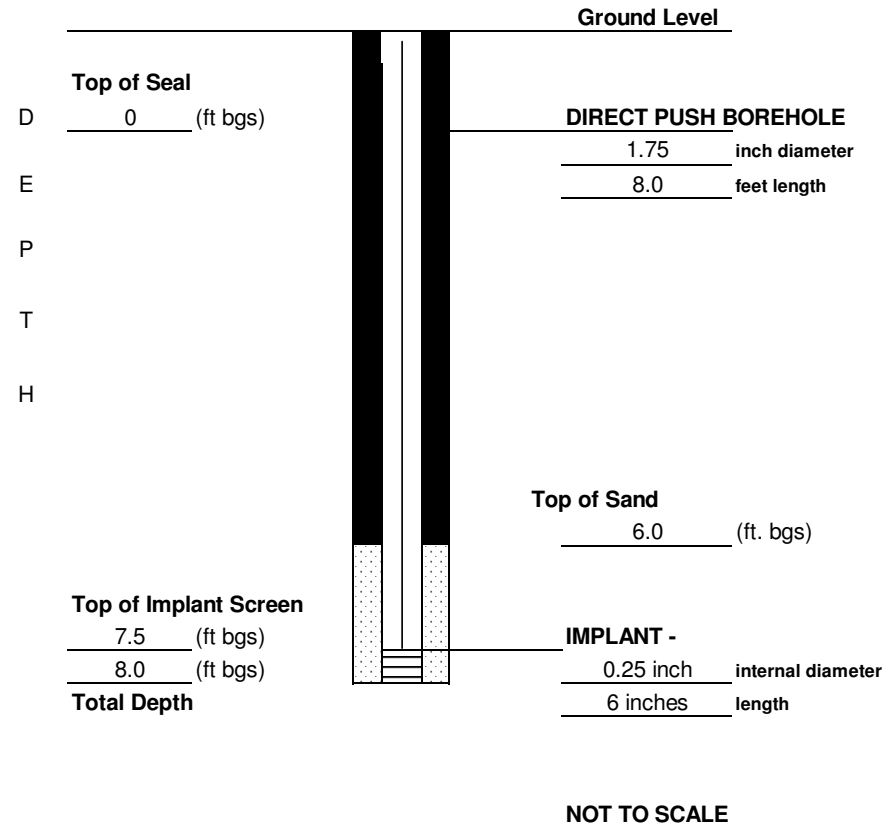
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

## GEOLOGIC LOG

| Depth(ft.) | Description |
|---|---|
| 0-0.5 | Dark brown, moist, Silty CLAY |
| 0.5-8.0 | Reddish brown, moist, Silty Clay, some gravel |




## WELL DESIGN

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-8** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

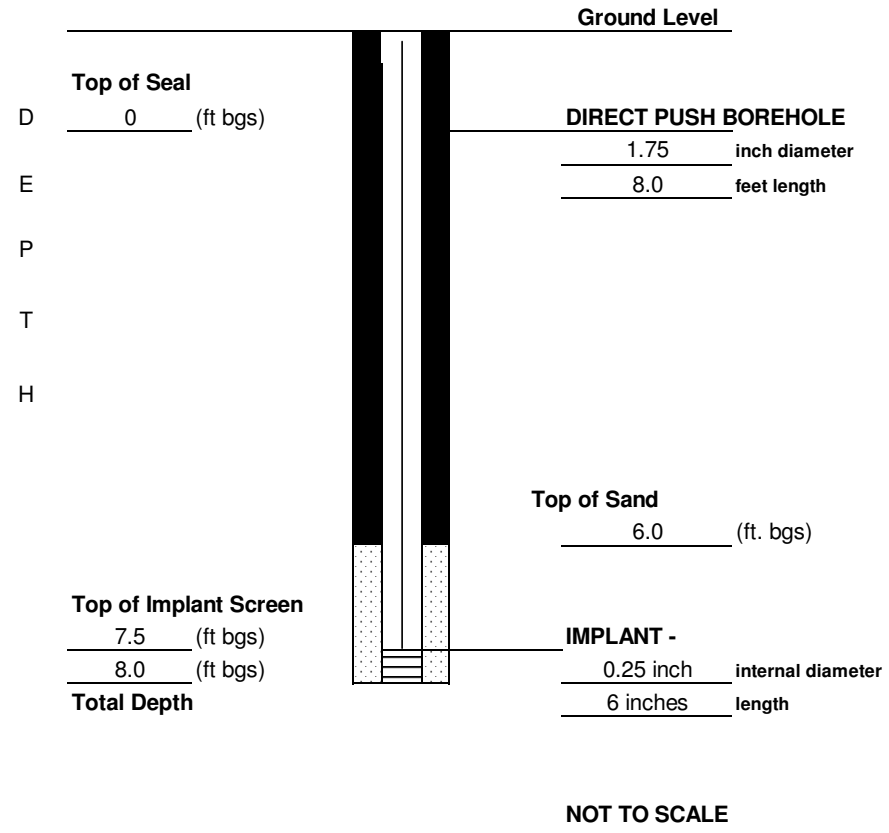
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

## GEOLOGIC LOG

| Depth(ft.) | Description |
|---|---|
| 0-8.0 | Reddish brown, moist, Silty Clay, some gravel |




## WELL DESIGN

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-9** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

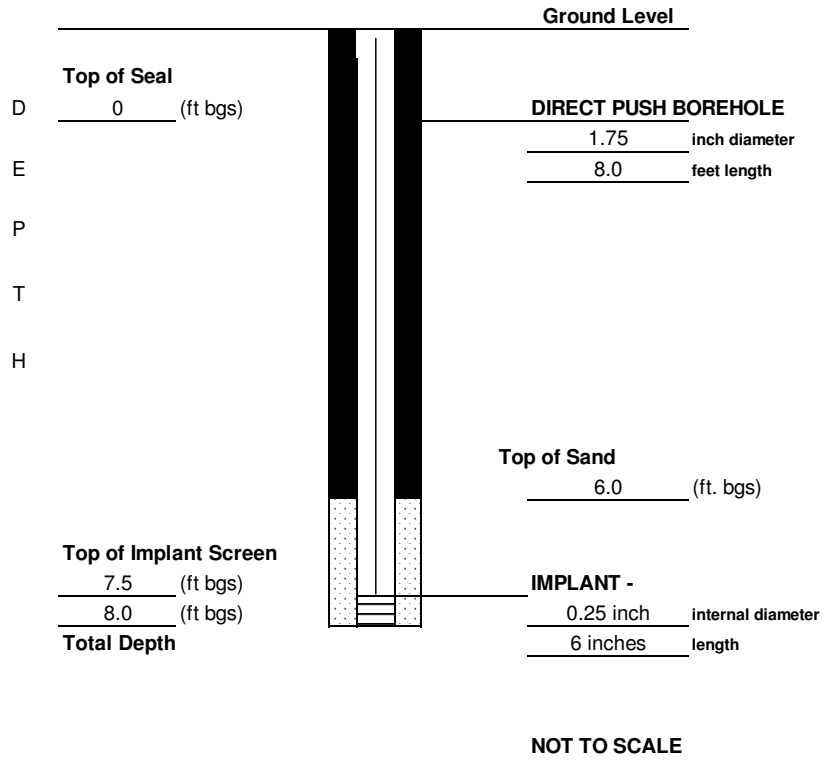
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




**WELL DESIGN**

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
|---|---|---|
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-10** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

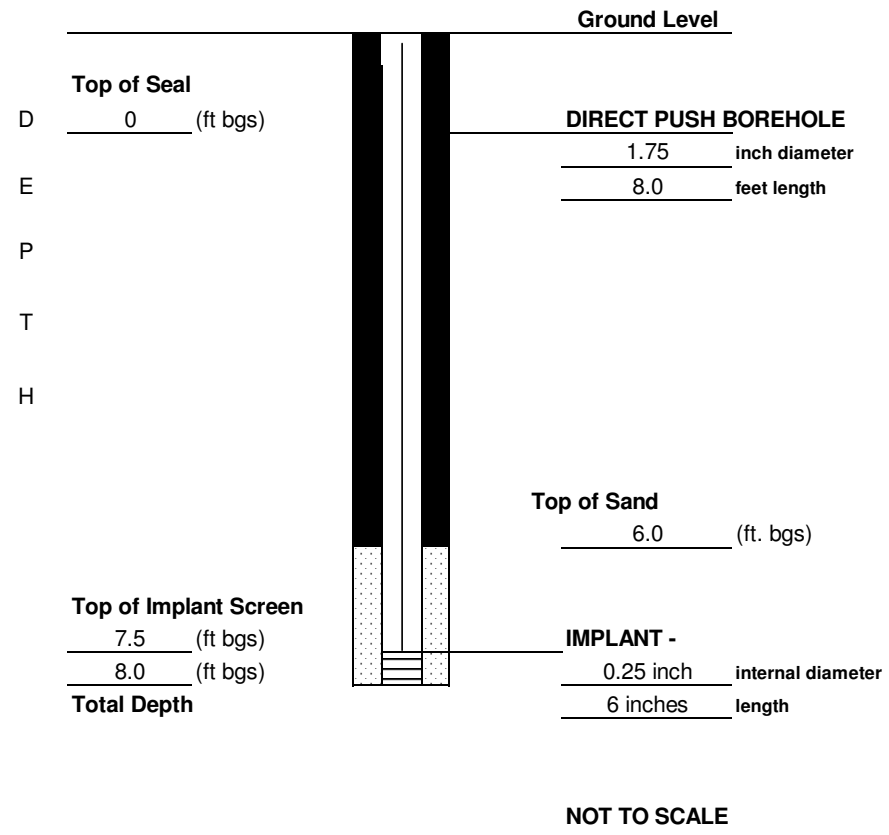
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




**WELL DESIGN**

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-11** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

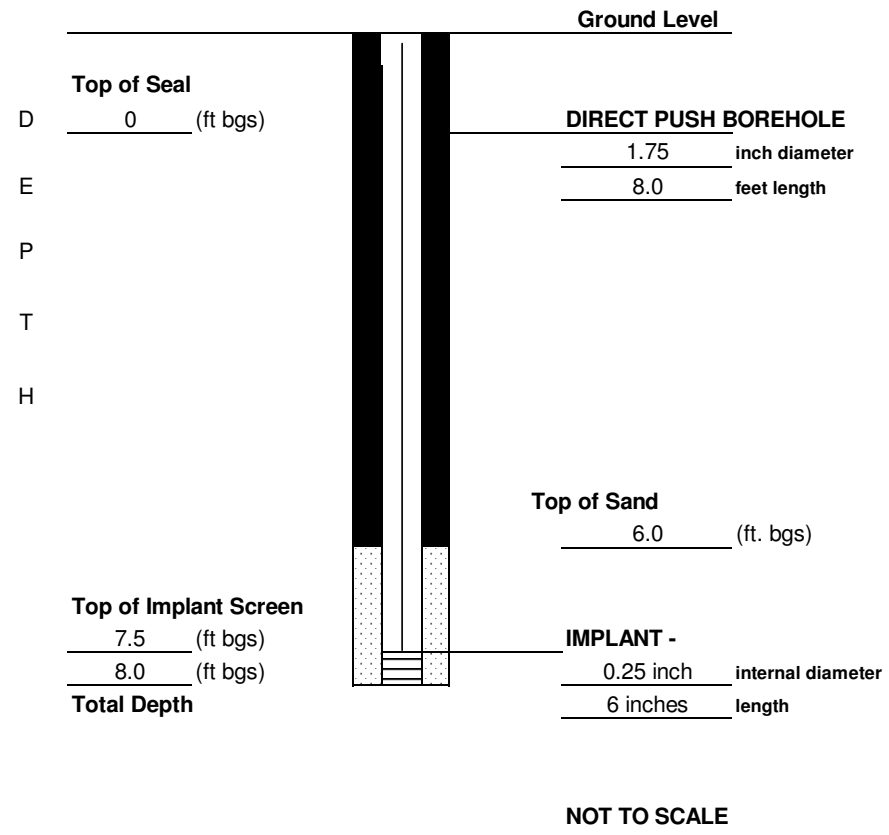
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




## WELL DESIGN

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-12** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

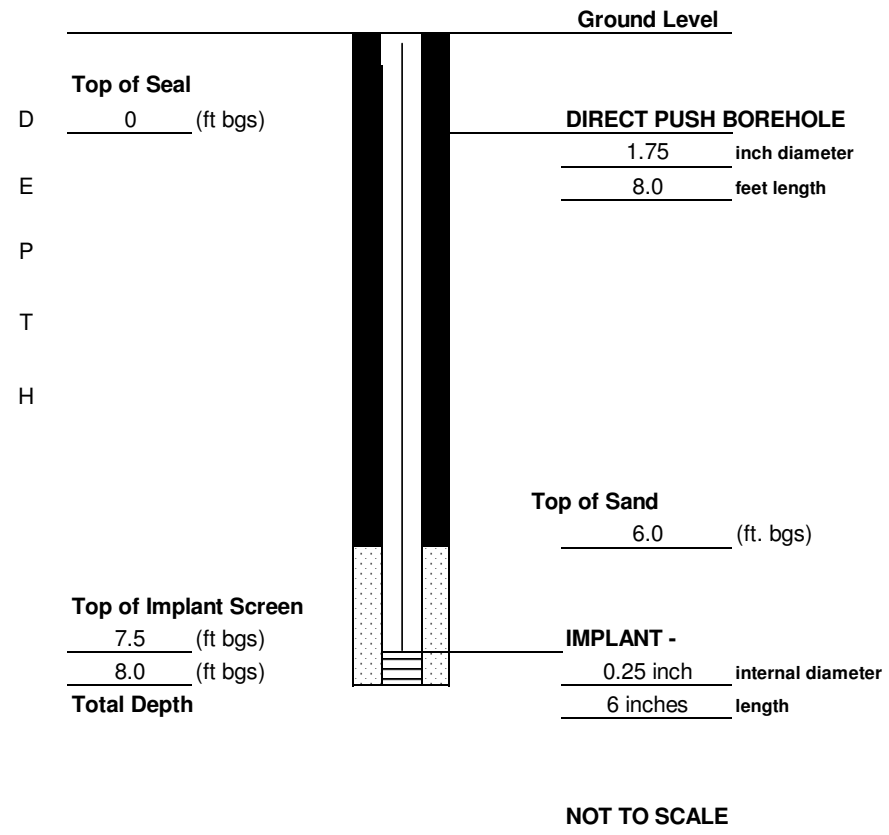
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




**WELL DESIGN**

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-13** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

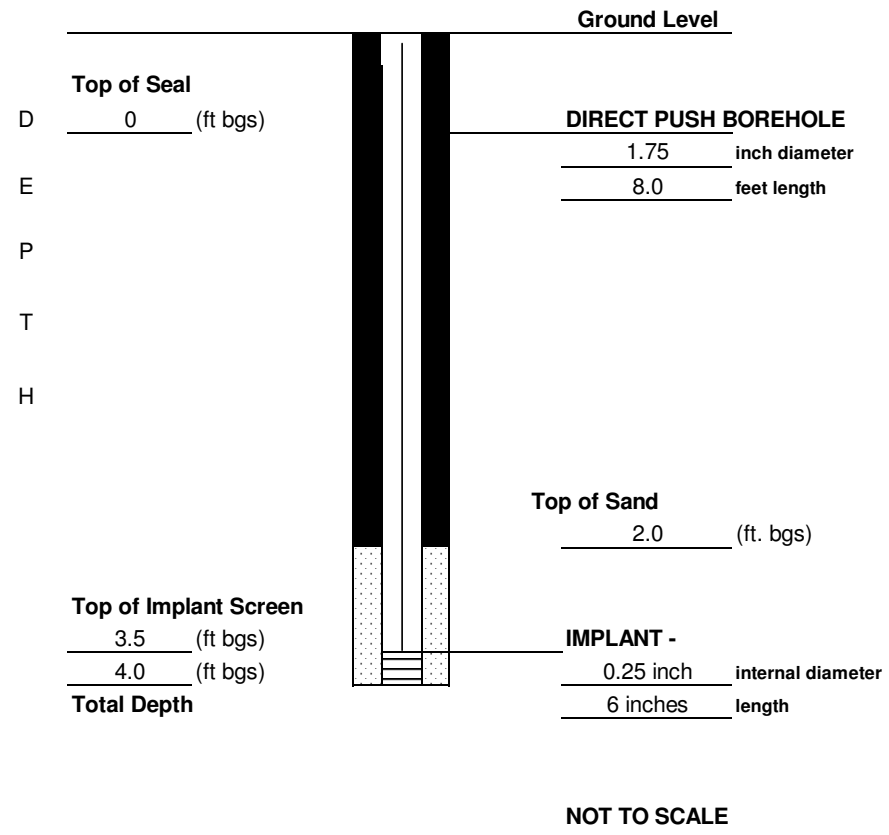
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 27, 2009

## GEOLOGIC LOG

| Depth(ft.) | Description |
|---|---|
| 0-4.0 | Fill: Reddish brown, moist, Silty Clay, some gravle and wood. |
| 4.0-8.0 | Fill: Black, wet Asphalt |




## WELL DESIGN

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 2.0-4.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-2.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-14** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

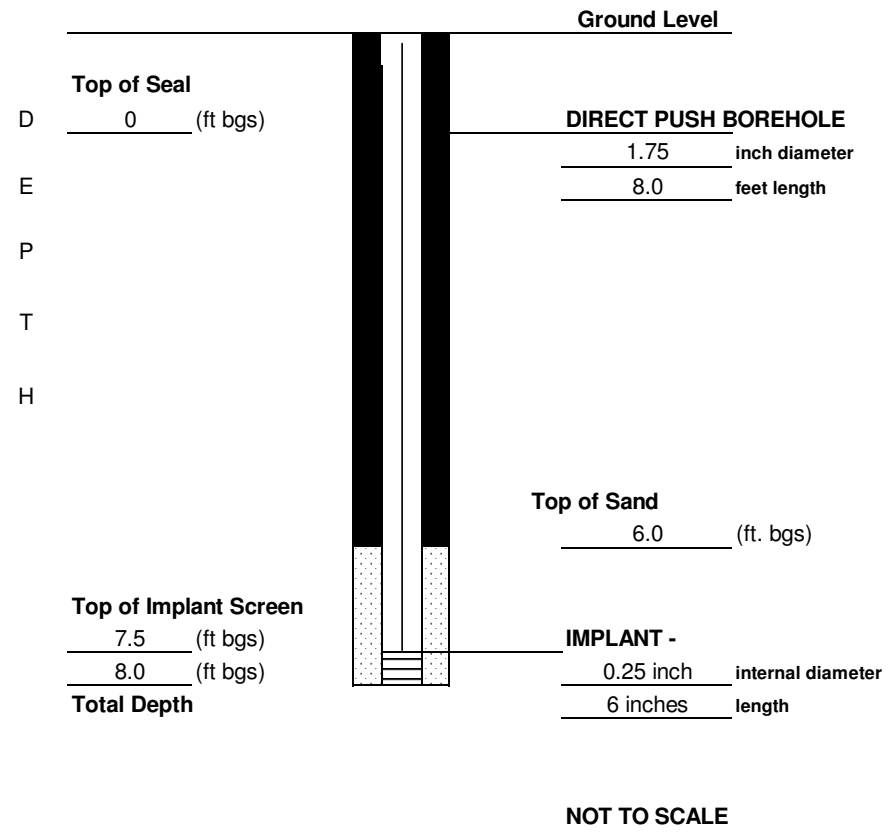
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 28, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




## WELL DESIGN

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-15** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

Driller:
Steve Gengrich

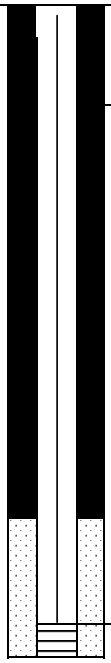
Rig Make/Model:
Simco Earthprobe 200

Date:
July 28, 2009

## GEOLOGIC LOG

| Depth(ft.) | Description |
|---|---|
| 0-0.5 | Fill: Mulch and topsoil |
| 0.5-1.5 | Fill: Gray, moist, crushed Limestone |
| 1.5-8.0 | Reddish brown, moist, Silty Clay, some gravel |

D E P T H



**Ground Level**

**Top of Seal**
0 (ft bgs)

**DIRECT PUSH BOREHOLE**
1.75 **inch diameter**
8.0 **feet length**

**Top of Sand**
6.0 (ft. bgs)

**Top of Implant Screen**
7.5 (ft bgs)
8.0 (ft bgs)
**Total Depth**

**IMPLANT -**
0.25 inch **internal diameter**
6 inches **length**

**NOT TO SCALE**

## WELL DESIGN

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-16** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

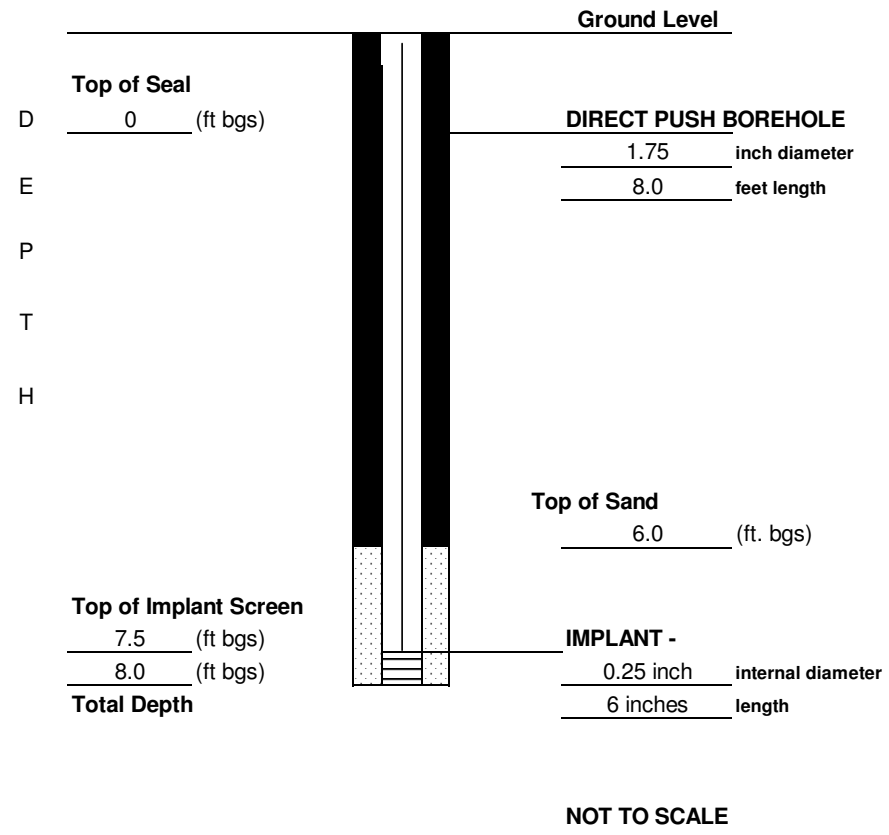
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 28, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




## WELL DESIGN

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-17** |

**DRILLING SUMMARY**

Geologist:
Scott McCabe

Drilling Company:
Nature's Way

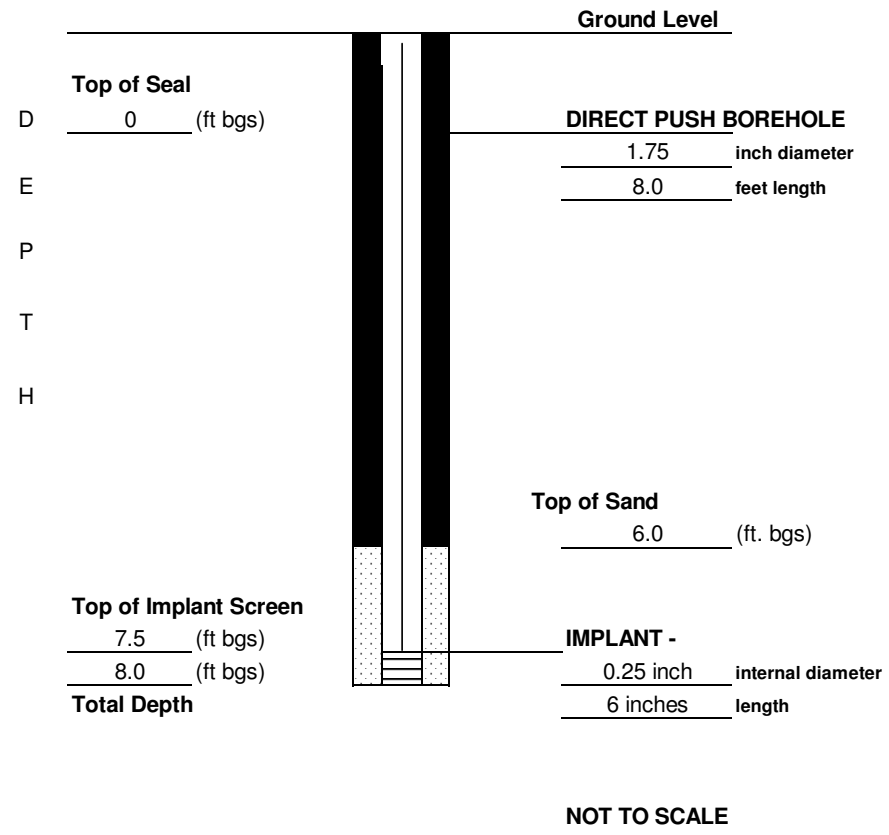
Driller:
Steve Gengrich

Rig Make/Model:
Simco Earthprobe 200

Date:
July 28, 2009

**GEOLOGIC LOG**

| Depth(ft.) | Description |
|---|---|
| | |




## WELL DESIGN

| *CASING MATERIAL* | *SCREEN MATERIAL* | *FILTER MATERIAL* |
|---|---|---|
| Surface: None<br>Well: 3/8 inch OD polyethylene tubing | Type: 6 inch stainless steel implant<br>Pore Diameter: 0.007 inch | Type: #1 glass beads Setting: 6.0-8.0'<br>*SEAL MATERIAL*<br>Type: Bentonite Granuals Setting: 0-6.0' |

*COMMENTS:*

Implant conncted to anchor point at bottom of boring. 3/8 inch outside diameter (OD) poly tubing connected from implant to surface for soil vapor sampling.

*LEGEND*

- Cement/Bentonite Grout
- Bentonite Seal
- Glass Bead Sandpack

| | | |
|---|---|---|
| **Client: Diebold** | **Location: Former Griffin Site** | **Project No.: 13813319** |
| ***U R S Corporation*** | **SOIL VAPOR IMPLANT CONSTRUCTION DETAILS** | **Well Number: SG-18** |

# ATTACHMENT 3

# PHOTOGRAPHIC LOG

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**

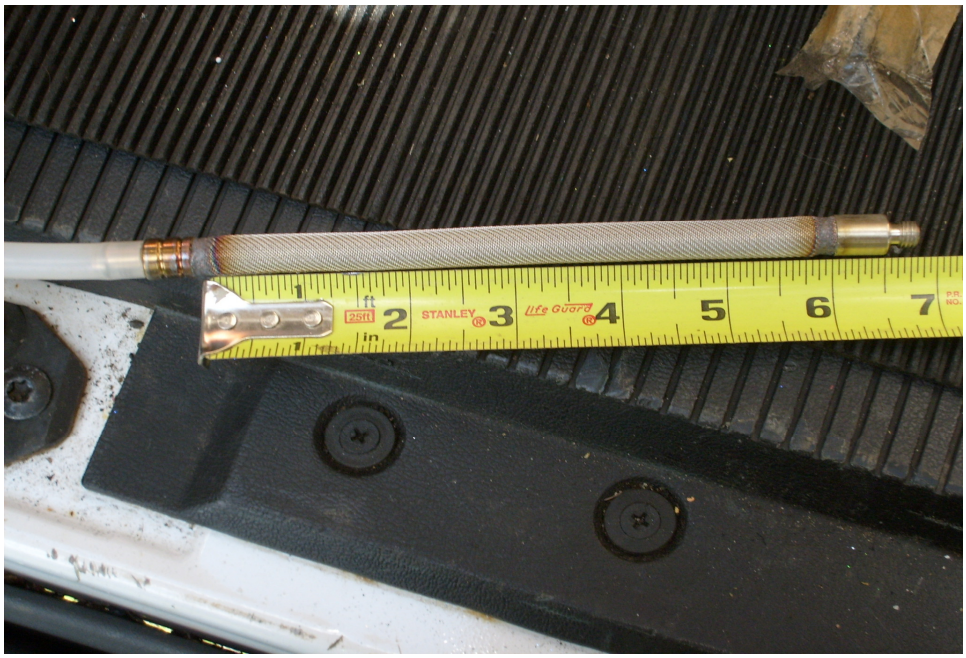



**Photo 1:** 6-inch long stainless steel soil vapor implant.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 2:** Soil vapor sampling with helium enclosure at SG-01.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 3:** Soil vapor sampling with helium enclosure at SG-02.


**Photo 4:** Soil vapor sampling with helium enclosure at SG-03.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 5:** Soil vapor sampling with helium enclosure at SG-04.


**Photo 6:** Soil vapor sampling with helium enclosure at SG-05.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**

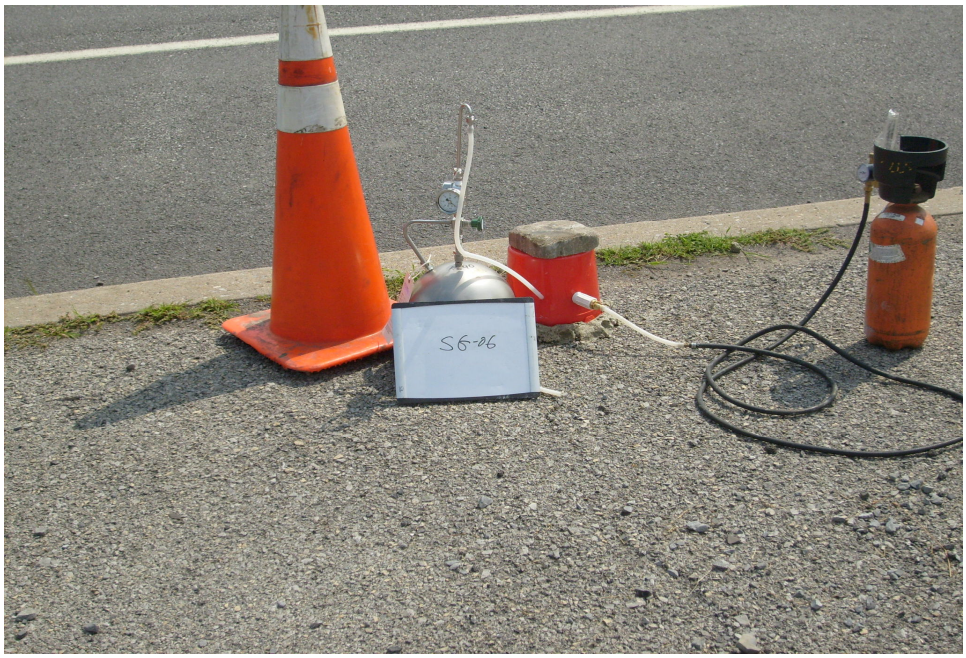



**Photo 7:** Soil vapor sampling with helium enclosure at SG-06.


**Photo 8:** Soil vapor sampling with helium enclosure at SG-07.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 9:** Soil vapor sampling with helium enclosure at SG-07 and field duplicate 072809-FD-1


**Photo 10:** Soil vapor sampling with helium enclosure at SG-09 and field duplicate 073009-FD-1.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 11:** Soil vapor sampling with helium enclosure at SG-10.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 12:** Soil vapor sampling with helium enclosure at SG-11.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 13:** Soil vapor sampling with helium enclosure at SG-12.


**Photo 14:** Soil vapor sampling with helium enclosure at SG-13.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 15:** Soil vapor sampling with helium enclosure at SG-14.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 16:** Soil vapor sampling with helium enclosure at SG-15.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 17:** Soil vapor sampling with helium enclosure at SG-16.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 18:** Soil vapor sampling with helium enclosure at SG-17.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 19:** Soil vapor sampling with helium enclosure at SG-18.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 20:** Outdoor air sample location 072809-AA-1.

**SOIL VAPOR SAMPLING- PHOTO LOG**
**FORMER GRIFFIN TECHNOLOGY FACILITY**
**FARMINGTON, NEW YORK**


**Photo 21:** Outdoor air sample location 073009-AA-1.

# ATTACHMENT 4

# SUMMA CANISTER SAMPLING FILED DATA SHEET

# Summa Canister Sampling Field Data Sheet

| | |
|---|---|
| Site: | Former Griffin Technology Facility |
| Samplers: | S. McCabe |
| Date: | 7/28/2009 |

| Sample # | SG-01 | SG-02 | SG-04 | 072809-AA-1 | SG-05 |
|---|---|---|---|---|---|
| Location | SG-01 | SG-02 | SG-04 | 072809-AA-1 | SG-05 |
| Summa Canister ID | SLC 00090 | SCL 00095 | SLC 00127 | SLC 00102 | SLC 00118 |
| Flow Controller ID | FC 00726 | FC 00743 | FC 00742 | FC 00723 | FC 00708 |
| Additional Tubing Added | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much **NO** |
| Purge Time (Start) | 1344 | 1409 | 1436 | - | 1455* |
| Purge Time (Stop) | 1349 | 1414 | 1441 | - | 1457 |
| Total Purge Time (min) | 5 | 5 | 5 | - | 2 |
| Purge Volume | 1L | 1L | 1L | - | 0.4 L* |
| PID Test of Purge Air | 0 ppm | 0 ppm | 0 ppm | - | 0 ppm |
| Initial Tracer Gas Results | 0 ppm | 0 ppm | 0 ppm | - | 0 ppm |
| Pressure Gauge - before sampling | -29 | -28 | -30 | -29 | -29 |
| Sample Time (Start) | 1350 | 1415 | 1442 | 1432 | 1458 |
| Sample Time (Stop) | 1750 | 1815 | 1842 | 1832 | 1858 |
| Total Sample Time (min) | 240 | 240 | 240 | 240 | 240 |
| Pressure Gauge - after sampling | -8 | -9 | -9 | -9 | -9 |
| Sample Volume | 6L | 6L | 6L | 6L | 6L |
| Canister Pressure Went To Ambient Pressure? | YES / **NO** | YES / **NO** | YES / **NO** | YES / **NO** | YES / **NO** |
| Final Tracer Gas Results | 0 ppm | 0 ppm | 0 ppm | 0 ppm | 0 ppm |
| Associated Ambient Air Sample Number | 072809-AA-01 | 072809-AA-01 | 072809-AA-01 | - | 072809-AA-01 |

General Comments: *- Note, purge pump stopped purging. No suction from point. May be due to geology. Attempt to collect sample using Summa canister. 072809-AA-1 is located west of SG-04 in upwind location.

# Summa Canister Sampling Field Data Sheet

| | |
|---|---|
| Site: | Former Griffin Technology Facility |
| Samplers: | S. McCabe |
| Date: | 7/28/2009 |

| Sample # | SG-03 | SG-07 | SG-08 | 072809-FD-1 | SG-14 |
|---|---|---|---|---|---|
| Location | SG-03 | SG-07 | SG-08 | SG-08 | SG-14 |
| Summa Canister ID | SLC 000967 | SCL 00068 | SLC 00098 | SLC 00029 | SLC 00100 |
| Flow Controller ID | FC 00760 | FC 00755 | FC 00758 | FC 00722 | FC 00756 |
| Additional Tubing Added | NO/ YES - How much **2'** | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much **NO** |
| Purge Time (Start) | 1535 | 1909 | 1924 | 1924 | 2340 |
| Purge Time (Stop) | 1540 | 1914 | 1929 | 1929 | 2345 |
| Total Purge Time (min) | 5 | 5 | 5 | 5 | 5 |
| Purge Volume | 1L | 1L | 1L | 1L | 1L |
| PID Test of Purge Air | 0 ppm | 0 ppm | 0 ppm | 0 ppm | 0 ppm |
| Initial Tracer Gas Results | 0 ppm | 0 ppm | 0 ppm | 0 ppm | 0 ppm |
| Pressure Gauge - before sampling | -29 | -30 | -30 | -29 | -30 |
| Sample Time (Start) | 1542 | 1915 | 1930 | 1930 | 2346 |
| Sample Time (Stop) | 1942 | 2315 | 2330 | 2330 | 346 |
| Total Sample Time (min) | 240 | 240 | 240 | 240 | 240 |
| Pressure Gauge - after sampling | -9 | -10 | -9 | -9 | -8 |
| Sample Volume | 6L | 6L | 6L | 6L | 6L |
| Canister Pressure Went To Ambient Pressure? | YES / **NO** | YES / **NO** | YES / **NO** | YES / **NO** | YES / **NO** |
| Final Tracer Gas Results | 0 ppm | 0 ppm | 0 ppm | 0 ppm | 0 ppm |
| Associated Ambient Air Sample Number | 072809-AA-01 | 072809-AA-01 | 072809-AA-01 | 072809-AA-01 | 072809-AA-01 |

General Comments: *- Note, purge pump stopped purging. No suction from point. May be due to geology. Attempt to collect sample using Summa canister. 072809-AA-1 is located west of SG-04 in upwind location.

# Summa Canister Sampling Field Data Sheet

| | |
|---|---|
| Site: | Former Griffin Technology Facility |
| Samplers: | S. McCabe |
| Date: | 7/29/2009 |

| Sample # | SG-18 | SG-17 | SG-16 | SG-15 | |
|---|---|---|---|---|---|
| Location | SG-18 | SG-17 | SG-16 | SG-15 | |
| Summa Canister ID | SLC 000040 | SCL 00114 | SLC 00047 | SLC 00029 | |
| Flow Controller ID | FC 00715 | FC 00721 | FC 00753 | FC 00722 | |
| Additional Tubing Added | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much |
| Purge Time (Start) | 2352 | 0006 | 0028 | 0049* | |
| Purge Time (Stop) | 2357 | 0011 | 0033 | 0050 | |
| Total Purge Time (min) | 5 | 5 | 5 | 1 | |
| Purge Volume | 1L | 1L | 1L | 0.2L* | |
| PID Test of Purge Air | 0 ppm | 0 ppm | 0 ppm | 0 ppm | |
| Initial Tracer Gas Results | 0 ppm | 0 ppm | 0 ppm | 0 ppm | |
| Pressure Gauge - before sampling | -28 | -29 | -29 | -29 | |
| Sample Time (Start) | 2358 | 0021 | 0035 | 0051 | |
| Sample Time (Stop) | 358 | 421 | 435 | 440 | |
| Total Sample Time (min) | 240 | 240 | 240 | 230 | |
| Pressure Gauge - after sampling | -8 | -10 | -10 | -28.5 | |
| Sample Volume | 6L | 6L | 6L | 6L | |
| Canister Pressure Went To Ambient Pressure? | YES / **NO** | YES / **NO** | YES / **NO** | YES / **NO** | YES / **NO** |
| Final Tracer Gas Results | 0 ppm | 0 ppm | 0 ppm | 0 ppm | |
| Associated Ambient Air Sample Number | 072809-AA-01 | 072809-AA-01 | 072809-AA-01 | 072809-AA-01 | |

General Comments: *- Note, purge pump stopped purging. No suction from point. May be due to geology. Attempt to collect sample using Summa canister. 072809-AA-1 is located west of SG-04 in upwind location.

# Summa Canister Sampling Field Data Sheet

| | |
|---|---|
| Site: | Former Griffin Technology Facility |
| Samplers: | S. McCabe |
| Date: | 7/30/2009 |

| Sample # | SG-12 | 073009-FD-1 | SG-09 | 073009-AA-1 | SG-10 |
|---|---|---|---|---|---|
| Location | SG-12 | SG-09 | SG-09 | 073009-AA-01 | SG-10 |
| Summa Canister ID | SLC 000034 | SCL 00077 | SLC 00078 | SLC 00061 | SLC 00059 |
| Flow Controller ID | FC 00736 | FC 00718 | FC 00725 | FC 00749 | FC 00739 |
| Additional Tubing Added | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much **NO** |
| Purge Time (Start) | 1421* | 1437* | 1437* | - | 1453 |
| Purge Time (Stop) | 1422 | 1439 | 1439 | - | 1454 |
| Total Purge Time (min) | 1 | 2 | 2 | - | 1 |
| Purge Volume | 0.2L* | 0.4L* | 0.4L* | - | 0.2L* |
| PID Test of Purge Air | 0 ppm | 0 ppm | 0 ppm | - | 0 ppm |
| Initial Tracer Gas Results | 0 ppm | 0 ppm | 0 ppm | - | 0 ppm |
| Pressure Gauge - before sampling | -28.5 | -30 | -29 | -28 | -29 |
| Sample Time (Start) | 1423 | 1440 | 1440 | 1447 | 1455 |
| Sample Time (Stop) | 1823 | 1840 | 1840 | 1847 | 1855 |
| Total Sample Time (min) | 240 | 240 | 240 | 240 | 240 |
| Pressure Gauge - after sampling | -9 | -9 | -10 | -9 | -10 |
| Sample Volume | 6L | 6L | 6L | 6L | 6L |
| Canister Pressure Went To Ambient Pressure? | YES / **NO** | YES / **NO** | YES / **NO** | YES / **NO** | YES / **NO** |
| Final Tracer Gas Results | 0 ppm | 0 ppm | 0 ppm | 0 ppm | 0 ppm |
| Associated Ambient Air Sample Number | 073009-AA-01 | 073009-AA-01 | 073009-AA-01 | - | 073009-AA-01 |

General Comments: *- Note, purge pump stopped purging. No suction from point. May be due to geology. Attempt to collect sample using Summa canister. 0723009-AA-1 is located west of SG-10 in upwind location.

# Summa Canister Sampling Field Data Sheet

| | |
|---|---|
| Site: | Former Griffin Technology Facility |
| Samplers: | S. McCabe |
| Date: | 7/30/2009 |

| Sample # | SG-11 | SG-13 | SG-15 | | |
|---|---|---|---|---|---|
| Location | SG-11 | SG-13 | SG-15 | | |
| Summa Canister ID | SLC 000130 | SCL 00080 | SLC 00123 | | |
| Flow Controller ID | FC 00745 | FC 00759 | FC 00728 | | |
| Additional Tubing Added | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much **NO** | NO/ YES - How much | NO/ YES - How much |
| Purge Time (Start) | 1508* | 1520 | 2313* | | |
| Purge Time (Stop) | 1509 | 1525 | 2314 | | |
| Total Purge Time (min) | 1 | 5 | 2 | | |
| Purge Volume | 0.2L* | 1L | 0.2L* | | |
| PID Test of Purge Air | 0 ppm | 0 ppm | 0 ppm | | |
| Initial Tracer Gas Results | 0 ppm | 0 ppm | 0 ppm | | |
| Pressure Gauge - before sampling | -28.5 | -29 | -30 | | |
| Sample Time (Start) | 1510 | 1520 | 2315 | | |
| Sample Time (Stop) | 1910 | 1920 | 315 | | |
| Total Sample Time (min) | 240 | 240 | 240 | | |
| Pressure Gauge - after sampling | -9 | -10 | -30 | | |
| Sample Volume | 6L | 6L | 6L | | |
| Canister Pressure Went To Ambient Pressure? | YES / **NO** | YES / **NO** | YES / **NO** | YES / **NO** | YES / **NO** |
| Final Tracer Gas Results | 0 ppm | 0 ppm | 0 ppm | | |
| Associated Ambient Air Sample Number | 073009-AA-01 | 073009-AA-01 | 073009-AA-01 | | |

General Comments: *- Note, purge pump stopped purging. No suction from point. May be due to geology. Attempt to collect sample using Summa canister. 0723009-AA-1 is located west of SG-10 in upwind location.

# ATTACHMENT 5

# DATA USABILITY SUMMARY REPORT

**MEMORANDUM**

**TO:** Mike Gutmann

**FROM:** George Kisluk

**DATE:** September 3, 2009

**SUBJECT:** **Soil Gas Analytical Results**
**Former Griffin Technology Facility**

Sixteen soil gas samples, two field duplicates and two outdoor air samples were collected from the Former Griffin Technology Facility site on July 28-30, 2009 and delivered to Columbia Analytical Services, Inc., (CAS) located in Rochester, NY for analysis. The samples were received by the laboratory on July 30, 2009 and August 3, 2009 intact and under proper chain-of-custody.

The samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Compendium Method TO-15, *Determination of VOCs in Air Collected in Specially Prepared Canisters and Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)*. The analytical method referenced is from Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition, EPA 625/R-96/010b, January 1999.

The following USEPA Region II standard operating procedure (SOP) was used to qualify the data:

- Validating Volatile Organic Analysis of Ambient Air in Canister by Method TO-15, HW-31, Revision 4, October 2006.

A limited data review was performed for completeness of deliverables, and for compliance with method and validation SOP criteria, which includes quantitation limits, holding times, method blanks, trip blanks, surrogate recoveries, internal standard recoveries, laboratory control sample (LCS) recoveries, and calibration criteria. Only method and validation SOP non-conformances are discussed in this report.

The validated analytical results with quantitation limits for non-detect compounds are provided on Table 1. Because the quantitation limits for many compounds are greater than 1 microgram per cubic meter (UG/M3), the validated analytical results with method detection limits (MDL) for non-detect compounds are provided on Table 2. All detections greater than or equal to the MDL but less than the quantitation limit are qualified 'J' by the laboratory. Definitions of USEPA Region II data qualifiers are presented at the end of this memorandum.

## VOCs

Methylene chloride and/or 4-methy-2-pentanone were detected in some of the laboratory method blanks. The results for methylene chloride in samples 072809-AA-1, 073009-AA-1, SG-03, SG-16, and SG-17, and 4-methyl 2-pentanone in sample 072809-AA-1 were qualified non-detect at the quantitation limit because the concentrations in these samples were less than five times the associated method blank value, adjusted for sample size and dilution.

The percent difference (%D) between the initial calibration standard average relative response factor (RRF) and the RRF in one of the calibration verification standards was greater than 30% for chloroethane. The results for chloroethane in associated samples 073009-AA-1 and SG-17 were qualified 'UJ'.

Acetone was detected at a concentration that exceeded the upper limit of the instrument calibration range in all samples except 072809-AA-1, 073003-AA-1, SG-16 and SG-17. Because acetone is not a contaminant of concern at the site and in order to provide the lowest quantitation limit, the laboratory was instructed not to dilute samples if acetone was the only compound that exceeded the instrument calibration range. The results for acetone in all samples except 072809-AA-1, 073003-AA-1, SG-16 and SG-17 were qualified 'J' during the data review.

Results reported from a secondary dilution analysis are qualified 'D'.

No other data qualifications were made and all other data are usable as reported.

## Field Duplicate Results

Field duplicate samples were collected at soil gas locations SG-08 and SG-09. The field duplicate results and relative percent differences (RPD) are summarized in Table 3. In general, field duplicate results were in agreement. USEPA Region II validation guidelines do not provide any criteria for RPDs, nor are there any recommendations for the qualification of data based on field duplicate results.

cc: File: 13807296.00000

## DEFINITION OF USEPA REGION II DATA QUALIFIERS

The following are definitions of the qualifiers assigned to results during the data review process.

**U** - The analyte was analyzed for, but was not detected above the reported quantitation limit.

**J** - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

**UJ** - The analyte was not detected above the quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

**D** - The result is reported from a secondary dilution analysis.

# TABLE 1
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | OUTDOOR AIR | OUTDOOR AIR | SG-01 | SG-02 | SG-03 |
|---|---|---|---|---|---|---|
| Sample ID | | 072809-AA-1 | 073009-AA-1 | SG-01 | SG-02 | SG-03 |
| Matrix | | Outdoor Air | Outdoor Air | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/28/09 | 07/30/09 | 07/28/09 | 07/28/09 | 07/28/09 |
| Parameter | Units | | | | | |
| **Volatile Organic Compounds** | | | | | | |
| 1,1,1-Trichloroethane | UG/M3 | 0.071 J | 0.066 J | 0.16 J | 2.3 U | 6.8 J |
| 1,1,2,2-Tetrachloroethane | UG/M3 | 0.27 U | 0.28 U | 0.56 U | 0.58 U | 2.3 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/M3 | 0.72 | 0.61 | 0.72 | 0.70 | 0.84 J |
| 1,1,2-Trichloroethane | UG/M3 | 1.1 U | 1.1 U | 2.2 U | 2.3 U | 9.0 U |
| 1,1-Dichloroethane | UG/M3 | 0.82 U | 0.84 U | 1.7 U | 1.7 U | 6.8 U |
| 1,1-Dichloroethene | UG/M3 | 0.80 U | 0.82 U | 1.6 U | 1.7 U | 6.6 U |
| 1,2-Dibromoethane (Ethylene dibromide) | UG/M3 | 0.31 U | 0.32 U | 0.63 U | 0.65 U | 2.6 U |
| 1,2-Dichlorobenzene | UG/M3 | 2.4 U | 2.5 U | 4.9 U | 5.1 U | 20 U |
| 1,2-Dichloroethane | UG/M3 | 0.051 J | 0.047 J | 1.7 U | 1.7 U | 6.8 U |
| 1,2-Dichloroethene (cis) | UG/M3 | 0.15 J | 0.061 J | 1.6 U | 1.7 U | 6.6 U |
| 1,2-Dichloroethene (trans) | UG/M3 | 0.80 U | 0.82 U | 1.6 U | 1.7 U | 6.6 U |
| 1,2-Dichloropropane | UG/M3 | 0.93 U | 0.95 U | 1.9 U | 2.0 U | 7.7 U |
| 1,3-Dichlorobenzene | UG/M3 | 2.4 U | 2.5 U | 21 | 15 | 9.8 J |
| 1,3-Dichloropropene (cis) | UG/M3 | 1.8 U | 1.9 U | 3.7 U | 3.8 U | 15 U |
| 1,3-Dichloropropene (trans) | UG/M3 | 0.91 U | 0.93 U | 1.9 U | 1.9 U | 7.5 U |
| 1,4-Dichlorobenzene | UG/M3 | 2.4 U | 2.5 U | 0.32 J | 0.25 J | 20 U |
| 2-Hexanone | UG/M3 | 0.82 U | 0.84 U | 4.2 | 1.8 | 6.8 U |
| 4-Methyl-2-pentanone | UG/M3 | 1.6 U | 0.095 J | 2.4 J | 6.5 | 1.6 J |
| Acetone | UG/M3 | 8.6 J | 6.0 J | 1,900 DJ | 990 J | 1,500 J |
| Benzene | UG/M3 | 0.43 J | 0.20 J | 69 | 43 | 7.7 |
| Bromodichloromethane | UG/M3 | 0.27 U | 0.28 U | 0.56 U | 0.58 U | 2.3 U |
| Bromoform | UG/M3 | 2.1 U | 2.1 U | 4.2 U | 4.4 U | 17 U |
| Bromomethane | UG/M3 | 0.78 U | 0.047 J | 1.6 U | 1.7 U | 6.5 U |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
PQL - Practical quantitation limit.

**Detection Limits shown are PQL**

# TABLE 1
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | OUTDOOR AIR | OUTDOOR AIR | SG-01 | SG-02 | SG-03 |
|---|---|---|---|---|---|---|
| Sample ID | | 072809-AA-1 | 073009-AA-1 | SG-01 | SG-02 | SG-03 |
| Matrix | | Outdoor Air | Outdoor Air | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/28/09 | 07/30/09 | 07/28/09 | 07/28/09 | 07/28/09 |
| **Parameter** | **Units** | | | | | |
| **Volatile Organic Compounds** | | | | | | |
| Carbon disulfide | UG/M3 | 0.078 J | 0.050 J | 60 | 35 | 3.0 J |
| Carbon tetrachloride | UG/M3 | 0.69 | 0.47 | 0.55 | 0.75 | 1.1 U |
| Chlorobenzene | UG/M3 | 0.93 U | 0.95 U | 0.42 J | 0.36 J | 0.45 J |
| Chloroethane | UG/M3 | 1.1 U | 1.1 UJ | 0.71 J | 0.61 J | 0.66 J |
| Chloroform | UG/M3 | 0.091 J | 0.076 J | 0.78 J | 0.88 J | 0.54 J |
| Chloromethane | UG/M3 | 1.0 | 1.1 | 1.9 | 1.8 | 2.3 J |
| Dibromochloromethane | UG/M3 | 0.35 U | 0.35 U | 0.71 U | 0.73 U | 2.9 U |
| Ethylbenzene | UG/M3 | 0.13 J | 0.050 J | 12 | 14 | 0.84 J |
| Methyl ethyl ketone (2-Butanone) | UG/M3 | 1.0 J | 0.83 J | 93 | 100 | 70 |
| Methyl tert-butyl ether | UG/M3 | 1.4 U | 1.5 U | 8.6 | 14 | 12 U |
| Methylene chloride | UG/M3 | 0.69 U | 0.71 U | 5.5 | 3.5 | 5.7 U |
| Styrene | UG/M3 | 1.7 U | 1.7 U | 3.5 U | 3.6 U | 14 U |
| Tetrachloroethene | UG/M3 | 0.15 J | 0.15 U | 180 | 100 | 15 |
| Toluene | UG/M3 | 1.5 | 0.72 J | 160 D | 110 | 17 |
| Trichloroethene | UG/M3 | 0.055 J | 0.11 U | 2.7 | 1.7 | 2.9 |
| Trichlorofluoromethane | UG/M3 | 1.6 | 1.5 | 1.6 J | 1.5 J | 1.8 J |
| Vinyl acetate | UG/M3 | 9.1 U | 9.3 U | 19 U | 19 U | 75 U |
| Vinyl chloride | UG/M3 | 0.11 U | 0.11 U | 0.20 J | 0.25 | 0.27 J |
| Xylene (total) | UG/M3 | 0.49 J | 0.19 J | 49 | 83 | 3.4 J |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
PQL - Practical quantitation limit.

**Detection Limits shown are PQL**

J:\Small_Chemistry_Jobs\DB\Program\EDMS.md
Printed: 9/3/2009 10:39:44 AM
[SITEID] = '13807296' AND ([MATRIX] = 'GS' OR [MATRIX] = 'AA

# TABLE 1
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-04 | SG-05 | SG-07 | SG-08 | SG-08 |
|---|---|---|---|---|---|---|
| Sample ID | | SG-04 | SG-05 | SG-07 | 072809-FD-1 | SG-08 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/28/09 | 07/28/09 | 07/28/09 | 07/28/09 | 07/28/09 |
| Parameter | Units | | | | Field Duplicate (1-1) | |
| **Volatile Organic Compounds** | | | | | | |
| 1,1,1-Trichloroethane | UG/M3 | 0.20 J | 0.20 J | 0.094 J | 0.13 J | 0.11 J |
| 1,1,2,2-Tetrachloroethane | UG/M3 | 0.57 U | 0.57 U | 0.53 U | 0.44 U | 0.53 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/M3 | 0.70 | 0.73 | 0.63 | 0.54 | 0.64 |
| 1,1,2-Trichloroethane | UG/M3 | 2.3 U | 2.3 U | 2.1 U | 1.8 U | 2.1 U |
| 1,1-Dichloroethane | UG/M3 | 1.7 U | 1.7 U | 1.6 U | 1.3 U | 1.6 U |
| 1,1-Dichloroethene | UG/M3 | 1.7 U | 1.7 U | 1.6 U | 1.3 U | 1.6 U |
| 1,2-Dibromoethane (Ethylene dibromide) | UG/M3 | 0.65 U | 0.65 U | 0.61 U | 0.50 U | 0.61 U |
| 1,2-Dichlorobenzene | UG/M3 | 5.0 U | 5.0 U | 4.7 U | 3.9 U | 4.7 U |
| 1,2-Dichloroethane | UG/M3 | 1.7 U | 1.7 U | 1.6 U | 1.3 U | 1.6 U |
| 1,2-Dichloroethene (cis) | UG/M3 | 1.7 U | 1.7 U | 1.6 U | 0.26 J | 1.6 U |
| 1,2-Dichloroethene (trans) | UG/M3 | 1.7 U | 1.7 U | 1.6 U | 1.3 U | 1.6 U |
| 1,2-Dichloropropane | UG/M3 | 1.9 U | 1.9 U | 1.8 U | 1.5 U | 1.8 U |
| 1,3-Dichlorobenzene | UG/M3 | 14 | 12 | 3.1 J | 3.9 U | 0.87 J |
| 1,3-Dichloropropene (cis) | UG/M3 | 3.8 U | 3.8 U | 3.6 U | 2.9 U | 3.6 U |
| 1,3-Dichloropropene (trans) | UG/M3 | 1.9 U | 1.9 U | 1.8 U | 1.5 U | 1.8 U |
| 1,4-Dichlorobenzene | UG/M3 | 0.20 J | 0.21 J | 4.7 U | 3.9 U | 4.7 U |
| 2-Hexanone | UG/M3 | 1.7 U | 1.3 J | 0.72 J | 1.3 U | 1.6 U |
| 4-Methyl-2-pentanone | UG/M3 | 2.7 J | 2.3 J | 3.5 | 1.6 J | 3.9 |
| Acetone | UG/M3 | 910 J | 1,100 J | 640 J | 240 J | 290 J |
| Benzene | UG/M3 | 25 | 53 | 19 | 11 | 13 |
| Bromodichloromethane | UG/M3 | 0.57 U | 0.57 U | 0.53 U | 0.44 U | 0.53 U |
| Bromoform | UG/M3 | 4.3 U | 4.3 U | 4.1 U | 3.3 U | 4.1 U |
| Bromomethane | UG/M3 | 1.6 U | 1.6 U | 1.5 U | 1.3 U | 1.5 U |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
PQL - Practical quantitation limit.

**Detection Limits shown are PQL**

# TABLE 1
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-04 | SG-05 | SG-07 | SG-08 | SG-08 |
|---|---|---|---|---|---|---|
| Sample ID | | SG-04 | SG-05 | SG-07 | 072809-FD-1 | SG-08 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/28/09 | 07/28/09 | 07/28/09 | 07/28/09 | 07/28/09 |
| Parameter | Units | | | | Field Duplicate (1-1) | |
| **Volatile Organic Compounds** | | | | | | |
| Carbon disulfide | UG/M3 | 29 | 35 | 32 | 9.0 | 10 |
| Carbon tetrachloride | UG/M3 | 0.41 | 0.49 | 0.36 | 0.33 | 0.47 |
| Chlorobenzene | UG/M3 | 0.36 J | 0.38 J | 1.8 U | 1.5 U | 1.8 U |
| Chloroethane | UG/M3 | 0.71 J | 0.69 J | 2.1 U | 1.7 U | 2.1 U |
| Chloroform | UG/M3 | 0.86 J | 5.3 | 0.93 J | 2.4 | 2.7 |
| Chloromethane | UG/M3 | 2.5 | 2.4 | 0.43 J | 1.3 | 1.5 J |
| Dibromochloromethane | UG/M3 | 0.72 U | 0.72 U | 0.68 U | 0.55 U | 0.68 U |
| Ethylbenzene | UG/M3 | 8.8 | 1.8 J | 3.8 | 0.14 J | 0.15 J |
| Methyl ethyl ketone (2-Butanone) | UG/M3 | 52 | 60 | 32 | 7.1 | 8.1 |
| Methyl tert-butyl ether | UG/M3 | 9.2 | 1.2 J | 11 | 6.5 | 8.0 |
| Methylene chloride | UG/M3 | 2.2 | 3.8 | 2.3 | 1.4 | 1.6 |
| Styrene | UG/M3 | 3.6 U | 3.6 U | 3.3 U | 2.7 U | 3.3 U |
| Tetrachloroethene | UG/M3 | 42 | 43 | 22 | 3.4 | 0.46 |
| Toluene | UG/M3 | 47 | 62 | 36 | 3.0 | 7.8 |
| Trichloroethene | UG/M3 | 0.78 | 1.3 | 0.63 | 0.77 | 0.23 |
| Trichlorofluoromethane | UG/M3 | 1.6 J | 1.5 J | 1.3 J | 1.3 J | 1.5 J |
| Vinyl acetate | UG/M3 | 19 U | 19 U | 18 U | 15 U | 18 U |
| Vinyl chloride | UG/M3 | 0.24 | 0.22 J | 0.080 J | 0.064 J | 0.21 U |
| Xylene (total) | UG/M3 | 59 | 6.8 J | 27 | 0.54 J | 0.67 J |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
PQL - Practical quantitation limit.

**Detection Limits shown are PQL**

# TABLE 1
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-09 | SG-09 | SG-10 | SG-11 | SG-12 |
|---|---|---|---|---|---|---|
| Sample ID | | 073009-FD-1 | SG-09 | SG-10 | SG-11 | SG-12 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/30/09 | 07/30/09 | 07/30/09 | 07/30/09 | 07/30/09 |
| Parameter | Units | Field Duplicate (1-1) | | | | |
| **Volatile Organic Compounds** | | | | | | |
| 1,1,1-Trichloroethane | UG/M3 | 0.46 J | 0.33 J | 0.13 J | 0.12 J | 0.12 J |
| 1,1,2,2-Tetrachloroethane | UG/M3 | 0.54 U | 0.61 U | 0.59 U | 0.55 U | 0.58 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/M3 | 0.73 | 0.72 | 0.79 | 0.87 | 0.76 |
| 1,1,2-Trichloroethane | UG/M3 | 2.2 U | 2.4 U | 2.4 U | 2.2 U | 2.3 U |
| 1,1-Dichloroethane | UG/M3 | 1.6 U | 1.8 U | 1.8 U | 1.6 U | 1.7 U |
| 1,1-Dichloroethene | UG/M3 | 1.6 U | 1.8 U | 1.7 U | 1.6 U | 1.7 U |
| 1,2-Dibromoethane (Ethylene dibromide) | UG/M3 | 0.61 U | 0.69 U | 0.67 U | 0.62 U | 0.65 U |
| 1,2-Dichlorobenzene | UG/M3 | 4.8 U | 5.4 U | 0.17 J | 4.8 U | 5.1 U |
| 1,2-Dichloroethane | UG/M3 | 1.6 U | 1.8 U | 1.8 U | 1.6 U | 1.7 U |
| 1,2-Dichloroethene (cis) | UG/M3 | 1.6 U | 1.8 U | 0.24 J | 1.6 U | 1.2 J |
| 1,2-Dichloroethene (trans) | UG/M3 | 1.6 U | 1.8 U | 1.7 U | 1.6 U | 1.7 U |
| 1,2-Dichloropropane | UG/M3 | 1.8 U | 2.1 U | 2.0 U | 1.9 U | 2.0 U |
| 1,3-Dichlorobenzene | UG/M3 | 13 | 10 | 8.5 | 5.1 | 6.8 |
| 1,3-Dichloropropene (cis) | UG/M3 | 3.6 U | 4.1 U | 3.9 U | 3.6 U | 3.8 U |
| 1,3-Dichloropropene (trans) | UG/M3 | 1.8 U | 2.0 U | 2.0 U | 1.8 U | 1.9 U |
| 1,4-Dichlorobenzene | UG/M3 | 0.20 J | 0.17 J | 0.20 J | 4.8 U | 0.15 J |
| 2-Hexanone | UG/M3 | 1.6 U | 1.8 U | 2.0 | 1.6 U | 1.7 U |
| 4-Methyl-2-pentanone | UG/M3 | 33 | 26 | 15 | 3.3 U | 3.5 U |
| Acetone | UG/M3 | 750 J | 730 J | 1,200 J | 940 J | 960 J |
| Benzene | UG/M3 | 9.7 | 6.7 | 28 | 29 | 19 |
| Bromodichloromethane | UG/M3 | 0.54 U | 0.61 U | 0.59 U | 0.55 U | 0.58 U |
| Bromoform | UG/M3 | 4.1 U | 4.7 U | 4.5 U | 4.1 U | 4.4 U |
| Bromomethane | UG/M3 | 1.5 U | 1.8 U | 1.7 U | 1.6 U | 1.7 U |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
PQL - Practical quantitation limit.

**Detection Limits shown are PQL**

# TABLE 1
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-09 | SG-09 | SG-10 | SG-11 | SG-12 |
|---|---|---|---|---|---|---|
| Sample ID | | 073009-FD-1 | SG-09 | SG-10 | SG-11 | SG-12 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/30/09 | 07/30/09 | 07/30/09 | 07/30/09 | 07/30/09 |
| Parameter | Units | Field Duplicate (1-1) | | | | |
| **Volatile Organic Compounds** | | | | | | |
| Carbon disulfide | UG/M3 | 10 | 8.2 | 23 | 53 | 97 |
| Carbon tetrachloride | UG/M3 | 0.49 | 0.30 | 0.23 J | 0.45 | 0.55 |
| Chlorobenzene | UG/M3 | 0.29 J | 0.28 J | 0.23 J | 0.21 J | 0.32 J |
| Chloroethane | UG/M3 | 0.81 J | 1.0 J | 0.43 J | 0.32 J | 0.46 J |
| Chloroform | UG/M3 | 0.77 J | 0.58 J | 0.42 J | 0.48 J | 0.53 J |
| Chloromethane | UG/M3 | 3.4 | 4.6 | 1.0 J | 1.2 J | 1.5 J |
| Dibromochloromethane | UG/M3 | 0.68 U | 0.78 U | 0.74 U | 0.69 U | 0.73 U |
| Ethylbenzene | UG/M3 | 0.54 J | 0.60 J | 5.2 | 0.68 J | 0.70 J |
| Methyl ethyl ketone (2-Butanone) | UG/M3 | 19 | 15 | 69 | 47 | 34 |
| Methyl tert-butyl ether | UG/M3 | 4.4 | 3.0 J | 6.7 | 6.6 | 3.4 |
| Methylene chloride | UG/M3 | 1.4 | 1.6 J | 1.4 J | 1.7 | 1.4 J |
| Styrene | UG/M3 | 0.24 J | 0.31 J | 3.7 U | 3.4 U | 3.6 U |
| Tetrachloroethene | UG/M3 | 1.7 | 1.5 | 58 | 21 | 14 |
| Toluene | UG/M3 | 19 | 16 | 82 | 41 | 26 |
| Trichloroethene | UG/M3 | 0.32 | 0.14 J | 0.90 | 0.83 | 1.8 |
| Trichlorofluoromethane | UG/M3 | 1.8 J | 1.8 J | 2.1 J | 2.2 J | 2.1 J |
| Vinyl acetate | UG/M3 | 18 U | 20 U | 20 U | 18 U | 19 U |
| Vinyl chloride | UG/M3 | 0.31 | 0.40 | 0.18 J | 0.18 J | 0.34 |
| Xylene (total) | UG/M3 | 2.5 J | 2.8 J | 30 | 2.3 J | 3.0 J |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
PQL - Practical quantitation limit.

**Detection Limits shown are PQL**

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[SITEID] = '13807296' AND ([MATRIX] = 'GS' OR [MATRIX] = 'AA

# TABLE 1
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-13 | SG-14 | SG-16 | SG-17 | SG-18 |
|---|---|---|---|---|---|---|
| Sample ID | | SG-13 | SG-14 | SG-16 | SG-17 | SG-18 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/30/09 | 07/29/09 | 07/29/09 | 07/29/09 | 07/29/09 |
| Parameter | Units | | | | | |
| **Volatile Organic Compounds** | | | | | | |
| 1,1,1-Trichloroethane | UG/M3 | 4.4 U | 0.12 J | 2.5 | 5.8 J | 2.1 U |
| 1,1,2,2-Tetrachloroethane | UG/M3 | 1.1 U | 0.50 U | 0.56 U | 2.3 U | 0.53 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/M3 | 0.93 J | 0.60 | 0.62 J | 0.82 J | 0.64 |
| 1,1,2-Trichloroethane | UG/M3 | 4.4 U | 2.0 U | 2.3 U | 9.2 U | 2.1 U |
| 1,1-Dichloroethane | UG/M3 | 3.3 U | 1.5 U | 1.7 U | 6.9 U | 1.6 U |
| 1,1-Dichloroethene | UG/M3 | 3.2 U | 1.5 U | 1.7 U | 6.8 U | 1.5 U |
| 1,2-Dibromoethane (Ethylene dibromide) | UG/M3 | 1.3 U | 0.56 U | 0.64 U | 2.6 U | 0.60 U |
| 1,2-Dichlorobenzene | UG/M3 | 9.7 U | 4.4 U | 5.0 U | 20 U | 4.6 U |
| 1,2-Dichloroethane | UG/M3 | 3.3 U | 1.5 U | 1.7 U | 6.9 U | 1.6 U |
| 1,2-Dichloroethene (cis) | UG/M3 | 0.35 J | 1.5 U | 1.7 U | 6.8 U | 1.5 U |
| 1,2-Dichloroethene (trans) | UG/M3 | 3.2 U | 1.5 U | 1.7 U | 6.8 U | 1.5 U |
| 1,2-Dichloropropane | UG/M3 | 3.8 U | 1.7 U | 1.9 U | 7.8 U | 1.8 U |
| 1,3-Dichlorobenzene | UG/M3 | 6.1 J | 0.60 J | 5.0 U | 20 U | 2.3 J |
| 1,3-Dichloropropene (cis) | UG/M3 | 7.4 U | 3.3 U | 3.8 U | 15 U | 3.5 U |
| 1,3-Dichloropropene (trans) | UG/M3 | 3.7 U | 1.7 U | 1.9 U | 7.7 U | 1.8 U |
| 1,4-Dichlorobenzene | UG/M3 | 9.7 U | 4.4 U | 5.0 U | 20 U | 4.6 U |
| 2-Hexanone | UG/M3 | 3.3 U | 1.5 U | 1.7 U | 6.9 U | 1.6 U |
| 4-Methyl-2-pentanone | UG/M3 | 36 | 1.9 J | 0.42 J | 2.0 J | 2.6 J |
| Acetone | UG/M3 | 1,300 J | 210 J | 31 | 93 | 650 J |
| Benzene | UG/M3 | 18 | 11 | 2.7 | 27 | 37 |
| Bromodichloromethane | UG/M3 | 1.1 U | 0.50 U | 0.56 U | 2.3 U | 0.53 U |
| Bromoform | UG/M3 | 8.4 U | 3.8 U | 4.3 U | 18 U | 4.0 U |
| Bromomethane | UG/M3 | 3.2 U | 1.4 U | 1.6 U | 6.6 U | 1.5 U |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
PQL - Practical quantitation limit.

**Detection Limits shown are PQL**

# TABLE 1
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-13 | SG-14 | SG-16 | SG-17 | SG-18 |
|---|---|---|---|---|---|---|
| Sample ID | | SG-13 | SG-14 | SG-16 | SG-17 | SG-18 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/30/09 | 07/29/09 | 07/29/09 | 07/29/09 | 07/29/09 |
| **Parameter** | **Units** | | | | | |
| **Volatile Organic Compounds** | | | | | | |
| Carbon disulfide | UG/M3 | 15 | 4.1 | 3.0 | 14 | 28 |
| Carbon tetrachloride | UG/M3 | 0.47 J | 0.51 | 0.30 | 0.45 J | 0.52 |
| Chlorobenzene | UG/M3 | 0.18 J | 1.7 U | 1.9 U | 7.8 U | 1.8 U |
| Chloroethane | UG/M3 | 0.76 J | 1.9 U | 2.2 U | 8.9 UJ | 2.0 U |
| Chloroform | UG/M3 | 0.33 J | 17 | 1.9 J | 0.69 J | 0.98 J |
| Chloromethane | UG/M3 | 3.2 J | 0.30 J | 1.7 U | 0.30 J | 0.31 J |
| Dibromochloromethane | UG/M3 | 1.4 U | 0.63 U | 0.71 U | 2.9 U | 0.67 U |
| Ethylbenzene | UG/M3 | 2.6 J | 9.2 | 0.42 J | 4.4 J | 7.5 |
| Methyl ethyl ketone (2-Butanone) | UG/M3 | 16 | 6.3 | 3.8 | 9.3 J | 22 |
| Methyl tert-butyl ether | UG/M3 | 3.7 J | 4.7 | 3.0 U | 5.6 J | 13 |
| Methylene chloride | UG/M3 | 1.4 J | 0.60 J | 1.4 U | 5.8 U | 1.9 |
| Styrene | UG/M3 | 6.9 U | 3.1 U | 3.5 U | 14 U | 3.3 U |
| Tetrachloroethene | UG/M3 | 17 | 36 | 9.2 | 34 | 45 |
| Toluene | UG/M3 | 30 | 45 | 8.6 | 45 | 69 |
| Trichloroethene | UG/M3 | 0.55 | 0.51 | 0.20 J | 0.48 J | 0.77 |
| Trichlorofluoromethane | UG/M3 | 2.4 J | 1.8 J | 1.0 J | 2.7 J | 5.1 |
| Vinyl acetate | UG/M3 | 37 U | 17 U | 19 U | 77 U | 18 U |
| Vinyl chloride | UG/M3 | 0.31 J | 0.28 | 0.23 U | 0.92 U | 0.21 U |
| Xylene (total) | UG/M3 | 18 | 57 | 2.4 J | 33 J | 49 |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported quantitation limit. UJ - Not detected. The reported quantitation limit is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
PQL - Practical quantitation limit.

**Detection Limits shown are PQL**

# TABLE 2
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | OUTDOOR AIR | OUTDOOR AIR | SG-01 | SG-02 | SG-03 |
|---|---|---|---|---|---|---|
| Sample ID | | 072809-AA-1 | 073009-AA-1 | SG-01 | SG-02 | SG-03 |
| Matrix | | Outdoor Air | Outdoor Air | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/28/09 | 07/30/09 | 07/28/09 | 07/28/09 | 07/28/09 |
| Parameter | Units | | | | | |
| **Volatile Organic Compounds** | | | | | | |
| 1,1,1-Trichloroethane | UG/M3 | 0.071 J | 0.066 J | 0.16 J | 0.071 U | 6.8 J |
| 1,1,2,2-Tetrachloroethane | UG/M3 | 0.051 U | 0.052 U | 0.10 U | 0.11 U | 0.42 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/M3 | 0.72 | 0.61 | 0.72 | 0.70 | 0.84 J |
| 1,1,2-Trichloroethane | UG/M3 | 0.066 U | 0.067 U | 0.13 U | 0.14 U | 0.54 U |
| 1,1-Dichloroethane | UG/M3 | 0.036 U | 0.037 U | 0.074 U | 0.077 U | 0.30 U |
| 1,1-Dichloroethene | UG/M3 | 0.029 U | 0.029 U | 0.059 U | 0.061 U | 0.24 U |
| 1,2-Dibromoethane (Ethylene dibromide) | UG/M3 | 0.056 U | 0.057 U | 0.11 U | 0.12 U | 0.46 U |
| 1,2-Dichlorobenzene | UG/M3 | 0.056 U | 0.058 U | 0.12 U | 0.12 U | 0.47 U |
| 1,2-Dichloroethane | UG/M3 | 0.051 J | 0.047 J | 0.069 U | 0.071 U | 0.28 U |
| 1,2-Dichloroethene (cis) | UG/M3 | 0.15 J | 0.061 J | 0.10 U | 0.10 U | 0.40 U |
| 1,2-Dichloroethene (trans) | UG/M3 | 0.029 U | 0.029 U | 0.058 U | 0.060 U | 0.24 U |
| 1,2-Dichloropropane | UG/M3 | 0.048 U | 0.049 U | 0.098 U | 0.10 U | 0.40 U |
| 1,3-Dichlorobenzene | UG/M3 | 0.040 U | 0.041 U | 21 | 15 | 9.8 J |
| 1,3-Dichloropropene (cis) | UG/M3 | 0.025 U | 0.026 U | 0.052 U | 0.054 U | 0.21 U |
| 1,3-Dichloropropene (trans) | UG/M3 | 0.039 U | 0.040 U | 0.079 U | 0.082 U | 0.32 U |
| 1,4-Dichlorobenzene | UG/M3 | 0.050 U | 0.051 U | 0.32 J | 0.25 J | 0.41 U |
| 2-Hexanone | UG/M3 | 0.037 U | 0.037 U | 4.2 | 1.8 | 0.30 U |
| 4-Methyl-2-pentanone | UG/M3 | 0.13 U | 0.095 J | 2.4 J | 6.5 | 1.6 J |
| Acetone | UG/M3 | 8.6 J | 6.0 J | 1,900 DJ | 990 J | 1,500 J |
| Benzene | UG/M3 | 0.43 J | 0.20 J | 69 | 43 | 7.7 |
| Bromodichloromethane | UG/M3 | 0.052 U | 0.053 U | 0.11 U | 0.11 U | 0.43 U |
| Bromoform | UG/M3 | 0.053 U | 0.054 U | 0.11 U | 0.11 U | 0.44 U |
| Bromomethane | UG/M3 | 0.042 U | 0.047 J | 0.086 U | 0.089 U | 0.35 U |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported MDL. UJ - Not detected. The reported MDL is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
MDL - Method detection limit.

**Detection Limits shown are MDL**

# TABLE 2
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | OUTDOOR AIR | OUTDOOR AIR | SG-01 | SG-02 | SG-03 |
|---|---|---|---|---|---|---|
| Sample ID | | 072809-AA-1 | 073009-AA-1 | SG-01 | SG-02 | SG-03 |
| Matrix | | Outdoor Air | Outdoor Air | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/28/09 | 07/30/09 | 07/28/09 | 07/28/09 | 07/28/09 |
| **Parameter** | **Units** | | | | | |
| **Volatile Organic Compounds** | | | | | | |
| Carbon disulfide | UG/M3 | 0.078 J | 0.050 J | 60 | 35 | 3.0 J |
| Carbon tetrachloride | UG/M3 | 0.69 | 0.47 | 0.55 | 0.75 | 0.38 U |
| Chlorobenzene | UG/M3 | 0.043 U | 0.044 U | 0.42 J | 0.36 J | 0.45 J |
| Chloroethane | UG/M3 | 0.054 U | 0.056 UJ | 0.71 J | 0.61 J | 0.66 J |
| Chloroform | UG/M3 | 0.091 J | 0.076 J | 0.78 J | 0.88 J | 0.54 J |
| Chloromethane | UG/M3 | 1.0 | 1.1 | 1.9 | 1.8 | 2.3 J |
| Dibromochloromethane | UG/M3 | 0.077 U | 0.078 U | 0.16 U | 0.16 U | 0.63 U |
| Ethylbenzene | UG/M3 | 0.13 J | 0.050 J | 12 | 14 | 0.84 J |
| Methyl ethyl ketone (2-Butanone) | UG/M3 | 1.0 J | 0.83 J | 93 | 100 | 70 |
| Methyl tert-butyl ether | UG/M3 | 0.011 U | 0.012 U | 8.6 | 14 | 0.093 U |
| Methylene chloride | UG/M3 | 0.25 U | 0.23 U | 5.5 | 3.5 | 0.95 U |
| Styrene | UG/M3 | 0.016 U | 0.016 U | 0.032 U | 0.033 U | 0.13 U |
| Tetrachloroethene | UG/M3 | 0.15 J | 0.058 U | 180 | 100 | 15 |
| Toluene | UG/M3 | 1.5 | 0.72 J | 160 D | 110 | 17 |
| Trichloroethene | UG/M3 | 0.055 J | 0.039 U | 2.7 | 1.7 | 2.9 |
| Trichlorofluoromethane | UG/M3 | 1.6 | 1.5 | 1.6 J | 1.5 J | 1.8 J |
| Vinyl acetate | UG/M3 | 0.017 U | 0.017 U | 0.035 U | 0.036 U | 0.14 U |
| Vinyl chloride | UG/M3 | 0.016 U | 0.016 U | 0.20 J | 0.25 | 0.27 J |
| Xylene (total) | UG/M3 | 0.49 J | 0.19 J | 49 | 83 | 3.4 J |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported MDL. UJ - Not detected. The reported MDL is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
MDL - Method detection limit.

**Detection Limits shown are MDL**

# TABLE 2
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-04 | SG-05 | SG-07 | SG-08 | SG-08 |
|---|---|---|---|---|---|---|
| Sample ID | | SG-04 | SG-05 | SG-07 | 072809-FD-1 | SG-08 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/28/09 | 07/28/09 | 07/28/09 | 07/28/09 | 07/28/09 |
| Parameter | Units | | | | Field Duplicate (1-1) | |
| **Volatile Organic Compounds** | | | | | | |
| 1,1,1-Trichloroethane | UG/M3 | 0.20 J | 0.20 J | 0.094 J | 0.13 J | 0.11 J |
| 1,1,2,2-Tetrachloroethane | UG/M3 | 0.11 U | 0.11 U | 0.099 U | 0.081 U | 0.099 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/M3 | 0.70 | 0.73 | 0.63 | 0.54 | 0.64 |
| 1,1,2-Trichloroethane | UG/M3 | 0.14 U | 0.14 U | 0.13 U | 0.11 U | 0.13 U |
| 1,1-Dichloroethane | UG/M3 | 0.076 U | 0.076 U | 0.071 U | 0.058 U | 0.071 U |
| 1,1-Dichloroethene | UG/M3 | 0.060 U | 0.060 U | 0.056 U | 0.046 U | 0.056 U |
| 1,2-Dibromoethane (Ethylene dibromide) | UG/M3 | 0.12 U | 0.12 U | 0.11 U | 0.090 U | 0.11 U |
| 1,2-Dichlorobenzene | UG/M3 | 0.12 U | 0.12 U | 0.11 U | 0.091 U | 0.11 U |
| 1,2-Dichloroethane | UG/M3 | 0.070 U | 0.070 U | 0.066 U | 0.054 U | 0.066 U |
| 1,2-Dichloroethene (cis) | UG/M3 | 0.10 U | 0.10 U | 0.096 U | 0.26 J | 0.096 U |
| 1,2-Dichloroethene (trans) | UG/M3 | 0.060 U | 0.060 U | 0.056 U | 0.046 U | 0.056 U |
| 1,2-Dichloropropane | UG/M3 | 0.10 U | 0.10 U | 0.094 U | 0.077 U | 0.094 U |
| 1,3-Dichlorobenzene | UG/M3 | 14 | 12 | 3.1 J | 0.064 U | 0.87 J |
| 1,3-Dichloropropene (cis) | UG/M3 | 0.053 U | 0.053 U | 0.050 U | 0.041 U | 0.050 U |
| 1,3-Dichloropropene (trans) | UG/M3 | 0.081 U | 0.081 U | 0.076 U | 0.062 U | 0.076 U |
| 1,4-Dichlorobenzene | UG/M3 | 0.20 J | 0.21 J | 0.097 U | 0.080 U | 0.097 U |
| 2-Hexanone | UG/M3 | 0.076 U | 1.3 J | 0.72 J | 0.059 U | 0.072 U |
| 4-Methyl-2-pentanone | UG/M3 | 2.7 J | 2.3 J | 3.5 | 1.6 J | 3.9 |
| Acetone | UG/M3 | 910 J | 1,100 J | 640 J | 240 J | 290 J |
| Benzene | UG/M3 | 25 | 53 | 19 | 11 | 13 |
| Bromodichloromethane | UG/M3 | 0.11 U | 0.11 U | 0.10 U | 0.084 U | 0.10 U |
| Bromoform | UG/M3 | 0.11 U | 0.11 U | 0.10 U | 0.085 U | 0.10 U |
| Bromomethane | UG/M3 | 0.088 U | 0.088 U | 0.083 U | 0.068 U | 0.083 U |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported MDL. UJ - Not detected. The reported MDL is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
MDL - Method detection limit.

**Detection Limits shown are MDL**

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[SITEID] = '13807296' AND ([MATRIX] = 'GS' OR [MATRIX] = 'AA

# TABLE 2
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-04 | SG-05 | SG-07 | SG-08 | SG-08 |
|---|---|---|---|---|---|---|
| Sample ID | | SG-04 | SG-05 | SG-07 | 072809-FD-1 | SG-08 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/28/09 | 07/28/09 | 07/28/09 | 07/28/09 | 07/28/09 |
| Parameter | Units | | | | Field Duplicate (1-1) | |
| **Volatile Organic Compounds** | | | | | | |
| Carbon disulfide | UG/M3 | 29 | 35 | 32 | 9.0 | 10 |
| Carbon tetrachloride | UG/M3 | 0.41 | 0.49 | 0.36 | 0.33 | 0.47 |
| Chlorobenzene | UG/M3 | 0.36 J | 0.38 J | 0.084 U | 0.069 U | 0.084 U |
| Chloroethane | UG/M3 | 0.71 J | 0.69 J | 0.11 U | 0.087 U | 0.11 U |
| Chloroform | UG/M3 | 0.86 J | 5.3 | 0.93 J | 2.4 | 2.7 |
| Chloromethane | UG/M3 | 2.5 | 2.4 | 0.43 J | 1.3 | 1.5 J |
| Dibromochloromethane | UG/M3 | 0.16 U | 0.16 U | 0.15 U | 0.12 U | 0.15 U |
| Ethylbenzene | UG/M3 | 8.8 | 1.8 J | 3.8 | 0.14 J | 0.15 J |
| Methyl ethyl ketone (2-Butanone) | UG/M3 | 52 | 60 | 32 | 7.1 | 8.1 |
| Methyl tert-butyl ether | UG/M3 | 9.2 | 1.2 J | 11 | 6.5 | 8.0 |
| Methylene chloride | UG/M3 | 2.2 | 3.8 | 2.3 | 1.4 | 1.6 |
| Styrene | UG/M3 | 0.033 U | 0.033 U | 0.031 U | 0.025 U | 0.031 U |
| Tetrachloroethene | UG/M3 | 42 | 43 | 22 | 3.4 | 0.46 |
| Toluene | UG/M3 | 47 | 62 | 36 | 3.0 | 7.8 |
| Trichloroethene | UG/M3 | 0.78 | 1.3 | 0.63 | 0.77 | 0.23 |
| Trichlorofluoromethane | UG/M3 | 1.6 J | 1.5 J | 1.3 J | 1.3 J | 1.5 J |
| Vinyl acetate | UG/M3 | 0.035 U | 0.035 U | 0.033 U | 0.027 U | 0.033 U |
| Vinyl chloride | UG/M3 | 0.24 | 0.22 J | 0.080 J | 0.064 J | 0.031 U |
| Xylene (total) | UG/M3 | 59 | 6.8 J | 27 | 0.54 J | 0.67 J |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported MDL. UJ - Not detected. The reported MDL is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
MDL - Method detection limit.

**Detection Limits shown are MDL**

# TABLE 2
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-09 | SG-09 | SG-10 | SG-11 | SG-12 |
|---|---|---|---|---|---|---|
| Sample ID | | 073009-FD-1 | SG-09 | SG-10 | SG-11 | SG-12 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/30/09 | 07/30/09 | 07/30/09 | 07/30/09 | 07/30/09 |
| Parameter | Units | Field Duplicate (1-1) | | | | |
| **Volatile Organic Compounds** | | | | | | |
| 1,1,1-Trichloroethane | UG/M3 | 0.46 J | 0.33 J | 0.13 J | 0.12 J | 0.12 J |
| 1,1,2,2-Tetrachloroethane | UG/M3 | 0.10 U | 0.11 U | 0.11 U | 0.10 U | 0.11 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/M3 | 0.73 | 0.72 | 0.79 | 0.87 | 0.76 |
| 1,1,2-Trichloroethane | UG/M3 | 0.13 U | 0.15 U | 0.14 U | 0.13 U | 0.14 U |
| 1,1-Dichloroethane | UG/M3 | 0.072 U | 0.082 U | 0.078 U | 0.073 U | 0.077 U |
| 1,1-Dichloroethene | UG/M3 | 0.057 U | 0.064 U | 0.062 U | 0.058 U | 0.061 U |
| 1,2-Dibromoethane (Ethylene dibromide) | UG/M3 | 0.11 U | 0.13 U | 0.12 U | 0.11 U | 0.12 U |
| 1,2-Dichlorobenzene | UG/M3 | 0.11 U | 0.13 U | 0.17 J | 0.11 U | 0.12 U |
| 1,2-Dichloroethane | UG/M3 | 0.067 U | 0.075 U | 0.073 U | 0.067 U | 0.071 U |
| 1,2-Dichloroethene (cis) | UG/M3 | 0.097 U | 0.11 U | 0.24 J | 0.098 U | 1.2 J |
| 1,2-Dichloroethene (trans) | UG/M3 | 0.057 U | 0.064 U | 0.062 U | 0.057 U | 0.060 U |
| 1,2-Dichloropropane | UG/M3 | 0.095 U | 0.11 U | 0.10 U | 0.096 U | 0.10 U |
| 1,3-Dichlorobenzene | UG/M3 | 13 | 10 | 8.5 | 5.1 | 6.8 |
| 1,3-Dichloropropene (cis) | UG/M3 | 0.050 U | 0.057 U | 0.055 U | 0.051 U | 0.054 U |
| 1,3-Dichloropropene (trans) | UG/M3 | 0.077 U | 0.087 U | 0.083 U | 0.078 U | 0.082 U |
| 1,4-Dichlorobenzene | UG/M3 | 0.20 J | 0.17 J | 0.20 J | 0.099 U | 0.15 J |
| 2-Hexanone | UG/M3 | 0.072 U | 0.082 U | 2.0 | 0.073 U | 0.077 U |
| 4-Methyl-2-pentanone | UG/M3 | 33 | 26 | 15 | 0.061 U | 0.064 U |
| Acetone | UG/M3 | 750 J | 730 J | 1,200 J | 940 J | 960 J |
| Benzene | UG/M3 | 9.7 | 6.7 | 28 | 29 | 19 |
| Bromodichloromethane | UG/M3 | 0.10 U | 0.12 U | 0.11 U | 0.10 U | 0.11 U |
| Bromoform | UG/M3 | 0.10 U | 0.12 U | 0.11 U | 0.11 U | 0.11 U |
| Bromomethane | UG/M3 | 0.084 U | 0.095 U | 0.091 U | 0.084 U | 0.089 U |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported MDL. UJ - Not detected. The reported MDL is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
MDL - Method detection limit.

**Detection Limits shown are MDL**

# TABLE 2
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-09 | SG-09 | SG-10 | SG-11 | SG-12 |
|---|---|---|---|---|---|---|
| Sample ID | | 073009-FD-1 | SG-09 | SG-10 | SG-11 | SG-12 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/30/09 | 07/30/09 | 07/30/09 | 07/30/09 | 07/30/09 |
| Parameter | Units | Field Duplicate (1-1) | | | | |
| **Volatile Organic Compounds** | | | | | | |
| Carbon disulfide | UG/M3 | 10 | 8.2 | 23 | 53 | 97 |
| Carbon tetrachloride | UG/M3 | 0.49 | 0.30 | 0.23 J | 0.45 | 0.55 |
| Chlorobenzene | UG/M3 | 0.29 J | 0.28 J | 0.23 J | 0.21 J | 0.32 J |
| Chloroethane | UG/M3 | 0.81 J | 1.0 J | 0.43 J | 0.32 J | 0.46 J |
| Chloroform | UG/M3 | 0.77 J | 0.58 J | 0.42 J | 0.48 J | 0.53 J |
| Chloromethane | UG/M3 | 3.4 | 4.6 | 1.0 J | 1.2 J | 1.5 J |
| Dibromochloromethane | UG/M3 | 0.15 U | 0.17 U | 0.17 U | 0.15 U | 0.16 U |
| Ethylbenzene | UG/M3 | 0.54 J | 0.60 J | 5.2 | 0.68 J | 0.70 J |
| Methyl ethyl ketone (2-Butanone) | UG/M3 | 19 | 15 | 69 | 47 | 34 |
| Methyl tert-butyl ether | UG/M3 | 4.4 | 3.0 J | 6.7 | 6.6 | 3.4 |
| Methylene chloride | UG/M3 | 1.4 | 1.6 J | 1.4 J | 1.7 | 1.4 J |
| Styrene | UG/M3 | 0.24 J | 0.31 J | 0.034 U | 0.032 U | 0.033 U |
| Tetrachloroethene | UG/M3 | 1.7 | 1.5 | 58 | 21 | 14 |
| Toluene | UG/M3 | 19 | 16 | 82 | 41 | 26 |
| Trichloroethene | UG/M3 | 0.32 | 0.14 J | 0.90 | 0.83 | 1.8 |
| Trichlorofluoromethane | UG/M3 | 1.8 J | 1.8 J | 2.1 J | 2.2 J | 2.1 J |
| Vinyl acetate | UG/M3 | 0.033 U | 0.038 U | 0.036 U | 0.034 U | 0.036 U |
| Vinyl chloride | UG/M3 | 0.31 | 0.40 | 0.18 J | 0.18 J | 0.34 |
| Xylene (total) | UG/M3 | 2.5 J | 2.8 J | 30 | 2.3 J | 3.0 J |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported MDL. UJ - Not detected. The reported MDL is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
MDL - Method detection limit.

**Detection Limits shown are MDL**

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[SITEID] = '13807296' AND ([MATRIX] = 'GS' OR [MATRIX] = 'AA

# TABLE 2
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-13 | SG-14 | SG-16 | SG-17 | SG-18 |
|---|---|---|---|---|---|---|
| Sample ID | | SG-13 | SG-14 | SG-16 | SG-17 | SG-18 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/30/09 | 07/29/09 | 07/29/09 | 07/29/09 | 07/29/09 |
| Parameter | Units | | | | | |
| **Volatile Organic Compounds** | | | | | | |
| 1,1,1-Trichloroethane | UG/M3 | 0.14 U | 0.12 J | 2.5 | 5.8 J | 0.064 U |
| 1,1,2,2-Tetrachloroethane | UG/M3 | 0.20 U | 0.092 U | 0.10 U | 0.43 U | 0.097 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/M3 | 0.93 J | 0.60 | 0.62 J | 0.82 J | 0.64 |
| 1,1,2-Trichloroethane | UG/M3 | 0.27 U | 0.12 U | 0.14 U | 0.56 U | 0.13 U |
| 1,1-Dichloroethane | UG/M3 | 0.15 U | 0.066 U | 0.075 U | 0.31 U | 0.070 U |
| 1,1-Dichloroethene | UG/M3 | 0.12 U | 0.052 U | 0.059 U | 0.24 U | 0.055 U |
| 1,2-Dibromoethane (Ethylene dibromide) | UG/M3 | 0.23 U | 0.10 U | 0.12 U | 0.47 U | 0.11 U |
| 1,2-Dichlorobenzene | UG/M3 | 0.23 U | 0.10 U | 0.12 U | 0.48 U | 0.11 U |
| 1,2-Dichloroethane | UG/M3 | 0.14 U | 0.061 U | 0.070 U | 0.28 U | 0.065 U |
| 1,2-Dichloroethene (cis) | UG/M3 | 0.35 J | 0.089 U | 0.10 U | 0.41 U | 0.094 U |
| 1,2-Dichloroethene (trans) | UG/M3 | 0.12 U | 0.052 U | 0.059 U | 0.24 U | 0.055 U |
| 1,2-Dichloropropane | UG/M3 | 0.19 U | 0.087 U | 0.099 U | 0.41 U | 0.092 U |
| 1,3-Dichlorobenzene | UG/M3 | 6.1 J | 0.60 J | 0.082 U | 0.34 U | 2.3 J |
| 1,3-Dichloropropene (cis) | UG/M3 | 0.10 U | 0.046 U | 0.053 U | 0.22 U | 0.049 U |
| 1,3-Dichloropropene (trans) | UG/M3 | 0.16 U | 0.070 U | 0.080 U | 0.33 U | 0.075 U |
| 1,4-Dichlorobenzene | UG/M3 | 0.20 U | 0.090 U | 0.10 U | 0.42 U | 0.096 U |
| 2-Hexanone | UG/M3 | 0.15 U | 0.066 U | 0.076 U | 0.31 U | 0.070 U |
| 4-Methyl-2-pentanone | UG/M3 | 36 | 1.9 J | 0.42 J | 2.0 J | 2.6 J |
| Acetone | UG/M3 | 1,300 J | 210 J | 31 | 93 | 650 J |
| Benzene | UG/M3 | 18 | 11 | 2.7 | 27 | 37 |
| Bromodichloromethane | UG/M3 | 0.21 U | 0.094 U | 0.11 U | 0.44 U | 0.10 U |
| Bromoform | UG/M3 | 0.21 U | 0.096 U | 0.11 U | 0.45 U | 0.10 U |
| Bromomethane | UG/M3 | 0.17 U | 0.077 U | 0.087 U | 0.36 U | 0.081 U |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported MDL. UJ - Not detected. The reported MDL is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
MDL - Method detection limit.

**Detection Limits shown are MDL**

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[SITEID] = '13807296' AND ([MATRIX] = 'GS' OR [MATRIX] = 'AA

# TABLE 2
# VALIDATED OUTDOOR AIR AND SOIL VAPOR SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | SG-13 | SG-14 | SG-16 | SG-17 | SG-18 |
|---|---|---|---|---|---|---|
| Sample ID | | SG-13 | SG-14 | SG-16 | SG-17 | SG-18 |
| Matrix | | Soil Gas | Soil Gas | Soil Gas | Soil Gas | Soil Gas |
| Depth Interval (ft) | | - | - | - | - | - |
| Date Sampled | | 07/30/09 | 07/29/09 | 07/29/09 | 07/29/09 | 07/29/09 |
| **Parameter** | **Units** | | | | | |
| **Volatile Organic Compounds** | | | | | | |
| Carbon disulfide | UG/M3 | 15 | 4.1 | 3.0 | 14 | 28 |
| Carbon tetrachloride | UG/M3 | 0.47 J | 0.51 | 0.30 | 0.45 J | 0.52 |
| Chlorobenzene | UG/M3 | 0.18 J | 0.078 U | 0.089 U | 0.36 U | 0.083 U |
| Chloroethane | UG/M3 | 0.76 J | 0.099 U | 0.11 U | 0.46 UJ | 0.10 U |
| Chloroform | UG/M3 | 0.33 J | 17 | 1.9 J | 0.69 J | 0.98 J |
| Chloromethane | UG/M3 | 3.2 J | 0.30 J | 0.049 U | 0.30 J | 0.31 J |
| Dibromochloromethane | UG/M3 | 0.31 U | 0.14 U | 0.16 U | 0.65 U | 0.15 U |
| Ethylbenzene | UG/M3 | 2.6 J | 9.2 | 0.42 J | 4.4 J | 7.5 |
| Methyl ethyl ketone (2-Butanone) | UG/M3 | 16 | 6.3 | 3.8 | 9.3 J | 22 |
| Methyl tert-butyl ether | UG/M3 | 3.7 J | 4.7 | 0.023 U | 5.6 J | 13 |
| Methylene chloride | UG/M3 | 1.4 J | 0.60 J | 0.27 U | 1.2 U | 1.9 |
| Styrene | UG/M3 | 0.064 U | 0.029 U | 0.033 U | 0.13 U | 0.030 U |
| Tetrachloroethene | UG/M3 | 17 | 36 | 9.2 | 34 | 45 |
| Toluene | UG/M3 | 30 | 45 | 8.6 | 45 | 69 |
| Trichloroethene | UG/M3 | 0.55 | 0.51 | 0.20 J | 0.48 J | 0.77 |
| Trichlorofluoromethane | UG/M3 | 2.4 J | 1.8 J | 1.0 J | 2.7 J | 5.1 |
| Vinyl acetate | UG/M3 | 0.068 U | 0.031 U | 0.035 U | 0.14 U | 0.033 U |
| Vinyl chloride | UG/M3 | 0.31 J | 0.28 | 0.032 U | 0.13 U | 0.030 U |
| Xylene (total) | UG/M3 | 18 | 57 | 2.4 J | 33 J | 49 |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. D - Result reported from a secondary dilution analysis.
U - Not detected above the reported MDL. UJ - Not detected. The reported MDL is an estimated value.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009
MDL - Method detection limit.

**Detection Limits shown are MDL**

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[SITEID] = '13807296' AND ([MATRIX] = 'GS' OR [MATRIX] = 'AA

**MEMORANDUM**

**TO:** Mike Gutmann

**FROM:** George Kisluk

**DATE:** September 3, 2009

**SUBJECT:** **Groundwater Analytical Results**
**Former Griffin Technology Facility**

Nine groundwater samples, one field duplicate and one matrix spike/matrix spike duplicate (MS/MSD) pair were collected from the Former Griffin Technology Facility site on August 3, 2009 and delivered to Columbia Analytical Services, Inc., (CAS) located in Rochester, NY for analysis. A trip blank accompanied the samples. The samples were received by the laboratory on August 3, 2009 intact, properly preserved and under proper chain-of-custody except as follows: Sample MW-9S was mislabeled as MW-9D and sample collection times were not recorded on the vials. However, sufficient field documentation was available for the laboratory to distinguish sample MW-9S from the sample actually collected at location MW-9D, and the mislabeling did not have any adverse affect on the sample data.

The samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260B. The analytical method referenced is from Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, SW-846, Final Update III, USEPA, June 1997.

The following USEPA Region II standard operating procedure (SOP) was used to evaluate and, when required, qualify the data:

- Validating Volatile Organic Compounds by SW-846 Method 8260B, HW-24, Revision 2, October 2006.

A limited data review was performed for completeness of deliverables, and for compliance with method and validation SOP criteria, which includes quantitation limits, holding times, method blanks, trip blanks, surrogate recoveries, internal standard recoveries, MS/MSD recoveries, laboratory control sample (LCS) recoveries, and calibration criteria. Only method and validation SOP non-conformances are discussed in this report.

The validated analytical results are provided in Tables 1 and 2. Definitions of USEPA Region II data qualifiers are presented at the end of this memorandum.

## VOCs

Acetone was detected in the trip blank associated with the samples. The results for acetone were qualified non-detect at the quantitation limit in all groundwater samples in which it was detected because the concentration of acetone in each sample was below the quantitation limit.

No other data qualifications were made and all other data are usable as reported.

## Field Duplicate Results

Sample 080309-FD-1 is a field duplicate of MW-7S. There was good agreement between the detected compounds in the sample and field duplicate, as shown in the Table 3. USEPA Region II validation guidelines do not provide any criteria for RPDs, nor are there any recommendations for the qualification of data based on field duplicate results.

cc: File: 13807296.00000

**TABLE 3**
**FIELD DUPLICATE COMPARISON**
**FORMER GRIFFIN TECHNOLOGY FACILITY SITE**

| **Detected Compound** | **MW-7S** (µg/L) | **080309-FD-1** (µg/L) | **RPD** (%) |
|---|---|---|---|
| 1,1,1-Trichloroethane | 1.4 | 1.4 | 0 |
| Trichloroethene | 76 | 77 | 1 |
| cis-1,2-Dichloroethene | 2.3 | 2.3 | 0 |

RPD – relative percent difference.

µg/L – micrograms per liter.

## DEFINITION OF USEPA REGION II DATA QUALIFIERS

The following are definitions of the qualifiers assigned to results during the data review process.

**U** - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

**J** - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

# TABLE 1
# VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | | MW-06D | MW-06S | MW-07D | MW-07S | MW-07S |
|---|---|---|---|---|---|---|---|
| Sample ID | | | MW-6D | MW-6S | MW-7D | 080309-FD-1 | MW-7S |
| Matrix | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Depth Interval (ft) | | | - | - | - | - | - |
| Date Sampled | | | 08/03/09 | 08/03/09 | 08/03/09 | 08/03/09 | 08/03/09 |
| **Parameter** | **Units** | **Criteria*** | | | | Field Duplicate (1-1) | |
| **Volatile Organic Compounds** | | | | | | | |
| 1,1,1-Trichloroethane | UG/L | 5 | 1.9 J | 1.0 J | 5.0 U | 1.4 J | 1.4 J |
| 1,1,2,2-Tetrachloroethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2-Trichloroethane | UG/L | 1 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,4-Trichlorobenzene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromo-3-chloropropane | UG/L | 0.04 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromoethane (Ethylene dibromide) | UG/L | 0.006 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichlorobenzene | UG/L | 3 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloroethane | UG/L | 0.6 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloroethene (cis) | UG/L | 5 | 0.62 J | 5.0 U | 24 | 2.3 J | 2.3 J |
| 1,2-Dichloroethene (trans) | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloropropane | UG/L | 1 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,3-Dichlorobenzene | UG/L | 3 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,3-Dichloropropene (cis) | UG/L | 0.4 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,3-Dichloropropene (trans) | UG/L | 0.4 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dichlorobenzene | UG/L | 3 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 2-Hexanone | UG/L | 50 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-pentanone | UG/L | - | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetone | UG/L | 50 | 20 U | 20 U | 20 U | 20 U | 20 U |
| Benzene | UG/L | 1 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromodichloromethane | UG/L | 50 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromoform | UG/L | 50 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No criteria or guidance value.

J - The reported concentration is an estimated value. U - Not detected above the reported quantitation limit.

Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009

**Detection Limits shown are PQL**

# TABLE 1
# VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | | MW-06D | MW-06S | MW-07D | MW-07S | MW-07S |
|---|---|---|---|---|---|---|---|
| Sample ID | | | MW-6D | MW-6S | MW-7D | 080309-FD-1 | MW-7S |
| Matrix | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Depth Interval (ft) | | | - | - | - | - | - |
| Date Sampled | | | 08/03/09 | 08/03/09 | 08/03/09 | 08/03/09 | 08/03/09 |
| **Parameter** | **Units** | **Criteria*** | | | | Field Duplicate (1-1) | |
| **Volatile Organic Compounds** | | | | | | | |
| Bromomethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Carbon disulfide | UG/L | 60 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbon tetrachloride | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chlorobenzene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroform | UG/L | 7 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloromethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Cyclohexane | UG/L | - | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibromochloromethane | UG/L | 50 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Dichlorodifluoromethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Ethylbenzene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Isopropylbenzene (Cumene) | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl acetate | UG/L | - | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methyl ethyl ketone (2-Butanone) | UG/L | 50 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | UG/L | 10 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methylcyclohexane | UG/L | - | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene chloride | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Styrene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Tetrachloroethene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Toluene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Trichloroethene | UG/L | 5 | 46 | 26 | 74 | 77 | 76 |
| Trichlorofluoromethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Vinyl chloride | UG/L | 2 | 5.0 U | 5.0 U | 0.65 J | 5.0 U | 5.0 U |
| Xylene (total) | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No criteria or guidance value.

J - The reported concentration is an estimated value. U - Not detected above the reported quantitation limit.

Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009

**Detection Limits shown are PQL**

# TABLE 1
# VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | | MW-09D | MW-09S | MW-10D | MW-10S | MW-11D |
|---|---|---|---|---|---|---|---|
| Sample ID | | | MW-9D | MW-9S | MW-10D | MW-10S | MW-11D |
| Matrix | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Depth Interval (ft) | | | - | - | - | - | - |
| Date Sampled | | | 08/03/09 | 08/03/09 | 08/03/09 | 08/03/09 | 08/03/09 |
| **Parameter** | **Units** | **Criteria*** | | | | | |
| **Volatile Organic Compounds** | | | | | | | |
| 1,1,1-Trichloroethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2,2-Tetrachloroethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2-Trichloroethane | UG/L | 1 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,4-Trichlorobenzene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromo-3-chloropropane | UG/L | 0.04 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromoethane (Ethylene dibromide) | UG/L | 0.006 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichlorobenzene | UG/L | 3 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloroethane | UG/L | 0.6 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloroethene (cis) | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloroethene (trans) | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloropropane | UG/L | 1 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,3-Dichlorobenzene | UG/L | 3 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,3-Dichloropropene (cis) | UG/L | 0.4 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,3-Dichloropropene (trans) | UG/L | 0.4 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dichlorobenzene | UG/L | 3 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 2-Hexanone | UG/L | 50 | 10 U | 10 U | 10 U | 10 U | 10 U |
| 4-Methyl-2-pentanone | UG/L | - | 10 U | 10 U | 10 U | 10 U | 10 U |
| Acetone | UG/L | 50 | 20 U | 20 U | 20 U | 20 U | 20 U |
| Benzene | UG/L | 1 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromodichloromethane | UG/L | 50 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromoform | UG/L | 50 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

- - No criteria or guidance value.

J - The reported concentration is an estimated value. U - Not detected above the reported quantitation limit.

Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009

**Detection Limits shown are PQL**

# TABLE 1
# VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | | MW-09D | MW-09S | MW-10D | MW-10S | MW-11D |
|---|---|---|---|---|---|---|---|
| Sample ID | | | MW-9D | MW-9S | MW-10D | MW-10S | MW-11D |
| Matrix | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Depth Interval (ft) | | | - | - | - | - | - |
| Date Sampled | | | 08/03/09 | 08/03/09 | 08/03/09 | 08/03/09 | 08/03/09 |
| **Parameter** | **Units** | **Criteria*** | | | | | |
| **Volatile Organic Compounds** | | | | | | | |
| Bromomethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Carbon disulfide | UG/L | 60 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbon tetrachloride | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chlorobenzene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroform | UG/L | 7 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloromethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Cyclohexane | UG/L | - | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibromochloromethane | UG/L | 50 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Dichlorodifluoromethane | UG/L | 5 | 5.0 U | 5.0 U | 0.69 J | 5.0 U | 5.0 U |
| Ethylbenzene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Isopropylbenzene (Cumene) | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl acetate | UG/L | - | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methyl ethyl ketone (2-Butanone) | UG/L | 50 | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methyl tert-butyl ether | UG/L | 10 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methylcyclohexane | UG/L | - | 10 U | 10 U | 10 U | 10 U | 10 U |
| Methylene chloride | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Styrene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Tetrachloroethene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Toluene | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Trichloroethene | UG/L | 5 | 5.0 U | 5.0 U | 5.6 | 4.6 J | 5.0 U |
| Trichlorofluoromethane | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Vinyl chloride | UG/L | 2 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Xylene (total) | UG/L | 5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998, including January 1999 Errata Sheet, April 2000 and June 2004 Addenda. Class GA.

Flags assigned during chemistry validation are shown.

(oval) Concentration Exceeds Criteria

- - No criteria or guidance value.

J - The reported concentration is an estimated value. U - Not detected above the reported quantitation limit.

Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009

**Detection Limits shown are PQL**

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Printed: 9/3/2009 10:20:00 AM
[SITEID] = '13807296' AND [MATRIX] = 'WG

# TABLE 2
# VALIDATED FIELD QC SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | FIELDQC |
|---|---|---|
| Sample ID | | Trip Blank |
| Matrix | | Water Quality |
| Depth Interval (ft) | | - |
| Date Sampled | | 08/03/09 |
| **Parameter** | **Units** | Trip Blank (1-1) |
| **Volatile Organic Compounds** | | |
| 1,1,1-Trichloroethane | UG/L | 5.0 U |
| 1,1,2,2-Tetrachloroethane | UG/L | 5.0 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | UG/L | 5.0 U |
| 1,1,2-Trichloroethane | UG/L | 5.0 U |
| 1,1-Dichloroethane | UG/L | 5.0 U |
| 1,1-Dichloroethene | UG/L | 5.0 U |
| 1,2,4-Trichlorobenzene | UG/L | 5.0 U |
| 1,2-Dibromo-3-chloropropane | UG/L | 5.0 U |
| 1,2-Dibromoethane (Ethylene dibromide) | UG/L | 5.0 U |
| 1,2-Dichlorobenzene | UG/L | 5.0 U |
| 1,2-Dichloroethane | UG/L | 5.0 U |
| 1,2-Dichloroethene (cis) | UG/L | 5.0 U |
| 1,2-Dichloroethene (trans) | UG/L | 5.0 U |
| 1,2-Dichloropropane | UG/L | 5.0 U |
| 1,3-Dichlorobenzene | UG/L | 5.0 U |
| 1,3-Dichloropropene (cis) | UG/L | 5.0 U |
| 1,3-Dichloropropene (trans) | UG/L | 5.0 U |
| 1,4-Dichlorobenzene | UG/L | 5.0 U |
| 2-Hexanone | UG/L | 10 U |
| 4-Methyl-2-pentanone | UG/L | 10 U |
| Acetone | UG/L | 2.1 J |
| Benzene | UG/L | 5.0 U |
| Bromodichloromethane | UG/L | 5.0 U |
| Bromoform | UG/L | 5.0 U |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. U - Not detected above the reported quantitation limit.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009

**Detection Limits shown are PQL**

# TABLE 2
# VALIDATED FIELD QC SAMPLE ANALYTICAL RESULTS
# FORMER GRIFFIN TECHNOLOGY FACILITY SITE

| Location ID | | FIELDQC |
|---|---|---|
| Sample ID | | Trip Blank |
| Matrix | | Water Quality |
| Depth Interval (ft) | | - |
| Date Sampled | | 08/03/09 |
| **Parameter** | **Units** | Trip Blank (1-1) |
| **Volatile Organic Compounds** | | |
| Bromomethane | UG/L | 5.0 U |
| Carbon disulfide | UG/L | 10 U |
| Carbon tetrachloride | UG/L | 5.0 U |
| Chlorobenzene | UG/L | 5.0 U |
| Chloroethane | UG/L | 5.0 U |
| Chloroform | UG/L | 5.0 U |
| Chloromethane | UG/L | 5.0 U |
| Cyclohexane | UG/L | 10 U |
| Dibromochloromethane | UG/L | 5.0 U |
| Dichlorodifluoromethane | UG/L | 5.0 U |
| Ethylbenzene | UG/L | 5.0 U |
| Isopropylbenzene (Cumene) | UG/L | 5.0 U |
| Methyl acetate | UG/L | 10 U |
| Methyl ethyl ketone (2-Butanone) | UG/L | 10 U |
| Methyl tert-butyl ether | UG/L | 5.0 U |
| Methylcyclohexane | UG/L | 10 U |
| Methylene chloride | UG/L | 5.0 U |
| Styrene | UG/L | 5.0 U |
| Tetrachloroethene | UG/L | 5.0 U |
| Toluene | UG/L | 5.0 U |
| Trichloroethene | UG/L | 5.0 U |
| Trichlorofluoromethane | UG/L | 5.0 U |
| Vinyl chloride | UG/L | 5.0 U |
| Xylene (total) | UG/L | 5.0 U |

Flags assigned during chemistry validation are shown.

J - The reported concentration is an estimated value. U - Not detected above the reported quantitation limit.
Made By: GEK 08/27/2009 Checked By: JJL 09/03/2009

**Detection Limits shown are PQL**

# ATTACHMENT 6

# PURGE LOGS

# LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Former Griffin Technology Site: Griffin Well I.D.: MW-06S

Date: 8/3/09 Sampling Personnel: Scott McCabe Company: URS Corporation

Purging/ Sampling Device: Geopump 2 peristaltic pump Tubing Type: HDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Top of Riser Initial Depth to Water: 10.25 Depth to Well Bottom: 18.90 Well Diameter: 2" Screen Length:

Casing Type: PVC Volume in 1 Well Casing (liters): 5.3 Estimated Purge Volume (liters): 8.4

Sample ID: MW-06S Sample Time: 1322 QA/QC: none

Sample Paramaters: TCL VOCs

## PURGE PARAMETERS

| TIME | pH | TEMP (°C) | COND. (mS/cm) | DISS. $O_2$ (mg/l) | TURB. (NTU) | Eh (mV) | FLOW RATE (ml/min.) | DEPTH TO WATER (btor) |
|---|---|---|---|---|---|---|---|---|
| 1308 | 6.86 | 14.5 | 3.090 | 1.07 | 486 | 9 | 700 | 10.25 |
| 1310 | 6.90 | 13.9 | 3.010 | 0.19 | 266 | 13 | 700 | 10.31 |
| 1312 | 6.90 | 13.7 | 3.000 | 0.00 | 259 | 14 | 700 | 10.33 |
| 1314 | 6.90 | 13.7 | 3.000 | 0.00 | 222 | 17 | 700 | 10.39 |
| 1316 | 6.90 | 13.6 | 2.980 | 0.00 | 108 | 18 | 700 | 10.52 |
| 1318 | 6.93 | 13.7 | 2.900 | 0.00 | 20.1 | 20 | 700 | 10.78 |
| 1320 | 6.96 | 13.7 | 2.690 | 0.00 | 19.3 | 26 | 700 | 10.99 |
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| **Tolerance:** | **0.1** | **---** | **3%** | **10%** | **10%** | **+ or - 10** | **---** | |

**Information:** WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

# LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Former Griffin Technology Site: Griffin Well I.D.: MW-06D

Date: 8/3/09 Sampling Personnel: Scott McCabe Company: URS Corporation

Purging/ Sampling Device: Geopump 2 peristaltic pump Tubing Type: HDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Top of Riser Initial Depth to Water: 10.27 Depth to Well Bottom: 37.65 Well Diameter: 2" Screen Length:

Casing Type: PVC Volume in 1 Well Casing (liters): 16.9 Estimated Purge Volume (liters): 21

Sample ID: MW-06D Sample Time: 1357 QA/QC: none

Sample Paramaters: TCL VOCs

## PURGE PARAMETERS

| TIME | pH | TEMP (ºC) | COND. (mS/cm) | DISS. $O_2$ (mg/l) | TURB. (NTU) | Eh (mV) | FLOW RATE (ml/min.) | DEPTH TO WATER (btor) |
|---|---|---|---|---|---|---|---|---|
| 1326 | 6.86 | 13.5 | 2.420 | 0.00 | 343 | -31 | 700 | 10.27 |
| 1331 | 6.81 | 13.3 | 2.490 | 0.00 | 165 | -94 | 700 | 10.56 |
| 1336 | 6.82 | 13.3 | 2.480 | 0.00 | 163 | -67 | 700 | 10.81 |
| 1341 | 6.86 | 13.3 | 2.520 | 0.00 | 155 | -56 | 700 | 11.15 |
| 1346 | 6.86 | 13.2 | 2.420 | 0.00 | 21.4 | -41 | 700 | 11.63 |
| 1351 | 6.86 | 13.2 | 2.400 | 0.00 | 14.3 | -35 | 700 | 11.78 |
| 1356 | 6.89 | 13.4 | 2.390 | 0.00 | 19.0 | -26 | 700 | 11.95 |
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| **Tolerance:** | **0.1** | **---** | **3%** | **10%** | **10%** | **+ or - 10** | **---** | |

**Information:** WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

# LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Former Griffin Technology Site: Griffin Well I.D.: MW-07S

Date: 8/3/09 Sampling Personnel: Scott McCabe Company: URS Corporation

Purging/ Sampling Device: Geopump 2 peristaltic pump Tubing Type: HDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Top of Riser Initial Depth to Water: 10.54 Depth to Well Bottom: 25.72 Well Diameter: 2" Screen Length:

Casing Type: PVC Volume in 1 Well Casing (liters): 9.4 Estimated Purge Volume (liters): 12.6

Sample ID: MW-07S Sample Time: 935 QA/QC: 080309-FD-1

Sample Paramaters: TCL VOCs

## PURGE PARAMETERS

| TIME | pH | TEMP (°C) | COND. (mS/cm) | DISS. $O_2$ (mg/l) | TURB. (NTU) | Eh (mV) | FLOW RATE (ml/min.) | DEPTH TO WATER (btor) |
|---|---|---|---|---|---|---|---|---|
| 915 | 6.67 | 15.0 | 1.730 | 1.26 | 343 | 189 | 700 | 10.54 |
| 918 | 6.61 | 14.8 | 1.730 | 0.97 | 318 | 189 | 700 | 10.71 |
| 921 | 6.61 | 14.7 | 1.730 | 0.85 | 115 | 189 | 700 | 10.93 |
| 924 | 6.56 | 14.5 | 1.730 | 0.46 | 30.8 | 190 | 700 | 11.11 |
| 927 | 6.57 | 14.5 | 1.730 | 0.36 | 28.1 | 190 | 700 | 11.15 |
| 930 | 6.58 | 14.4 | 1.730 | 0.21 | 27.3 | 188 | 700 | 11.17 |
| 933 | 6.60 | 14.3 | 1.730 | 0.19 | 24.0 | 186 | 700 | 11.19 |
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| **Tolerance:** | **0.1** | **---** | **3%** | **10%** | **10%** | **+ or - 10** | **---** | |

**Information:** WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

# LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Former Griffin Technology Site: Griffin Well I.D.: MW-07D

Date: 8/3/09 Sampling Personnel: Scott McCabe Company: URS Corporation

Purging/ Sampling Device: Whale submersible pump Tubing Type: HDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Top of Riser Initial Depth to Water: 34.20 Depth to Well Bottom: 44.40 Well Diameter: 2" Screen Length:

Casing Type: PVC Volume in 1 Well Casing (liters): 6.3 Estimated Purge Volume (liters): 6.3

Sample ID: MW-07D Sample Time: 958 QA/QC: none

Sample Paramaters: TCL VOCs

## PURGE PARAMETERS

| TIME | pH | TEMP (ºC) | COND. (mS/cm) | DISS. $O_2$ (mg/l) | TURB. (NTU) | Eh (mV) | FLOW RATE (ml/min.) | DEPTH TO WATER (btor) |
|---|---|---|---|---|---|---|---|---|
| 950 | 6.85 | 16.5 | 2.010 | 1.91 | 506 | 74 | 900 | 34.20 |
| 951 | 6.81 | 15.0 | 2.120 | 0.49 | 348 | 20 | 900 | 37.10 |
| 952 | 6.80 | 14.7 | 2.150 | 0.25 | 142 | 23 | 900 | 38.24 |
| 953 | 6.79 | 14.7 | 2.170 | 0.31 | 220 | 25 | 900 | 38.71 |
| 954 | 6.79 | 14.7 | 2.170 | 0.35 | 183 | 25 | 900 | 38.82 |
| 955 | 6.79 | 14.7 | 2.180 | 0.37 | 199 | 25 | 900 | 38.53 |
| 956 | 6.79 | 14.8 | 2.180 | 0.36 | 176 | 24 | 900 | 38.42 |
| 957 | 6.79 | 14.9 | 2.160 | 0.33 | 94 | 27 | 900 | 38.71 |
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| **Tolerance:** | **0.1** | **---** | **3%** | **10%** | **10%** | **+ or - 10** | **---** | |

**Information:** WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

# LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Former Griffin Technology Site: Griffin Well I.D.: MW-09S

Date: 8/3/09 Sampling Personnel: Scott McCabe Company: URS Corporation

Purging/ Sampling Device: Geopump 2 peristaltic pump Tubing Type: HDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Top of Riser Initial Depth to Water: 12.12 Depth to Well Bottom: 26.65 Well Diameter: 2" Screen Length:

Casing Type: PVC Volume in 1 Well Casing (liters): 9.0 Estimated Purge Volume (liters): 9.8

Sample ID: MW-09S Sample Time: 1040 QA/QC: MS/MSD

Sample Paramaters: TCL VOCs

## PURGE PARAMETERS

| TIME | pH | TEMP (°C) | COND. (mS/cm) | DISS. $O_2$ (mg/l) | TURB. (NTU) | Eh (mV) | FLOW RATE (ml/min.) | DEPTH TO WATER (btor) |
|---|---|---|---|---|---|---|---|---|
| 1025 | 7.05 | 14.5 | 2.110 | 4.25 | 163 | 125 | 700 | 12.12 |
| 1027 | 7.01 | 14.5 | 2.150 | 3.22 | 87.1 | 121 | 700 | 12.31 |
| 1029 | 6.99 | 14.1 | 2.180 | 1.89 | 50.3 | 117 | 700 | 12.43 |
| 1031 | 6.96 | 13.8 | 2.300 | 1.44 | 29.7 | 110 | 700 | 12.45 |
| 1033 | 6.95 | 13.7 | 2.360 | 1.15 | 22.9 | 99 | 700 | 12.51 |
| 1035 | 6.96 | 13.6 | 2.360 | 1.03 | 21.1 | 92 | 700 | 12.55 |
| 1037 | 6.96 | 13.5 | 2.370 | 0.94 | 20.3 | 87 | 700 | 12.51 |
| 1039 | 6.96 | 13.5 | 2.390 | 0.87 | 20.9 | 76 | 700 | 12.57 |
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| **Tolerance:** | **0.1** | **---** | **3%** | **10%** | **10%** | **+ or - 10** | **---** | |

**Information:** WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

# LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Former Griffin Technology Site: Griffin Well I.D.: MW-09D

Date: 8/3/09 Sampling Personnel: Scott McCabe Company: URS Corporation

Purging/ Sampling Device: Whale submersible pump Tubing Type: HDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Top of Riser Initial Depth to Water: 33.00 Depth to Well Bottom: 43.71 Well Diameter: 2" Screen Length:

Casing Type: PVC Volume in 1 Well Casing (liters): 6.6 Estimated Purge Volume (liters): 8

Sample ID: MW-09D Sample Time: 1100 QA/QC: none

Sample Paramaters: TCL VOCs

## PURGE PARAMETERS

| TIME | pH | TEMP (ºC) | COND. (mS/cm) | DISS. $O_2$ (mg/l) | TURB. (NTU) | Eh (mV) | FLOW RATE (ml/min.) | DEPTH TO WATER (btor) |
|---|---|---|---|---|---|---|---|---|
| 1052 | 7.34 | 14.5 | 0.960 | 1.85 | 323 | -48 | 1000 | 33.00 |
| 1054 | 7.20 | 14.4 | 0.950 | 1.34 | 142 | -29 | 1000 | 35.10 |
| 1056 | 7.17 | 14.4 | 0.960 | 1.31 | 106 | -31 | 1000 | 35.65 |
| 1058 | 7.16 | 14.4 | 0.950 | 1.30 | 81 | -33 | 1000 | 36.12 |
| 1100 | 7.15 | 14.4 | 0.940 | 1.29 | 47 | -36 | 1000 | 36.66 |
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| **Tolerance:** | **0.1** | **---** | **3%** | **10%** | **10%** | **+ or - 10** | **---** | |

**Information:** WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

# LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Former Griffin Technology Site: Griffin Well I.D.: MW-10S

Date: 8/3/09 Sampling Personnel: Scott McCabe Company: URS Corporation

Purging/ Sampling Device: Geopump 2 peristaltic pump Tubing Type: HDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Top of Riser Initial Depth to Water: 15.86 Depth to Well Bottom: 22.85 Well Diameter: 2" Screen Length:

Casing Type: PVC Volume in 1 Well Casing (liters): 4.3 Estimated Purge Volume (liters): 7.2

Sample ID: MW-10S Sample Time: 1215 QA/QC: none

Sample Paramaters: TCL VOCs

## PURGE PARAMETERS

| TIME | pH | TEMP (°C) | COND. (mS/cm) | DISS. $O_2$ (mg/l) | TURB. (NTU) | Eh (mV) | FLOW RATE (ml/min.) | DEPTH TO WATER (btor) |
|---|---|---|---|---|---|---|---|---|
| 1200 | 7.20 | 14.5 | 1.340 | 2.03 | >1000 | -124 | 600 | 15.86 |
| 1202 | 7.18 | 14.4 | 1.340 | 0.67 | >1000 | -124 | 600 | 16.00 |
| 1204 | 7.16 | 14.4 | 1.350 | 0.22 | 996 | -123 | 600 | 16.23 |
| 1206 | 7.14 | 14.4 | 1.360 | 0.02 | 921 | -122 | 600 | 16.61 |
| 1208 | 7.13 | 14.4 | 1.380 | 0.00 | 914 | -121 | 600 | 16.80 |
| 1210 | 7.09 | 14.4 | 1.520 | 0.00 | 896 | -118 | 600 | 16.81 |
| 1212 | 7.08 | 14.4 | 1.550 | 0.00 | 741 | -116 | 600 | 16.92 |
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| **Tolerance:** | **0.1** | **---** | **3%** | **10%** | **10%** | **+ or - 10** | **---** | |

**Information:** WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

# LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Former Griffin Technology  Site: Griffin  Well I.D.: MW-10D

Date: 8/3/09  Sampling Personnel: Scott McCabe  Company: URS Corporation

Purging/ Sampling Device: Geopump 2 peristaltic pump  Tubing Type: HDPE  Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Top of Riser  Initial Depth to Water: 16.44  Depth to Well Bottom: 42.44  Well Diameter: 2"  Screen Length:

Casing Type: PVC  Volume in 1 Well Casing (liters): 16.0  Estimated Purge Volume (liters): 21

Sample ID: MW-10D  Sample Time: 1155  QA/QC: none

Sample Paramaters: TCL VOCs

## PURGE PARAMETERS

| TIME | pH | TEMP (ºC) | COND. (mS/cm) | DISS. $O_2$ (mg/l) | TURB. (NTU) | Eh (mV) | FLOW RATE (ml/min.) | DEPTH TO WATER (btor) |
|---|---|---|---|---|---|---|---|---|
| 1118 | 7.12 | 15.3 | 1.530 | 1.55 | 333 | 98 | 600 | 16.14 |
| 1123 | 7.02 | 14.8 | 1.490 | 1.06 | 169 | 92 | 600 | 21.11 |
| 1128 | 6.97 | 14.5 | 1.510 | 0.33 | 141 | 83 | 600 | 23.95 |
| 1133 | 6.97 | 14.5 | 1.510 | 0.26 | 131 | 80 | 600 | 24.10 |
| 1138 | 6.98 | 14.7 | 1.540 | 0.12 | 86 | 80 | 600 | 24.50 |
| 1143 | 7.00 | 14.7 | 1.580 | 0.00 | 76 | 76 | 600 | 24.54 |
| 1148 | 7.00 | 14.7 | 1.590 | 0.00 | 51 | 76 | 600 | 24.61 |
| 1153 | 7.01 | 14.7 | 1.620 | 0.00 | 34 | 75 | 600 | 24.63 |
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| **Tolerance:** | **0.1** | **---** | **3%** | **10%** | **10%** | **+ or - 10** | **---** | |

**Information:** WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

# LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: Former Griffin Technology Site: Griffin Well I.D.: MW-11D

Date: 8/3/09 Sampling Personnel: Scott McCabe Company: URS Corporation

Purging/ Sampling Device: Geopump 2 peristaltic pump Tubing Type: HDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Top of Riser Initial Depth to Water: 13.30 Depth to Well Bottom: 35.71 Well Diameter: 2" Screen Length:

Casing Type: PVC Volume in 1 Well Casing (liters): 13.8 Estimated Purge Volume (liters): 18

Sample ID: MW-11D Sample Time: 1447 QA/QC: none

Sample Paramaters: TCL VOCs

## PURGE PARAMETERS

| TIME | pH | TEMP (ºC) | COND. (mS/cm) | DISS. $O_2$ (mg/l) | TURB. (NTU) | Eh (mV) | FLOW RATE (ml/min.) | DEPTH TO WATER (btor) |
|---|---|---|---|---|---|---|---|---|
| 1415 | 6.89 | 13.8 | 2.110 | 0.00 | 256 | 71 | 600 | 13.30 |
| 1420 | 7.00 | 12.7 | 2.220 | 0.00 | 124 | 65 | 600 | 13.92 |
| 1425 | 6.97 | 12.6 | 2.230 | 0.00 | 65 | 61 | 600 | 13.92 |
| 1430 | 6.95 | 12.5 | 2.510 | 0.00 | 61 | 60 | 600 | 13.92 |
| 1435 | 6.92 | 12.3 | 2.750 | 0.00 | 60 | 60 | 600 | 13.92 |
| 1440 | 6.92 | 12.1 | 2.770 | 0.00 | 29 | 60 | 600 | 13.92 |
| 1445 | 6.91 | 12.2 | 2.790 | 0.00 | 11 | 58 | 600 | 13.92 |
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| **Tolerance:** | **0.1** | **---** | **3%** | **10%** | **10%** | **+ or - 10** | **---** | |

**Information:** WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)