

**New York State Department of  
Environmental Conservation**

**Site Number 7-09-009**

**Gladding Cordage Site Quarterly  
Report**

First Quarter 2012

September 2012



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**Gladding Cordage Site  
Quarterly Report**

**First Quarter 2012**

Site Number 7-09-009

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New York State Department of  
Environmental Conservation

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## **1. Introduction**

The New York State Department of Environmental Conservation (NYSDEC) has issued a Work Assignment (# D004443-5) to Malcolm Pirnie, Inc. (Malcolm Pirnie) for Operation, Maintenance, and Monitoring at the Gladding Cordage Site in New York State (Site # 7-09-009). Malcolm Pirnie has prepared this Quarterly Report in accordance with the NYSDEC-approved Work Plan to summarize site activities.

## **2. Site Description**

The Gladding Cordage Site is located on Ridge Road, South Otselic, Chenango County, New York (Figure 2-1), along the western bank of the Otselic River. The site contains an active braided wire and rope manufacturing facility that has been in operation since 1892.

### **3. Operation and Maintenance**

On August 23, 2007, NYSDEC provided a training session to Malcolm Pirnie personnel on the operation and maintenance (O&M) of the groundwater treatment plant at the Gladding Cordage Site. Since then, Malcolm Pirnie has maintained operation of the groundwater treatment plant. This includes the operation, maintenance, and influent/effluent sampling in accordance with the NYSDEC O&M manual (Operation and Maintenance Manual, Volume I, Gladding Cordage Site, Site 7-09-009, TAMS Consultants, Inc., 1996) (O&M Manual).

#### **3.1 Treatment Plant Upgrades**

##### **3.1.1 Variable Frequency Drive**

A variable frequency drive (VFD) was installed on January 9, 2008 to regulate the speed of the air stripper blower motor. Following the installation of the VFD, effluent samples were collected at various blower motor frequencies (speeds) including 40 HZ, 50 HZ, and 60 HZ. The analyte 1,1,1-trichloroethane (1,1,1-TCA) was detected at 6 µg/l in the 40 HZ effluent sample but was not detected in the 50 HZ and 60 HZ samples. Following the completion of the January 9, 2008 sampling event the VFD was set to 50 HZ. Additional sampling was conducted in February 2008 to optimize the treatment system blower speed. Based on the results, the VFD setting was reduced to 42 HZ beginning in March 2008. The VFD setting is evaluated on a monthly basis. The current VFD setting (46 HZ) has been maintained since September 2010.

##### **3.1.2 Treatment Plant Controls**

In August 2011, the NYSDEC authorized construction and installation of a new treatment plant controls system. The new control system is designed to provide remote access to treatment plant operating parameters and improve reliability of the groundwater remediation system. The treatment plant was shut down to begin repairs and upgrades on January 30, 2012 by Aztech Technologies, Inc. (Aztech). The upgrades to the treatment system controls were completed and the treatment plant resumed operation on March 22, 2012. A summary of the upgrades is provided below.

#### *3.1.2.1 Programmable Logic Controller*

The auto-dialer system was removed and replaced with an EOS Research Ltd. ProControl programmable logic controller (PLC) with ProView interface software. The interface software allows remote connection to the PLC via analog phone line. The PLC and interface software also allows the treatment system to be started or stopped remotely. The PLC is programmed to send a facsimile with the status of various system inputs and outputs on a daily basis. In addition, if input and/or output device signals exceed defined operating parameters, an alarm condition is set and the corresponding alarm information is sent via facsimile to the system user (i.e. Malcolm Pirnie).

#### *3.1.2.2 Electrical Components*

Various electrical components, including recovery well flow and pressure sensors, water level pressure transducers, and an indoor temperature sensors were installed or replaced during the treatment plant controls upgrade. The manufacturer's information for these components will be updated in the system O&M Manual.

#### *3.1.3 Air Stripper Blower Motor*

The air stripper blower motor assembly was removed for inspection on January 30, 2012 due to excessive noise detected during operation. The assembly was transported to Troy Motor Service (TMS) in Troy, New York for inspection. A copy of the TMS inspection information is provided in Appendix A. As shown in Appendix A, TMS determined that the cost of repairs required to fix the blower motor assembly were greater than the replacement cost of a new unit. Malcolm Pirnie solicited quotes for a replacement and received approval from NYSDEC to purchase a new unit from Chase Air Systems (Chase) on February 21, 2012. The new blower motor assembly was installed and tested on March 21, 2012.

#### *3.1.4 Geothermal Heat Exchanger*

The NYSDEC authorized the installation of a geothermal exchanger to provide climate control (heating and humidity) for the treatment system building. The heat-exchanger will use treated groundwater from the treatment plant as a geo-thermal energy source. The heat-exchanger is expected to provide a reduction in the energy required to heat the treatment plant building. The heat-pump is expected to be installed during the second quarter 2012.



### **3.2 Treatment Plant Operation**

As shown on the O&M Check Lists and System Operation Logs (Appendix B), and PLC facsimile reports from March 2012 (Appendix C), the Gladding Cordage groundwater treatment system operated without interruption in January 2012 until the system was shut down for repairs on January 31, 2012. As indicated in Section 3.1.2, the treatment plant resumed operation on March 22, 2012 with no interruptions reported through the end of the first quarter 2012 operating period.

The monthly estimated flow rates and total flow volumes for the first quarter 2012 operating period are summarized in Table 3-1. As shown in Table 3-1, the flow meters for RW-1 and RW-2 were inoperative prior to the treatment plant repairs. However, as indicated in Section 3.1.2.2, new recovery well flow meters were installed during the treatment plant upgrades. Therefore, the average flow rates for the first quarter 2012 are based on flow measurements reported by the PLC during the March 27, 2012 system inspection. As shown in Table 3-1, the flow measurements reported by the PLC from RW-1 and RW-2 were 22.7 gpm and 18.0 gpm, respectively. Based on the estimated total flow values, approximately 2.3 million gallons of water were treated between January and March, 2012.

#### **3.2.1 Treatment System Sampling**

Influent and effluent groundwater samples were collected from the Gladding Cordage treatment system in accordance with the Work Plan and submitted to Chemtech Laboratories following chain-of-custody protocols for analysis of target compound list (TCL) volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260B. Analytical Reporting Forms are provided in Appendix D. As indicated in Section 3.1.2, the treatment plant was shut down for repairs between January 30 and March 22, 2012. Therefore, no samples were collected from the treatment plant in February 2012.

##### **3.2.1.1 Influent Sample Results**

Table 3-2 and Table 3-3 summarize the VOC influent and effluent sample results, respectively. Figure 3-1 provides a summary of 1,1,1-TCA concentrations in samples from recovery wells RW-1 and RW-2 since September 2007. Tables 3-2 and 3-3, and Figure 3-1 show that the concentrations of 1,1,1-TCA in the samples from recovery

well RW-1 were 58 micrograms per liter ( $\mu\text{g/L}$ ) and 48  $\mu\text{g/L}$  in January and March 2012, respectively. The concentrations of 1,1,1-TCA in the samples from RW-2 were 47  $\mu\text{g/L}$  to 44  $\mu\text{g/L}$  in January and March 2012, respectively. These results exceed the corresponding NYSDEC Class GA Standard of 5  $\mu\text{g/L}$ ; however, Figure 3-1 shows that the concentrations in the samples from these wells are consistent with previous results.

As shown in Tables 3-2 and 3-3, first quarter 2012 concentrations of 1,1-dichloroethane (1,1-DCA) were consistent at 1.8  $\mu\text{g/L}$  in samples collected from recover well RW-1 and ranged from the estimated concentrations (based on the "J" qualifier) of 0.861  $\mu\text{g/L}$  to 0.90  $\mu\text{g/L}$  in samples collected from RW-2. The concentrations of 1,1-dichloroethene (1,1-DCE) in samples collected at recovery well RW-1 ranged from 1.2  $\mu\text{g/L}$  to 1.8  $\mu\text{g/L}$  and the concentrations ranged from 1.4  $\mu\text{g/L}$  to 0.94  $\mu\text{g/L}$  in the samples from RW-2. The 1,1-DCA and 1,1-DCE results were less than the applicable NYSDEC Class GA Standard of 5  $\mu\text{g/L}$ .

Carbon tetrachloride was detected in the January 2012 samples from recovery well RW-1 and RW-2 at concentrations of 8.2  $\mu\text{g/L}$  and 6.3  $\mu\text{g/L}$ , respectively. As shown in Table 3-2 and Table 3-3, these concentrations exceed the NYSDEC Class GA Standard of 5  $\mu\text{g/L}$ . Carbon tetrachloride was not detected at concentrations greater than the indicated quantitation limits in samples from either recovery well in March 2012.

#### *3.2.1.2 Effluent Sample Results*

Table 3-4 summarizes laboratory analytical data for effluent samples collected from the treatment system. No VOCs were detected in the first quarter 2012 effluent samples. Based on influent sample concentrations and total flow volumes from the Gladding Cordage treatment system, approximately 1.2 pounds of VOCs were removed by the treatment system during the first quarter, 2012.

#### **4. Groundwater Monitoring Program**

Groundwater samples were collected from the site during the second quarter 2011 in accordance with the Work Plan. The results of the sampling even were submitted in the second quarter 2011 Gladding Cordage Site Quarterly Report and Annual Groundwater Monitoring Summary (ARCADIS, 2011). The next groundwater sampling even is scheduled to take place during the third quarter 2012.

## **5. Recommendations**

It is recommended that a revised O&M Manual be prepared and submitted for NYSDEC-review following the final installation the geothermal heat-exchanger system. The O&M Manual will include information required to operate the various treatment plant systems, define system operating parameters, and provide manufacturer specifications and maintenance procedures for new and existing treatment plant components.

## **6. Summary**

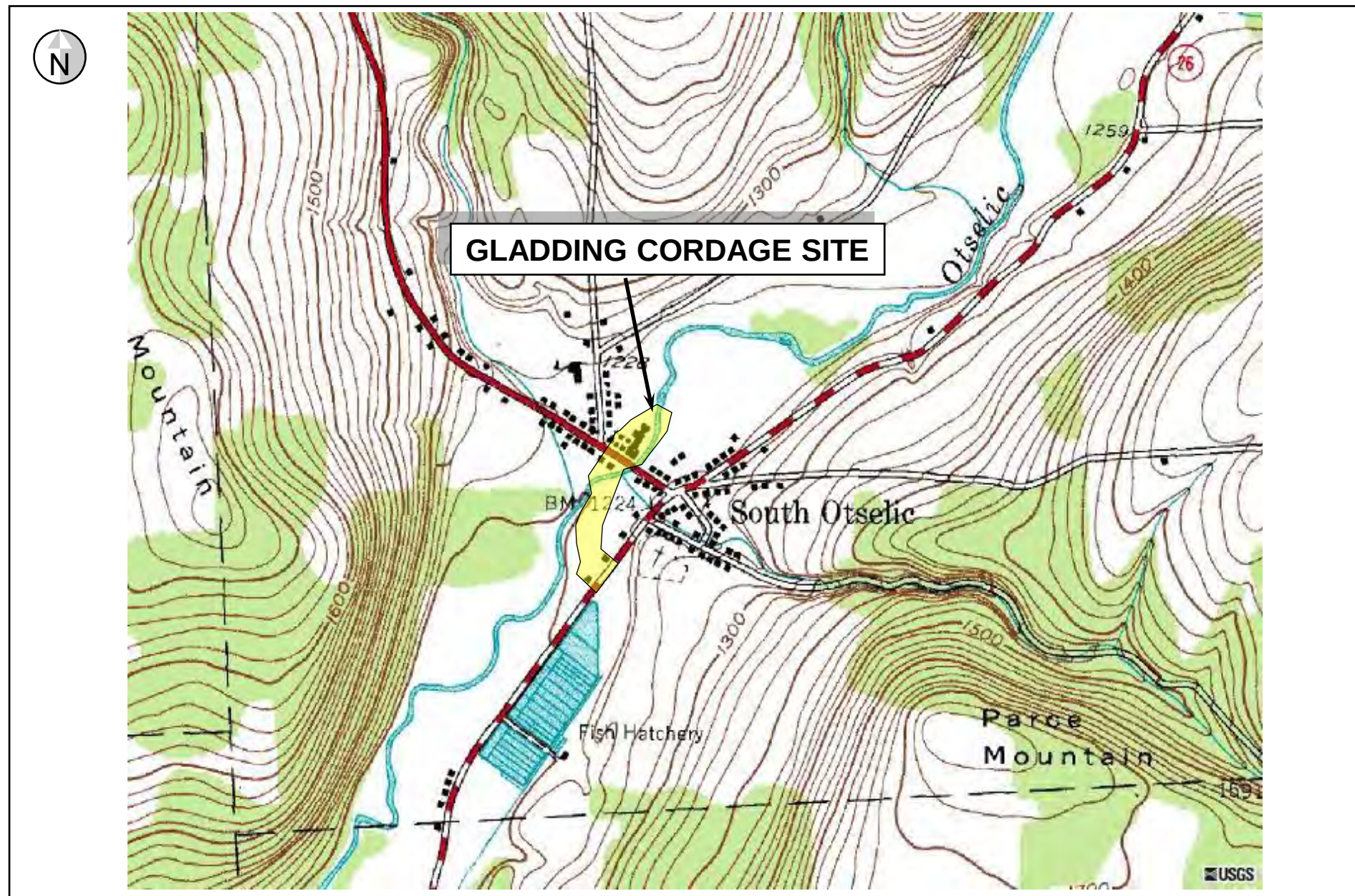
The Gladding Cordage groundwater treatment system operated without interruption in January 2012 until it was shut down for repairs on January 30, 2012. A new PLC was installed to control the treatment plant and allow remote monitoring of treatment plant operation. The existing air stripper blower motor was replaced due to noisy operation. The treatment plant resumed operation on March 22, 2012. A geothermal heat-exchanger is scheduled to be installed during the second quarter 2012. The total flow rate through the treatment system following the treatment plant upgrades was approximately 41 GPM. No VOCs were detected in the first quarter 2012 effluent samples. Based on monthly influent and effluent sampling, the treatment successfully removes VOCs from groundwater extracted from the capture zone at the current VFD setting of 46 Hz. The VFD setting will continue to be evaluated based on system monitoring results. Approximately 1.2 pounds of VOCs were removed by the treatment system during the first quarter 2012. Annual groundwater sampling is scheduled to be conducted during the third quarter 2012. It is recommended that the existing O&M Manual be updated to include recent and planned system upgrades.



**Figure 2-1  
Site Location**

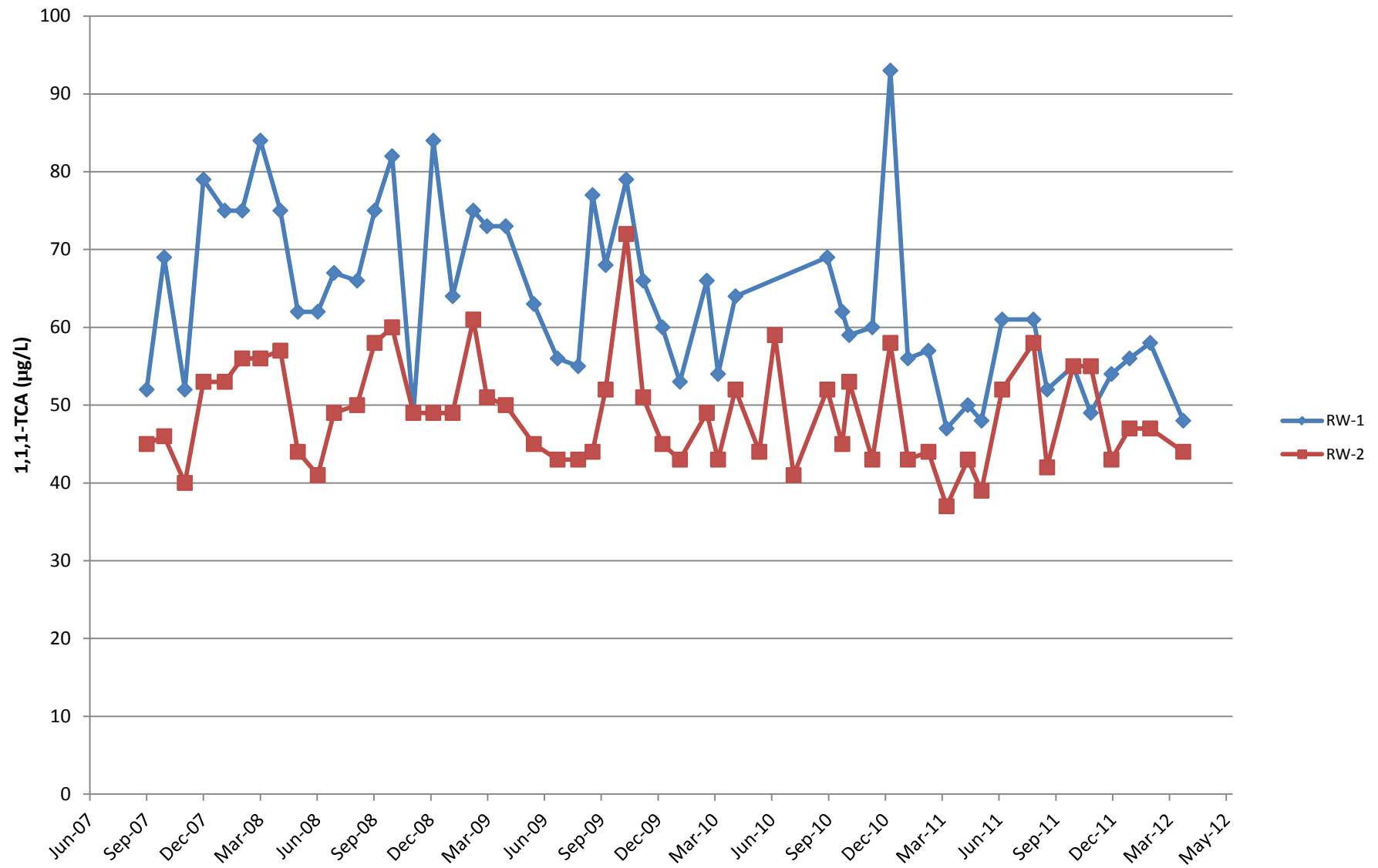
Gladding Cordage Site  
South Otselic, New York  
Site Number 7-09-009

0 2,000 ft



Source: USGS 7.5-minute Series Topographic Quadrangle, South Otselic.

**Figure 3-1**  
**Treatment System Influent Sample Concentrations (1,1,1-TCA)**  
**Gladding Cordage Site**  
**NYSDEC Site Number 7-09-009**



**TABLE 3-1**  
**TREATMENT SYSTEM STATUS AND FLOW SUMMARY**  
**GLADDING CORDAGE SITE**  
**SOUTH OTSELIC, NEW YORK**  
**NYSDEC SITE NO. 7-04-009A**

| Date                   | System Operation<br>(days) | System On-time<br>(% of possible days) | Well On-time          |                       | Flow Rates    |                     | Recovery Well Total Flows |                          | Total System Flow<br>(gallons) | Quarterly Totals<br>(gallons) |
|------------------------|----------------------------|----------------------------------------|-----------------------|-----------------------|---------------|---------------------|---------------------------|--------------------------|--------------------------------|-------------------------------|
|                        |                            |                                        | RW-1<br>(% possible ) | RW-2<br>(% possible ) | RW-1<br>(gpm) | RW-2<br>(gpm)       | RW-1<br>(gallons)         | RW-2<br>(gallons)        |                                |                               |
| August-07              | 8 <sup>(1)</sup>           | 100%                                   | 100%                  | 100%                  | 38            | 24                  | 437,760 <sup>(3)</sup>    | 276,480 <sup>(3)</sup>   | 714,240                        | 3,435,840                     |
| September-07           | 30                         | 100%                                   | 100%                  | 100%                  | 38            | 25                  | 1,641,600 <sup>(3)</sup>  | 1,080,000 <sup>(3)</sup> | 2,721,600                      |                               |
| October-07             | 20                         | 65%                                    | 100%                  | 100%                  | 38.2          | 25.7                | 1,100,160 <sup>(3)</sup>  | 740,160 <sup>(3)</sup>   | 1,840,320                      | 6,172,646                     |
| November-07            | 30                         | 100%                                   | 67%                   | 100%                  | 39.9          | 24.9 <sup>(2)</sup> | 958,840 <sup>(4)</sup>    | 1,075,680 <sup>(3)</sup> | 2,034,520                      |                               |
| December-07            | 31                         | 100%                                   | 39%                   | 100%                  | 31.8          | 24.9 <sup>(2)</sup> | 1,186,270 <sup>(4)</sup>  | 1,111,536 <sup>(3)</sup> | 2,297,806                      | 5,503,499                     |
| January-08             | 31                         | 100%                                   | 100%                  | 100%                  | 31.8          | 24.9 <sup>(2)</sup> | 856,620 <sup>(4)</sup>    | 1,111,536 <sup>(3)</sup> | 1,968,156                      |                               |
| February-08            | 26                         | 90%                                    | 69%                   | 88%                   | 32            | 24.9 <sup>(2)</sup> | 1,179,610 <sup>(4)</sup>  | 820,385 <sup>(3)</sup>   | 1,999,995                      | 6,846,908                     |
| March-08               | 23                         | 74%                                    | 100%                  | 100%                  | 32.9          | 24.9 <sup>(2)</sup> | 710,660 <sup>(4)</sup>    | 824,688 <sup>(3)</sup>   | 1,535,348                      |                               |
| April-08               | 30                         | 100%                                   | 100%                  | 100%                  | 30.8          | 24.9 <sup>(2)</sup> | 1,051,520 <sup>(4)</sup>  | 1,075,680 <sup>(3)</sup> | 2,127,200                      | 6,201,456                     |
| May-08                 | 31                         | 100%                                   | 100%                  | 100%                  | 31.3          | 24.9 <sup>(2)</sup> | 1,238,580 <sup>(4)</sup>  | 1,111,536 <sup>(3)</sup> | 2,350,116                      |                               |
| June-08                | 27                         | 90%                                    | 100%                  | 100%                  | 30.5          | 24.9 <sup>(2)</sup> | 1,401,480 <sup>(4)</sup>  | 968,112 <sup>(3)</sup>   | 2,369,592                      | 7,494,552                     |
| July-08                | 28                         | 90%                                    | 68%                   | 100%                  | 30.1          | 24.9 <sup>(2)</sup> | 1,029,590 <sup>(4)</sup>  | 1,003,968 <sup>(3)</sup> | 2,033,558                      |                               |
| August-08              | 28                         | 90%                                    | 100%                  | 100%                  | 30            | 24.9 <sup>(2)</sup> | 943,060 <sup>(4)</sup>    | 1,003,968 <sup>(3)</sup> | 1,947,028                      | 26,046,415                    |
| September-08           | 30                         | 100%                                   | 100%                  | 100%                  | 29.8          | 24.9 <sup>(2)</sup> | 1,145,190 <sup>(4)</sup>  | 1,075,680 <sup>(3)</sup> | 2,220,870                      |                               |
| October-08             | 31                         | 100%                                   | 100%                  | 100%                  | 30            | 24.9 <sup>(2)</sup> | 1,212,410 <sup>(4)</sup>  | 1,111,536 <sup>(3)</sup> | 2,323,946                      | 7,494,552                     |
| November-08            | 30                         | 100%                                   | 100%                  | 100%                  | 31.7          | 24.9 <sup>(2)</sup> | 1,532,370 <sup>(4)</sup>  | 1,075,680 <sup>(3)</sup> | 2,608,050                      |                               |
| December-08            | 31                         | 100%                                   | 100%                  | 100%                  | 31.3          | 24.9 <sup>(2)</sup> | 1,451,020 <sup>(4)</sup>  | 1,111,536 <sup>(3)</sup> | 2,562,556                      |                               |
| <b>Total Flow 2007</b> |                            |                                        |                       |                       |               |                     | <b>5,324,630</b>          | <b>4,283,856</b>         | <b>9,608,486</b>               |                               |
| <b>Total Flow 2008</b> |                            |                                        |                       |                       |               |                     | <b>13,752,110</b>         | <b>12,294,305</b>        | <b>26,046,415</b>              |                               |

Notes:

1 - System started on 8/23/07.

2 - Flow meter inoperative. Flow based on average flow from August, September, and October 2008.

3 - Calculated based on percentage of system on-time, flow rate, and percentage of recovery well on-time.

4 - Calculated from totalizer values.

gpm - Gallons per minute



**TABLE 3-1**  
**TREATMENT SYSTEM STATUS AND FLOW SUMMARY**  
**GLADDING CORDAGE SITE**  
**SOUTH OTSELIC, NEW YORK**  
**NYSDEC SITE NO. 7-04-009A**

| Date                   | System Operation<br>(days) | System On-time<br>(% of possible days) | Well On-time          |                       | Flow Rates          |                     | Recovery Well Total Flows |                          | Total System Flow<br>(gallons) | Quarterly Totals<br>(gallons) |
|------------------------|----------------------------|----------------------------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------------|--------------------------|--------------------------------|-------------------------------|
|                        |                            |                                        | RW-1<br>(% possible ) | RW-2<br>(% possible ) | RW-1<br>(gpm)       | RW-2<br>(gpm)       | RW-1<br>(gallons)         | RW-2<br>(gallons)        |                                |                               |
| January-09             | 31                         | 100%                                   | 100%                  | 100%                  | 31.3                | 24.9 <sup>(2)</sup> | 1,392,710 <sup>(4)</sup>  | 1,111,536 <sup>(3)</sup> | 2,504,246                      | 6,931,910                     |
| February-09            | 28                         | 100%                                   | 100%                  | 100%                  | 30.8                | 24.9 <sup>(2)</sup> | 1,363,120 <sup>(4)</sup>  | 1,003,968 <sup>(3)</sup> | 2,367,088                      |                               |
| March-09               | 31                         | 100%                                   | 100%                  | 100%                  | 30.8                | 24.9 <sup>(2)</sup> | 949,040 <sup>(4)</sup>    | 1,111,536 <sup>(3)</sup> | 2,060,576                      |                               |
| April-09               | 30                         | 100%                                   | 100%                  | 100%                  | 31.2                | 24.9 <sup>(2)</sup> | 1,281,120 <sup>(4)</sup>  | 1,075,680 <sup>(3)</sup> | 2,356,800                      | 8,217,156                     |
| May-09                 | 31                         | 100%                                   | 100%                  | 100%                  | 31.5                | 24.9 <sup>(2)</sup> | 1,968,910 <sup>(4)</sup>  | 1,111,536 <sup>(3)</sup> | 3,080,446                      |                               |
| June-09                | 30                         | 100%                                   | 100%                  | 100%                  | 31.1                | 24.9 <sup>(2)</sup> | 1,704,230 <sup>(4)</sup>  | 1,075,680 <sup>(3)</sup> | 2,779,910                      |                               |
| July-09                | 28                         | 90%                                    | 100%                  | 100%                  | 30.4                | 24.9 <sup>(2)</sup> | 736,020 <sup>(4)</sup>    | 1,003,968 <sup>(3)</sup> | 1,739,988                      | 5,833,432                     |
| August-09              | 29                         | 94%                                    | 100%                  | 100%                  | 30.6                | 24.9 <sup>(2)</sup> | 982,480 <sup>(4)</sup>    | 1,039,824 <sup>(3)</sup> | 2,022,304                      |                               |
| September-09           | 30                         | 100%                                   | 100%                  | 100%                  | 30.3                | 24.9 <sup>(2)</sup> | 995,460 <sup>(4)</sup>    | 1,075,680 <sup>(3)</sup> | 2,071,140                      |                               |
| October-09             | 20                         | 65%                                    | 100%                  | 100%                  | 34.1                | 24.9 <sup>(2)</sup> | 1,363,040 <sup>(4)</sup>  | 717,120 <sup>(3)</sup>   | 2,080,160                      | 6,228,096                     |
| November-09            | 29                         | 97%                                    | 100%                  | 100%                  | 31.7                | 24.9 <sup>(2)</sup> | 866,140 <sup>(4)</sup>    | 1,039,824 <sup>(3)</sup> | 1,905,964                      |                               |
| December-09            | 27                         | 87%                                    | 100%                  | 100%                  | 33.7                | 24.9 <sup>(2)</sup> | 1,273,860 <sup>(4)</sup>  | 968,112 <sup>(3)</sup>   | 2,241,972                      |                               |
| January-10             | 31                         | 100%                                   | 100%                  | 100%                  | 29.2                | 24.9 <sup>(2)</sup> | 1,327,190 <sup>(4)</sup>  | 1,111,536 <sup>(3)</sup> | 2,438,726                      | 7,478,090                     |
| February-10            | 28                         | 100%                                   | 100%                  | 100%                  | 34.8                | 24.9 <sup>(2)</sup> | 2,029,590 <sup>(4)</sup>  | 1,003,968 <sup>(3)</sup> | 3,033,558                      |                               |
| March-10               | 31                         | 100%                                   | 100%                  | 100%                  | 33                  | 24.9 <sup>(2)</sup> | 894,270 <sup>(4)</sup>    | 1,111,536 <sup>(3)</sup> | 2,005,806                      |                               |
| April-10               | 26                         | 87%                                    | 100%                  | 100%                  | 35.2                | 24.9 <sup>(2)</sup> | 1,143,260 <sup>(4)</sup>  | 932,256 <sup>(3)</sup>   | 2,075,516                      | 3,981,724                     |
| May-10                 | 28                         | 90%                                    | 36%                   | 100%                  | 35.2                | 24.9 <sup>(2)</sup> | 290,240 <sup>(4)</sup>    | 1,003,968 <sup>(3)</sup> | 1,294,208                      |                               |
| June-10                | 17                         | 57%                                    | 0%                    | 100%                  | 0                   | 25 <sup>(2)</sup>   | 0 <sup>(4)</sup>          | 612,000 <sup>(3)</sup>   | 612,000                        |                               |
| July-10                | 18                         | 58%                                    | 0%                    | 100%                  | 0                   | 24.9 <sup>(2)</sup> | 0 <sup>(3)</sup>          | 645,408 <sup>(3)</sup>   | 645,408                        | 4,034,736                     |
| August-10              | 23                         | 74%                                    | 0%                    | 100%                  | 0                   | 24.9 <sup>(2)</sup> | 0 <sup>(3)</sup>          | 824,688 <sup>(3)</sup>   | 824,688                        |                               |
| September-10           | 30                         | 100%                                   | 100%                  | 100%                  | 34.5 <sup>(2)</sup> | 24.9 <sup>(2)</sup> | 1,488,960 <sup>(3)</sup>  | 1,075,680 <sup>(3)</sup> | 2,564,640                      |                               |
| October-10             | 31                         | 100%                                   | 100%                  | 90%                   | 33.4 <sup>(2)</sup> | 24.9 <sup>(2)</sup> | 1,489,302 <sup>(3)</sup>  | 1,000,382 <sup>(3)</sup> | 2,489,684                      | 7,271,870                     |
| November-10            | 30                         | 100%                                   | 100%                  | 100%                  | 33.4 <sup>(2)</sup> | 24.9 <sup>(2)</sup> | 1,441,260 <sup>(3)</sup>  | 1,075,680 <sup>(3)</sup> | 2,516,940                      |                               |
| December-10            | 27                         | 87%                                    | 100%                  | 100%                  | 33.4 <sup>(2)</sup> | 24.9 <sup>(2)</sup> | 1,297,134 <sup>(3)</sup>  | 968,112 <sup>(3)</sup>   | 2,265,246                      |                               |
| <b>Total Flow 2009</b> |                            |                                        |                       |                       |                     |                     | <b>14,876,130</b>         | <b>12,334,464</b>        | <b>27,210,594</b>              |                               |
| <b>Total Flow 2010</b> |                            |                                        |                       |                       |                     |                     | <b>11,401,206</b>         | <b>11,365,214</b>        | <b>22,766,420</b>              |                               |

Notes:

- 1 - System started on 8/23/07.
  - 2 - Flow meter inoperative. Flow based on previous average flows or from manual tests.
  - 3 - Calculated based on percentage of system on-time, flow rate, and percentage of recovery well on-time.
  - 4 - Calculated from totalizer values.
- gpm - Gallons per minute

**TABLE 3-1**  
**TREATMENT SYSTEM STATUS AND FLOW SUMMARY**  
**GLADDING CORDAGE SITE**  
**SOUTH OTSELIC, NEW YORK**  
**NYSDEC SITE NO. 7-04-009A**

| Date                   | System Operation<br>(days) | System On-time<br>(% of possible days) | Well On-time          |                       | Flow Rates           |                     | Recovery Well Total Flows |                          | Total System Flow<br>(gallons) | Quarterly Totals<br>(gallons) |
|------------------------|----------------------------|----------------------------------------|-----------------------|-----------------------|----------------------|---------------------|---------------------------|--------------------------|--------------------------------|-------------------------------|
|                        |                            |                                        | RW-1<br>(% possible ) | RW-2<br>(% possible ) | RW-1<br>(gpm)        | RW-2<br>(gpm)       | RW-1<br>(gallons)         | RW-2<br>(gallons)        |                                |                               |
| January-11             | 31                         | 100%                                   | 100%                  | 100%                  | 33.4 <sup>(2)</sup>  | 24.9 <sup>(2)</sup> | 1,489,302 <sup>(3)</sup>  | 1,111,536 <sup>(3)</sup> | 2,600,838                      | 6,292,350                     |
| February-11            | 20                         | 71%                                    | 100%                  | 100%                  | 33.4 <sup>(2)</sup>  | 24.9 <sup>(2)</sup> | 960,840 <sup>(3)</sup>    | 717,120 <sup>(3)</sup>   | 1,677,960                      |                               |
| March-11               | 24                         | 77%                                    | 100%                  | 100%                  | 33.4 <sup>(2)</sup>  | 24.9 <sup>(2)</sup> | 1,153,008 <sup>(3)</sup>  | 860,544 <sup>(3)</sup>   | 2,013,552                      |                               |
| April-11               | 27                         | 90%                                    | 100%                  | 100%                  | 33.36 <sup>(2)</sup> | 24.9 <sup>(2)</sup> | 1,297,134 <sup>(3)</sup>  | 968,112 <sup>(3)</sup>   | 2,265,246                      | 6,544,044                     |
| May-11                 | 28                         | 90%                                    | 100%                  | 100%                  | 33.36 <sup>(2)</sup> | 24.9 <sup>(2)</sup> | 1,345,176 <sup>(3)</sup>  | 1,003,968 <sup>(3)</sup> | 2,349,144                      |                               |
| June-11                | 23                         | 77%                                    | 100%                  | 100%                  | 33.36 <sup>(2)</sup> | 24.9 <sup>(2)</sup> | 1,104,966 <sup>(3)</sup>  | 824,688 <sup>(3)</sup>   | 1,929,654                      |                               |
| July-11                | 6                          | 19%                                    | 100%                  | 100%                  | 33.4 <sup>(2)</sup>  | 24.9 <sup>(2)</sup> | 288,576 <sup>(3)</sup>    | 215,136 <sup>(3)</sup>   | 503,712                        | 5,592,514                     |
| August-11              | 31                         | 100%                                   | 100%                  | 100%                  | 33.4 <sup>(2)</sup>  | 24.9 <sup>(2)</sup> | 1,490,976 <sup>(3)</sup>  | 1,111,536 <sup>(3)</sup> | 2,602,512                      |                               |
| September-11           | 30                         | 100%                                   | 100%                  | 97%                   | 33.4 <sup>(2)</sup>  | 24.9 <sup>(2)</sup> | 1,442,880 <sup>(3)</sup>  | 1,043,410 <sup>(3)</sup> | 2,486,290                      |                               |
| October-11             | 28                         | 90%                                    | 100%                  | 54%                   | 33.4 <sup>(2)</sup>  | 24.9 <sup>(2)</sup> | 1,346,688 <sup>(3)</sup>  | 542,143 <sup>(3)</sup>   | 1,888,831                      | 7,009,903                     |
| November-11            | 30                         | 100%                                   | 100%                  | 100%                  | 33.4 <sup>(2)</sup>  | 24.9 <sup>(2)</sup> | 1,442,880 <sup>(3)</sup>  | 1,075,680 <sup>(3)</sup> | 2,518,560                      |                               |
| December-11            | 31                         | 100%                                   | 100%                  | 100%                  | 33.4 <sup>(2)</sup>  | 24.9 <sup>(2)</sup> | 1,490,976 <sup>(3)</sup>  | 1,111,536 <sup>(3)</sup> | 2,602,512                      |                               |
| January-12             | 30                         | 97%                                    | 100%                  | 100%                  | 22.7 <sup>(6)</sup>  | 18.0 <sup>(6)</sup> | 980,640 <sup>(3)</sup>    | 777,600 <sup>(3)</sup>   | 1,758,240                      | 2,311,830                     |
| February-12            | 0 <sup>(5)</sup>           | 0%                                     | 0%                    | 0%                    | 0                    | 0                   | 0                         | 0                        | 0                              |                               |
| March-12               | 10                         | 32%                                    | 100%                  | 100%                  | 22.7                 | 18.0                | 308,309 <sup>(4)</sup>    | 245,281 <sup>(4)</sup>   | 553,590                        |                               |
| <b>Total Flow 2011</b> |                            |                                        |                       |                       |                      |                     | <b>14,853,402</b>         | <b>10,585,408</b>        | <b>25,438,810</b>              |                               |
| <b>Total Flow 2012</b> |                            |                                        |                       |                       |                      |                     | <b>1,288,949</b>          | <b>1,022,881</b>         | <b>2,311,830</b>               |                               |

Notes:

1 - System started on 8/23/07.

2 - Flow meter inoperative. Flow based on previous average flows or from manual tests.

3 - Calculated based on percentage of system on-time, flow rate, and percentage of recovery well on-time.

4 - Calculated from totalizer values.

5 - System shut down for repairs.

6 - Flow based on March 2012 PLC data.

gpm - Gallons per minute





TABLE 3-2  
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT - RW-1)  
GLADDING CORDAGE  
SOUTH OTSELIC, NEW YORK  
NYSDEC Site No. 7-09-009

| Sample ID<br>Sampling Date<br>Matrix<br>Units | NYSDEC<br>Class GA<br>Standard<br>ug/L | RW-1<br>3/9/2010<br>WATER<br>ug/L | RW-1<br>4/6/2010<br>WATER<br>ug/L | RW-1<br>8/31/2010<br>WATER<br>ug/L | RW-1<br>9/24/2010<br>WATER<br>ug/L | RW-1<br>10/5/2010<br>WATER<br>ug/L | RW-1<br>11/11/2010<br>WATER<br>ug/L | RW-1<br>12/10/2010<br>WATER<br>ug/L | RW-1<br>1/7/2011<br>WATER<br>ug/L | RW-1<br>2/9/2011<br>WATER<br>ug/L | RW-1<br>3/10/2011<br>WATER<br>ug/L | RW-1<br>4/13/2011<br>WATER<br>ug/L | RW-1<br>5/5/2011<br>WATER<br>ug/L | RW-1<br>6/7/2011<br>WATER<br>ug/L |
|-----------------------------------------------|----------------------------------------|-----------------------------------|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| VOCs                                          |                                        |                                   |                                   |                                    |                                    |                                    |                                     |                                     |                                   |                                   |                                    |                                    |                                   |                                   |
| 1,1,1-Trichloroethane                         | 5                                      | 54                                | 64                                | 69                                 | 62                                 | 59                                 | 60                                  | 93                                  | 56                                | 57                                | 47                                 | 50                                 | 48                                | 61                                |
| 1,1,2,2-Tetrachloroethane                     | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| 1,1,2-Trichloroethane                         | 1                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| 1,1,2-Trichlorotrifluoroethane                | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| 1,1-Dichloroethane                            | 5                                      | 2.7                               | 2.3                               | 1 U                                | 2.9                                | 2.5                                | 1 U                                 | 3.9                                 | 2.5                               | 2.6                               | 2                                  | 1 U                                | 1.7                               | 2.7                               |
| 1,1-Dichloroethene                            | 5                                      | 2.6                               | 1.2                               | 2.6                                | 3.4                                | 3.4                                | 1.4                                 | 9.6                                 | 3.5                               | 3.5                               | 2.8                                | 1.2                                | 1.1                               | 1.1                               |
| 1,2,4-Trichlorobenzene                        |                                        | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| 1,2-Dibromo-3-Chloropropane                   | 0.04                                   | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| 1,2-Dibromoethane                             | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| 1,2-Dichlorobenzene                           | 3                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| 1,2-Dichloroethane                            | 0.6                                    | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| 1,2-Dichloropropane                           | 1                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| 1,3-Dichlorobenzene                           | 3                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| 1,4-Dichlorobenzene                           | 3                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| 2-Butanone                                    | 50                                     | 5 U                               | 5 U                               | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                 | 5 U                               | 5 U                               | 5 U                                | 5 U                                | 5 U                               | 5 U                               |
| 2-Hexanone                                    | 50                                     | 5 U                               | 5 U                               | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                 | 5 U                               | 5 U                               | 5 U                                | 5 U                                | 5 U                               | 5 U                               |
| 4-Methyl-2-Pentanone                          |                                        | 5 U                               | 5 U                               | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                 | 5 U                               | 5 U                               | 5 U                                | 5 U                                | 5 U                               | 5 U                               |
| Acetone                                       | 50                                     | 5 U                               | 5 U                               | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                 | 5 U                               | 5 U                               | 5 U                                | 5 U                                | 5 U                               | 5 U                               |
| Benzene                                       | 1                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Bromodichloromethane                          | 50                                     | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Bromoform                                     | 50                                     | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Bromomethane                                  | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Carbon Disulfide                              |                                        | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Carbon Tetrachloride                          | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Chlorobenzene                                 | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Chloroethane                                  | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Chloroform                                    | 7                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Chloromethane                                 |                                        | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| cis-1,2-Dichloroethene                        | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| cis-1,3-Dichloropropene                       | 0.4                                    | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Cyclohexane                                   |                                        | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Dibromochloromethane                          | 50                                     | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Dichlorodifluoromethane                       | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Ethyl Benzene                                 | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Isopropylbenzene                              | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| m/p-Xylenes                                   | 5                                      | 2 U                               | 2 U                               | 2 U                                | 2 U                                | 2 U                                | 2 U                                 | 2 U                                 | 2 U                               | 2 U                               | 2 U                                | 2 U                                | 2 U                               | 2 U                               |
| Methyl Acetate                                |                                        | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Methyl tert-butyl Ether                       |                                        | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Methylcyclohexane                             |                                        | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Methylene Chloride                            | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| o-Xylene                                      |                                        | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Styrene                                       | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| t-1,3-Dichloropropene                         | 0.4                                    | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Tetrachloroethene                             | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Toluene                                       | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| trans-1,2-Dichloroethene                      | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Trichloroethene                               | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Trichlorofluoromethane                        | 5                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Vinyl Chloride                                | 2                                      | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                               | 1 U                               | 1 U                                | 1 U                                | 1 U                               | 1 U                               |
| Total VOCs                                    |                                        | 59.3                              | 67.5                              | 71.6                               | 68.3                               | 64.9                               | 62.4                                | 106.5                               | 62                                | 63.1                              | 51.8                               | 51.2                               | 50.8                              | 64.8                              |

- Concentration exceeds corresponding NYSDEC  
Class GA Standard.  
U - Not detected at the indicated concentration  
J - Estimated concentration.



TABLE 3-2  
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT - RW-1)  
GLADDING CORDAGE  
SOUTH OTSELIC, NEW YORK  
NYSDEC Site No. 7-09-009

| Sample ID<br>Sampling Date<br>Matrix<br>Units | NYSDEC<br>Class GA<br>Standard<br>ug/L | RW-1<br>7/27/2011<br>WATER<br>ug/L | RW-1<br>8/18/2011<br>WATER<br>ug/L | RW-1<br>9/29/2011<br>WATER<br>ug/L | RW-1<br>10/27/2011<br>WATER<br>ug/L | RW-1<br>11/29/2011<br>WATER<br>ug/L | RW-1<br>12/28/2011<br>WATER<br>ug/L | RW-1<br>1/30/2012<br>WATER<br>ug/L | RW-1<br>3/23/2012<br>WATER<br>ug/L |
|-----------------------------------------------|----------------------------------------|------------------------------------|------------------------------------|------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------------|
| VOCs                                          |                                        |                                    |                                    |                                    |                                     |                                     |                                     |                                    |                                    |
| 1,1,1-Trichloroethane                         | 5                                      | 61                                 | 52                                 | 55                                 | 49                                  | 54                                  | 56                                  | 58                                 | 48                                 |
| 1,1,2,2-Tetrachloroethane                     | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,1,2-Trichloroethane                         | 1                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,1,2-Trichlorotrifluoroethane                | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,1-Dichloroethane                            | 5                                      | 2.3                                | 2.1                                | 2.7                                | 2.5                                 | 2.6                                 | 2.6                                 | 1.8                                | 1.8                                |
| 1,1-Dichloroethene                            | 5                                      | 2.1                                | 1.7                                | 1.6                                | 3.4                                 | 2.9                                 | 2.1                                 | 1.8                                | 1.2                                |
| 1,2,4-Trichlorobenzene                        |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,2-Dibromo-3-Chloropropane                   | 0.04                                   | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,2-Dibromoethane                             | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,2-Dichlorobenzene                           | 3                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,2-Dichloroethane                            | 0.6                                    | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,2-Dichloropropane                           | 1                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,3-Dichlorobenzene                           | 3                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,4-Dichlorobenzene                           | 3                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 2.8 J                              |
| 2-Butanone                                    | 50                                     | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                 | 5 U                                 | 5 U                                | 2.5 U                              |
| 2-Hexanone                                    | 50                                     | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                 | 5 U                                 | 5 U                                | 2.5 U                              |
| 4-Methyl-2-Pentanone                          |                                        | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                 | 5 U                                 | 5 U                                | 2.5 U                              |
| Acetone                                       | 50                                     | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                 | 5 U                                 | 5 U                                | 0.5 U                              |
| Benzene                                       | 1                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Bromodichloromethane                          | 50                                     | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Bromoform                                     | 50                                     | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1.3                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Bromomethane                                  | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Carbon Disulfide                              |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Carbon Tetrachloride                          | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 8.2                                | 0.5 U                              |
| Chlorobenzene                                 | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Chloroethane                                  | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Chloroform                                    | 7                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Chloromethane                                 |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| cis-1,2-Dichloroethene                        | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| cis-1,3-Dichloropropene                       | 0.4                                    | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Cyclohexane                                   |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Dibromochloromethane                          | 50                                     | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Dichlorodifluoromethane                       | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Ethyl Benzene                                 | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Isopropylbenzene                              | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| m/p-Xylenes                                   | 5                                      | 2 U                                | 2 U                                | 2 U                                | 2 U                                 | 2 U                                 | 2 U                                 | 2 U                                | 1 U                                |
| Methyl Acetate                                |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Methyl tert-butyl Ether                       |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Methylcyclohexane                             |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Methylene Chloride                            | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| o-Xylene                                      |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Styrene                                       | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| t-1,3-Dichloropropene                         | 0.4                                    | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Tetrachloroethene                             | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Toluene                                       | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| trans-1,2-Dichloroethene                      | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Trichloroethene                               | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Trichlorofluoromethane                        | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Vinyl Chloride                                | 2                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Total VOCs                                    |                                        | 65.4                               | 55.8                               | 59.3                               | 54.9                                | 60.8                                | 60.7                                | 69.8                               | 53.8                               |

- Concentration exceeds corresponding NYSDEC  
Class GA Standard.  
U - Not detected at the indicated concentration  
J - Estimated concentration.





TABLE 3-3  
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT - RW-2)  
GLADDING CORDAGE  
SOUTH OTSELIC, NEW YORK  
NYSDEC Site No. 7-09-009

| Sample ID<br>Sampling Date<br>Matrix<br>Units | NYSDEC<br>Class GA<br>Standard<br>ug/L | RW-2<br>12/8/2008<br>WATER<br>ug/L | RW-2<br>1/8/2009<br>WATER<br>ug/L | RW-2<br>2/10/2009<br>WATER<br>ug/L | RW-2<br>3/4/2009<br>WATER<br>ug/L | RW-2<br>4/3/2009<br>WATER<br>ug/L | RW-2<br>5/18/2009<br>WATER<br>ug/L | RW-2<br>6/25/2009<br>WATER<br>ug/L | RW-2<br>7/28/2009<br>WATER<br>ug/L | RW-2<br>8/20/2009<br>WATER<br>ug/L | RW-2<br>9/10/2009<br>WATER<br>ug/L | RW-2<br>10/13/2009<br>WATER<br>ug/L | RW-2<br>11/9/2009<br>WATER<br>ug/L | RW-2<br>12/10/2009<br>WATER<br>ug/L | RW-2<br>1/7/2010<br>WATER<br>ug/L | RW-2<br>2/19/2010<br>WATER<br>ug/L |
|-----------------------------------------------|----------------------------------------|------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|------------------------------------|
| VOCs                                          |                                        |                                    |                                   |                                    |                                   |                                   |                                    |                                    |                                    |                                    |                                    |                                     |                                    |                                     |                                   |                                    |
| 1,1,1-Trichloroethane                         | 5                                      | 49                                 | 49                                | 61                                 | 51                                | 50                                | 45                                 | 43                                 | 43                                 | 44                                 | 52                                 | 72                                  | 51                                 | 45                                  | 43                                | 49                                 |
| 1,1,2,2-Tetrachloroethane                     | 5                                      | 1 U                                | 1 U                               | 0.31 U                             | 0.31 U                            | 0.31 U                            | 0.31 U                             | 0.31 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| 1,1,2-Trichloroethane                         | 1                                      | 1 U                                | 1 U                               | 0.38 U                             | 0.38 U                            | 0.38 U                            | 0.38 U                             | 0.38 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| 1,1,2-Trichlorotrifluoroethane                | 5                                      | 1 U                                | 1 U                               | 0.45 U                             | 0.45 U                            | 0.45 U                            | 0.45 U                             | 0.45 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| 1,1-Dichloroethane                            | 5                                      | 4.3                                | 1 U                               | 1.2                                | 1.2                               | 0.36 U                            | 1.1                                | 0.94 J                             | 0.85 J                             | 0.95 J                             | 1.1                                | 1.8                                 | 1.3                                | 1.1                                 | 0.9 J                             | 1.1                                |
| 1,1-Dichloroethene                            | 5                                      | 5.2                                | 1 U                               | 1.8                                | 0.47 U                            | 0.47 U                            | 0.73 J                             | 0.87 J                             | 1.9                                | 1.7                                | 2                                  | 2.5                                 | 2.2                                | 1.6                                 | 1.7                               | 1.9                                |
| 1,2,4-Trichlorobenzene                        |                                        | 1 U                                | 1 U                               | 0.62 U                             | 0.62 U                            | 0.62 U                            | 0.62 U                             | 0.62 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| 1,2-Dibromo-3-Chloropropane                   | 0.04                                   | 1 U                                | 1 U                               | 0.46 U                             | 0.46 U                            | 0.46 U                            | 0.46 U                             | 0.46 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| 1,2-Dibromoethane                             | 5                                      | 1 U                                | 1 U                               | 0.41 U                             | 0.41 U                            | 0.41 U                            | 0.41 U                             | 0.41 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| 1,2-Dichlorobenzene                           | 3                                      | 1 U                                | 1 U                               | 0.45 U                             | 0.45 U                            | 0.45 U                            | 0.45 U                             | 0.45 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| 1,2-Dichloroethane                            | 0.6                                    | 1 U                                | 1 U                               | 0.48 U                             | 0.48 U                            | 0.48 U                            | 0.48 U                             | 0.48 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| 1,2-Dichloropropane                           | 1                                      | 1 U                                | 1 U                               | 0.46 U                             | 0.46 U                            | 0.46 U                            | 0.46 U                             | 0.46 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| 1,3-Dichlorobenzene                           | 3                                      | 1 U                                | 1 U                               | 0.43 U                             | 0.43 U                            | 0.43 U                            | 0.43 U                             | 0.43 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| 1,4-Dichlorobenzene                           | 3                                      | 1 U                                | 1 U                               | 0.32 U                             | 0.32 U                            | 0.32 U                            | 0.32 U                             | 0.32 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| 2-Butanone                                    | 50                                     | 5 U                                | 5 U                               | 1.3 U                              | 1.3 U                             | 1.3 U                             | 1.3 U                              | 1.3 U                              | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                | 5 U                                 | 5 U                               | 5 U                                |
| 2-Hexanone                                    | 50                                     | 5 U                                | 5 U                               | 1.9 U                              | 1.9 U                             | 1.9 U                             | 1.9 U                              | 1.9 U                              | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                | 5 U                                 | 5 U                               | 5 U                                |
| 4-Methyl-2-Pentanone                          |                                        | 5 U                                | 5 U                               | 2.1 U                              | 2.1 U                             | 2.1 U                             | 2.1 U                              | 2.1 U                              | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                | 5 U                                 | 5 U                               | 5 U                                |
| Acetone                                       | 50                                     | 5 U                                | 5 U                               | 2.8 U                              | 2.8 U                             | 2.8 U                             | 2.8 U                              | 2.8 U                              | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                | 5 U                                 | 5 U                               | 5 U                                |
| Benzene                                       | 1                                      | 1 U                                | 1 U                               | 0.32 U                             | 0.32 U                            | 0.32 U                            | 0.32 U                             | 0.32 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Bromodichloromethane                          | 50                                     | 1 U                                | 1 U                               | 0.36 U                             | 0.36 U                            | 0.36 U                            | 0.36 U                             | 0.36 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Bromoform                                     | 50                                     | 1 U                                | 1 U                               | 0.47 U                             | 0.47 U                            | 0.47 U                            | 0.47 U                             | 0.47 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1.3                                 | 1 U                               | 1 U                                |
| Bromomethane                                  | 5                                      | 1 U                                | 1 U                               | 0.62 U                             | 0.62 U                            | 0.62 U                            | 0.62 U                             | 0.62 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Carbon Disulfide                              |                                        | 1 U                                | 1 U                               | 0.54 U                             | 0.54 U                            | 0.54 U                            | 0.54 U                             | 0.54 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Carbon Tetrachloride                          | 5                                      | 1 U                                | 5.9                               | 6.4                                | 0.62 U                            | 0.62 U                            | 0.62 U                             | 0.62 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Chlorobenzene                                 | 5                                      | 1 U                                | 1 U                               | 0.49 U                             | 0.49 U                            | 0.49 U                            | 0.49 U                             | 0.49 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Chloroethane                                  | 5                                      | 1 U                                | 1 U                               | 0.66 U                             | 0.66 U                            | 0.66 U                            | 0.66 U                             | 0.66 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Chloroform                                    | 7                                      | 1 U                                | 1 U                               | 0.34 U                             | 0.34 U                            | 0.34 U                            | 0.34 U                             | 0.34 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Chloromethane                                 |                                        | 1 U                                | 1 U                               | 0.54 U                             | 0.54 U                            | 0.54 U                            | 0.54 U                             | 0.54 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| cis-1,2-Dichloroethene                        | 5                                      | 1 U                                | 1 U                               | 0.35 U                             | 0.35 U                            | 0.35 U                            | 0.35 U                             | 0.35 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| cis-1,3-Dichloropropene                       | 0.4                                    | 1 U                                | 1 U                               | 0.31 U                             | 0.31 U                            | 0.31 U                            | 0.31 U                             | 0.31 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Cyclohexane                                   |                                        | 1 U                                | 1 U                               | 0.55 U                             | 0.55 U                            | 0.55 U                            | 0.55 U                             | 0.55 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Dibromochloromethane                          | 50                                     | 1 U                                | 1 U                               | 0.52 U                             | 0.52 U                            | 0.52 U                            | 0.52 U                             | 0.52 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 0.78 J                              | 1 U                               | 1 U                                |
| Dichlorodifluoromethane                       | 5                                      | 1 U                                | 1 U                               | 0.55 U                             | 0.55 U                            | 0.55 U                            | 0.55 U                             | 0.55 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Ethyl Benzene                                 | 5                                      | 1 U                                | 1 U                               | 0.53 U                             | 0.53 U                            | 0.53 U                            | 0.53 U                             | 0.53 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Isopropylbenzene                              | 5                                      | 1 U                                | 1 U                               | 0.45 U                             | 0.45 U                            | 0.45 U                            | 0.45 U                             | 0.45 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| m/p-Xylenes                                   | 5                                      | 2 U                                | 2 U                               | 0.95 U                             | 0.95 U                            | 0.95 U                            | 0.95 U                             | 0.95 U                             | 2 U                                | 2 U                                | 2 U                                | 2 U                                 | 2 U                                | 2 U                                 | 2 U                               | 2 U                                |
| Methyl Acetate                                |                                        | 1 U                                | 1 U                               | 0.83 U                             | 0.83 U                            | 0.83 U                            | 0.83 U                             | 0.83 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Methyl tert-butyl Ether                       |                                        | 1 U                                | 1 U                               | 0.35 U                             | 0.35 U                            | 0.35 U                            | 0.35 U                             | 0.35 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Methylcyclohexane                             |                                        | 1 U                                | 1 U                               | 0.68 U                             | 0.68 U                            | 0.68 U                            | 0.68 U                             | 0.68 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Methylene Chloride                            | 5                                      | 1 U                                | 1 U                               | 0.41 U                             | 0.41 U                            | 0.41 U                            | 0.41 U                             | 0.41 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 2.1                                 | 1 U                               | 1 U                                |
| o-Xylene                                      |                                        | 1 U                                | 1 U                               | 0.43 U                             | 0.43 U                            | 0.43 U                            | 0.43 U                             | 0.43 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Styrene                                       | 5                                      | 1 U                                | 1 U                               | 0.36 U                             | 0.36 U                            | 0.36 U                            | 0.36 U                             | 0.36 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| t-1,3-Dichloropropene                         | 0.4                                    | 1 U                                | 1 U                               | 0.29 U                             | 0.29 U                            | 0.29 U                            | 0.29 U                             | 0.29 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Tetrachloroethene                             | 5                                      | 1 U                                | 1 U                               | 0.27 U                             | 0.27 U                            | 0.27 U                            | 0.27 U                             | 0.27 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Toluene                                       | 5                                      | 1 U                                | 1 U                               | 0.37 U                             | 0.37 U                            | 0.37 U                            | 0.37 U                             | 0.37 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| trans-1,2-Dichloroethene                      | 5                                      | 1 U                                | 1 U                               | 0.41 U                             | 0.41 U                            | 0.41 U                            | 0.41 U                             | 0.41 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Trichloroethene                               | 5                                      | 1 U                                | 1 U                               | 0.28 U                             | 0.28 U                            | 0.28 U                            | 0.28 U                             | 0.28 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Trichlorofluoromethane                        | 5                                      | 1 U                                | 1 U                               | 0.35 U                             | 0.35 U                            | 0.35 U                            | 0.35 U                             | 0.35 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Vinyl Chloride                                | 2                                      | 1 U                                | 1 U                               | 0.34 U                             | 0.34 U                            | 0.34 U                            | 0.34 U                             | 0.34 U                             | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                | 1 U                                 | 1 U                               | 1 U                                |
| Total VOCs                                    |                                        | 58.5                               | 54.9                              | 70.4                               | 52.2                              | 50.0                              | 46.8                               | 44.8                               | 45.8                               | 46.7                               | 55.1                               | 76.3                                | 54.5                               | 51.9                                | 45.6                              | 52.0                               |

- Concentration exceeds corresponding NYSDEC  
Class GA Standard.  
U - Not detected at the indicated concentration  
J - Estimated concentration.





TABLE 3-3  
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT - RW-2)  
GLADDING CORDAGE  
SOUTH OTSELIC, NEW YORK  
NYSDEC Site No. 7-09-009

| Sample ID<br>Sampling Date<br>Matrix<br>Units | NYSDEC<br>Class GA<br>Standard<br>ug/L | RW-2<br>7/27/2011<br>WATER<br>ug/L | RW-2<br>8/18/2011<br>WATER<br>ug/L | RW-2<br>9/29/2011<br>WATER<br>ug/L | RW-2<br>10/27/2011<br>WATER<br>ug/L | RW-2<br>11/29/2011<br>WATER<br>ug/L | RW-2<br>12/28/2011<br>WATER<br>ug/L | RW-2<br>1/30/2012<br>WATER<br>ug/L | RW-2<br>3/23/2012<br>WATER<br>ug/L |
|-----------------------------------------------|----------------------------------------|------------------------------------|------------------------------------|------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------------|
| VOCs                                          |                                        |                                    |                                    |                                    |                                     |                                     |                                     |                                    |                                    |
| 1,1,1-Trichloroethane                         | 5                                      | 58                                 | 42                                 | 55                                 | 55                                  | 43                                  | 47                                  | 47                                 | 44                                 |
| 1,1,2,2-Tetrachloroethane                     | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,1,2-Trichloroethane                         | 1                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,1,2-Trichlorotrifluoroethane                | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,1-Dichloroethane                            | 5                                      | 1.3                                | 1 U                                | 2.6                                | 1.4                                 | 1                                   | 1.1                                 | 0.86 J                             | 0.9 J                              |
| 1,1-Dichloroethene                            | 5                                      | 1.8                                | 1.6                                | 1.8                                | 3                                   | 1.8                                 | 1.6                                 | 1.4                                | 0.94 J                             |
| 1,2,4-Trichlorobenzene                        |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,2-Dibromo-3-Chloropropane                   | 0.04                                   | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,2-Dibromoethane                             | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,2-Dichlorobenzene                           | 3                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,2-Dichloroethane                            | 0.6                                    | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,2-Dichloropropane                           | 1                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,3-Dichlorobenzene                           | 3                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| 1,4-Dichlorobenzene                           | 3                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 2.5 U                              |
| 2-Butanone                                    | 50                                     | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                 | 5 U                                 | 5 U                                | 2.5 U                              |
| 2-Hexanone                                    | 50                                     | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                 | 5 U                                 | 5 U                                | 2.5 U                              |
| 4-Methyl-2-Pentanone                          |                                        | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                 | 5 U                                 | 5 U                                | 2.5 U                              |
| Acetone                                       | 50                                     | 5 U                                | 5 U                                | 5 U                                | 5 U                                 | 5 U                                 | 5 U                                 | 5 U                                | 0.5 U                              |
| Benzene                                       | 1                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Bromodichloromethane                          | 50                                     | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Bromoform                                     | 50                                     | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Bromomethane                                  | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Carbon Disulfide                              |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Carbon Tetrachloride                          | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 8.7                                 | 1 U                                 | 6.3                                | 0.5 U                              |
| Chlorobenzene                                 | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Chloroethane                                  | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Chloroform                                    | 7                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Chloromethane                                 |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| cis-1,2-Dichloroethene                        | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| cis-1,3-Dichloropropene                       | 0.4                                    | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Cyclohexane                                   |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Dibromochloromethane                          | 50                                     | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Dichlorodifluoromethane                       | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Ethyl Benzene                                 | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Isopropylbenzene                              | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| m/p-Xylenes                                   | 5                                      | 2 U                                | 2 U                                | 2 U                                | 2 U                                 | 2 U                                 | 2 U                                 | 2 U                                | 1 U                                |
| Methyl Acetate                                |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Methyl tert-butyl Ether                       |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Methylcyclohexane                             |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Methylene Chloride                            | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| o-Xylene                                      |                                        | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Styrene                                       | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| t-1,3-Dichloropropene                         | 0.4                                    | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Tetrachloroethene                             | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Toluene                                       | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| trans-1,2-Dichloroethene                      | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Trichloroethene                               | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Trichlorofluoromethane                        | 5                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Vinyl Chloride                                | 2                                      | 1 U                                | 1 U                                | 1 U                                | 1 U                                 | 1 U                                 | 1 U                                 | 1 U                                | 0.5 U                              |
| Total VOCs                                    |                                        | 61.1                               | 43.6                               | 59.4                               | 59.4                                | 54.5                                | 49.7                                | 55.6                               | 45.8                               |

- Concentration exceeds corresponding NYSDEC  
Class GA Standard.  
U - Not detected at the indicated concentration  
J - Estimated concentration.









TABLE 3-4  
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (EFFLUENT)  
GLADDING CORDAGE  
SOUTH OTSELIC, NEW YORK  
NYSDEC Site No. 7-09-009

| Sample ID<br>Sampling Date<br>Matrix<br>Units | NYSDEC<br>GA<br>Standard<br>ug/L | EFF(46HZ)<br>7/27/2011<br>WATER<br>ug/L | EFF(46HZ)<br>8/18/2011<br>WATER<br>ug/L | EFF(46HZ)<br>9/29/2011<br>WATER<br>ug/L | EFF(46HZ)<br>10/27/2011<br>WATER<br>ug/L | EFF(46HZ)<br>11/29/2011<br>WATER<br>ug/L | EFF(46HZ)<br>12/28/2011<br>WATER<br>ug/L | EFF(46HZ)<br>1/30/2012<br>WATER<br>ug/L | EFF(46HZ)<br>3/23/2012<br>WATER<br>ug/L |
|-----------------------------------------------|----------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|-----------------------------------------|-----------------------------------------|
| VOCS                                          |                                  |                                         |                                         |                                         |                                          |                                          |                                          |                                         |                                         |
| 1,1,1-Trichloroethane                         | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,1,2,2-Tetrachloroethane                     | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,1,2-Trichloroethane                         | 1                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,1,2-Trichlorotrifluoroethane                | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,1-Dichloroethane                            | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,1-Dichloroethene                            | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,2,4-Trichlorobenzene                        |                                  | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,2-Dibromo-3-Chloropropane                   | 0.04                             | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,2-Dibromoethane                             | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,2-Dichlorobenzene                           | 3                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,2-Dichloroethane                            | 0.6                              | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,2-Dichloropropane                           | 1                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,3-Dichlorobenzene                           | 3                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| 1,4-Dichlorobenzene                           | 3                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 2.5 U                                   |
| 2-Butanone                                    | 50                               | 5 U                                     | 5 U                                     | 5 U                                     | 5 U                                      | 5 U                                      | 5 U                                      | 5 U                                     | 2.5 U                                   |
| 2-Hexanone                                    | 50                               | 5 U                                     | 5 U                                     | 5 U                                     | 5 U                                      | 5 U                                      | 5 U                                      | 5 U                                     | 2.5 U                                   |
| 4-Methyl-2-Pentanone                          |                                  | 5 U                                     | 5 U                                     | 5 U                                     | 5 U                                      | 5 U                                      | 5 U                                      | 5 U                                     | 2.5 U                                   |
| Acetone                                       | 50                               | 5 U                                     | 5 U                                     | 5 U                                     | 5 U                                      | 5 U                                      | 5 U                                      | 5 U                                     | 0.5 U                                   |
| Benzene                                       | 1                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Bromodichloromethane                          | 50                               | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Bromoform                                     | 50                               | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Bromomethane                                  | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Carbon Disulfide                              |                                  | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Carbon Tetrachloride                          | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Chlorobenzene                                 | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Chloroethane                                  | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Chloroform                                    | 7                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Chloromethane                                 |                                  | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| cis-1,2-Dichloroethene                        | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| cis-1,3-Dichloropropene                       | 0.4                              | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Cyclohexane                                   |                                  | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Dibromochloromethane                          | 50                               | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Dichlorodifluoromethane                       | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Ethyl Benzene                                 | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Isopropylbenzene                              | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| m/p-Xylenes                                   | 5                                | 2 U                                     | 2 U                                     | 2 U                                     | 2 U                                      | 2 U                                      | 2 U                                      | 2 U                                     | 1 U                                     |
| Methyl Acetate                                |                                  | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Methyl tert-butyl Ether                       |                                  | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Methylcyclohexane                             |                                  | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Methylene Chloride                            | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| o-Xylene                                      |                                  | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Styrene                                       | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| t-1,3-Dichloropropene                         | 0.4                              | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Tetrachloroethene                             | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Toluene                                       | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| trans-1,2-Dichloroethene                      | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Trichloroethene                               | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Trichlorofluoromethane                        | 5                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |
| Vinyl Chloride                                | 2                                | 1 U                                     | 1 U                                     | 1 U                                     | 1 U                                      | 1 U                                      | 1 U                                      | 1 U                                     | 0.5 U                                   |

Notes  
U - Not detected at the indicated concentration.  
J - Estimated concentration.

## **Appendix A**

Troy Motor Service Air Stripper  
Blower Inspection Documents



70 COHOES RD. WATERVLIET, N.Y. 12189

PHONE: (518) 272-4920

FAX: (518) 272-0531

|           |
|-----------|
| Quotation |
|-----------|

Order Number: 0044180

Order Date: 2/3/2012

Expiration Date: 12/31/5999

Salesperson: 0117

Taker: Ross Wagner

Customer Number: CUST

**Sold To:**

ARCADIA MANUFACTURING GROUP  
80 COHOES AVENUE  
GREEN ISLAND, NY 12183

**Confirm To:**

JEREMY WYCKOFF 250-7335

**Ship To:**

ARCADIA  
JEREMY WYCKOFF 250-7335

| Customer P.O. | Ship VIA   | Shipping Instructions | F.O.B.     | Terms                  | Ship Comp. |
|---------------|------------|-----------------------|------------|------------------------|------------|
| COD Account   | CHARGE FRT | Pre-pay and add       | SHIP POINT | ***CASH ON DELIVERY*** | N          |

| Item Number | Unit | Ordered | Price  | Amount |
|-------------|------|---------|--------|--------|
| BL          | EACH | 1.000   | 160.00 | 160.00 |

CINCINNATI FAN PB-15A, W/ BALDOR, MOD# M3709T, SER# F895  
7.5HP, 3600RPM, 208-230/460V, 213T FRAME, TEFC, R, FULL, Y-BLOWER  
\* OVERHAUL / REPAIR \*

PLEASE NOTE: Upon initial inspection and evaluation, we have determined that the motor is burnt and would require a rewind, the housings are both bad and would need to be machined and rebushed, all bearings need replacing and the external fan itself would require machine work and balancing. The above listed blower is beyond economic repair; the cost of the repair will exceed the cost of a new unit.

FYI - LABOR TO DATE FOR INSPECTION/EVALUATION OF THIS REPAIR IS: \$160.00

This fee will be waived should you choose to purchase a new unit as quoted below.

We are pleased to offer the following replacement unit for your consideration:

|     |       |          |          |
|-----|-------|----------|----------|
| /MS | 1.000 | 2,443.75 | 2,443.75 |
|-----|-------|----------|----------|

PB-15A, CINCINNATI FAN  
ARRANGEMENT 4, 8"INLET, CW ROTATION, TH DISCHARGE, 16-1/2 X 4-3/8,  
(WITH 7.5HP 3600RPM, 213T FRAME, PREM EFF MOTOR INCLUDED)

ESTIMATED DELIVERY: 10 working days to ship, ARO (plus transit time).

FOB shipping point (OH) with freight charges prepaid and added to the invoice.

Approximate shipping weight: 246 lbs.

Thank you for the opportunity to quote this job. Please advise how you would like us to proceed.  
Feel free to give me a call should you have any questions or should you wish to proceed with an order.

Your customer service contact for this inquiry is: Tina Watson  
518-272-4920, x-144  
watson@troybelting.com

**TERMS AND CONDITIONS:**

- Prices quoted are firm for an order placed within 30 days.
- Terms are 1% 10 Days, Net 30 unless otherwise noted.
- Shipments are FOB Shipping Point unless otherwise noted.

Net Order: 2,603.75

Freight:

Sales Tax: 210.30

**Order Total:** 2,814.05

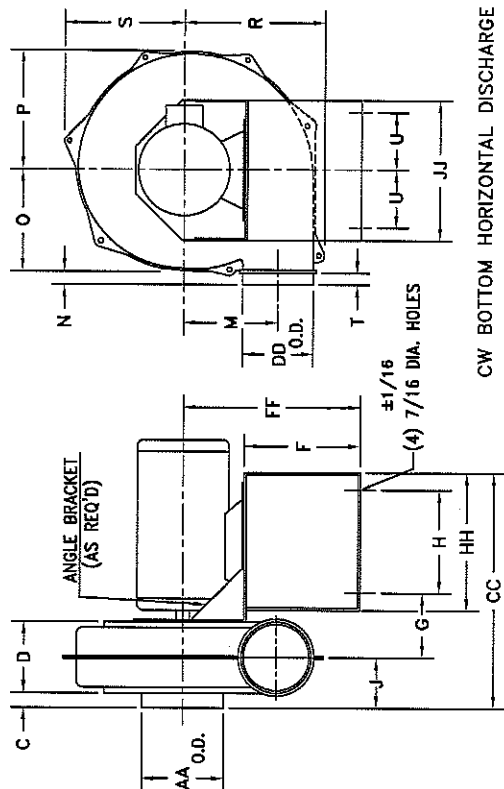
To order the above material, please complete the following and return to Troy Belting via fax or mail:

PURCHASE ORDER #: \_\_\_\_\_ DATE: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_ TITLE: \_\_\_\_\_

YOUR ORDER CANNOT BE PROCESSED WITHOUT A SIGNATURE



A PB4



CW BOTTOM HORIZONTAL DISCHARGE  
SHOWN ABOVE

|         |           | HOUSING         |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  |                  |                 |                  |                  |                 |                 |                 |   |
|---------|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|-------------------|----------------|----|----|------------------|------------------|-----------------|------------------|------------------|-----------------|-----------------|-----------------|---|
| MODEL   | FRAME     | C               | D               | J               | M               | N               | O                | P                | R                | S                 | T              | AA | DD | F                | G                | H               | U                | CC               | FF              | HH              | JJ              |   |
| PB-8    | 56        | 1               | $3\frac{3}{4}$  | $2\frac{7}{8}$  | $4\frac{1}{8}$  | $1\frac{1}{8}$  | $4\frac{5}{8}$   | $5\frac{5}{8}$   | $7\frac{3}{8}$   | $4\frac{7}{8}$    | $1\frac{1}{8}$ | 4  | 4  | 5                | $3\frac{3}{8}$   | 5               | $2\frac{3}{4}$   | $12\frac{1}{8}$  | $8\frac{9}{16}$ | $7\frac{1}{8}$  | 7               |   |
|         | 56        | $1\frac{1}{16}$ | $4\frac{1}{8}$  | $3\frac{1}{8}$  | $5\frac{5}{8}$  | $1\frac{3}{16}$ | $6\frac{1}{8}$   | $7\frac{3}{8}$   | $8\frac{1}{2}$   | $6\frac{5}{8}$    | 1              | 5  | 4  | $6\frac{7}{8}$   | $3\frac{3}{8}$   | $5\frac{3}{4}$  | $2\frac{3}{4}$   | $13\frac{5}{8}$  | $10\frac{7}{8}$ | $7\frac{7}{8}$  | 7               |   |
| PB-9    | 143T-145T |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  | $8\frac{1}{4}$   | $4\frac{3}{4}$  | 5                | $3\frac{3}{4}$   | $13\frac{1}{8}$ | $11\frac{7}{8}$ | 8               | 9 |
|         | 56        | $1\frac{1}{4}$  | $4\frac{1}{4}$  | $3\frac{3}{8}$  | $6\frac{9}{16}$ | 1               | $6\frac{7}{8}$   | $9\frac{7}{16}$  | $10\frac{3}{8}$  | $7\frac{13}{16}$  | 1              | 6  | 5  | $6\frac{7}{8}$   | $3\frac{7}{8}$   | $5\frac{3}{4}$  | $2\frac{3}{4}$   | $13\frac{1}{16}$ | $10\frac{7}{8}$ | $7\frac{7}{8}$  | 7               |   |
| PB-10A  | 143T-145T |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  | $8\frac{1}{4}$   | $4\frac{1}{4}$  | 5                | $3\frac{3}{4}$   | $14\frac{1}{8}$ | $11\frac{7}{8}$ | 8               | 9 |
|         | 56        |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  | $8\frac{1}{4}$   | $4\frac{1}{4}$  | 5                | $3\frac{3}{4}$   | $14\frac{1}{2}$ |                 | 8               | 9 |
| PB-12A  | 143T-145T | $1\frac{1}{4}$  | 5               | $3\frac{3}{4}$  | $7\frac{9}{16}$ | $7\frac{7}{8}$  | 8                | $9\frac{5}{8}$   | $11\frac{1}{16}$ | $9\frac{7}{16}$   | 1              | 7  | 6  | $8\frac{1}{4}$   | $4\frac{5}{8}$   | 5               | $3\frac{3}{4}$   | $14\frac{7}{8}$  | $11\frac{7}{8}$ | 8               | 9               |   |
|         | 182T-184T |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    | $6\frac{7}{8}$   | 5                | $8\frac{3}{4}$  | $4\frac{15}{16}$ | 19               |                 | $11\frac{3}{4}$ | 12              |   |
| PB-14A  | 56C *     |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  | $5\frac{3}{8}$   |                 |                  | $19\frac{1}{16}$ |                 |                 |                 |   |
|         | 143T-145T | $1\frac{1}{4}$  | 6               | $4\frac{1}{4}$  | $8\frac{1}{16}$ | 1               | $8\frac{13}{16}$ | $10\frac{3}{8}$  | $12\frac{3}{16}$ | $10\frac{1}{4}$   | 1              | 7  | 6  | $9\frac{15}{16}$ | $5\frac{1}{2}$   | $8\frac{3}{4}$  | $4\frac{15}{16}$ | 20               | $15\frac{3}{8}$ | $11\frac{3}{4}$ | 12              |   |
| PB-15A  | 182T-213T |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  |                  |                 |                  |                  |                 |                 |                 |   |
|         | 182T-184T |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  |                  |                 |                  |                  |                 |                 |                 |   |
| PB-15A  | 213T-215T | $1\frac{1}{4}$  | $7\frac{1}{4}$  | $4\frac{7}{8}$  | $7\frac{7}{8}$  | 1               | $9\frac{13}{16}$ | $11\frac{3}{8}$  | 13               | $10\frac{13}{16}$ | 1              | 8  | 8  | $9\frac{15}{16}$ | $6\frac{1}{8}$   | $8\frac{3}{4}$  | $4\frac{15}{16}$ | $21\frac{1}{4}$  | $15\frac{3}{8}$ | $11\frac{3}{4}$ | 12              |   |
|         | 254T-256T |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  | $8\frac{15}{16}$ | 13              |                  | $25\frac{1}{2}$  |                 | 16              | $16\frac{1}{2}$ |   |
| PB-18   | 182T-184T |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  |                  |                 |                  |                  |                 |                 |                 |   |
|         | 213T-215T | $1\frac{1}{4}$  | $6\frac{1}{4}$  | $4\frac{3}{8}$  | $10\frac{1}{2}$ | $1\frac{5}{16}$ | $10\frac{1}{2}$  | $12\frac{1}{16}$ | $14\frac{1}{2}$  | $12\frac{7}{16}$  | 1              | 8  | 6  | $9\frac{15}{16}$ | $5\frac{5}{8}$   | $8\frac{3}{4}$  | $4\frac{15}{16}$ | $20\frac{1}{4}$  | $15\frac{3}{8}$ | $11\frac{3}{4}$ | 12              |   |
| PB-18   | 254T-256T |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  | $8\frac{15}{16}$ | 13              |                  | $24\frac{1}{2}$  |                 | 16              | $16\frac{1}{2}$ |   |
|         | 182T-184T |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  |                  |                 |                  |                  |                 |                 |                 |   |
| PB-18WA | 213T-215T | $1\frac{1}{4}$  | $8\frac{1}{16}$ | $5\frac{5}{16}$ | $9\frac{7}{8}$  | $7\frac{7}{8}$  | 11               | $13\frac{3}{16}$ | $15\frac{1}{8}$  | $11\frac{13}{16}$ | 1              | 10 | 8  | $12\frac{3}{4}$  | $6\frac{1}{2}$   | $10\frac{3}{4}$ | $6\frac{1}{4}$   | $24\frac{1}{16}$ | 18              | $13\frac{3}{4}$ | $16\frac{1}{2}$ |   |
|         | 254T-256T |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  | $11\frac{3}{4}$  | $15\frac{3}{4}$ |                  | $29\frac{1}{16}$ |                 | $18\frac{3}{4}$ |                 |   |
| PB-18WA | 284T-286T |                 |                 |                 |                 |                 |                  |                  |                  |                   |                |    |    |                  | 11               |                 |                  |                  |                 |                 |                 |   |

## OPTIONAL INLET SIZES

- ☐ 6" INLET AVAILABLE FOR PB-14A, PB-15A & PB-18  
☐ 7" INLET AVAILABLE FOR PB-15A  
☐ 8" INLET AVAILABLE FOR PB-14A & PB-18WA  
☐ 10" INLET AVAILABLE FOR PB-15A & PB-18

## NOTES:

1. HOUSINGS ARE ROTATABLE IN 45° INCREMENTS.
2. ALL MODELS: DISCHARGE FLANGE NOT AVAILABLE FOR DOWN BLAST DISCHARGE.
- \* 3. PB-14A 56 FRAME MOTOR MUST BE 56C ROUND BODY ONLY (NOT FOOT MOUNT).



TOLERANCES:  
ANGLES: ± 1°  
FRACTIONS ± 1/8

ALL DIMENSIONS IN INCHES  
UNLESS OTHERWISE SPECIFIED

SUPERSEDES:

CERTIFIED  
DRAWING

TITLE

PB BLOWERS - ARR. 4

DRAWING NO.  
A PB4REV.  
3

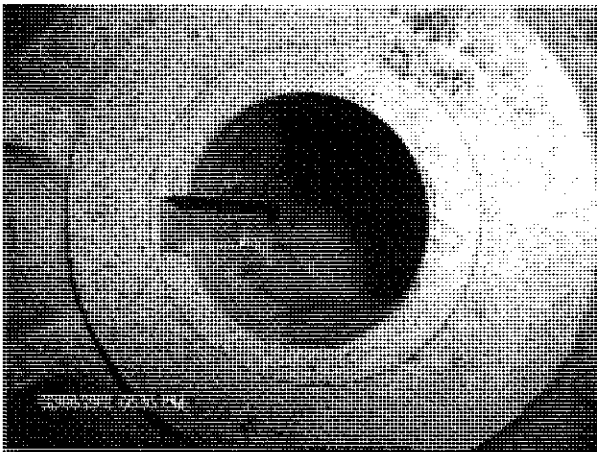


## MOTOR SERVICE



70 Cohoes Road, Watervliet, New York 12189

Arcadia Manufacturing: W/T 0044180  
Cincinnati PB-15A Blower



Fan Bore 001 pic



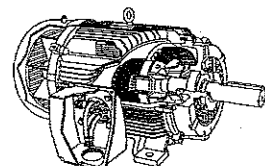
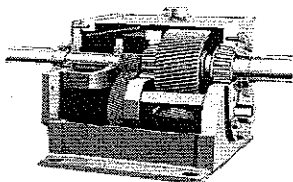
Fan Bore 002 pic

### Cincinnati Blower PB-15A:

The fan runs at 3600rpm; at that speed, the fan should be a shrink fit on the shaft. Upon our inspections, we found the fan bore to be pounded (see photos above); it fits loosely on the shaft and can be rocked back and forth by hand. The fan bore currently measures to be .007" oversized. This oversized fan bore can be attributed to the noises the customer is hearing. To fix the fan, we would make a steel bushing to press fit into the fan bore, re-bore the fan for a shrink fit and re-machine the keyway.

The 7.5hp motor on this unit is also in need of repairs. In order to correctly repair the motor, we would need to machine and re-bush both housings, rewind the stator, and install new bearings.

Per Troy Belting quote # 0044180, we have determined that this blower unit is beyond economic repair; the cost to repair the fan and motor will exceed the cost of a new unit.



## **Appendix B**

O&M Checklists and System  
Operation Logs

|           |           |
|-----------|-----------|
| Date      | 1/30/2012 |
| Inspector | JRW       |
| Time      | 10:00     |

| Recovery Wells       | Initial                | Final | Initial                | Final |
|----------------------|------------------------|-------|------------------------|-------|
|                      | RW-1                   |       | RW-2                   |       |
| Flow Rate (GPM)      | <u>Flow meter inop</u> |       | <u>Flow meter inop</u> |       |
| Total Flow (Gallons) | <u>Flow meter inop</u> |       | <u>Flow meter inop</u> |       |
| Water Level (Feet)   | 32.6                   | -     | 36.0                   | -     |

| Air Stripper                    |    | Initial | Final |
|---------------------------------|----|---------|-------|
| Blower VFD Setting (Hertz)      |    | 46      | -     |
| System Pressure (inches water)  |    | 11.0    | -     |
| Intake/Exhaust Piping OK? (Y/N) | Y  |         |       |
| Water Leaks (Y/N)               | N  |         |       |
| Water Temperature (F°)          | 50 |         |       |

[illegible]



**System Operation Log**  
**Gladding Cordage Groundwater Treatment System**  
**South Otselic, New York**  
**NYSDEC Site #709009**  
**315-653-7234**

| Date      | System Information |            |                 |                 |       |
|-----------|--------------------|------------|-----------------|-----------------|-------|
|           | Blower Pressure    | Sump Level | Recovery Well 1 | Recovery Well 2 | Notes |
| 1/1/2012  | X                  | X          | X               | X               | (1)   |
| 1/2/2012  | X                  | X          | X               | X               |       |
| 1/3/2012  | X                  | X          | X               | X               |       |
| 1/4/2012  | X                  | X          | X               | X               |       |
| 1/5/2012  | X                  | X          | X               | X               |       |
| 1/6/2012  | X                  | X          | X               | X               |       |
| 1/7/2012  | X                  | X          | X               | X               | (1)   |
| 1/8/2012  | X                  | X          | X               | X               | (1)   |
| 1/9/2012  | X                  | X          | X               | X               |       |
| 1/10/2012 | X                  | X          | X               | X               |       |
| 1/11/2012 | X                  | X          | X               | X               |       |
| 1/12/2012 | X                  | X          | X               | X               |       |
| 1/13/2012 | X                  | X          | X               | X               |       |
| 1/14/2012 | X                  | X          | X               | X               | (1)   |
| 1/15/2012 | X                  | X          | X               | X               | (1)   |
| 1/16/2012 | X                  | X          | X               | X               |       |
| 1/17/2012 | X                  | X          | X               | X               |       |
| 1/18/2012 | X                  | X          | X               | X               |       |
| 1/19/2012 | X                  | X          | X               | X               |       |
| 1/20/2012 | X                  | X          | X               | X               |       |
| 1/21/2012 | X                  | X          | X               | X               | (1)   |
| 1/22/2012 | X                  | X          | X               | X               | (1)   |
| 1/23/2012 | X                  | X          | X               | X               |       |
| 1/24/2012 | X                  | X          | X               | X               |       |
| 1/25/2012 | X                  | X          | X               | X               |       |
| 1/26/2012 | X                  | X          | X               | X               |       |
| 1/27/2012 | X                  | X          | X               | X               |       |
| 1/28/2012 | X                  | X          | X               | X               | (1)   |
| 1/29/2012 | X                  | X          | X               | X               | (1)   |
| 1/30/2012 | X                  | X          | X               | X               |       |
| 1/31/2012 |                    |            |                 |                 | (2)   |

**Notes:**

X - Indicates normal operation

1 - No data recorded. System operation based on previous and subsequent day's call log.

2 - System shut down for repairs.

3 - System operation confirmed by daily PLC facsimile.

**System Operation Log**  
**Gladding Cordage Groundwater Treatment System**  
**South Otselic, New York**  
**NYSDEC Site #709009**  
**315-653-7234**

| Date      | System Information |            |                 |                 |       |
|-----------|--------------------|------------|-----------------|-----------------|-------|
|           | Blower Pressure    | Sump Level | Recovery Well 1 | Recovery Well 2 | Notes |
| 2/1/2012  |                    |            |                 |                 | (2)   |
| 2/2/2012  |                    |            |                 |                 | (2)   |
| 2/3/2012  |                    |            |                 |                 | (2)   |
| 2/4/2012  |                    |            |                 |                 | (2)   |
| 2/5/2012  |                    |            |                 |                 | (2)   |
| 2/6/2012  |                    |            |                 |                 | (2)   |
| 2/7/2012  |                    |            |                 |                 | (2)   |
| 2/8/2012  |                    |            |                 |                 | (2)   |
| 2/9/2012  |                    |            |                 |                 | (2)   |
| 2/10/2012 |                    |            |                 |                 | (2)   |
| 2/11/2012 |                    |            |                 |                 | (2)   |
| 2/12/2012 |                    |            |                 |                 | (2)   |
| 2/13/2012 |                    |            |                 |                 | (2)   |
| 2/14/2012 |                    |            |                 |                 | (2)   |
| 2/15/2012 |                    |            |                 |                 | (2)   |
| 2/16/2012 |                    |            |                 |                 | (2)   |
| 2/17/2012 |                    |            |                 |                 | (2)   |
| 2/18/2012 |                    |            |                 |                 | (2)   |
| 2/19/2012 |                    |            |                 |                 | (2)   |
| 2/20/2012 |                    |            |                 |                 | (2)   |
| 2/21/2012 |                    |            |                 |                 | (2)   |
| 2/22/2012 |                    |            |                 |                 | (2)   |
| 2/23/2012 |                    |            |                 |                 | (2)   |
| 2/24/2012 |                    |            |                 |                 | (2)   |
| 2/25/2012 |                    |            |                 |                 | (2)   |
| 2/26/2012 |                    |            |                 |                 | (2)   |
| 2/27/2012 |                    |            |                 |                 | (2)   |
| 2/28/2012 |                    |            |                 |                 | (2)   |
| 2/29/2012 |                    |            |                 |                 | (2)   |

**Notes:**

X - Indicates normal operation

1 - No data recorded. System operation based on previous and subsequent day's call log.

2 - System shut down for repairs.

3 - System operation confirmed by daily PLC facsimile.

**System Operation Log**  
**Gladding Cordage Groundwater Treatment System**  
**South Otselic, New York**  
**NYSDEC Site #709009**  
**315-653-7234**

| Date      | System Information |            |                 |                 |       |
|-----------|--------------------|------------|-----------------|-----------------|-------|
|           | Blower Pressure    | Sump Level | Recovery Well 1 | Recovery Well 2 | Notes |
| 3/1/2012  |                    |            |                 |                 | (2)   |
| 3/2/2012  |                    |            |                 |                 | (2)   |
| 3/3/2012  |                    |            |                 |                 | (2)   |
| 3/4/2012  |                    |            |                 |                 | (2)   |
| 3/5/2012  |                    |            |                 |                 | (2)   |
| 3/6/2012  |                    |            |                 |                 | (2)   |
| 3/7/2012  |                    |            |                 |                 | (2)   |
| 3/8/2012  |                    |            |                 |                 | (2)   |
| 3/9/2012  |                    |            |                 |                 | (2)   |
| 3/10/2012 |                    |            |                 |                 | (2)   |
| 3/11/2012 |                    |            |                 |                 | (2)   |
| 3/12/2012 |                    |            |                 |                 | (2)   |
| 3/13/2012 |                    |            |                 |                 | (2)   |
| 3/14/2012 |                    |            |                 |                 | (2)   |
| 3/15/2012 |                    |            |                 |                 | (2)   |
| 3/16/2012 |                    |            |                 |                 | (2)   |
| 3/17/2012 |                    |            |                 |                 | (2)   |
| 3/18/2012 |                    |            |                 |                 | (2)   |
| 3/19/2012 |                    |            |                 |                 | (2)   |
| 3/20/2012 |                    |            |                 |                 | (2)   |
| 3/21/2012 |                    |            |                 |                 | (2)   |
| 3/22/2012 | X                  | X          | X               | X               | (3)   |
| 3/23/2012 | X                  | X          | X               | X               | (3)   |
| 3/24/2012 | X                  | X          | X               | X               | (3)   |
| 3/25/2012 | X                  | X          | X               | X               | (3)   |
| 3/26/2012 | X                  | X          | X               | X               | (3)   |
| 3/27/2012 | X                  | X          | X               | X               | (3)   |
| 3/28/2012 | X                  | X          | X               | X               | (3)   |
| 3/29/2012 | X                  | X          | X               | X               | (3)   |
| 3/30/2012 | X                  | X          | X               | X               | (3)   |
| 3/31/2012 | X                  | X          | X               | X               | (3)   |

**Notes:**

X - Indicates normal operation

1 - No data recorded. System operation based on previous and subsequent day's call log.

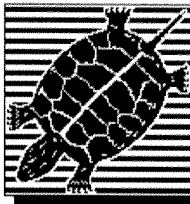
2 - System shut down for repairs.

3 - System operation confirmed by daily PLC facsimile.



## **Appendix C**

ProControl Daily Facsimile Reports



# ProControl Series II+

EOS Research Ltd. Fax Report

**To:**

JEREMY WYCKOFF

**From:**

THE NYSDEC GLADDING SYSTEM IN SOUTH OTSELIC NY @ 06:00:00 ON 03/23/2012  
SER NO 9605 : SETUP VER 1 : ROM 2.1996 : MODEL A2

**System Status:**

AUTO P09 : LAST SHUTDOWN @ 10:53:39 ON 03/22/2012 BY REMOTE

**Discrete Inputs:**

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_CTR is ON  | W2_CTR is ON  | ASBVFD is ON  | SMPCTR is OFF |
| ASP_HH is OFF | ASP_LO is OFF | FLRSMP is OFF | ACFAIL is OFF |
| E_STOP is OFF |               |               |               |

**Discrete Outputs:**

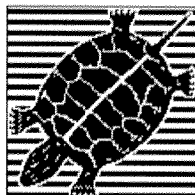
|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_GO is ON   | W2_GO is ON   | ASB_GO is ON  | SMP_GO is OFF |
| AIR_HH is OFF | ASMPHH is OFF | ASMPLL is OFF | W1_ALM is OFF |
| W2_ALM is OFF | ASBALM is OFF | SMPALM is OFF | AIR_LL is OFF |
| VEDRUN is OFF | VEDRST is OFF |               |               |

**Analog Inputs:**

|                 |                         |     |              |
|-----------------|-------------------------|-----|--------------|
| W1_FLO is 22.7  | GPM TOTAL FLOW is 49327 | GAL |              |
| W2_FLO is 18.0  | GPM TOTAL FLOW is 37613 | GAL |              |
| ASBPRS is 10.7  | IWC LIMITS are L: 5.0   | IWC | H: 30.0 IWC  |
| HTXFLO is 0.0   | GPM TOTAL FLOW is 481   | GAL |              |
| HTXPRS is 0.0   | PSI LIMITS are L: 0.0   | PSI | H: 60.0 PSI  |
| BLOSPD is 0     | RPM LIMITS are L: 0     | RPM | H: 100 RPM   |
| W1_AMP is 4.69  | AMP LIMITS are L: 0.00  | AMP | H: 10.00 AMP |
| W2_AMP is 4.46  | AMP LIMITS are L: 0.00  | AMP | H: 10.00 AMP |
| W1_LVL is 35.59 | FT LIMITS are L: 8.00   | FT  | H: 28.00 FT  |
| W2_LVL is 61.06 | FT LIMITS are L: 9.00   | FT  | H: 52.00 FT  |
| W1_PRS is 4.1   | PSI LIMITS are L: 0.5   | PSI | H: 100.0 PSI |
| W2_PRS is 4.4   | PSI LIMITS are L: 0.5   | PSI | H: 100.0 PSI |
| INTEMP is 58.2  | DEG LIMITS are L: 42.0  | DEG | H: 130.0 DEG |
| SMPAMP is 0.00  | AMP LIMITS are L: 0.00  | AMP | H: 20.00 AMP |

**Analog Outputs:**

ASBSPD 0.0 PCT MAN



# ProControl Series II+

EOS Research Ltd. Fax Report

**To:**

JEREMY WYCKOFF

**From:**

THE NYSDEC GLADDING SYSTEM IN SOUTH OTSELIC NY @ 06:00:00 ON 03/24/2012  
SER NO 9605 : SETUP VER 1 : ROM 2.1996 : MODEL A2

**System Status:**

AUTO P09 : LAST SHUTDOWN @ 13:03:26 ON 03/23/2012 BY REMOTE

**Discrete Inputs:**

|               |               |               |                |
|---------------|---------------|---------------|----------------|
| W1_CTR is ON  | W2_CTR is ON  | ASBVFD is ON  | SMPCTR is OFF  |
| ASP_HH is OFF | ASP_LO is OFF | FLRSMP is OFF | ACEFAIL is OFF |
| E_STOP is OFF |               |               |                |

**Discrete Outputs:**

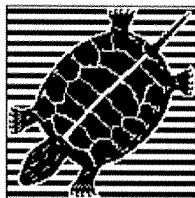
|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_GO is ON   | W2_GO is ON   | ASB_GO is ON  | SMP_GO is OFF |
| AIR_HH is OFF | ASMPHH is OFF | ASMPLL is OFF | W1_ALM is OFF |
| W2_ALM is OFF | ASBALM is OFF | SMPALM is OFF | AIR_LL is OFF |
| VFDRUN is OFF | VFDRST is OFF |               |               |

**Analog Inputs:**

|                 |                         |     |              |
|-----------------|-------------------------|-----|--------------|
| W1_FLO is 22.2  | GPM TOTAL FLOW is 80408 | GAL |              |
| W2_FLO is 18.1  | GPM TOTAL FLOW is 62304 | GAL |              |
| ASBPRS is 10.5  | IWC LIMITS are L: 5.0   | IWC | H: 30.0 IWC  |
| HTXFLO is 0.0   | GPM TOTAL FLOW is 481   | GAL |              |
| HTXPRS is 0.0   | PSI LIMITS are L: 0.0   | PSI | H: 60.0 PSI  |
| BLOSPD is 0     | RPM LIMITS are L: 0     | RPM | H: 100 RPM   |
| W1_AMP is 4.73  | AMP LIMITS are L: 0.00  | AMP | H: 10.00 AMP |
| W2_AMP is 4.51  | AMP LIMITS are L: 0.00  | AMP | H: 10.00 AMP |
| W1_LVL is 35.49 | FT LIMITS are L: 8.00   | FT  | H: 28.00 FT  |
| W2_LVL is 60.94 | FT LIMITS are L: 9.00   | FT  | H: 52.00 FT  |
| W1_PRS is 4.1   | PSI LIMITS are L: 0.5   | PSI | H: 100.0 PSI |
| W2_PRS is 4.3   | PSI LIMITS are L: 0.5   | PSI | H: 100.0 PSI |
| INTEMP is 58.5  | DEG LIMITS are L: 42.0  | DEG | H: 130.0 DEG |
| SMPAMP is 0.01  | AMP LIMITS are L: 0.00  | AMP | H: 20.00 AMP |

**Analog Outputs:**

ASBSPD 0.0 PCT MAN



# ProControl Series II+

EOS Research Ltd.

Fax Report

## To:

JEREMY WYCKOFF

## From:

THE NYSDEC GLADDING SYSTEM IN SOUTH OTSELIC NY @ 06:00:00 ON 03/25/2012  
SER NO 9605 : SETUP VER 1 : ROM 2.1996 : MODEL A2

## System Status:

AUTO P09 : LAST SHUTDOWN @ 13:03:26 ON 03/23/2012 BY REMOTE

## Discrete Inputs:

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_CTR is ON  | W2_CTR is ON  | ASBVFD is ON  | SMPCTR is OFF |
| ASP_HH is OFF | ASP_LO is OFF | FLRSMP is OFF | ACFAIL is OFF |
| E_STOP is OFF |               |               |               |

## Discrete Outputs:

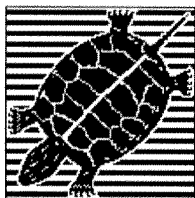
|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_GO is ON   | W2_GO is ON   | ASB_GO is ON  | SMP_GO is OFF |
| AIR_HH is OFF | ASMPHH is OFF | ASMPLL is OFF | W1_ALM is OFF |
| W2_ALM is OFF | ASBALM is OFF | SMPALM is OFF | AIR_LL is OFF |
| VEDRUN is OFF | VEDRST is OFF |               |               |

## Analog Inputs:

|                 |                          |     |              |
|-----------------|--------------------------|-----|--------------|
| W1_FLO is 22.7  | GPM TOTAL FLOW is 113129 | GAL |              |
| W2_FLO is 18.2  | GPM TOTAL FLOW is 88428  | GAL |              |
| ASBPRS is 10.7  | IWC LIMITS are L: 5.0    | IWC | H: 30.0 IWC  |
| HTXFLO is 0.0   | GPM TOTAL FLOW is 481    | GAL |              |
| HTXPRS is 0.0   | PSI LIMITS are L: 0.0    | PSI | H: 60.0 PSI  |
| BLOSPD is 0     | RPM LIMITS are L: 0      | RPM | H: 100 RPM   |
| W1_AMP is 4.73  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W2_AMP is 4.52  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W1_LVL is 35.43 | FT LIMITS are L: 8.00    | FT  | H: 28.00 FT  |
| W2_LVL is 60.92 | FT LIMITS are L: 9.00    | FT  | H: 52.00 FT  |
| W1_PRS is 4.1   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| W2_PRS is 4.4   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| INTEMP is 55.2  | DEG LIMITS are L: 42.0   | DEG | H: 130.0 DEG |
| SMPAMP is 0.00  | AMP LIMITS are L: 0.00   | AMP | H: 20.00 AMP |

## Analog Outputs:

ASBSPD 0.0 PCT MAN



# ProControl Series II+

EOS Research Ltd.

Fax Report

## To:

JEREMY WYCKOFF

## From:

THE NYSDEC GLADDING SYSTEM IN SOUTH OTSELIC NY @ 06:00:00 ON 03/26/2012  
SER NO 9605 : SETUP VER 1 : ROM 2.1996 : MODEL A2

## System Status:

AUTO P09 : LAST SHUTDOWN @ 13:03:26 ON 03/23/2012 BY REMOTE

## Discrete Inputs:

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_CTR is ON  | W2_CTR is ON  | ASBVFD is ON  | SMPCTR is OFF |
| ASP_HH is OFF | ASP_LO is OFF | FLRSMP is OFF | ACFAIL is OFF |
| E_STOP is OFF |               |               |               |

## Discrete Outputs:

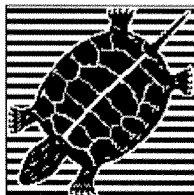
|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_GO is ON   | W2_GO is ON   | ASB_GO is ON  | SMP_GO is OFF |
| AIR_HH is OFF | ASMPHH is OFF | ASMPLL is OFF | W1_ALM is OFF |
| W2_ALM is OFF | ASBALM is OFF | SMPALM is OFF | AIR_LL is OFF |
| VFDRUN is OFF | VFDRST is OFF |               |               |

## Analog Inputs:

|                 |                          |     |              |
|-----------------|--------------------------|-----|--------------|
| W1_FLO is 22.7  | GPM TOTAL FLOW is 145765 | GAL |              |
| W2_FLO is 18.1  | GPM TOTAL FLOW is 114555 | GAL |              |
| ASBPRS is 10.7  | IWC LIMITS are L: 5.0    | IWC | H: 30.0 IWC  |
| HTXFLO is 0.0   | GPM TOTAL FLOW is 481    | GAL |              |
| HTXPRS is 0.0   | PSI LIMITS are L: 0.0    | PSI | H: 60.0 PSI  |
| BLOSPD is 0     | RPM LIMITS are L: 0      | RPM | H: 100 RPM   |
| W1_AMP is 4.67  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W2_AMP is 4.47  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W1_LVL is 35.48 | FT LIMITS are L: 8.00    | FT  | H: 28.00 FT  |
| W2_LVL is 60.87 | FT LIMITS are L: 9.00    | FT  | H: 52.00 FT  |
| W1_PRS is 4.1   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| W2_PRS is 4.4   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| INTEMP is 53.5  | DEG LIMITS are L: 42.0   | DEG | H: 130.0 DEG |
| SMPAMP is 0.00  | AMP LIMITS are L: 0.00   | AMP | H: 20.00 AMP |

## Analog Outputs:

ASBSPD 0.0 PCT MAN



# ProControl Series II+

EOS Research Ltd.

Fax Report

**To:**

JEREMY WYCKOFF

**From:**

THE NYSDEC GLADDING SYSTEM IN SOUTH OTSELIC NY @ 06:00:00 ON 03/27/2012  
SER NO 9605 : SETUP VER 1 : ROM 2.1996 : MODEL A2

**System Status:**

AUTO P09 : LAST SHUTDOWN @ 13:03:26 ON 03/23/2012 BY REMOTE

**Discrete Inputs:**

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_CTR is ON  | W2_CTR is ON  | ASBVFD is ON  | SMPCTR is OFF |
| ASP_HH is OFF | ASP_LO is OFF | FLRSMP is OFF | ACFAIL is OFF |
| E_STOP is OFF |               |               |               |

**Discrete Outputs:**

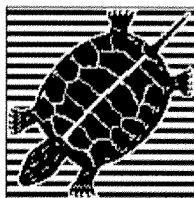
|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_GO is ON   | W2_GO is ON   | ASB_GO is ON  | SMP_GO is OFF |
| AIR_HH is OFF | ASMPHH is OFF | ASMPLL is OFF | W1_ALM is OFF |
| W2_ALM is OFF | ASBALM is OFF | SMPALM is OFF | AIR_LL is OFF |
| VFDRUN is OFF | VFDRST is OFF |               |               |

**Analog Inputs:**

|                 |                          |     |              |
|-----------------|--------------------------|-----|--------------|
| W1_FLO is 22.7  | GPM TOTAL FLOW is 178328 | GAL |              |
| W2_FLO is 18.0  | GPM TOTAL FLOW is 140697 | GAL |              |
| ASBPRS is 11.1  | IWC LIMITS are L: 5.0    | IWC | H: 30.0 IWC  |
| HTXFLO is 0.0   | GPM TOTAL FLOW is 481    | GAL |              |
| HTXPRS is 0.0   | PSI LIMITS are L: 0.0    | PSI | H: 60.0 PSI  |
| BLOSPD is 0     | RPM LIMITS are L: 0      | RPM | H: 100 RPM   |
| W1_AMP is 4.57  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W2_AMP is 4.35  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W1_LVL is 36.04 | FT LIMITS are L: 8.00    | FT  | H: 28.00 FT  |
| W2_LVL is 60.79 | FT LIMITS are L: 9.00    | FT  | H: 52.00 FT  |
| W1_PRS is 4.2   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| W2_PRS is 4.5   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| INTEMP is 45.5  | DEG LIMITS are L: 42.0   | DEG | H: 130.0 DEG |
| SMPAMP is 0.00  | AMP LIMITS are L: 0.00   | AMP | H: 20.00 AMP |

**Analog Outputs:**

ASBSPD 0.0 PCT MAN



# ProControl Series II+

EOS Research Ltd.

Fax Report

## To:

JEREMY WYCKOFF

## From:

THE NYSDEC GLADDING SYSTEM IN SOUTH OTSELIC NY @ 06:00:00 ON 03/28/2012  
SER NO 9605 : SETUP VER 1 : ROM 2.1996 : MODEL A2

## System Status:

AUTO P09 : LAST SHUTDOWN @ 13:03:26 ON 03/23/2012 BY REMOTE

## Discrete Inputs:

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_CTR is ON  | W2_CTR is ON  | ASBVFD is ON  | SMPCTR is OFF |
| ASP_HH is OFF | ASP_LO is OFF | FLRSMP is OFF | ACFAIL is OFF |
| E_STOP is OFF |               |               |               |

## Discrete Outputs:

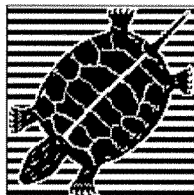
|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_GO is ON   | W2_GO is ON   | ASB_GO is ON  | SMP_GO is OFF |
| AIR_HH is OFF | ASMPHH is OFF | ASMPLL is OFF | W1_ALM is OFF |
| W2_ALM is OFF | ASBALM is OFF | SMPALM is OFF | AIR_LL is OFF |
| VFDRUN is OFF | VFDRST is OFF |               |               |

## Analog Inputs:

|                 |                          |     |              |
|-----------------|--------------------------|-----|--------------|
| W1_FLO is 22.7  | GPM TOTAL FLOW is 210857 | GAL |              |
| W2_FLO is 18.2  | GPM TOTAL FLOW is 166831 | GAL |              |
| ASBPRS is 10.7  | IWC LIMITS are L: 5.0    | IWC | H: 30.0 IWC  |
| HTXFLO is 0.0   | GPM TOTAL FLOW is 481    | GAL |              |
| HTXPRS is 0.0   | PSI LIMITS are L: 0.0    | PSI | H: 60.0 PSI  |
| BLOSPD is 0     | RPM LIMITS are L: 0      | RPM | H: 100 RPM   |
| W1_AMP is 4.63  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W2_AMP is 4.43  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W1_LVL is 35.54 | FT LIMITS are L: 8.00    | FT  | H: 28.00 FT  |
| W2_LVL is 60.71 | FT LIMITS are L: 9.00    | FT  | H: 52.00 FT  |
| W1_PRS is 4.1   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| W2_PRS is 4.4   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| INTEMP is 51.1  | DEG LIMITS are L: 42.0   | DEG | H: 130.0 DEG |
| SMPAMP is 0.00  | AMP LIMITS are L: 0.00   | AMP | H: 20.00 AMP |

## Analog Outputs:

ASBSPD 0.0 PCT MAN



# ProControl Series II+

EOS Research Ltd.

Fax Report

**To:**

JEREMY WYCKOFF

**From:**

THE NYSDEC GLADDING SYSTEM IN SOUTH OTSELIC NY @ 06:00:00 ON 03/29/2012  
SER NO 9605 : SETUP VER 1 : ROM 2.1996 : MODEL A2

**System Status:**

AUTO P09 : LAST SHUTDOWN @ 13:03:26 ON 03/23/2012 BY REMOTE

**Discrete Inputs:**

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_CTR is ON  | W2_CTR is ON  | ASBVFD is ON  | SMPCTR is OFF |
| ASP_HH is OFF | ASP_LO is OFF | FLRSMP is OFF | ACFAIL is OFF |
| E_STOP is OFF |               |               |               |

**Discrete Outputs:**

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_GO is ON   | W2_GO is ON   | ASB_GO is ON  | SMP_GO is OFF |
| AIR_HH is OFF | ASMPHH is OFF | ASMPLL is OFF | W1_ALM is OFF |
| W2_ALM is OFF | ASBALM is OFF | SMPALM is OFF | AIR_LL is OFF |
| VFDRUN is OFF | VFDRST is OFF |               |               |

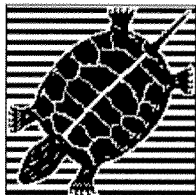
**Analog Inputs:**

|                 |                          |     |              |
|-----------------|--------------------------|-----|--------------|
| W1_FLO is 22.6  | GPM TOTAL FLOW is 243307 | GAL |              |
| W2_FLO is 18.4  | GPM TOTAL FLOW is 192972 | GAL |              |
| ASBPRS is 10.7  | IWC LIMITS are L: 5.0    | IWC | H: 30.0 IWC  |
| HTXFLO is 0.0   | GPM TOTAL FLOW is 481    | GAL |              |
| HTXPRS is 0.0   | PSI LIMITS are L: 0.0    | PSI | H: 60.0 PSI  |
| BLOSPD is 0     | RPM LIMITS are L: 0      | RPM | H: 100 RPM   |
| W1_AMP is 4.66  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W2_AMP is 4.44  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W1_LVL is 35.53 | FT LIMITS are L: 8.00    | FT  | H: 28.00 FT  |
| W2_LVL is 60.75 | FT LIMITS are L: 9.00    | FT  | H: 52.00 FT  |
| W1_PRS is 4.1   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| W2_PRS is 4.4   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| INTEMP is 52.3  | DEG LIMITS are L: 42.0   | DEG | H: 130.0 DEG |
| SMPAMP is 0.01  | AMP LIMITS are L: 0.00   | AMP | H: 20.00 AMP |

**Analog Outputs:**

ASBSPD 0.0 PCT MAN





# ProControl Series II+

EOS Research Ltd.

Fax Report

## To:

JEREMY WYCKOFF

## From:

THE NYSDEC GLADDING SYSTEM IN SOUTH OTSELIC NY @ 06:00:00 ON 03/30/2012  
SER NO 9605 : SETUP VER 1 : ROM 2.1996 : MODEL A2

## System Status:

AUTO P09 : LAST SHUTDOWN @ 13:03:26 ON 03/23/2012 BY REMOTE

## Discrete Inputs:

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_CTR is ON  | W2_CTR is ON  | ASBVFD is ON  | SMPCTR is OFF |
| ASP_HH is OFF | ASP_LO is OFF | FLRSMP is OFF | ACFAIL is OFF |
| E_STOP is OFF |               |               |               |

## Discrete Outputs:

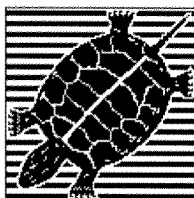
|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_GO is ON   | W2_GO is ON   | ASB_GO is ON  | SMP_GO is OFF |
| AIR_HH is OFF | ASMPHH is OFF | ASMPLL is OFF | W1_ALM is OFF |
| W2_ALM is OFF | ASBALM is OFF | SMPALM is OFF | AIR_LL is OFF |
| VFDRUN is OFF | VFDRST is OFF |               |               |

## Analog Inputs:

|                 |                          |     |              |
|-----------------|--------------------------|-----|--------------|
| W1_FLO is 22.9  | GPM TOTAL FLOW is 275811 | GAL |              |
| W2_FLO is 18.1  | GPM TOTAL FLOW is 219128 | GAL |              |
| ASBPRS is 10.9  | IWC LIMITS are L: 5.0    | IWC | H: 30.0 IWC  |
| HTXFLO is 0.0   | GPM TOTAL FLOW is 481    | GAL |              |
| HTXPRS is 0.0   | PSI LIMITS are L: 0.0    | PSI | H: 60.0 PSI  |
| BLOSPD is 0     | RPM LIMITS are L: 0      | RPM | H: 100 RPM   |
| W1_AMP is 4.67  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W2_AMP is 4.44  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W1_LVL is 35.99 | FT LIMITS are L: 8.00    | FT  | H: 28.00 FT  |
| W2_LVL is 60.81 | FT LIMITS are L: 9.00    | FT  | H: 52.00 FT  |
| W1_PRS is 4.1   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| W2_PRS is 4.4   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| INTEMP is 48.4  | DEG LIMITS are L: 42.0   | DEG | H: 130.0 DEG |
| SMPAMP is 0.00  | AMP LIMITS are L: 0.00   | AMP | H: 20.00 AMP |

## Analog Outputs:

ASBSPD 0.0 PCT MAN



# ProControl Series II+

ECS Research Ltd.

Fax Report

**To:**

JEREMY WYCKOFF

**From:**

THE NYSDEC GLADDING SYSTEM IN SOUTH OTSELIC NY @ 06:00:00 ON 03/31/2012  
SER NO 9605 : SETUP VER 1 : ROM 2.1996 : MODEL A2

**System Status:**

AUTO P09 : LAST SHUTDOWN @ 13:03:26 ON 03/23/2012 BY REMOTE

**Discrete Inputs:**

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_CTR is ON  | W2_CTR is ON  | ASBVFD is ON  | SMPCTR is OFF |
| ASP_HH is OFF | ASP_LO is OFF | FLRSMP is OFF | ACFAIL is OFF |
| E_STOP is OFF |               |               |               |

**Discrete Outputs:**

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| W1_GO is ON   | W2_GO is ON   | ASB_GO is ON  | SMP_GO is OFF |
| AIR_HH is OFF | ASMPHH is OFF | ASMPLL is OFF | W1_ALM is OFF |
| W2_ALM is OFF | ASBALM is OFF | SMPALM is OFF | AIR_LL is OFF |
| VFDRUN is OFF | VFDRST is OFF |               |               |

**Analog Inputs:**

|                 |                          |     |              |
|-----------------|--------------------------|-----|--------------|
| W1_FLO is 22.6  | GPM TOTAL FLOW is 308309 | GAL |              |
| W2_FLO is 18.6  | GPM TOTAL FLOW is 245281 | GAL |              |
| ASBPRS is 10.7  | IWC LIMITS are L: 5.0    | IWC | H: 30.0 IWC  |
| HTXFLO is 0.0   | GPM TOTAL FLOW is 481    | GAL |              |
| HTXPRS is 0.0   | PSI LIMITS are L: 0.0    | PSI | H: 60.0 PSI  |
| BLOSPD is 0     | RPM LIMITS are L: 0      | RPM | H: 100 RPM   |
| W1_AMP is 4.65  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W2_AMP is 4.43  | AMP LIMITS are L: 0.00   | AMP | H: 10.00 AMP |
| W1_LVL is 35.72 | FT LIMITS are L: 8.00    | FT  | H: 28.00 FT  |
| W2_LVL is 60.73 | FT LIMITS are L: 9.00    | FT  | H: 52.00 FT  |
| W1_PRS is 4.1   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| W2_PRS is 4.4   | PSI LIMITS are L: 0.5    | PSI | H: 100.0 PSI |
| INTEMP is 50.1  | DEG LIMITS are L: 42.0   | DEG | H: 130.0 DEG |
| SMPAMP is 0.01  | AMP LIMITS are L: 0.00   | AMP | H: 20.00 AMP |

**Analog Outputs:**

ASBSPD 0.0 PCT MAN

## **Appendix D**

Analytical Reporting Forms

## **ANALYTICAL RESULTS SUMMARY**

**PROJECT NAME : DEC GLADDING CORDAGE**

**ARCADIS INC.  
855 Route 146, Suite 210**

**Clifton Park , NY - 12065  
Phone No: 5182507300**

**ORDER ID : D1333  
ATTENTION : Jeremy Wyckoff**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**FORM S-I**  
**SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY**

| <b>NYSDEC<br/>Sample<br/>ID/Code</b> | <b>Laboratory<br/>Sample<br/>ID/Code</b> | <b>VOA<br/>GC/MS<br/>(Method #)</b> | <b>BNA<br/>GC/MS<br/>(Method #)</b> | <b>VOA GC<br/>(Method<br/>#)</b> | <b>Pest PCBs<br/>(Method #)</b> | <b>Metals<br/>(Method<br/>#)</b> | <b>Other<br/>(Method<br/>#)</b> |
|--------------------------------------|------------------------------------------|-------------------------------------|-------------------------------------|----------------------------------|---------------------------------|----------------------------------|---------------------------------|
| RW-1                                 | D1333-01                                 | 8260-Low                            |                                     |                                  |                                 |                                  |                                 |
| RW-2                                 | D1333-02                                 | 8260-Low                            |                                     |                                  |                                 |                                  |                                 |
| EFF-46HZ                             | D1333-03                                 | 8260-Low                            |                                     |                                  |                                 |                                  |                                 |
| TRIPBLANK                            | D1333-04                                 | 8260-Low                            |                                     |                                  |                                 |                                  |                                 |

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL  
CONSERVATION**

**FORM S-IIb**

**SAMPLE PREPARATION AND ANALYSIS SUMMARY  
VOLATILE (VOA) ANALYSES**

| <b>Laboratory<br/>Sample ID</b> | <b>Matrix</b> | <b>Date<br/>Collected</b> | <b>Date<br/>Rec'd at<br/>Lab</b> | <b>Date<br/>Extracted</b> | <b>Date<br/>Analyzed</b> |
|---------------------------------|---------------|---------------------------|----------------------------------|---------------------------|--------------------------|
| D1333-01                        | WATER         | 01/30/12                  | 01/31/12                         |                           | 02/02/12                 |
| D1333-02                        | WATER         | 01/30/12                  | 01/31/12                         |                           | 02/02/12                 |
| D1333-03                        | WATER         | 01/30/12                  | 01/31/12                         |                           | 02/02/12                 |
| D1333-04                        | WATER         | 01/30/12                  | 01/31/12                         |                           | 02/02/12                 |

\* Details For Test :VOC-TCLVOA-10

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL  
CONSERVATION

FORM S-III

SAMPLE PREPARATION AND ANALYSIS SUMMARY  
MISCELLANEOUS ORGANIC ANALYSES

| Laboratory<br>Sample ID | Matrix | Analytical<br>Protocol | Extraction<br>Method | Auxiliary<br>Cleanup | Dil/Conc<br>Factor |
|-------------------------|--------|------------------------|----------------------|----------------------|--------------------|
| D1333-01                | Water  | 8260-Low               | 5030                 |                      |                    |
| D1333-02                | Water  | 8260-Low               | 5030                 |                      |                    |
| D1333-03                | Water  | 8260-Low               | 5030                 |                      |                    |
| D1333-04                | Water  | 8260-Low               | 5030                 |                      |                    |

---



## Cover Page

**Order ID :** D1333

**Project ID :** DEC Gladding Cordage

**Client :** Arcadis Inc.

### Lab Sample Number

D1333-01  
D1333-02  
D1333-03  
D1333-04

### Client Sample Number

RW-1  
RW-2  
EFF-46HZ  
TRIPBLANK

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : \_\_\_\_\_



**CHEMTECH**

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092

(908) 789-8900 Fax (908) 789-8922

www.chemtech.net

CHEMTECH PROJECT NO.

QUOTE NO.

COC Number

021183

## CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: ARCADISADDRESS: 855 Route 146 STE 210CITY: Clifton Park STATE: NY ZIP: 12065ATTENTION: Jeremy WyckoffPHONE: 518-250-7300 FAX: 518-250-7301

## CLIENT PROJECT INFORMATION

PROJECT NAME: NYSDEC - Gladys, CondyPROJECT NO: 00266365.0000 LOCATION: S. OtisliePROJECT MANAGER: J. Wyckoffe-mail: jeremy.wyckoff@arcadis-us.comPHONE: Same FAX: Same

## CLIENT BILLING INFORMATION

BILL TO: ARCADIS

00266365.0000

PO#:

ADDRESS:

CITY: Highlands Ranch STATE: CO ZIP:ATTENTION: Accts Payable PHONE:

## ANALYSIS

## DATA TURNAROUND INFORMATION

FAX: \_\_\_\_\_ DAYS: \_\_\_\_\_

HARD COPY: \_\_\_\_\_ DAYS: \_\_\_\_\_

EDD: 10 DAYS: \_\_\_\_\_PREAPPROVED TAT: ☐ YES ☐ NO

STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

## DATA DELIVERABLE INFORMATION

- ☐ RESULTS ONLY ☐ USEPA CLP  
☐ RESULTS + QC ☒ New York State ASP "B"  
☐ New Jersey REDUCED ☐ New York State ASP "A"  
☐ New Jersey CLP ☐ Other \_\_\_\_\_  
☒ EDD FORMAT NYSDEC - EQUIS

TEL VOES

## PRESERVATIVES

## COMMENTS

| CHEMTECH<br>SAMPLE<br>ID | PROJECT<br>SAMPLE IDENTIFICATION | SAMPLE<br>MATRIX | SAMPLE<br>TYPE |      | SAMPLE<br>COLLECTION |      | # OF BOTTLES |   |  |  |  |  |  |  |  |  | ← Specify Preservatives<br>A - HCl    B - HNO <sub>3</sub><br>C - H <sub>2</sub> SO <sub>4</sub> D - NaOH<br>E - ICE    F - Other |  |
|--------------------------|----------------------------------|------------------|----------------|------|----------------------|------|--------------|---|--|--|--|--|--|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------|--|
|                          |                                  |                  | COMP           | GRAB | DATE                 | TIME |              | A |  |  |  |  |  |  |  |  |                                                                                                                                   |  |
| 1.                       | RW-1                             | AQ               |                | X    | 1/30/12              | 1005 | 2            | X |  |  |  |  |  |  |  |  |                                                                                                                                   |  |
| 2.                       | RW-2                             | ↓                |                | X    | ↓                    | 1010 | 2            | ↓ |  |  |  |  |  |  |  |  |                                                                                                                                   |  |
| 3.                       | EFF -46 H2                       | ↓                |                | X    | ↓                    | 1015 | 2            | ↓ |  |  |  |  |  |  |  |  |                                                                                                                                   |  |
| 4.                       | TRIF Blank                       | ↓                | -              |      | ↓                    | -    | 2            | ↓ |  |  |  |  |  |  |  |  |                                                                                                                                   |  |
| 5.                       |                                  |                  |                |      |                      |      |              |   |  |  |  |  |  |  |  |  |                                                                                                                                   |  |
| 6.                       |                                  |                  |                |      |                      |      |              |   |  |  |  |  |  |  |  |  |                                                                                                                                   |  |
| 7.                       |                                  |                  |                |      |                      |      |              |   |  |  |  |  |  |  |  |  |                                                                                                                                   |  |
| 8.                       |                                  |                  |                |      |                      |      |              |   |  |  |  |  |  |  |  |  |                                                                                                                                   |  |
| 9.                       |                                  |                  |                |      |                      |      |              |   |  |  |  |  |  |  |  |  |                                                                                                                                   |  |
| 10.                      |                                  |                  |                |      |                      |      |              |   |  |  |  |  |  |  |  |  |                                                                                                                                   |  |

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

|                                                  |                                   |                                              |                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------|-----------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RELINQUISHED BY SAMPLER<br><u>Jeremy Wyckoff</u> | DATE/TIME:<br><u>1/30/12 1455</u> | RECEIVED BY:<br><u>1. [Signature]</u>        | Conditions of bottles or coolers at receipt: <input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non Compliant<br>MeOH extraction requires an additional 4 oz jar for percent solid.<br>Comments: | Cooler Temp. <u>4°C</u><br>Ice in Cooler?: <u>y</u>                                                                                                                                                                                                                                     |
| RELINQUISHED BY:<br><u>2. [Signature]</u>        | DATE/TIME:                        | RECEIVED BY:<br><u>2. [Signature]</u>        |                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                         |
| RELINQUISHED BY:<br><u>3. FedEx</u>              | DATE/TIME: <u>1/31/12 9:05</u>    | RECEIVED FOR LAB BY:<br><u>3. Dilsh Shah</u> | Page <u>1</u> of <u>1</u>                                                                                                                                                                                            | SHIPPED VIA: CLIENT: <input type="checkbox"/> HAND DELIVERED <input checked="" type="checkbox"/> OVERNIGHT<br>CHEMTECH: <input type="checkbox"/> PICKED UP <input type="checkbox"/> OVERNIGHT<br>Shipment Complete: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO |

0007

00028

FedEx  
Express

Emp# 56082 30JAN12 BGMA 50FC1/9F59/F5F4

## 1 From This portion of...

Date 1/30/12

FedEx  
Tracking Number

898919775170

Sender's  
NameJEREMY WICKSTOFF  
LINDSAY WICKSTOFF

Phone

614 350-2300

Company

MALCOLM SCHULTE INC

Address

805 ROUTE 136 LIE 210

Dept./Floor/Suite/Room

City

CLIFTON PARK

State

ZIP

10045-1020

## 2 Your Internal Billing Reference

00266365.0000

## 3 To

Recipient's  
Name

Sample Receiving

Phone

908 789-8900

Company

Chemtech

Address

284 Sheffield St.

Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City

Mountain side

State

ZIP

07092

HOLD Weekday  
FedEx location address  
REQUIRED. NOT available for  
FedEx First Overnight.☐HOLD Saturday  
FedEx location address  
REQUIRED. Available ONLY for  
FedEx Priority Overnight and  
FedEx 2Day to select locations.☐

8989 1977 5170

PS  
1/31/12  
9:05

0215

## press Package Service

\* To most locations.

NOTE: Service order has changed. Please select carefully.

## Next Business Day

☐ FedEx First Overnight  
Earliest next business morning delivery to select  
locations. Friday shipments will be delivered on  
Monday unless SATURDAY Delivery is selected.☒ FedEx Priority Overnight  
Next business morning.\* Friday shipments will be  
delivered on Monday unless SATURDAY Delivery  
is selected.☐ FedEx Standard Overnight  
Next business afternoon.\*  
Saturday Delivery NOT available.

## 2 or 3 Business Days

☐ NEW FedEx 2Day A.M.  
Second business morning.\*  
Saturday Delivery NOT available.☐ FedEx 2Day  
Second business afternoon.\* Thursday shipments  
will be delivered on Monday unless SATURDAY  
Delivery is selected.☐ FedEx Express Saver  
Third business day.\*  
Saturday Delivery NOT available.

## 5 Packaging

\* Declared value limit \$500.

☐ FedEx Envelope\*☐ FedEx Pak\*☐ FedEx  
Box☐ FedEx  
Tube☒ Other

## 6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery  
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.☐ No Signature Required  
Package may be left without  
obtaining a signature for delivery.☒ Direct Signature  
Someone at recipient's address  
may sign for delivery. Fee applies.☐ Indirect Signature  
If no one is available at recipient's  
address, someone at a neighboring  
address may sign for delivery. For  
residential deliveries only. Fee applies.

## Does this shipment contain dangerous goods?

One box must be checked.

☒ No☐ Yes  
As per attached  
Shipper's Declaration.☐ Yes  
Shipper's Declaration  
not required.☐ Dry Ice  
Dry Ice, 9 UN 1845 x kg☐ Cargo Aircraft Only

## 7 Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

Obtain recip.  
Acct. No. ☐☒ Sender  
Acct. No. in Section  
1 will be billed.☐ Recipient☐ Third Party☐ Credit Card☐ Cash/Check

Total Packages

Total Weight

lbs.

Credit Card Auth.

611

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RECIPIENT: PEEL HERE

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## **CASE NARRATIVE**

**Arcadis Inc.**

**Project Name: DEC Gladding Cordage**

**Project # N/A**

**Chemtech Project # D1333**

**Test Name: VOC-TCLVOA-10**

### **A. Number of Samples and Date of Receipt:**

4 Water samples were received on 01/31/2012.

### **B. Parameters**

According to the Chain of Custody document, the following analyses were requested: VOC-TCLVOA-10. This data package contains results for VOC-TCLVOA-10.

### **C. Analytical Techniques:**

The analysis performed on instrument MSVOA\_G were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator. The analysis of VOC-TCLVOA-10 was based on method 8260-Low.

### **D. QA/ QC Samples:**

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The MS {D1350-04MS} with File ID: VG040687.D recoveries met the requirements for all compounds except for 1,2-Dibromo-3-Chloropropane[134%], 1,2-Dibromoethane[122%], 2-Hexanone[132%], Acetone[141%] and o-Xylene[122%] .

The MSD {D1350-05MSD} with File ID: VG040688.D recoveries met the acceptable requirements except for 1,2-Dibromoethane[124%], Acetone[141%], Methyl tert-butyl Ether[128%] and o-Xylene[124%] .

The RPD recoveries met criteria .

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Initial Calibration Verification met the requirements .

The Continuous Calibration File ID VG040672.D met the requirements except for Methyl Acetate, 2-Hexanone, Acetone and 1,2-Dibromo-3-Chloropropane but they were not detected in any samples.

The Tuning criteria met requirements.

### **E. Additional Comments:**

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial



Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

**F. Manual Integration Comments:**

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

---

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature\_\_\_\_\_

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 01/30/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 01/31/12      |
| Client Sample ID:  | RW-1                 | SDG No.:        | D1333         |
| Lab Sample ID:     | D1333-01             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RTX-VMS ID : 0.18    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VG040682.D        | 1         |           | 02/02/12      | vg020112      |

| CAS Number     | Parameter                      | Conc. | Qualifier | LOD | LOQ / CRQL | Units |
|----------------|--------------------------------|-------|-----------|-----|------------|-------|
| <b>TARGETS</b> |                                |       |           |     |            |       |
| 75-71-8        | Dichlorodifluoromethane        | 1     | U         | 0.5 | 1          | ug/L  |
| 74-87-3        | Chloromethane                  | 1     | U         | 0.5 | 1          | ug/L  |
| 75-01-4        | Vinyl Chloride                 | 1     | U         | 0.5 | 1          | ug/L  |
| 74-83-9        | Bromomethane                   | 1     | U         | 0.5 | 1          | ug/L  |
| 75-00-3        | Chloroethane                   | 1     | U         | 0.5 | 1          | ug/L  |
| 75-69-4        | Trichlorofluoromethane         | 1     | U         | 0.5 | 1          | ug/L  |
| 76-13-1        | 1,1,2-Trichlorotrifluoroethane | 1     | U         | 0.5 | 1          | ug/L  |
| 75-35-4        | 1,1-Dichloroethene             | 1.8   |           | 0.5 | 1          | ug/L  |
| 67-64-1        | Acetone                        | 5     | U         | 2.5 | 5          | ug/L  |
| 75-15-0        | Carbon Disulfide               | 1     | U         | 0.5 | 1          | ug/L  |
| 1634-04-4      | Methyl tert-butyl Ether        | 1     | U         | 0.5 | 1          | ug/L  |
| 79-20-9        | Methyl Acetate                 | 1     | U         | 0.5 | 1          | ug/L  |
| 75-09-2        | Methylene Chloride             | 1     | U         | 0.5 | 1          | ug/L  |
| 156-60-5       | trans-1,2-Dichloroethene       | 1     | U         | 0.5 | 1          | ug/L  |
| 75-34-3        | 1,1-Dichloroethane             | 1.8   |           | 0.5 | 1          | ug/L  |
| 110-82-7       | Cyclohexane                    | 1     | U         | 0.5 | 1          | ug/L  |
| 78-93-3        | 2-Butanone                     | 5     | U         | 2.5 | 5          | ug/L  |
| 56-23-5        | Carbon Tetrachloride           | 8.2   |           | 0.5 | 1          | ug/L  |
| 156-59-2       | cis-1,2-Dichloroethene         | 1     | U         | 0.5 | 1          | ug/L  |
| 67-66-3        | Chloroform                     | 1     | U         | 0.5 | 1          | ug/L  |
| 71-55-6        | 1,1,1-Trichloroethane          | 58    |           | 0.5 | 1          | ug/L  |
| 108-87-2       | Methylcyclohexane              | 1     | U         | 0.5 | 1          | ug/L  |
| 71-43-2        | Benzene                        | 1     | U         | 0.5 | 1          | ug/L  |
| 107-06-2       | 1,2-Dichloroethane             | 1     | U         | 0.5 | 1          | ug/L  |
| 79-01-6        | Trichloroethene                | 1     | U         | 0.5 | 1          | ug/L  |
| 78-87-5        | 1,2-Dichloropropane            | 1     | U         | 0.5 | 1          | ug/L  |
| 75-27-4        | Bromodichloromethane           | 1     | U         | 0.5 | 1          | ug/L  |
| 108-10-1       | 4-Methyl-2-Pentanone           | 5     | U         | 2.5 | 5          | ug/L  |
| 108-88-3       | Toluene                        | 1     | U         | 0.5 | 1          | ug/L  |
| 10061-02-6     | t-1,3-Dichloropropene          | 1     | U         | 0.5 | 1          | ug/L  |
| 10061-01-5     | cis-1,3-Dichloropropene        | 1     | U         | 0.5 | 1          | ug/L  |

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 01/30/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 01/31/12      |
| Client Sample ID:  | RW-1                 | SDG No.:        | D1333         |
| Lab Sample ID:     | D1333-01             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RTX-VMS ID : 0.18    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VG040682.D        | 1         |           | 02/02/12      | vg020112      |

| CAS Number                | Parameter                   | Conc.   | Qualifier | LOD | LOQ / CRQL | Units   |
|---------------------------|-----------------------------|---------|-----------|-----|------------|---------|
| 79-00-5                   | 1,1,2-Trichloroethane       | 1       | U         | 0.5 | 1          | ug/L    |
| 591-78-6                  | 2-Hexanone                  | 5       | U         | 2.5 | 5          | ug/L    |
| 124-48-1                  | Dibromochloromethane        | 1       | U         | 0.5 | 1          | ug/L    |
| 106-93-4                  | 1,2-Dibromoethane           | 1       | U         | 0.5 | 1          | ug/L    |
| 127-18-4                  | Tetrachloroethene           | 1       | U         | 0.5 | 1          | ug/L    |
| 108-90-7                  | Chlorobenzene               | 1       | U         | 0.5 | 1          | ug/L    |
| 100-41-4                  | Ethyl Benzene               | 1       | U         | 0.5 | 1          | ug/L    |
| 179601-23-1               | m/p-Xylenes                 | 2       | U         | 1   | 2          | ug/L    |
| 95-47-6                   | o-Xylene                    | 1       | U         | 0.5 | 1          | ug/L    |
| 100-42-5                  | Styrene                     | 1       | U         | 0.5 | 1          | ug/L    |
| 75-25-2                   | Bromoform                   | 1       | U         | 0.5 | 1          | ug/L    |
| 98-82-8                   | Isopropylbenzene            | 1       | U         | 0.5 | 1          | ug/L    |
| 79-34-5                   | 1,1,2,2-Tetrachloroethane   | 1       | U         | 0.5 | 1          | ug/L    |
| 541-73-1                  | 1,3-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 106-46-7                  | 1,4-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 95-50-1                   | 1,2-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 96-12-8                   | 1,2-Dibromo-3-Chloropropane | 1       | U         | 0.5 | 1          | ug/L    |
| 120-82-1                  | 1,2,4-Trichlorobenzene      | 1       | U         | 0.5 | 1          | ug/L    |
| <b>SURROGATES</b>         |                             |         |           |     |            |         |
| 17060-07-0                | 1,2-Dichloroethane-d4       | 55      |           |     | 110%       | SPK: 50 |
| 1868-53-7                 | Dibromofluoromethane        | 50.4    |           |     | 101%       | SPK: 50 |
| 2037-26-5                 | Toluene-d8                  | 54.9    |           |     | 110%       | SPK: 50 |
| 460-00-4                  | 4-Bromofluorobenzene        | 44.6    |           |     | 89%        | SPK: 50 |
| <b>INTERNAL STANDARDS</b> |                             |         |           |     |            |         |
| 363-72-4                  | Pentafluorobenzene          | 1322420 | 3.91      |     |            |         |
| 540-36-3                  | 1,4-Difluorobenzene         | 1805460 | 4.71      |     |            |         |
| 3114-55-4                 | Chlorobenzene-d5            | 1568460 | 9.69      |     |            |         |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4      | 770884  | 13.4      |     |            |         |

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 01/30/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 01/31/12      |
| Client Sample ID:  | RW-2                 | SDG No.:        | D1333         |
| Lab Sample ID:     | D1333-02             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RTX-VMS ID : 0.18    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VG040681.D        | 1         |           | 02/02/12      | vg020112      |

| CAS Number     | Parameter                      | Conc. | Qualifier | LOD | LOQ / CRQL | Units |
|----------------|--------------------------------|-------|-----------|-----|------------|-------|
| <b>TARGETS</b> |                                |       |           |     |            |       |
| 75-71-8        | Dichlorodifluoromethane        | 1     | U         | 0.5 | 1          | ug/L  |
| 74-87-3        | Chloromethane                  | 1     | U         | 0.5 | 1          | ug/L  |
| 75-01-4        | Vinyl Chloride                 | 1     | U         | 0.5 | 1          | ug/L  |
| 74-83-9        | Bromomethane                   | 1     | U         | 0.5 | 1          | ug/L  |
| 75-00-3        | Chloroethane                   | 1     | U         | 0.5 | 1          | ug/L  |
| 75-69-4        | Trichlorofluoromethane         | 1     | U         | 0.5 | 1          | ug/L  |
| 76-13-1        | 1,1,2-Trichlorotrifluoroethane | 1     | U         | 0.5 | 1          | ug/L  |
| 75-35-4        | 1,1-Dichloroethene             | 1.4   |           | 0.5 | 1          | ug/L  |
| 67-64-1        | Acetone                        | 5     | U         | 2.5 | 5          | ug/L  |
| 75-15-0        | Carbon Disulfide               | 1     | U         | 0.5 | 1          | ug/L  |
| 1634-04-4      | Methyl tert-butyl Ether        | 1     | U         | 0.5 | 1          | ug/L  |
| 79-20-9        | Methyl Acetate                 | 1     | U         | 0.5 | 1          | ug/L  |
| 75-09-2        | Methylene Chloride             | 1     | U         | 0.5 | 1          | ug/L  |
| 156-60-5       | trans-1,2-Dichloroethene       | 1     | U         | 0.5 | 1          | ug/L  |
| 75-34-3        | 1,1-Dichloroethane             | 0.86  | J         | 0.5 | 1          | ug/L  |
| 110-82-7       | Cyclohexane                    | 1     | U         | 0.5 | 1          | ug/L  |
| 78-93-3        | 2-Butanone                     | 5     | U         | 2.5 | 5          | ug/L  |
| 56-23-5        | Carbon Tetrachloride           | 6.3   |           | 0.5 | 1          | ug/L  |
| 156-59-2       | cis-1,2-Dichloroethene         | 1     | U         | 0.5 | 1          | ug/L  |
| 67-66-3        | Chloroform                     | 1     | U         | 0.5 | 1          | ug/L  |
| 71-55-6        | 1,1,1-Trichloroethane          | 47    |           | 0.5 | 1          | ug/L  |
| 108-87-2       | Methylcyclohexane              | 1     | U         | 0.5 | 1          | ug/L  |
| 71-43-2        | Benzene                        | 1     | U         | 0.5 | 1          | ug/L  |
| 107-06-2       | 1,2-Dichloroethane             | 1     | U         | 0.5 | 1          | ug/L  |
| 79-01-6        | Trichloroethene                | 1     | U         | 0.5 | 1          | ug/L  |
| 78-87-5        | 1,2-Dichloropropane            | 1     | U         | 0.5 | 1          | ug/L  |
| 75-27-4        | Bromodichloromethane           | 1     | U         | 0.5 | 1          | ug/L  |
| 108-10-1       | 4-Methyl-2-Pentanone           | 5     | U         | 2.5 | 5          | ug/L  |
| 108-88-3       | Toluene                        | 1     | U         | 0.5 | 1          | ug/L  |
| 10061-02-6     | t-1,3-Dichloropropene          | 1     | U         | 0.5 | 1          | ug/L  |
| 10061-01-5     | cis-1,3-Dichloropropene        | 1     | U         | 0.5 | 1          | ug/L  |

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 01/30/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 01/31/12      |
| Client Sample ID:  | RW-2                 | SDG No.:        | D1333         |
| Lab Sample ID:     | D1333-02             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RTX-VMS ID : 0.18    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VG040681.D        | 1         |           | 02/02/12      | vg020112      |

| CAS Number                | Parameter                   | Conc.   | Qualifier | LOD | LOQ / CRQL | Units   |
|---------------------------|-----------------------------|---------|-----------|-----|------------|---------|
| 79-00-5                   | 1,1,2-Trichloroethane       | 1       | U         | 0.5 | 1          | ug/L    |
| 591-78-6                  | 2-Hexanone                  | 5       | U         | 2.5 | 5          | ug/L    |
| 124-48-1                  | Dibromochloromethane        | 1       | U         | 0.5 | 1          | ug/L    |
| 106-93-4                  | 1,2-Dibromoethane           | 1       | U         | 0.5 | 1          | ug/L    |
| 127-18-4                  | Tetrachloroethene           | 1       | U         | 0.5 | 1          | ug/L    |
| 108-90-7                  | Chlorobenzene               | 1       | U         | 0.5 | 1          | ug/L    |
| 100-41-4                  | Ethyl Benzene               | 1       | U         | 0.5 | 1          | ug/L    |
| 179601-23-1               | m/p-Xylenes                 | 2       | U         | 1   | 2          | ug/L    |
| 95-47-6                   | o-Xylene                    | 1       | U         | 0.5 | 1          | ug/L    |
| 100-42-5                  | Styrene                     | 1       | U         | 0.5 | 1          | ug/L    |
| 75-25-2                   | Bromoform                   | 1       | U         | 0.5 | 1          | ug/L    |
| 98-82-8                   | Isopropylbenzene            | 1       | U         | 0.5 | 1          | ug/L    |
| 79-34-5                   | 1,1,2,2-Tetrachloroethane   | 1       | U         | 0.5 | 1          | ug/L    |
| 541-73-1                  | 1,3-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 106-46-7                  | 1,4-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 95-50-1                   | 1,2-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 96-12-8                   | 1,2-Dibromo-3-Chloropropane | 1       | U         | 0.5 | 1          | ug/L    |
| 120-82-1                  | 1,2,4-Trichlorobenzene      | 1       | U         | 0.5 | 1          | ug/L    |
| <b>SURROGATES</b>         |                             |         |           |     |            |         |
| 17060-07-0                | 1,2-Dichloroethane-d4       | 55.3    |           |     | 111%       | SPK: 50 |
| 1868-53-7                 | Dibromofluoromethane        | 49.9    |           |     | 100%       | SPK: 50 |
| 2037-26-5                 | Toluene-d8                  | 55.3    |           |     | 111%       | SPK: 50 |
| 460-00-4                  | 4-Bromofluorobenzene        | 44      |           |     | 88%        | SPK: 50 |
| <b>INTERNAL STANDARDS</b> |                             |         |           |     |            |         |
| 363-72-4                  | Pentafluorobenzene          | 1315300 | 3.91      |     |            |         |
| 540-36-3                  | 1,4-Difluorobenzene         | 1848680 | 4.72      |     |            |         |
| 3114-55-4                 | Chlorobenzene-d5            | 1589550 | 9.69      |     |            |         |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4      | 788710  | 13.4      |     |            |         |



## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 01/30/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 01/31/12      |
| Client Sample ID:  | EFF-46HZ             | SDG No.:        | D1333         |
| Lab Sample ID:     | D1333-03             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RTX-VMS ID : 0.18    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VG040679.D        | 1         |           | 02/02/12      | vg020112      |

| CAS Number     | Parameter                      | Conc. | Qualifier | LOD | LOQ / CRQL | Units |
|----------------|--------------------------------|-------|-----------|-----|------------|-------|
| <b>TARGETS</b> |                                |       |           |     |            |       |
| 75-71-8        | Dichlorodifluoromethane        | 1     | U         | 0.5 | 1          | ug/L  |
| 74-87-3        | Chloromethane                  | 1     | U         | 0.5 | 1          | ug/L  |
| 75-01-4        | Vinyl Chloride                 | 1     | U         | 0.5 | 1          | ug/L  |
| 74-83-9        | Bromomethane                   | 1     | U         | 0.5 | 1          | ug/L  |
| 75-00-3        | Chloroethane                   | 1     | U         | 0.5 | 1          | ug/L  |
| 75-69-4        | Trichlorofluoromethane         | 1     | U         | 0.5 | 1          | ug/L  |
| 76-13-1        | 1,1,2-Trichlorotrifluoroethane | 1     | U         | 0.5 | 1          | ug/L  |
| 75-35-4        | 1,1-Dichloroethene             | 1     | U         | 0.5 | 1          | ug/L  |
| 67-64-1        | Acetone                        | 5     | U         | 2.5 | 5          | ug/L  |
| 75-15-0        | Carbon Disulfide               | 1     | U         | 0.5 | 1          | ug/L  |
| 1634-04-4      | Methyl tert-butyl Ether        | 1     | U         | 0.5 | 1          | ug/L  |
| 79-20-9        | Methyl Acetate                 | 1     | U         | 0.5 | 1          | ug/L  |
| 75-09-2        | Methylene Chloride             | 1     | U         | 0.5 | 1          | ug/L  |
| 156-60-5       | trans-1,2-Dichloroethene       | 1     | U         | 0.5 | 1          | ug/L  |
| 75-34-3        | 1,1-Dichloroethane             | 1     | U         | 0.5 | 1          | ug/L  |
| 110-82-7       | Cyclohexane                    | 1     | U         | 0.5 | 1          | ug/L  |
| 78-93-3        | 2-Butanone                     | 5     | U         | 2.5 | 5          | ug/L  |
| 56-23-5        | Carbon Tetrachloride           | 1     | U         | 0.5 | 1          | ug/L  |
| 156-59-2       | cis-1,2-Dichloroethene         | 1     | U         | 0.5 | 1          | ug/L  |
| 67-66-3        | Chloroform                     | 1     | U         | 0.5 | 1          | ug/L  |
| 71-55-6        | 1,1,1-Trichloroethane          | 1     | U         | 0.5 | 1          | ug/L  |
| 108-87-2       | Methylcyclohexane              | 1     | U         | 0.5 | 1          | ug/L  |
| 71-43-2        | Benzene                        | 1     | U         | 0.5 | 1          | ug/L  |
| 107-06-2       | 1,2-Dichloroethane             | 1     | U         | 0.5 | 1          | ug/L  |
| 79-01-6        | Trichloroethene                | 1     | U         | 0.5 | 1          | ug/L  |
| 78-87-5        | 1,2-Dichloropropane            | 1     | U         | 0.5 | 1          | ug/L  |
| 75-27-4        | Bromodichloromethane           | 1     | U         | 0.5 | 1          | ug/L  |
| 108-10-1       | 4-Methyl-2-Pentanone           | 5     | U         | 2.5 | 5          | ug/L  |
| 108-88-3       | Toluene                        | 1     | U         | 0.5 | 1          | ug/L  |
| 10061-02-6     | t-1,3-Dichloropropene          | 1     | U         | 0.5 | 1          | ug/L  |
| 10061-01-5     | cis-1,3-Dichloropropene        | 1     | U         | 0.5 | 1          | ug/L  |

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 01/30/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 01/31/12      |
| Client Sample ID:  | EFF-46HZ             | SDG No.:        | D1333         |
| Lab Sample ID:     | D1333-03             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RTX-VMS ID : 0.18    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VG040679.D        | 1         |           | 02/02/12      | vg020112      |

| CAS Number                | Parameter                   | Conc.   | Qualifier | LOD | LOQ / CRQL | Units   |
|---------------------------|-----------------------------|---------|-----------|-----|------------|---------|
| 79-00-5                   | 1,1,2-Trichloroethane       | 1       | U         | 0.5 | 1          | ug/L    |
| 591-78-6                  | 2-Hexanone                  | 5       | U         | 2.5 | 5          | ug/L    |
| 124-48-1                  | Dibromochloromethane        | 1       | U         | 0.5 | 1          | ug/L    |
| 106-93-4                  | 1,2-Dibromoethane           | 1       | U         | 0.5 | 1          | ug/L    |
| 127-18-4                  | Tetrachloroethene           | 1       | U         | 0.5 | 1          | ug/L    |
| 108-90-7                  | Chlorobenzene               | 1       | U         | 0.5 | 1          | ug/L    |
| 100-41-4                  | Ethyl Benzene               | 1       | U         | 0.5 | 1          | ug/L    |
| 179601-23-1               | m/p-Xylenes                 | 2       | U         | 1   | 2          | ug/L    |
| 95-47-6                   | o-Xylene                    | 1       | U         | 0.5 | 1          | ug/L    |
| 100-42-5                  | Styrene                     | 1       | U         | 0.5 | 1          | ug/L    |
| 75-25-2                   | Bromoform                   | 1       | U         | 0.5 | 1          | ug/L    |
| 98-82-8                   | Isopropylbenzene            | 1       | U         | 0.5 | 1          | ug/L    |
| 79-34-5                   | 1,1,2,2-Tetrachloroethane   | 1       | U         | 0.5 | 1          | ug/L    |
| 541-73-1                  | 1,3-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 106-46-7                  | 1,4-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 95-50-1                   | 1,2-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 96-12-8                   | 1,2-Dibromo-3-Chloropropane | 1       | U         | 0.5 | 1          | ug/L    |
| 120-82-1                  | 1,2,4-Trichlorobenzene      | 1       | U         | 0.5 | 1          | ug/L    |
| <b>SURROGATES</b>         |                             |         |           |     |            |         |
| 17060-07-0                | 1,2-Dichloroethane-d4       | 54.7    |           |     | 109%       | SPK: 50 |
| 1868-53-7                 | Dibromofluoromethane        | 51.2    |           |     | 102%       | SPK: 50 |
| 2037-26-5                 | Toluene-d8                  | 56.2    |           |     | 112%       | SPK: 50 |
| 460-00-4                  | 4-Bromofluorobenzene        | 46.2    |           |     | 92%        | SPK: 50 |
| <b>INTERNAL STANDARDS</b> |                             |         |           |     |            |         |
| 363-72-4                  | Pentafluorobenzene          | 1424410 | 3.91      |     |            |         |
| 540-36-3                  | 1,4-Difluorobenzene         | 1842810 | 4.71      |     |            |         |
| 3114-55-4                 | Chlorobenzene-d5            | 1577480 | 9.69      |     |            |         |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4      | 824494  | 13.39     |     |            |         |

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 01/30/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 01/31/12      |
| Client Sample ID:  | TRIPBLANK            | SDG No.:        | D1333         |
| Lab Sample ID:     | D1333-04             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RTX-VMS ID : 0.18    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VG040678.D        | 1         |           | 02/02/12      | vg020112      |

| CAS Number     | Parameter                      | Conc. | Qualifier | LOD | LOQ / CRQL | Units |
|----------------|--------------------------------|-------|-----------|-----|------------|-------|
| <b>TARGETS</b> |                                |       |           |     |            |       |
| 75-71-8        | Dichlorodifluoromethane        | 1     | U         | 0.5 | 1          | ug/L  |
| 74-87-3        | Chloromethane                  | 1     | U         | 0.5 | 1          | ug/L  |
| 75-01-4        | Vinyl Chloride                 | 1     | U         | 0.5 | 1          | ug/L  |
| 74-83-9        | Bromomethane                   | 1     | U         | 0.5 | 1          | ug/L  |
| 75-00-3        | Chloroethane                   | 1     | U         | 0.5 | 1          | ug/L  |
| 75-69-4        | Trichlorofluoromethane         | 1     | U         | 0.5 | 1          | ug/L  |
| 76-13-1        | 1,1,2-Trichlorotrifluoroethane | 1     | U         | 0.5 | 1          | ug/L  |
| 75-35-4        | 1,1-Dichloroethene             | 1     | U         | 0.5 | 1          | ug/L  |
| 67-64-1        | Acetone                        | 5     | U         | 2.5 | 5          | ug/L  |
| 75-15-0        | Carbon Disulfide               | 1     | U         | 0.5 | 1          | ug/L  |
| 1634-04-4      | Methyl tert-butyl Ether        | 1     | U         | 0.5 | 1          | ug/L  |
| 79-20-9        | Methyl Acetate                 | 1     | U         | 0.5 | 1          | ug/L  |
| 75-09-2        | Methylene Chloride             | 1     | U         | 0.5 | 1          | ug/L  |
| 156-60-5       | trans-1,2-Dichloroethene       | 1     | U         | 0.5 | 1          | ug/L  |
| 75-34-3        | 1,1-Dichloroethane             | 1     | U         | 0.5 | 1          | ug/L  |
| 110-82-7       | Cyclohexane                    | 1     | U         | 0.5 | 1          | ug/L  |
| 78-93-3        | 2-Butanone                     | 5     | U         | 2.5 | 5          | ug/L  |
| 56-23-5        | Carbon Tetrachloride           | 1     | U         | 0.5 | 1          | ug/L  |
| 156-59-2       | cis-1,2-Dichloroethene         | 1     | U         | 0.5 | 1          | ug/L  |
| 67-66-3        | Chloroform                     | 1     | U         | 0.5 | 1          | ug/L  |
| 71-55-6        | 1,1,1-Trichloroethane          | 1     | U         | 0.5 | 1          | ug/L  |
| 108-87-2       | Methylcyclohexane              | 1     | U         | 0.5 | 1          | ug/L  |
| 71-43-2        | Benzene                        | 1     | U         | 0.5 | 1          | ug/L  |
| 107-06-2       | 1,2-Dichloroethane             | 1     | U         | 0.5 | 1          | ug/L  |
| 79-01-6        | Trichloroethene                | 1     | U         | 0.5 | 1          | ug/L  |
| 78-87-5        | 1,2-Dichloropropane            | 1     | U         | 0.5 | 1          | ug/L  |
| 75-27-4        | Bromodichloromethane           | 1     | U         | 0.5 | 1          | ug/L  |
| 108-10-1       | 4-Methyl-2-Pentanone           | 5     | U         | 2.5 | 5          | ug/L  |
| 108-88-3       | Toluene                        | 1     | U         | 0.5 | 1          | ug/L  |
| 10061-02-6     | t-1,3-Dichloropropene          | 1     | U         | 0.5 | 1          | ug/L  |
| 10061-01-5     | cis-1,3-Dichloropropene        | 1     | U         | 0.5 | 1          | ug/L  |

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 01/30/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 01/31/12      |
| Client Sample ID:  | TRIPBLANK            | SDG No.:        | D1333         |
| Lab Sample ID:     | D1333-04             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RTX-VMS ID : 0.18    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VG040678.D        | 1         |           | 02/02/12      | vg020112      |

| CAS Number                | Parameter                   | Conc.   | Qualifier | LOD | LOQ / CRQL | Units   |
|---------------------------|-----------------------------|---------|-----------|-----|------------|---------|
| 79-00-5                   | 1,1,2-Trichloroethane       | 1       | U         | 0.5 | 1          | ug/L    |
| 591-78-6                  | 2-Hexanone                  | 5       | U         | 2.5 | 5          | ug/L    |
| 124-48-1                  | Dibromochloromethane        | 1       | U         | 0.5 | 1          | ug/L    |
| 106-93-4                  | 1,2-Dibromoethane           | 1       | U         | 0.5 | 1          | ug/L    |
| 127-18-4                  | Tetrachloroethene           | 1       | U         | 0.5 | 1          | ug/L    |
| 108-90-7                  | Chlorobenzene               | 1       | U         | 0.5 | 1          | ug/L    |
| 100-41-4                  | Ethyl Benzene               | 1       | U         | 0.5 | 1          | ug/L    |
| 179601-23-1               | m/p-Xylenes                 | 2       | U         | 1   | 2          | ug/L    |
| 95-47-6                   | o-Xylene                    | 1       | U         | 0.5 | 1          | ug/L    |
| 100-42-5                  | Styrene                     | 1       | U         | 0.5 | 1          | ug/L    |
| 75-25-2                   | Bromoform                   | 1       | U         | 0.5 | 1          | ug/L    |
| 98-82-8                   | Isopropylbenzene            | 1       | U         | 0.5 | 1          | ug/L    |
| 79-34-5                   | 1,1,2,2-Tetrachloroethane   | 1       | U         | 0.5 | 1          | ug/L    |
| 541-73-1                  | 1,3-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 106-46-7                  | 1,4-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 95-50-1                   | 1,2-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 96-12-8                   | 1,2-Dibromo-3-Chloropropane | 1       | U         | 0.5 | 1          | ug/L    |
| 120-82-1                  | 1,2,4-Trichlorobenzene      | 1       | U         | 0.5 | 1          | ug/L    |
| <b>SURROGATES</b>         |                             |         |           |     |            |         |
| 17060-07-0                | 1,2-Dichloroethane-d4       | 56.2    |           |     | 112%       | SPK: 50 |
| 1868-53-7                 | Dibromofluoromethane        | 50.4    |           |     | 101%       | SPK: 50 |
| 2037-26-5                 | Toluene-d8                  | 53.4    |           |     | 107%       | SPK: 50 |
| 460-00-4                  | 4-Bromofluorobenzene        | 45.4    |           |     | 91%        | SPK: 50 |
| <b>INTERNAL STANDARDS</b> |                             |         |           |     |            |         |
| 363-72-4                  | Pentafluorobenzene          | 1425790 | 3.9       |     |            |         |
| 540-36-3                  | 1,4-Difluorobenzene         | 1901610 | 4.71      |     |            |         |
| 3114-55-4                 | Chlorobenzene-d5            | 1701210 | 9.68      |     |            |         |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4      | 803818  | 13.39     |     |            |         |



Hit Summary Sheet  
SW-846

SDG No.: D1333

Client: Arcadis Inc.

| Sample ID  | Client ID |       | Parameter             | Concentration | C     | RDL | MDL  | Units |
|------------|-----------|-------|-----------------------|---------------|-------|-----|------|-------|
| Client ID: | RW-1      |       |                       |               |       |     |      |       |
| D1333-01   | RW-1      | WATER | 1,1-Dichloroethene    | 1.80          |       | 1.0 | 0.47 | ug/L  |
| D1333-01   | RW-1      | WATER | 1,1-Dichloroethane    | 1.80          |       | 1.0 | 0.36 | ug/L  |
| D1333-01   | RW-1      | WATER | Carbon Tetrachloride  | 8.20          |       | 1.0 | 0.20 | ug/L  |
| D1333-01   | RW-1      | WATER | 1,1,1-Trichloroethane | 58.00         |       | 1.0 | 0.40 | ug/L  |
|            |           |       | Total Voc :           |               | 69.80 |     |      |       |
|            |           |       | Total Concentration:  |               | 69.80 |     |      |       |
| Client ID: | RW-2      |       |                       |               |       |     |      |       |
| D1333-02   | RW-2      | WATER | 1,1-Dichloroethene    | 1.40          |       | 1.0 | 0.47 | ug/L  |
| D1333-02   | RW-2      | WATER | 1,1-Dichloroethane    | 0.86          | J     | 1.0 | 0.36 | ug/L  |
| D1333-02   | RW-2      | WATER | Carbon Tetrachloride  | 6.30          |       | 1.0 | 0.20 | ug/L  |
| D1333-02   | RW-2      | WATER | 1,1,1-Trichloroethane | 47.00         |       | 1.0 | 0.40 | ug/L  |
|            |           |       | Total Voc :           |               | 55.56 |     |      |       |
|            |           |       | Total Concentration:  |               | 55.56 |     |      |       |



## Surrogate Summary

SDG No.: D1333

Client: Arcadis Inc.

Analytical Method: EPA SW846 8260

| Lab Sample ID | Client ID   | Parameter             | Spike | Result | Recovery | Qual | Limits |      |
|---------------|-------------|-----------------------|-------|--------|----------|------|--------|------|
|               |             |                       |       |        |          |      | Low    | High |
| BSG0201W3     | BSG0201W3   | 1,2-Dichloroethane-d4 | 50    | 56.18  | 112      |      | 70     | 120  |
|               |             | Dibromofluoromethane  | 50    | 49.88  | 100      |      | 85     | 115  |
|               |             | Toluene-d8            | 50    | 50.67  | 101      |      | 85     | 120  |
|               |             | 4-Bromofluorobenzene  | 50    | 48.66  | 97       |      | 75     | 120  |
| D1333-01      | RW-1        | 1,2-Dichloroethane-d4 | 50    | 55.02  | 110      |      | 61     | 141  |
|               |             | Dibromofluoromethane  | 50    | 50.45  | 101      |      | 69     | 133  |
|               |             | Toluene-d8            | 50    | 54.86  | 110      |      | 65     | 126  |
|               |             | 4-Bromofluorobenzene  | 50    | 44.55  | 89       |      | 58     | 135  |
| D1333-02      | RW-2        | 1,2-Dichloroethane-d4 | 50    | 55.31  | 111      |      | 61     | 141  |
|               |             | Dibromofluoromethane  | 50    | 49.87  | 100      |      | 69     | 133  |
|               |             | Toluene-d8            | 50    | 55.27  | 111      |      | 65     | 126  |
|               |             | 4-Bromofluorobenzene  | 50    | 43.99  | 88       |      | 58     | 135  |
| D1333-03      | EFF-46HZ    | 1,2-Dichloroethane-d4 | 50    | 54.71  | 109      |      | 61     | 141  |
|               |             | Dibromofluoromethane  | 50    | 51.18  | 102      |      | 69     | 133  |
|               |             | Toluene-d8            | 50    | 56.22  | 112      |      | 65     | 126  |
|               |             | 4-Bromofluorobenzene  | 50    | 46.24  | 92       |      | 58     | 135  |
| D1333-04      | TRIPBLANK   | 1,2-Dichloroethane-d4 | 50    | 56.2   | 112      |      | 61     | 141  |
|               |             | Dibromofluoromethane  | 50    | 50.39  | 101      |      | 69     | 133  |
|               |             | Toluene-d8            | 50    | 53.44  | 107      |      | 65     | 126  |
|               |             | 4-Bromofluorobenzene  | 50    | 45.4   | 91       |      | 58     | 135  |
| D1350-04MS    | MW-T2-03MS  | 1,2-Dichloroethane-d4 | 50    | 54.98  | 110      |      | 70     | 120  |
|               |             | Dibromofluoromethane  | 50    | 50.38  | 101      |      | 85     | 115  |
|               |             | Toluene-d8            | 50    | 52.57  | 105      |      | 85     | 120  |
|               |             | 4-Bromofluorobenzene  | 50    | 54.9   | 110      |      | 75     | 120  |
| D1350-05MSD   | MW-T2-03MSD | 1,2-Dichloroethane-d4 | 50    | 50.83  | 102      |      | 70     | 120  |
|               |             | Dibromofluoromethane  | 50    | 48.11  | 96       |      | 85     | 115  |
|               |             | Toluene-d8            | 50    | 51.06  | 102      |      | 85     | 120  |
|               |             | 4-Bromofluorobenzene  | 50    | 51.18  | 102      |      | 75     | 120  |
| VBG0201W2     | VBG0201W2   | 1,2-Dichloroethane-d4 | 50    | 58.98  | 118      |      | 70     | 120  |
|               |             | Dibromofluoromethane  | 50    | 51.37  | 103      |      | 85     | 115  |
|               |             | Toluene-d8            | 50    | 57.35  | 115      |      | 85     | 120  |
|               |             | 4-Bromofluorobenzene  | 50    | 49.56  | 99       |      | 75     | 120  |

**WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY**Lab Name: CHEMTECH Client: Arcadis Inc.Lab Code: CHEM Cas No: D1333 SAS No : D1333 SDG No: D1333Matrix Spike - EPA Sample No : D1350-04 Analytical Method: EPA SW846 8260 Datafile : VG040687.D

| COMPOUND                       | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>CONCENTRATION<br>(ug/L) | MS<br>CONCENTRATION<br>(ug/L) | MS<br>%<br>REC# | QC<br>LIMITS<br>REC |
|--------------------------------|--------------------------|-----------------------------------|-------------------------------|-----------------|---------------------|
| Dichlorodifluoromethane        | 50                       | 0                                 | 54                            | 108             | (30-155)            |
| Chloromethane                  | 50                       | 0                                 | 55                            | 110             | (40-125)            |
| Vinyl Chloride                 | 50                       | 0                                 | 53                            | 106             | (50-145)            |
| Bromomethane                   | 50                       | 0                                 | 49                            | 98              | (34-145)            |
| Chloroethane                   | 50                       | 0                                 | 51                            | 102             | (60-135)            |
| Trichlorofluoromethane         | 50                       | 0                                 | 56                            | 112             | (60-145)            |
| 1,1,2-Trichlorotrifluoroethane | 50                       | 0                                 | 52                            | 104             | (47-152)            |
| 1,1-Dichloroethene             | 50                       | 0                                 | 51                            | 102             | (70-130)            |
| Acetone                        | 250                      | 48                                | 400                           | 141*            | (40-140)            |
| Carbon Disulfide               | 50                       | 0                                 | 46                            | 92              | (35-160)            |
| Methyl tert-butyl Ether        | 50                       | 0                                 | 57                            | 114             | (65-125)            |
| Methyl Acetate                 | 50                       | 0                                 | 55                            | 110             | (29-176)            |
| Methylene Chloride             | 50                       | 0                                 | 54                            | 108             | (55-140)            |
| trans-1,2-Dichloroethene       | 50                       | 0                                 | 53                            | 106             | (60-140)            |
| 1,1-Dichloroethane             | 50                       | 0                                 | 58                            | 116             | (70-135)            |
| Cyclohexane                    | 50                       | 0                                 | 51                            | 102             | (42-159)            |
| 2-Butanone                     | 250                      | 0                                 | 290                           | 116             | (47-150)            |
| Carbon Tetrachloride           | 50                       | 0                                 | 62                            | 124             | (65-140)            |
| cis-1,2-Dichloroethene         | 50                       | 0                                 | 53                            | 106             | (70-125)            |
| Chloroform                     | 50                       | 0                                 | 61                            | 122             | (65-135)            |
| 1,1,1-Trichloroethane          | 50                       | 0                                 | 65                            | 130             | (65-130)            |
| Methylcyclohexane              | 50                       | 0                                 | 48                            | 96              | (41-152)            |
| Benzene                        | 50                       | 0                                 | 55                            | 110             | (80-120)            |
| 1,2-Dichloroethane             | 50                       | 0                                 | 62                            | 124             | (70-130)            |
| Trichloroethene                | 50                       | 0                                 | 54                            | 108             | (70-125)            |
| 1,2-Dichloropropane            | 50                       | 0                                 | 55                            | 110             | (75-125)            |
| Bromodichloromethane           | 50                       | 0                                 | 58                            | 116             | (75-120)            |
| 4-Methyl-2-Pentanone           | 250                      | 0                                 | 320                           | 128             | (60-135)            |
| Toluene                        | 50                       | 0                                 | 59                            | 118             | (75-120)            |
| t-1,3-Dichloropropene          | 50                       | 0                                 | 52                            | 104             | (55-140)            |
| cis-1,3-Dichloropropene        | 50                       | 0                                 | 52                            | 104             | (70-130)            |
| 1,1,2-Trichloroethane          | 50                       | 0                                 | 62                            | 124             | (75-125)            |
| 2-Hexanone                     | 250                      | 0                                 | 330                           | 132*            | (55-130)            |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits



# WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: Arcadis Inc.

Lab Code: CHEM Cas No: D1333 SAS No : D1333 SDG No: D1333

Matrix Spike - EPA Sample No : D1350-04 Analytical Method: EPA SW846 8260 Datafile : VG040687.D

| COMPOUND                    | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>CONCENTRATION<br>(ug/L) | MS<br>CONCENTRATION<br>(ug/L) | MS<br>%<br>REC# | QC<br>LIMITS<br>REC |
|-----------------------------|--------------------------|-----------------------------------|-------------------------------|-----------------|---------------------|
| Dibromochloromethane        | 50                       | 0                                 | 61                            | 122             | (60-135)            |
| 1,2-Dibromoethane           | 50                       | 0                                 | 61                            | 122*            | (80-120)            |
| Tetrachloroethene           | 50                       | 0                                 | 49                            | 98              | (45-148)            |
| Chlorobenzene               | 50                       | 0                                 | 59                            | 118             | (80-120)            |
| Ethyl Benzene               | 50                       | 0                                 | 56                            | 112             | (75-125)            |
| m/p-Xylenes                 | 100                      | 0                                 | 120                           | 120             | (75-130)            |
| o-Xylene                    | 50                       | 0                                 | 61                            | 122*            | (80-120)            |
| Styrene                     | 50                       | 0                                 | 59                            | 118             | (65-135)            |
| Bromoform                   | 50                       | 0                                 | 56                            | 112             | (70-130)            |
| Isopropylbenzene            | 50                       | 0                                 | 51                            | 102             | (75-125)            |
| 1,1,2,2-Tetrachloroethane   | 50                       | 0                                 | 58                            | 116             | (65-130)            |
| 1,3-Dichlorobenzene         | 50                       | 0                                 | 55                            | 110             | (75-125)            |
| 1,4-Dichlorobenzene         | 50                       | 0                                 | 56                            | 112             | (75-125)            |
| 1,2-Dichlorobenzene         | 50                       | 0                                 | 58                            | 116             | (70-120)            |
| 1,2-Dibromo-3-Chloropropane | 50                       | 0                                 | 67                            | 134*            | (50-130)            |
| 1,2,4-Trichlorobenzene      | 50                       | 0                                 | 52                            | 104             | (65-135)            |

RPD : 0 Out of 49 outside limits

Spike Recovery : 5 Out of 49 outside limits

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits





# WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: Arcadis Inc.

Lab Code: CHEM Cas No: D1333 SAS No : D1333 SDG No: D1333

Matrix Spike - EPA Sample No : D1350-05 Analytical Method: EPA SW846 8260 Datafile : VG040688.D

| COMPOUND                       | SPIKE<br>ADDED<br>(ug/L) | MSD<br>CONCENTRATION<br>(ug/L) | MSD<br>% %<br>(ug/L) |    | QC LIMITS |          |
|--------------------------------|--------------------------|--------------------------------|----------------------|----|-----------|----------|
|                                |                          |                                |                      |    | RPD       | REC      |
| Dichlorodifluoromethane        | 50                       | 55                             | 110                  | 2  | 20        | (30-155) |
| Chloromethane                  | 50                       | 61                             | 122                  | 10 | 20        | (40-125) |
| Vinyl Chloride                 | 50                       | 56                             | 112                  | 6  | 20        | (50-145) |
| Bromomethane                   | 50                       | 49                             | 98                   | 0  | 20        | (34-145) |
| Chloroethane                   | 50                       | 49                             | 98                   | 4  | 20        | (60-135) |
| Trichlorofluoromethane         | 50                       | 64                             | 128                  | 13 | 20        | (60-145) |
| 1,1,2-Trichlorotrifluoroethane | 50                       | 51                             | 102                  | 2  | 20        | (47-152) |
| 1,1-Dichloroethene             | 50                       | 57                             | 114                  | 11 | 20        | (70-130) |
| Acetone                        | 250                      | 400                            | 141*                 | 0  | 20        | (40-140) |
| Carbon Disulfide               | 50                       | 49                             | 98                   | 6  | 20        | (35-160) |
| Methyl tert-butyl Ether        | 50                       | 64                             | 128*                 | 12 | 20        | (65-125) |
| Methyl Acetate                 | 50                       | 53                             | 106                  | 4  | 20        | (29-176) |
| Methylene Chloride             | 50                       | 58                             | 116                  | 7  | 20        | (55-140) |
| trans-1,2-Dichloroethene       | 50                       | 57                             | 114                  | 7  | 20        | (60-140) |
| 1,1-Dichloroethane             | 50                       | 58                             | 116                  | 0  | 20        | (70-135) |
| Cyclohexane                    | 50                       | 51                             | 102                  | 0  | 20        | (42-159) |
| 2-Butanone                     | 250                      | 270                            | 108                  | 7  | 20        | (47-150) |
| Carbon Tetrachloride           | 50                       | 58                             | 116                  | 7  | 20        | (65-140) |
| cis-1,2-Dichloroethene         | 50                       | 55                             | 110                  | 4  | 20        | (70-125) |
| Chloroform                     | 50                       | 60                             | 120                  | 2  | 20        | (65-135) |
| 1,1,1-Trichloroethane          | 50                       | 63                             | 126                  | 3  | 20        | (65-130) |
| Methylcyclohexane              | 50                       | 43                             | 86                   | 11 | 20        | (41-152) |
| Benzene                        | 50                       | 51                             | 102                  | 8  | 20        | (80-120) |
| 1,2-Dichloroethane             | 50                       | 60                             | 120                  | 3  | 20        | (70-130) |
| Trichloroethene                | 50                       | 54                             | 108                  | 0  | 20        | (70-125) |
| 1,2-Dichloropropane            | 50                       | 55                             | 110                  | 0  | 20        | (75-125) |
| Bromodichloromethane           | 50                       | 57                             | 114                  | 2  | 20        | (75-120) |
| 4-Methyl-2-Pentanone           | 250                      | 310                            | 124                  | 3  | 20        | (60-135) |
| Toluene                        | 50                       | 58                             | 116                  | 2  | 20        | (75-120) |
| t-1,3-Dichloropropene          | 50                       | 51                             | 102                  | 2  | 20        | (55-140) |
| cis-1,3-Dichloropropene        | 50                       | 51                             | 102                  | 2  | 20        | (70-130) |
| 1,1,2-Trichloroethane          | 50                       | 60                             | 120                  | 3  | 20        | (75-125) |
| 2-Hexanone                     | 250                      | 310                            | 124                  | 6  | 20        | (55-130) |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits



# WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: Arcadis Inc.

Lab Code: CHEM Cas No: D1333 SAS No : D1333 SDG No: D1333

Matrix Spike - EPA Sample No : D1350-05 Analytical Method: EPA SW846 8260 Datafile : VG040688.D

| COMPOUND                    | SPIKE<br>ADDED<br>(ug/L) | MSD<br>CONCENTRATION<br>(ug/L) | MSD  |   | QC LIMITS |          |
|-----------------------------|--------------------------|--------------------------------|------|---|-----------|----------|
|                             |                          |                                | %    | % | RPD       | REC      |
| Dibromochloromethane        | 50                       | 60                             | 120  | 2 | 20        | (60-135) |
| 1,2-Dibromoethane           | 50                       | 62                             | 124* | 2 | 20        | (80-120) |
| Tetrachloroethene           | 50                       | 50                             | 100  | 2 | 20        | (45-148) |
| Chlorobenzene               | 50                       | 58                             | 116  | 2 | 20        | (80-120) |
| Ethyl Benzene               | 50                       | 56                             | 112  | 0 | 20        | (75-125) |
| m/p-Xylenes                 | 100                      | 120                            | 120  | 0 | 20        | (75-130) |
| o-Xylene                    | 50                       | 62                             | 124* | 2 | 20        | (80-120) |
| Styrene                     | 50                       | 58                             | 116  | 2 | 20        | (65-135) |
| Bromoform                   | 50                       | 56                             | 112  | 0 | 20        | (70-130) |
| Isopropylbenzene            | 50                       | 52                             | 104  | 2 | 20        | (75-125) |
| 1,1,2,2-Tetrachloroethane   | 50                       | 54                             | 108  | 7 | 20        | (65-130) |
| 1,3-Dichlorobenzene         | 50                       | 53                             | 106  | 4 | 20        | (75-125) |
| 1,4-Dichlorobenzene         | 50                       | 55                             | 110  | 2 | 20        | (75-125) |
| 1,2-Dichlorobenzene         | 50                       | 58                             | 116  | 0 | 20        | (70-120) |
| 1,2-Dibromo-3-Chloropropane | 50                       | 63                             | 126  | 6 | 20        | (50-130) |
| 1,2,4-Trichlorobenzene      | 50                       | 52                             | 104  | 0 | 20        | (65-135) |

RPD : 0 Out of 49 outside limits

Spike Recovery : 4 Out of 49 outside limits

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits



## WATER VOLATILE LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: Arcadis Inc.

Lab Code: CHEM Cas No: D1333 SAS No : D1333 SDG No: D1333

Matrix Spike - EPA Sample No : BSG0201W3 Analytical Method: EPA SW846 8260 Datafile : VG040675.D

| COMPOUND                       | SPIKE<br>ADDED<br>(ug/L) | CONCENTRATION<br>(ug/L) | LCS<br>CONCENTRATION<br>(ug/L) | LCS<br>%<br>REC# | QC<br>LIMITS<br>REC |
|--------------------------------|--------------------------|-------------------------|--------------------------------|------------------|---------------------|
| Dichlorodifluoromethane        | 20                       |                         | 20                             | 100              | (35-124)            |
| Chloromethane                  | 20                       |                         | 21                             | 105              | (40-125)            |
| Vinyl Chloride                 | 20                       |                         | 20                             | 100              | (50-144)            |
| Bromomethane                   | 20                       |                         | 19                             | 95               | (44-145)            |
| Chloroethane                   | 20                       |                         | 19                             | 95               | (60-135)            |
| Trichlorofluoromethane         | 20                       |                         | 21                             | 105              | (60-137)            |
| 1,1,2-Trichlorotrifluoroethane | 20                       |                         | 19                             | 95               | (52-142)            |
| 1,1-Dichloroethene             | 20                       |                         | 19                             | 95               | (70-130)            |
| Acetone                        | 100                      |                         | 120                            | 120              | (50-140)            |
| Carbon Disulfide               | 20                       |                         | 22                             | 110              | (36-155)            |
| Methyl tert-butyl Ether        | 20                       |                         | 22                             | 110              | (65-125)            |
| Methyl Acetate                 | 20                       |                         | 26                             | 130              | (51-158)            |
| Methylene Chloride             | 20                       |                         | 21                             | 105              | (61-138)            |
| trans-1,2-Dichloroethene       | 20                       |                         | 20                             | 100              | (60-137)            |
| 1,1-Dichloroethane             | 20                       |                         | 21                             | 105              | (70-135)            |
| Cyclohexane                    | 20                       |                         | 18                             | 90               | (56-141)            |
| 2-Butanone                     | 100                      |                         | 110                            | 110              | (56-150)            |
| Carbon Tetrachloride           | 20                       |                         | 23                             | 115              | (65-138)            |
| cis-1,2-Dichloroethene         | 20                       |                         | 19                             | 95               | (70-125)            |
| Chloroform                     | 20                       |                         | 23                             | 115              | (67-135)            |
| 1,1,1-Trichloroethane          | 20                       |                         | 24                             | 120              | (65-130)            |
| Methylcyclohexane              | 20                       |                         | 17                             | 85               | (56-137)            |
| Benzene                        | 20                       |                         | 19                             | 95               | (80-120)            |
| 1,2-Dichloroethane             | 20                       |                         | 23                             | 115              | (70-130)            |
| Trichloroethene                | 20                       |                         | 18                             | 90               | (70-125)            |
| 1,2-Dichloropropane            | 20                       |                         | 20                             | 100              | (75-125)            |
| Bromodichloromethane           | 20                       |                         | 19                             | 95               | (75-120)            |
| 4-Methyl-2-Pentanone           | 100                      |                         | 110                            | 110              | (63-135)            |
| Toluene                        | 20                       |                         | 20                             | 100              | (75-120)            |
| t-1,3-Dichloropropene          | 20                       |                         | 20                             | 100              | (66-135)            |
| cis-1,3-Dichloropropene        | 20                       |                         | 19                             | 95               | (70-130)            |
| 1,1,2-Trichloroethane          | 20                       |                         | 21                             | 105              | (75-125)            |
| 2-Hexanone                     | 100                      |                         | 110                            | 110              | (56-130)            |
| Dibromochloromethane           | 20                       |                         | 21                             | 105              | (64-135)            |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

Comments:

**WATER VOLATILE LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY**

Lab Name: CHEMTECH Client: Arcadis Inc.

Lab Code: CHEM Cas No: D1333 SAS No : D1333 SDG No: D1333

Matrix Spike - EPA Sample No : BSG0201W3 Analytical Method: EPA SW846 8260 Datafile : VG040675.D

| COMPOUND                    | SPIKE<br>ADDED<br>(ug/L) | CONCENTRATION<br>(ug/L) | LCS<br>CONCENTRATION<br>(ug/L) | LCS<br>%<br>REC# | QC<br>LIMITS<br>REC |
|-----------------------------|--------------------------|-------------------------|--------------------------------|------------------|---------------------|
| 1,2-Dibromoethane           | 20                       |                         | 22                             | 110              | (80-120)            |
| Tetrachloroethene           | 20                       |                         | 20                             | 100              | (45-178)            |
| Chlorobenzene               | 20                       |                         | 20                             | 100              | (80-120)            |
| Ethyl Benzene               | 20                       |                         | 19                             | 95               | (75-125)            |
| m/p-Xylenes                 | 40                       |                         | 39                             | 98               | (75-130)            |
| o-Xylene                    | 20                       |                         | 22                             | 110              | (80-120)            |
| Styrene                     | 20                       |                         | 20                             | 100              | (65-135)            |
| Bromoform                   | 20                       |                         | 16                             | 80               | (70-130)            |
| Isopropylbenzene            | 20                       |                         | 17                             | 85               | (75-125)            |
| 1,1,2,2-Tetrachloroethane   | 20                       |                         | 21                             | 105              | (65-130)            |
| 1,3-Dichlorobenzene         | 20                       |                         | 21                             | 105              | (75-125)            |
| 1,4-Dichlorobenzene         | 20                       |                         | 21                             | 105              | (75-125)            |
| 1,2-Dichlorobenzene         | 20                       |                         | 21                             | 105              | (70-120)            |
| 1,2-Dibromo-3-Chloropropane | 20                       |                         | 20                             | 100              | (54-130)            |
| 1,2,4-Trichlorobenzene      | 20                       |                         | 18                             | 90               | (65-133)            |

RPD : 0 Out of 49 outside limits

Spike Recovery : 0 Out of 49 outside limits

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

Comments:

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## VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBG0201W2

Lab Name: CHEMTECHContract: MALC02Lab Code: CHEM Case No.: D1333SAS No.: D1333 SDG NO.: D1333Lab File ID: VG040673.DLab Sample ID: VBG0201W2Date Analyzed: 02/02/2012Time Analyzed: 05:18GC Column: RTX-VMS ID: 0.18 (mm)Heated Purge: (Y/N) NInstrument ID: MSVOAG

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

| EPA<br>SAMPLE NO. | LAB<br>SAMPLE ID | LAB<br>FILE ID | DATE<br>ANALYZED |
|-------------------|------------------|----------------|------------------|
| BSG0201W3         | BSG0201W3        | VG040675.D     | 02/02/2012       |
| TRIPBLANK         | D1333-04         | VG040678.D     | 02/02/2012       |
| EFF-46HZ          | D1333-03         | VG040679.D     | 02/02/2012       |
| RW-2              | D1333-02         | VG040681.D     | 02/02/2012       |
| RW-1              | D1333-01         | VG040682.D     | 02/02/2012       |
| MW-T2-03MS        | D1350-04MS       | VG040687.D     | 02/02/2012       |
| MW-T2-03MSD       | D1350-05MSD      | VG040688.D     | 02/02/2012       |

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

## Report of Analysis

|                    |                      |           |                 |               |
|--------------------|----------------------|-----------|-----------------|---------------|
| Client:            | Arcadis Inc.         |           | Date Collected: |               |
| Project:           | DEC Gladding Cordage |           | Date Received:  |               |
| Client Sample ID:  | VBG0201W2            |           | SDG No.:        | D1333         |
| Lab Sample ID:     | VBG0201W2            |           | Matrix:         | WATER         |
| Analytical Method: | SW8260C              |           | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5                    | Units: mL | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  |                      | uL        | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RTX-VMS              | ID : 0.18 | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VG040673.D        | 1         |           | 02/02/12      | VG020112      |

| CAS Number     | Parameter                      | Conc. | Qualifier | LOD | LOQ / CRQL | Units |
|----------------|--------------------------------|-------|-----------|-----|------------|-------|
| <b>TARGETS</b> |                                |       |           |     |            |       |
| 75-71-8        | Dichlorodifluoromethane        | 1     | U         | 0.5 | 1          | ug/L  |
| 74-87-3        | Chloromethane                  | 1     | U         | 0.5 | 1          | ug/L  |
| 75-01-4        | Vinyl Chloride                 | 1     | U         | 0.5 | 1          | ug/L  |
| 74-83-9        | Bromomethane                   | 1     | U         | 0.5 | 1          | ug/L  |
| 75-00-3        | Chloroethane                   | 1     | U         | 0.5 | 1          | ug/L  |
| 75-69-4        | Trichlorofluoromethane         | 1     | U         | 0.5 | 1          | ug/L  |
| 76-13-1        | 1,1,2-Trichlorotrifluoroethane | 1     | U         | 0.5 | 1          | ug/L  |
| 75-35-4        | 1,1-Dichloroethene             | 1     | U         | 0.5 | 1          | ug/L  |
| 67-64-1        | Acetone                        | 5     | U         | 2.5 | 5          | ug/L  |
| 75-15-0        | Carbon Disulfide               | 1     | U         | 0.5 | 1          | ug/L  |
| 1634-04-4      | Methyl tert-butyl Ether        | 1     | U         | 0.5 | 1          | ug/L  |
| 79-20-9        | Methyl Acetate                 | 1     | U         | 0.5 | 1          | ug/L  |
| 75-09-2        | Methylene Chloride             | 1     | U         | 0.5 | 1          | ug/L  |
| 156-60-5       | trans-1,2-Dichloroethene       | 1     | U         | 0.5 | 1          | ug/L  |
| 75-34-3        | 1,1-Dichloroethane             | 1     | U         | 0.5 | 1          | ug/L  |
| 110-82-7       | Cyclohexane                    | 1     | U         | 0.5 | 1          | ug/L  |
| 78-93-3        | 2-Butanone                     | 5     | U         | 2.5 | 5          | ug/L  |
| 56-23-5        | Carbon Tetrachloride           | 1     | U         | 0.5 | 1          | ug/L  |
| 156-59-2       | cis-1,2-Dichloroethene         | 1     | U         | 0.5 | 1          | ug/L  |
| 67-66-3        | Chloroform                     | 1     | U         | 0.5 | 1          | ug/L  |
| 71-55-6        | 1,1,1-Trichloroethane          | 1     | U         | 0.5 | 1          | ug/L  |
| 108-87-2       | Methylcyclohexane              | 1     | U         | 0.5 | 1          | ug/L  |
| 71-43-2        | Benzene                        | 1     | U         | 0.5 | 1          | ug/L  |
| 107-06-2       | 1,2-Dichloroethane             | 1     | U         | 0.5 | 1          | ug/L  |
| 79-01-6        | Trichloroethene                | 1     | U         | 0.5 | 1          | ug/L  |
| 78-87-5        | 1,2-Dichloropropane            | 1     | U         | 0.5 | 1          | ug/L  |
| 75-27-4        | Bromodichloromethane           | 1     | U         | 0.5 | 1          | ug/L  |
| 108-10-1       | 4-Methyl-2-Pentanone           | 5     | U         | 2.5 | 5          | ug/L  |
| 108-88-3       | Toluene                        | 1     | U         | 0.5 | 1          | ug/L  |
| 10061-02-6     | t-1,3-Dichloropropene          | 1     | U         | 0.5 | 1          | ug/L  |
| 10061-01-5     | cis-1,3-Dichloropropene        | 1     | U         | 0.5 | 1          | ug/L  |

## Report of Analysis

|                    |                      |           |                 |               |
|--------------------|----------------------|-----------|-----------------|---------------|
| Client:            | Arcadis Inc.         |           | Date Collected: |               |
| Project:           | DEC Gladding Cordage |           | Date Received:  |               |
| Client Sample ID:  | VBG0201W2            |           | SDG No.:        | D1333         |
| Lab Sample ID:     | VBG0201W2            |           | Matrix:         | WATER         |
| Analytical Method: | SW8260C              |           | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5                    | Units: mL | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  |                      | uL        | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RTX-VMS              | ID : 0.18 | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VG040673.D        | 1         |           | 02/02/12      | VG020112      |

| CAS Number                | Parameter                   | Conc.   | Qualifier | LOD | LOQ / CRQL | Units   |
|---------------------------|-----------------------------|---------|-----------|-----|------------|---------|
| 79-00-5                   | 1,1,2-Trichloroethane       | 1       | U         | 0.5 | 1          | ug/L    |
| 591-78-6                  | 2-Hexanone                  | 5       | U         | 2.5 | 5          | ug/L    |
| 124-48-1                  | Dibromochloromethane        | 1       | U         | 0.5 | 1          | ug/L    |
| 106-93-4                  | 1,2-Dibromoethane           | 1       | U         | 0.5 | 1          | ug/L    |
| 127-18-4                  | Tetrachloroethene           | 1       | U         | 0.5 | 1          | ug/L    |
| 108-90-7                  | Chlorobenzene               | 1       | U         | 0.5 | 1          | ug/L    |
| 100-41-4                  | Ethyl Benzene               | 1       | U         | 0.5 | 1          | ug/L    |
| 179601-23-1               | m/p-Xylenes                 | 2       | U         | 1   | 2          | ug/L    |
| 95-47-6                   | o-Xylene                    | 1       | U         | 0.5 | 1          | ug/L    |
| 100-42-5                  | Styrene                     | 1       | U         | 0.5 | 1          | ug/L    |
| 75-25-2                   | Bromoform                   | 1       | U         | 0.5 | 1          | ug/L    |
| 98-82-8                   | Isopropylbenzene            | 1       | U         | 0.5 | 1          | ug/L    |
| 79-34-5                   | 1,1,2,2-Tetrachloroethane   | 1       | U         | 0.5 | 1          | ug/L    |
| 541-73-1                  | 1,3-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 106-46-7                  | 1,4-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 95-50-1                   | 1,2-Dichlorobenzene         | 1       | U         | 0.5 | 1          | ug/L    |
| 96-12-8                   | 1,2-Dibromo-3-Chloropropane | 1       | U         | 0.5 | 1          | ug/L    |
| 120-82-1                  | 1,2,4-Trichlorobenzene      | 1       | U         | 0.5 | 1          | ug/L    |
| <b>SURROGATES</b>         |                             |         |           |     |            |         |
| 17060-07-0                | 1,2-Dichloroethane-d4       | 59      |           |     | 118%       | SPK: 50 |
| 1868-53-7                 | Dibromofluoromethane        | 51.4    |           |     | 103%       | SPK: 50 |
| 2037-26-5                 | Toluene-d8                  | 57.4    |           |     | 115%       | SPK: 50 |
| 460-00-4                  | 4-Bromofluorobenzene        | 49.6    |           |     | 99%        | SPK: 50 |
| <b>INTERNAL STANDARDS</b> |                             |         |           |     |            |         |
| 363-72-4                  | Pentafluorobenzene          | 1568370 | 3.9       |     |            |         |
| 540-36-3                  | 1,4-Difluorobenzene         | 2150510 | 4.71      |     |            |         |
| 3114-55-4                 | Chlorobenzene-d5            | 1937250 | 9.68      |     |            |         |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4      | 954866  | 13.39     |     |            |         |



## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: MALC02  
Lab Code: CHEM Case No.: D1333 SAS No.: D1333 SDG NO.: D1333  
Lab File ID: VG040672.D Date Analyzed: 02/02/2012  
Instrument ID: MSVOAG Time Analyzed: 04:50  
GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) N

|                | IS1<br>AREA # | RT # | IS2<br>AREA # | RT # | IS3<br>AREA # | RT #  |
|----------------|---------------|------|---------------|------|---------------|-------|
| 12 HOUR STD    | 1699120       | 3.90 | 2298101       | 4.71 | 2048307       | 9.68  |
| UPPER LIMIT    | 3398240       | 4.4  | 4596202       | 5.21 | 4096614       | 10.18 |
| LOWER LIMIT    | 849560        | 3.4  | 1149051       | 4.21 | 1024154       | 9.18  |
| EPA SAMPLE NO. |               |      |               |      |               |       |
| BSG0201W3      | 1550677       | 3.90 | 2173885       | 4.71 | 1988489       | 9.69  |
| RW-1           | 1322416       | 3.91 | 1805458       | 4.71 | 1568462       | 9.69  |
| RW-2           | 1315302       | 3.91 | 1848678       | 4.72 | 1589547       | 9.69  |
| EFF-46HZ       | 1424407       | 3.91 | 1842814       | 4.71 | 1577477       | 9.69  |
| TRIPBLANK      | 1425790       | 3.90 | 1901607       | 4.71 | 1701209       | 9.68  |
| MW-T2-03MS     | 1351993       | 3.90 | 1795023       | 4.70 | 1648739       | 9.68  |
| MW-T2-03MSD    | 1491444       | 3.91 | 2008459       | 4.72 | 1758525       | 9.68  |
| VBG0201W2      | 1568368       | 3.90 | 2150507       | 4.71 | 1937249       | 9.68  |

IS1 = Pentafluorobenzene

IS2 = 1,4-Difluorobenzene

IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

\* Values outside of QC limits.





## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: MALC02  
Lab Code: CHEM Case No.: D1333 SAS No.: D1333 SDG NO.: D1333  
Lab File ID: VG040672.D Date Analyzed: 02/02/2012  
Instrument ID: MSVOAG Time Analyzed: 04:50  
GC Column: RTX-VMS ID: 0.18 (mm) Heated Purge: (Y/N) N

|                | IS4<br>AREA # | RT #  |  |  |  |  |
|----------------|---------------|-------|--|--|--|--|
| 12 HOUR STD    | 1195272       | 13.39 |  |  |  |  |
| UPPER LIMIT    | 2390544       | 13.89 |  |  |  |  |
| LOWER LIMIT    | 597636        | 12.89 |  |  |  |  |
| EPA SAMPLE NO. |               |       |  |  |  |  |
| BSG0201W3      | 1121952       | 13.39 |  |  |  |  |
| RW-1           | 770884        | 13.40 |  |  |  |  |
| RW-2           | 788710        | 13.40 |  |  |  |  |
| EFF-46HZ       | 824494        | 13.39 |  |  |  |  |
| TRIPBLANK      | 803818        | 13.39 |  |  |  |  |
| MW-T2-03MS     | 1049125       | 13.39 |  |  |  |  |
| MW-T2-03MSD    | 1086447       | 13.39 |  |  |  |  |
| VBG0201W2      | 954866        | 13.39 |  |  |  |  |

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

\* Values outside of QC limits.

## **ANALYTICAL RESULTS SUMMARY**

**PROJECT NAME : DEC GLADDING CORDAGE**

**ARCADIS INC.  
855 Route 146, Suite 210**

**Clifton Park , NY - 12065  
Phone No: 5182507300**

**ORDER ID : D1971  
ATTENTION : Jeremy Wyckoff**

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**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

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**FORM S-I**

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**SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY**

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| <b>NYSDEC<br/>Sample<br/>ID/Code</b> | <b>Laboratory<br/>Sample<br/>ID/Code</b> | <b>VOA<br/>GC/MS<br/>(Method #)</b> | <b>BNA<br/>GC/MS<br/>(Method #)</b> | <b>VOA GC<br/>(Method<br/>#)</b> | <b>Pest PCBs<br/>(Method<br/>#)</b> | <b>Metals<br/>(Method<br/>#)</b> | <b>Other<br/>(Method<br/>#)</b> |
|--------------------------------------|------------------------------------------|-------------------------------------|-------------------------------------|----------------------------------|-------------------------------------|----------------------------------|---------------------------------|
| RW-1                                 | D1971-01                                 | 8260-Low                            |                                     |                                  |                                     |                                  |                                 |
| RW-2                                 | D1971-02                                 | 8260-Low                            |                                     |                                  |                                     |                                  |                                 |
| EFF-46HZ                             | D1971-03                                 | 8260-Low                            |                                     |                                  |                                     |                                  |                                 |
| TRIPBLANK                            | D1971-04                                 | 8260-Low                            |                                     |                                  |                                     |                                  |                                 |

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL  
CONSERVATION

FORM S-IIa

SAMPLE PREPARATION AND ANALYSIS SUMMARY  
SEMIVOLATILE (BNA) ANALYSES

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL  
CONSERVATION

FORM S-IIb

SAMPLE PREPARATION AND ANALYSIS SUMMARY VOLATILE  
(VOA) ANALYSES

| Laboratory<br>Sample ID | Matrix | Date<br>Collected | Date<br>Rec'd at<br>Lab | Date<br>Extracted | Date<br>Analyzed |
|-------------------------|--------|-------------------|-------------------------|-------------------|------------------|
| D1971-01                | WATER  | 03/23/12          | 03/24/12                |                   | 03/28/12         |
| D1971-02                | WATER  | 03/23/12          | 03/24/12                |                   | 03/28/12         |
| D1971-03                | WATER  | 03/23/12          | 03/24/12                |                   | 03/28/12         |
| D1971-04                | WATER  | 02/01/12          | 03/24/12                |                   | 03/28/12         |

\* Details For Test :VOC-TCLVOA-10

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL  
CONSERVATION

FORM S-III

SAMPLE PREPARATION AND ANALYSIS SUMMARY  
MISCELLANEOUS ORGANIC ANALYSES

| Laboratory<br>Sample ID | Matrix | Analytical<br>Protocol | Extraction<br>Method | Auxiliary<br>Cleanup | Dil/Conc<br>Factor |
|-------------------------|--------|------------------------|----------------------|----------------------|--------------------|
| D1971-01                | Water  | 8260-Low               | OLM04.3              |                      |                    |
| D1971-02                | Water  | 8260-Low               | OLM04.3              |                      |                    |
| D1971-03                | Water  | 8260-Low               | OLM04.3              |                      |                    |
| D1971-04                | Water  | 8260-Low               | OLM04.3              |                      |                    |

## Cover Page

**Order ID :** D1971**Project ID :** DEC Gladding Cordage**Client :** Arcadis Inc.

| Lab Sample Number | Client Sample Number | Test          | Out of Hold |
|-------------------|----------------------|---------------|-------------|
| D1971-01          | RW-1                 |               |             |
| D1971-02          | RW-2                 |               |             |
| D1971-03          | EFF-46HZ             |               |             |
| D1971-04          | TRIPBLANK            | VOC-TCLVOA-10 | *           |

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : \_\_\_\_\_

## **CASE NARRATIVE**

**Arcadis Inc.**

**Project Name: DEC Gladding Cordage**

**Project # N/A**

**Chemtech Project # D1971**

**Test Name: VOC-TCLVOA-10**

### **A. Number of Samples and Date of Receipt:**

4 Water samples were received on 03/24/2012.

### **B. Parameters**

According to the Chain of Custody document, the following analyses were requested: VOC-TCLVOA-10. This data package contains results for VOC-TCLVOA-10.

### **C. Analytical Techniques:**

The analysis performed on instrument MSVOA\_R were done using GC column RXI-624SIL MS 30m 0.25mm 1.4um 872456. The analysis of VOC-TCLVOA-10 was based on method 8260-Low.

### **D. QA/ QC Samples:**

The Holding Times were met for all analysis except for TRIPBLANK.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements except for MW-34SMS.

The Retention Times were acceptable for all samples.

The MS {D1942-05MS} with File ID: VR004480.D recoveries met the requirements for all compounds except for Tetrachloroethene[142%] .

The MSD recoveries met the acceptable requirements .

The RPD for {D1942-06MSD} with File ID: VR004481.D recoveries met criteria except for Tetrachloroethene[35%] .

The Blank Spike met requirements for all samples .

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

The Tuning criteria met requirements.

### **E. Additional Comments:**

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.



**F. Manual Integration Comments:**

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

---

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature\_\_\_\_\_



# CHEMTECH

## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092  
(908) 789-8900 Fax (908) 789-8922  
www.chemtech.net

CHEMTECH PROJECT NO.

QUOTE NO.

COC Number

020739

00266365.0000  
PO#:

## CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: ARCA DIS  
ADDRESS: 855 Route 146 Ste 210  
CITY: Clifton Park STATE: NY ZIP: 12065  
ATTENTION: Jeremy Wyckoff  
PHONE: 518-250-7300 FAX: 518-250-7301

## CLIENT PROJECT INFORMATION

PROJECT NAME: NYS DEC - Gladding Cardage  
PROJECT NO.: 06266365.0000 LOCATION: S. Otisville, NY  
PROJECT MANAGER: J. Wyckoff  
e-mail: jwyckoff@arcadis-us.com  
PHONE: Same FAX: Same

## CLIENT BILLING INFORMATION

BILL TO: ARCADIS  
ADDRESS: 630 Plaza Prime  
CITY: Highlands Ranch STATE: CO ZIP: 80129  
ATTENTION: Accts Payable PHONE:

## DATA TURNAROUND INFORMATION

FAX: \_\_\_\_\_ DAYS: \_\_\_\_\_  
HARD COPY: 10 DAYS: \_\_\_\_\_  
EDD: 10 DAYS: \_\_\_\_\_  
PREAPPROVED TAT: ☒ YES ☐ NO  
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

## DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP  
☐ RESULTS + QC ☒ New York State ASP "B"  
☐ New Jersey REDUCED ☐ New York State ASP "A"  
☐ New Jersey CLP ☐ Other \_\_\_\_\_  
☒ EDD FORMAT NYS DEC EQUIS

## PRESERVATIVES

## COMMENTS

← Specify Preservatives  
A - HCl B - HNO<sub>3</sub>  
C - H<sub>2</sub>SO<sub>4</sub> D - NaOH  
E - ICE F - Other

| CHEMTECH<br>SAMPLE<br>ID | PROJECT<br>SAMPLE IDENTIFICATION | SAMPLE<br>MATRIX | SAMPLE<br>TYPE |      | SAMPLE<br>COLLECTION |      | # OF BOTTLES | PRESERVATIVES |   |   |   |   |   |   |   |   | A |  |  |  |  |  |  |  |  |  | COMMENTS<br>← Specify Preservatives<br>A - HCl      B - HNO <sub>3</sub><br>C - H <sub>2</sub> SO <sub>4</sub> D - NaOH<br>E - ICE      F - Other |
|--------------------------|----------------------------------|------------------|----------------|------|----------------------|------|--------------|---------------|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------|
|                          |                                  |                  | COMP           | GRAB | DATE                 | TIME |              | 1             | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |   |  |  |  |  |  |  |  |  |  |                                                                                                                                                   |
| 1.                       | RW-1                             | ACQ              |                | X    | 3/23/12              | 1320 | 2            | X             |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |                                                                                                                                                   |
| 2.                       | RW-2                             | ↓                |                | X    | ↓                    | 1325 | 2            | X             |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |                                                                                                                                                   |
| 3.                       | EFF-46 HZ                        | ↓                |                | X    | ↓                    | 1330 | 2            | X             |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |                                                                                                                                                   |
| 4.                       | TRIP Blank                       | ↓                |                | -    | ↓                    | —    | 2            | X             |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |                                                                                                                                                   |
| 5.                       |                                  |                  |                |      |                      |      |              |               |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |                                                                                                                                                   |
| 6.                       |                                  |                  |                |      |                      |      |              |               |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |                                                                                                                                                   |
| 7.                       |                                  |                  |                |      |                      |      |              |               |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |                                                                                                                                                   |
| 8.                       |                                  |                  |                |      |                      |      |              |               |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |                                                                                                                                                   |
| 9.                       |                                  |                  |                |      |                      |      |              |               |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |                                                                                                                                                   |
| 10.                      |                                  |                  |                |      |                      |      |              |               |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |                                                                                                                                                   |

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER

1. [Signature]

DATE/TIME:

3/23/12 1448

RECEIVED BY:

1. [Signature]

RELINQUISHED BY

2. [Signature]

DATE/TIME:

3/24/12 10:00

RECEIVED BY:

2. [Signature]

RELINQUISHED BY

3. Fed Ex

DATE/TIME:

3/24/12

RECEIVED FOR LAB BY:

3. [Signature]

Conditions of bottles or coolers at receipt:

☒ Compliant☐ Non CompliantCooler Temp. 4°C

MeOH extraction requires an additional 4 oz jar for percent solid.

Ice in Cooler?: yes

Comments:

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT  
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete:  
☒ YES ☐ NO

00028

19197 REV 10/04 MWI

11K 0909 1977 0192

**FedEx** NEW Package  
**Express** **US Airbill**
FedEx  
Tracking  
Number

8989 1977 5192

## 1 From This package can be removed for Recipient's records.

 Date 3/2/12 FedEx Tracking Number 898919775192

 Sender's Name Jonny Wscholtz Phone 612 240-7300

 Company PAULY SERVICE INC

 Address 600 RIVER ST STE 210 Dept./Floor/Suite/Room

 City CLINTON PARK State NY ZIP 12045-4500

## 2 Your Internal Billing Reference

00266365.0000

## 3 To

 Recipient's Name Simple Control Phone 908 787-8700

 Company Simple Tech

 Address 214 11th Street We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address Use this line for the HOLD location address or for continuation of your shipping address.

 City Paterson NJ State NJ ZIP 07092

 HOLD Weekday  
 FedEx location address  
 REQUIRED. NOT available for  
 FedEx First Overnight.

 HOLD Saturday  
 FedEx location address  
 REQUIRED. Available ONLY for  
 FedEx Priority Overnight and  
 FedEx 2Day to select locations.


8989 1977 5192

 KR 3/24/12  
 10:00

Form ID No. 0215

## 4 Express Package Service

NOTE: Service order has changed. Please select

## Next Business Day

☐ FedEx First Overnight  
 Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☒ FedEx Priority Overnight  
 Next business morning. \* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight  
 Next business afternoon. \* Saturday Delivery NOT available.

## 5 Packaging \*Declared value limit \$500.

☐ FedEx Envelope\* ☐ FedEx Pak

## 6 Special Handling and Delivery S

☒ SATURDAY Delivery  
 NOT available for FedEx Standard Overnight, FedEx 2Day

☐ No Signature Required  
 Package may be left without obtaining a signature for delivery. ☒ Direct Signature Required

## Does this shipment contain dangerous goods?

☒ No ☐ Yes ☐ Yes ☐ Yes  
 As per attached Shipper's Declaration. Shipper's Declaration not required.

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

## 7 Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

Obtain recip. Acct. No.

☒ Sender Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Total Packages Total Weight

10 lbs

Credit Card Auth.

\*Our liability is limited to \$100 unless you declare a higher value. See the current FedEx Service Guide for details.

PRIORITY OVERNIGHT



284 SHEFFIELD ST

 PLACE THIS LABEL ON PA  
 NEXT TO THE SHIPPING

 CITY, ST, ZIP, ZIP+4 X kg  
☐ Cargo Aircraft Only

611

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D1971 SUMMARY

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 03/23/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 03/24/12      |
| Client Sample ID:  | RW-1                 | SDG No.:        | D1971         |
| Lab Sample ID:     | D1971-01             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624 ID : 0.25    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004473.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number     | Parameter                      | Conc. | Qualifier | MDL  | LOD | LOQ / CRQL | Units |
|----------------|--------------------------------|-------|-----------|------|-----|------------|-------|
| <b>TARGETS</b> |                                |       |           |      |     |            |       |
| 75-71-8        | Dichlorodifluoromethane        | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 74-87-3        | Chloromethane                  | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-01-4        | Vinyl Chloride                 | 0.5   | U         | 0.34 | 0.5 | 1          | ug/L  |
| 74-83-9        | Bromomethane                   | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-00-3        | Chloroethane                   | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-69-4        | Trichlorofluoromethane         | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 76-13-1        | 1,1,2-Trichlorotrifluoroethane | 0.5   | U         | 0.45 | 0.5 | 1          | ug/L  |
| 75-35-4        | 1,1-Dichloroethene             | 1.2   |           | 0.47 | 0.5 | 1          | ug/L  |
| 67-64-1        | Acetone                        | 2.5   | U         | 0.5  | 2.5 | 5          | ug/L  |
| 75-15-0        | Carbon Disulfide               | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 1634-04-4      | Methyl tert-butyl Ether        | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 79-20-9        | Methyl Acetate                 | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-09-2        | Methylene Chloride             | 0.5   | U         | 0.41 | 0.5 | 1          | ug/L  |
| 156-60-5       | trans-1,2-Dichloroethene       | 0.5   | U         | 0.41 | 0.5 | 1          | ug/L  |
| 75-34-3        | 1,1-Dichloroethane             | 1.8   |           | 0.36 | 0.5 | 1          | ug/L  |
| 110-82-7       | Cyclohexane                    | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 78-93-3        | 2-Butanone                     | 2.8   | J         | 1.3  | 2.5 | 5          | ug/L  |
| 56-23-5        | Carbon Tetrachloride           | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 156-59-2       | cis-1,2-Dichloroethene         | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 74-97-5        | Bromochloromethane             | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 67-66-3        | Chloroform                     | 0.5   | U         | 0.34 | 0.5 | 1          | ug/L  |
| 71-55-6        | 1,1,1-Trichloroethane          | 48    |           | 0.4  | 0.5 | 1          | ug/L  |
| 108-87-2       | Methylcyclohexane              | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 71-43-2        | Benzene                        | 0.5   | U         | 0.32 | 0.5 | 1          | ug/L  |
| 107-06-2       | 1,2-Dichloroethane             | 0.5   | U         | 0.48 | 0.5 | 1          | ug/L  |
| 79-01-6        | Trichloroethene                | 0.5   | U         | 0.28 | 0.5 | 1          | ug/L  |
| 78-87-5        | 1,2-Dichloropropane            | 0.5   | U         | 0.46 | 0.5 | 1          | ug/L  |
| 75-27-4        | Bromodichloromethane           | 0.5   | U         | 0.36 | 0.5 | 1          | ug/L  |
| 108-10-1       | 4-Methyl-2-Pentanone           | 2.5   | U         | 2.1  | 2.5 | 5          | ug/L  |
| 108-88-3       | Toluene                        | 0.5   | U         | 0.37 | 0.5 | 1          | ug/L  |
| 10061-02-6     | t-1,3-Dichloropropene          | 0.5   | U         | 0.29 | 0.5 | 1          | ug/L  |

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 03/23/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 03/24/12      |
| Client Sample ID:  | RW-1                 | SDG No.:        | D1971         |
| Lab Sample ID:     | D1971-01             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624 ID : 0.25    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004473.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number                | Parameter                   | Conc.   | Qualifier | MDL      | LOD | LOQ / CRQL | Units   |
|---------------------------|-----------------------------|---------|-----------|----------|-----|------------|---------|
| 10061-01-5                | cis-1,3-Dichloropropene     | 0.5     | U         | 0.31     | 0.5 | 1          | ug/L    |
| 79-00-5                   | 1,1,2-Trichloroethane       | 0.5     | U         | 0.38     | 0.5 | 1          | ug/L    |
| 591-78-6                  | 2-Hexanone                  | 2.5     | U         | 1.9      | 2.5 | 5          | ug/L    |
| 124-48-1                  | Dibromochloromethane        | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 106-93-4                  | 1,2-Dibromoethane           | 0.5     | U         | 0.41     | 0.5 | 1          | ug/L    |
| 127-18-4                  | Tetrachloroethene           | 0.5     | U         | 0.27     | 0.5 | 1          | ug/L    |
| 108-90-7                  | Chlorobenzene               | 0.5     | U         | 0.49     | 0.5 | 1          | ug/L    |
| 100-41-4                  | Ethyl Benzene               | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 179601-23-1               | m/p-Xylenes                 | 1       | U         | 0.95     | 1   | 2          | ug/L    |
| 95-47-6                   | o-Xylene                    | 0.5     | U         | 0.43     | 0.5 | 1          | ug/L    |
| 100-42-5                  | Styrene                     | 0.5     | U         | 0.36     | 0.5 | 1          | ug/L    |
| 75-25-2                   | Bromoform                   | 0.5     | U         | 0.47     | 0.5 | 1          | ug/L    |
| 98-82-8                   | Isopropylbenzene            | 0.5     | U         | 0.45     | 0.5 | 1          | ug/L    |
| 79-34-5                   | 1,1,2,2-Tetrachloroethane   | 0.5     | U         | 0.31     | 0.5 | 1          | ug/L    |
| 541-73-1                  | 1,3-Dichlorobenzene         | 0.5     | U         | 0.43     | 0.5 | 1          | ug/L    |
| 106-46-7                  | 1,4-Dichlorobenzene         | 0.5     | U         | 0.32     | 0.5 | 1          | ug/L    |
| 95-50-1                   | 1,2-Dichlorobenzene         | 0.5     | U         | 0.45     | 0.5 | 1          | ug/L    |
| 96-12-8                   | 1,2-Dibromo-3-Chloropropane | 0.5     | U         | 0.46     | 0.5 | 1          | ug/L    |
| 120-82-1                  | 1,2,4-Trichlorobenzene      | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 87-61-6                   | 1,2,3-Trichlorobenzene      | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 123-91-1                  | 1,4-Dioxane                 | 10      | U         | 50       | 10  | 20         | ug/L    |
| <b>SURROGATES</b>         |                             |         |           |          |     |            |         |
| 17060-07-0                | 1,2-Dichloroethane-d4       | 46.5    |           | 61 - 141 |     | 93%        | SPK: 50 |
| 1868-53-7                 | Dibromofluoromethane        | 49.7    |           | 69 - 133 |     | 99%        | SPK: 50 |
| 2037-26-5                 | Toluene-d8                  | 50.1    |           | 65 - 126 |     | 100%       | SPK: 50 |
| 460-00-4                  | 4-Bromofluorobenzene        | 48.1    |           | 58 - 135 |     | 96%        | SPK: 50 |
| <b>INTERNAL STANDARDS</b> |                             |         |           |          |     |            |         |
| 363-72-4                  | Pentafluorobenzene          | 2219420 | 7.58      |          |     |            |         |
| 540-36-3                  | 1,4-Difluorobenzene         | 3712840 | 8.5       |          |     |            |         |
| 3114-55-4                 | Chlorobenzene-d5            | 3336530 | 11.31     |          |     |            |         |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4      | 1621680 | 13.26     |          |     |            |         |

**Report of Analysis**

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 03/23/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 03/24/12      |
| Client Sample ID:  | RW-1                 | SDG No.:        | D1971         |
| Lab Sample ID:     | D1971-01             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5                    | Units:          | mL            |
| Soil Aliquot Vol:  |                      |                 | uL            |
| GC Column:         | RXI-624              | ID :            | 0.25          |
|                    |                      | Final Vol:      | 5000          |
|                    |                      | Test:           | VOC-TCLVOA-10 |
|                    |                      | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004473.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|------------|-----------|-------|-----------|-----|-----|------------|-------|
|------------|-----------|-------|-----------|-----|-----|------------|-------|

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

**D1971 SUMMARY**

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 03/23/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 03/24/12      |
| Client Sample ID:  | RW-2                 | SDG No.:        | D1971         |
| Lab Sample ID:     | D1971-02             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624 ID : 0.25    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004474.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number     | Parameter                      | Conc. | Qualifier | MDL  | LOD | LOQ / CRQL | Units |
|----------------|--------------------------------|-------|-----------|------|-----|------------|-------|
| <b>TARGETS</b> |                                |       |           |      |     |            |       |
| 75-71-8        | Dichlorodifluoromethane        | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 74-87-3        | Chloromethane                  | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-01-4        | Vinyl Chloride                 | 0.5   | U         | 0.34 | 0.5 | 1          | ug/L  |
| 74-83-9        | Bromomethane                   | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-00-3        | Chloroethane                   | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-69-4        | Trichlorofluoromethane         | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 76-13-1        | 1,1,2-Trichlorotrifluoroethane | 0.5   | U         | 0.45 | 0.5 | 1          | ug/L  |
| 75-35-4        | 1,1-Dichloroethene             | 0.94  | J         | 0.47 | 0.5 | 1          | ug/L  |
| 67-64-1        | Acetone                        | 2.5   | U         | 0.5  | 2.5 | 5          | ug/L  |
| 75-15-0        | Carbon Disulfide               | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 1634-04-4      | Methyl tert-butyl Ether        | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 79-20-9        | Methyl Acetate                 | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-09-2        | Methylene Chloride             | 0.5   | U         | 0.41 | 0.5 | 1          | ug/L  |
| 156-60-5       | trans-1,2-Dichloroethene       | 0.5   | U         | 0.41 | 0.5 | 1          | ug/L  |
| 75-34-3        | 1,1-Dichloroethane             | 0.9   | J         | 0.36 | 0.5 | 1          | ug/L  |
| 110-82-7       | Cyclohexane                    | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 78-93-3        | 2-Butanone                     | 2.5   | U         | 1.3  | 2.5 | 5          | ug/L  |
| 56-23-5        | Carbon Tetrachloride           | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 156-59-2       | cis-1,2-Dichloroethene         | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 74-97-5        | Bromochloromethane             | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 67-66-3        | Chloroform                     | 0.5   | U         | 0.34 | 0.5 | 1          | ug/L  |
| 71-55-6        | 1,1,1-Trichloroethane          | 44    |           | 0.4  | 0.5 | 1          | ug/L  |
| 108-87-2       | Methylcyclohexane              | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 71-43-2        | Benzene                        | 0.5   | U         | 0.32 | 0.5 | 1          | ug/L  |
| 107-06-2       | 1,2-Dichloroethane             | 0.5   | U         | 0.48 | 0.5 | 1          | ug/L  |
| 79-01-6        | Trichloroethene                | 0.5   | U         | 0.28 | 0.5 | 1          | ug/L  |
| 78-87-5        | 1,2-Dichloropropane            | 0.5   | U         | 0.46 | 0.5 | 1          | ug/L  |
| 75-27-4        | Bromodichloromethane           | 0.5   | U         | 0.36 | 0.5 | 1          | ug/L  |
| 108-10-1       | 4-Methyl-2-Pentanone           | 2.5   | U         | 2.1  | 2.5 | 5          | ug/L  |
| 108-88-3       | Toluene                        | 0.5   | U         | 0.37 | 0.5 | 1          | ug/L  |
| 10061-02-6     | t-1,3-Dichloropropene          | 0.5   | U         | 0.29 | 0.5 | 1          | ug/L  |

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 03/23/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 03/24/12      |
| Client Sample ID:  | RW-2                 | SDG No.:        | D1971         |
| Lab Sample ID:     | D1971-02             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624 ID : 0.25    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004474.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number                | Parameter                   | Conc.   | Qualifier | MDL      | LOD | LOQ / CRQL | Units   |
|---------------------------|-----------------------------|---------|-----------|----------|-----|------------|---------|
| 10061-01-5                | cis-1,3-Dichloropropene     | 0.5     | U         | 0.31     | 0.5 | 1          | ug/L    |
| 79-00-5                   | 1,1,2-Trichloroethane       | 0.5     | U         | 0.38     | 0.5 | 1          | ug/L    |
| 591-78-6                  | 2-Hexanone                  | 2.5     | U         | 1.9      | 2.5 | 5          | ug/L    |
| 124-48-1                  | Dibromochloromethane        | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 106-93-4                  | 1,2-Dibromoethane           | 0.5     | U         | 0.41     | 0.5 | 1          | ug/L    |
| 127-18-4                  | Tetrachloroethene           | 0.5     | U         | 0.27     | 0.5 | 1          | ug/L    |
| 108-90-7                  | Chlorobenzene               | 0.5     | U         | 0.49     | 0.5 | 1          | ug/L    |
| 100-41-4                  | Ethyl Benzene               | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 179601-23-1               | m/p-Xylenes                 | 1       | U         | 0.95     | 1   | 2          | ug/L    |
| 95-47-6                   | o-Xylene                    | 0.5     | U         | 0.43     | 0.5 | 1          | ug/L    |
| 100-42-5                  | Styrene                     | 0.5     | U         | 0.36     | 0.5 | 1          | ug/L    |
| 75-25-2                   | Bromoform                   | 0.5     | U         | 0.47     | 0.5 | 1          | ug/L    |
| 98-82-8                   | Isopropylbenzene            | 0.5     | U         | 0.45     | 0.5 | 1          | ug/L    |
| 79-34-5                   | 1,1,2,2-Tetrachloroethane   | 0.5     | U         | 0.31     | 0.5 | 1          | ug/L    |
| 541-73-1                  | 1,3-Dichlorobenzene         | 0.5     | U         | 0.43     | 0.5 | 1          | ug/L    |
| 106-46-7                  | 1,4-Dichlorobenzene         | 0.5     | U         | 0.32     | 0.5 | 1          | ug/L    |
| 95-50-1                   | 1,2-Dichlorobenzene         | 0.5     | U         | 0.45     | 0.5 | 1          | ug/L    |
| 96-12-8                   | 1,2-Dibromo-3-Chloropropane | 0.5     | U         | 0.46     | 0.5 | 1          | ug/L    |
| 120-82-1                  | 1,2,4-Trichlorobenzene      | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 87-61-6                   | 1,2,3-Trichlorobenzene      | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 123-91-1                  | 1,4-Dioxane                 | 10      | U         | 50       | 10  | 20         | ug/L    |
| <b>SURROGATES</b>         |                             |         |           |          |     |            |         |
| 17060-07-0                | 1,2-Dichloroethane-d4       | 46.7    |           | 61 - 141 |     | 93%        | SPK: 50 |
| 1868-53-7                 | Dibromofluoromethane        | 49.2    |           | 69 - 133 |     | 98%        | SPK: 50 |
| 2037-26-5                 | Toluene-d8                  | 49.6    |           | 65 - 126 |     | 99%        | SPK: 50 |
| 460-00-4                  | 4-Bromofluorobenzene        | 48      |           | 58 - 135 |     | 96%        | SPK: 50 |
| <b>INTERNAL STANDARDS</b> |                             |         |           |          |     |            |         |
| 363-72-4                  | Pentafluorobenzene          | 2207800 | 7.58      |          |     |            |         |
| 540-36-3                  | 1,4-Difluorobenzene         | 3692850 | 8.5       |          |     |            |         |
| 3114-55-4                 | Chlorobenzene-d5            | 3300970 | 11.32     |          |     |            |         |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4      | 1609040 | 13.26     |          |     |            |         |

**Report of Analysis**

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 03/23/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 03/24/12      |
| Client Sample ID:  | RW-2                 | SDG No.:        | D1971         |
| Lab Sample ID:     | D1971-02             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5                    | Units:          | mL            |
| Soil Aliquot Vol:  |                      |                 | uL            |
| GC Column:         | RXI-624              | ID :            | 0.25          |
|                    |                      | Final Vol:      | 5000          |
|                    |                      | Test:           | VOC-TCLVOA-10 |
|                    |                      | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004474.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|------------|-----------|-------|-----------|-----|-----|------------|-------|
|------------|-----------|-------|-----------|-----|-----|------------|-------|

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

**D1971 SUMMARY**



## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 03/23/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 03/24/12      |
| Client Sample ID:  | EFF-46HZ             | SDG No.:        | D1971         |
| Lab Sample ID:     | D1971-03             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624 ID : 0.25    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004475.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number     | Parameter                      | Conc. | Qualifier | MDL  | LOD | LOQ / CRQL | Units |
|----------------|--------------------------------|-------|-----------|------|-----|------------|-------|
| <b>TARGETS</b> |                                |       |           |      |     |            |       |
| 75-71-8        | Dichlorodifluoromethane        | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 74-87-3        | Chloromethane                  | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-01-4        | Vinyl Chloride                 | 0.5   | U         | 0.34 | 0.5 | 1          | ug/L  |
| 74-83-9        | Bromomethane                   | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-00-3        | Chloroethane                   | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-69-4        | Trichlorofluoromethane         | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 76-13-1        | 1,1,2-Trichlorotrifluoroethane | 0.5   | U         | 0.45 | 0.5 | 1          | ug/L  |
| 75-35-4        | 1,1-Dichloroethene             | 0.5   | U         | 0.47 | 0.5 | 1          | ug/L  |
| 67-64-1        | Acetone                        | 2.5   | U         | 0.5  | 2.5 | 5          | ug/L  |
| 75-15-0        | Carbon Disulfide               | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 1634-04-4      | Methyl tert-butyl Ether        | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 79-20-9        | Methyl Acetate                 | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-09-2        | Methylene Chloride             | 0.5   | U         | 0.41 | 0.5 | 1          | ug/L  |
| 156-60-5       | trans-1,2-Dichloroethene       | 0.5   | U         | 0.41 | 0.5 | 1          | ug/L  |
| 75-34-3        | 1,1-Dichloroethane             | 0.5   | U         | 0.36 | 0.5 | 1          | ug/L  |
| 110-82-7       | Cyclohexane                    | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 78-93-3        | 2-Butanone                     | 2.5   | U         | 1.3  | 2.5 | 5          | ug/L  |
| 56-23-5        | Carbon Tetrachloride           | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 156-59-2       | cis-1,2-Dichloroethene         | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 74-97-5        | Bromochloromethane             | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 67-66-3        | Chloroform                     | 0.5   | U         | 0.34 | 0.5 | 1          | ug/L  |
| 71-55-6        | 1,1,1-Trichloroethane          | 0.5   | U         | 0.4  | 0.5 | 1          | ug/L  |
| 108-87-2       | Methylcyclohexane              | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 71-43-2        | Benzene                        | 0.5   | U         | 0.32 | 0.5 | 1          | ug/L  |
| 107-06-2       | 1,2-Dichloroethane             | 0.5   | U         | 0.48 | 0.5 | 1          | ug/L  |
| 79-01-6        | Trichloroethene                | 0.5   | U         | 0.28 | 0.5 | 1          | ug/L  |
| 78-87-5        | 1,2-Dichloropropane            | 0.5   | U         | 0.46 | 0.5 | 1          | ug/L  |
| 75-27-4        | Bromodichloromethane           | 0.5   | U         | 0.36 | 0.5 | 1          | ug/L  |
| 108-10-1       | 4-Methyl-2-Pentanone           | 2.5   | U         | 2.1  | 2.5 | 5          | ug/L  |
| 108-88-3       | Toluene                        | 0.5   | U         | 0.37 | 0.5 | 1          | ug/L  |
| 10061-02-6     | t-1,3-Dichloropropene          | 0.5   | U         | 0.29 | 0.5 | 1          | ug/L  |

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 03/23/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 03/24/12      |
| Client Sample ID:  | EFF-46HZ             | SDG No.:        | D1971         |
| Lab Sample ID:     | D1971-03             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624 ID : 0.25    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004475.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number                | Parameter                   | Conc.   | Qualifier | MDL      | LOD | LOQ / CRQL | Units   |
|---------------------------|-----------------------------|---------|-----------|----------|-----|------------|---------|
| 10061-01-5                | cis-1,3-Dichloropropene     | 0.5     | U         | 0.31     | 0.5 | 1          | ug/L    |
| 79-00-5                   | 1,1,2-Trichloroethane       | 0.5     | U         | 0.38     | 0.5 | 1          | ug/L    |
| 591-78-6                  | 2-Hexanone                  | 2.5     | U         | 1.9      | 2.5 | 5          | ug/L    |
| 124-48-1                  | Dibromochloromethane        | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 106-93-4                  | 1,2-Dibromoethane           | 0.5     | U         | 0.41     | 0.5 | 1          | ug/L    |
| 127-18-4                  | Tetrachloroethene           | 0.5     | U         | 0.27     | 0.5 | 1          | ug/L    |
| 108-90-7                  | Chlorobenzene               | 0.5     | U         | 0.49     | 0.5 | 1          | ug/L    |
| 100-41-4                  | Ethyl Benzene               | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 179601-23-1               | m/p-Xylenes                 | 1       | U         | 0.95     | 1   | 2          | ug/L    |
| 95-47-6                   | o-Xylene                    | 0.5     | U         | 0.43     | 0.5 | 1          | ug/L    |
| 100-42-5                  | Styrene                     | 0.5     | U         | 0.36     | 0.5 | 1          | ug/L    |
| 75-25-2                   | Bromoform                   | 0.5     | U         | 0.47     | 0.5 | 1          | ug/L    |
| 98-82-8                   | Isopropylbenzene            | 0.5     | U         | 0.45     | 0.5 | 1          | ug/L    |
| 79-34-5                   | 1,1,2,2-Tetrachloroethane   | 0.5     | U         | 0.31     | 0.5 | 1          | ug/L    |
| 541-73-1                  | 1,3-Dichlorobenzene         | 0.5     | U         | 0.43     | 0.5 | 1          | ug/L    |
| 106-46-7                  | 1,4-Dichlorobenzene         | 0.5     | U         | 0.32     | 0.5 | 1          | ug/L    |
| 95-50-1                   | 1,2-Dichlorobenzene         | 0.5     | U         | 0.45     | 0.5 | 1          | ug/L    |
| 96-12-8                   | 1,2-Dibromo-3-Chloropropane | 0.5     | U         | 0.46     | 0.5 | 1          | ug/L    |
| 120-82-1                  | 1,2,4-Trichlorobenzene      | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 87-61-6                   | 1,2,3-Trichlorobenzene      | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 123-91-1                  | 1,4-Dioxane                 | 10      | U         | 50       | 10  | 20         | ug/L    |
| <b>SURROGATES</b>         |                             |         |           |          |     |            |         |
| 17060-07-0                | 1,2-Dichloroethane-d4       | 46.1    |           | 61 - 141 |     | 92%        | SPK: 50 |
| 1868-53-7                 | Dibromofluoromethane        | 47.4    |           | 69 - 133 |     | 95%        | SPK: 50 |
| 2037-26-5                 | Toluene-d8                  | 49.9    |           | 65 - 126 |     | 100%       | SPK: 50 |
| 460-00-4                  | 4-Bromofluorobenzene        | 47.7    |           | 58 - 135 |     | 95%        | SPK: 50 |
| <b>INTERNAL STANDARDS</b> |                             |         |           |          |     |            |         |
| 363-72-4                  | Pentafluorobenzene          | 2198870 | 7.58      |          |     |            |         |
| 540-36-3                  | 1,4-Difluorobenzene         | 3645170 | 8.5       |          |     |            |         |
| 3114-55-4                 | Chlorobenzene-d5            | 3257510 | 11.32     |          |     |            |         |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4      | 1571450 | 13.26     |          |     |            |         |

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 03/23/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 03/24/12      |
| Client Sample ID:  | EFF-46HZ             | SDG No.:        | D1971         |
| Lab Sample ID:     | D1971-03             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624 ID : 0.25    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004475.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|------------|-----------|-------|-----------|-----|-----|------------|-------|
|------------|-----------|-------|-----------|-----|-----|------------|-------|

U = Not Detected  
 LOQ = Limit of Quantitation  
 MDL = Method Detection Limit  
 LOD = Limit of Detection  
 E = Value Exceeds Calibration Range  
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value  
 B = Analyte Found in Associated Method Blank  
 N = Presumptive Evidence of a Compound  
 \* = Values outside of QC limits  
 D = Dilution

### D1971 SUMMARY

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 02/01/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 03/24/12      |
| Client Sample ID:  | TRIPBLANK            | SDG No.:        | D1971         |
| Lab Sample ID:     | D1971-04             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624 ID : 0.25    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004468.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number     | Parameter                      | Conc. | Qualifier | MDL  | LOD | LOQ / CRQL | Units |
|----------------|--------------------------------|-------|-----------|------|-----|------------|-------|
| <b>TARGETS</b> |                                |       |           |      |     |            |       |
| 75-71-8        | Dichlorodifluoromethane        | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 74-87-3        | Chloromethane                  | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-01-4        | Vinyl Chloride                 | 0.5   | U         | 0.34 | 0.5 | 1          | ug/L  |
| 74-83-9        | Bromomethane                   | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-00-3        | Chloroethane                   | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-69-4        | Trichlorofluoromethane         | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 76-13-1        | 1,1,2-Trichlorotrifluoroethane | 0.5   | U         | 0.45 | 0.5 | 1          | ug/L  |
| 75-35-4        | 1,1-Dichloroethene             | 0.5   | U         | 0.47 | 0.5 | 1          | ug/L  |
| 67-64-1        | Acetone                        | 2.5   | U         | 0.5  | 2.5 | 5          | ug/L  |
| 75-15-0        | Carbon Disulfide               | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 1634-04-4      | Methyl tert-butyl Ether        | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 79-20-9        | Methyl Acetate                 | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-09-2        | Methylene Chloride             | 0.5   | U         | 0.41 | 0.5 | 1          | ug/L  |
| 156-60-5       | trans-1,2-Dichloroethene       | 0.5   | U         | 0.41 | 0.5 | 1          | ug/L  |
| 75-34-3        | 1,1-Dichloroethane             | 0.5   | U         | 0.36 | 0.5 | 1          | ug/L  |
| 110-82-7       | Cyclohexane                    | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 78-93-3        | 2-Butanone                     | 2.5   | U         | 1.3  | 2.5 | 5          | ug/L  |
| 56-23-5        | Carbon Tetrachloride           | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 156-59-2       | cis-1,2-Dichloroethene         | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 74-97-5        | Bromochloromethane             | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 67-66-3        | Chloroform                     | 0.5   | U         | 0.34 | 0.5 | 1          | ug/L  |
| 71-55-6        | 1,1,1-Trichloroethane          | 0.5   | U         | 0.4  | 0.5 | 1          | ug/L  |
| 108-87-2       | Methylcyclohexane              | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 71-43-2        | Benzene                        | 0.5   | U         | 0.32 | 0.5 | 1          | ug/L  |
| 107-06-2       | 1,2-Dichloroethane             | 0.5   | U         | 0.48 | 0.5 | 1          | ug/L  |
| 79-01-6        | Trichloroethene                | 0.5   | U         | 0.28 | 0.5 | 1          | ug/L  |
| 78-87-5        | 1,2-Dichloropropane            | 0.5   | U         | 0.46 | 0.5 | 1          | ug/L  |
| 75-27-4        | Bromodichloromethane           | 0.5   | U         | 0.36 | 0.5 | 1          | ug/L  |
| 108-10-1       | 4-Methyl-2-Pentanone           | 2.5   | U         | 2.1  | 2.5 | 5          | ug/L  |
| 108-88-3       | Toluene                        | 0.5   | U         | 0.37 | 0.5 | 1          | ug/L  |
| 10061-02-6     | t-1,3-Dichloropropene          | 0.5   | U         | 0.29 | 0.5 | 1          | ug/L  |

## Report of Analysis

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 02/01/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 03/24/12      |
| Client Sample ID:  | TRIPBLANK            | SDG No.:        | D1971         |
| Lab Sample ID:     | D1971-04             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624 ID : 0.25    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004468.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number                | Parameter                   | Conc.   | Qualifier | MDL      | LOD | LOQ / CRQL | Units   |
|---------------------------|-----------------------------|---------|-----------|----------|-----|------------|---------|
| 10061-01-5                | cis-1,3-Dichloropropene     | 0.5     | U         | 0.31     | 0.5 | 1          | ug/L    |
| 79-00-5                   | 1,1,2-Trichloroethane       | 0.5     | U         | 0.38     | 0.5 | 1          | ug/L    |
| 591-78-6                  | 2-Hexanone                  | 2.5     | U         | 1.9      | 2.5 | 5          | ug/L    |
| 124-48-1                  | Dibromochloromethane        | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 106-93-4                  | 1,2-Dibromoethane           | 0.5     | U         | 0.41     | 0.5 | 1          | ug/L    |
| 127-18-4                  | Tetrachloroethene           | 0.5     | U         | 0.27     | 0.5 | 1          | ug/L    |
| 108-90-7                  | Chlorobenzene               | 0.5     | U         | 0.49     | 0.5 | 1          | ug/L    |
| 100-41-4                  | Ethyl Benzene               | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 179601-23-1               | m/p-Xylenes                 | 1       | U         | 0.95     | 1   | 2          | ug/L    |
| 95-47-6                   | o-Xylene                    | 0.5     | U         | 0.43     | 0.5 | 1          | ug/L    |
| 100-42-5                  | Styrene                     | 0.5     | U         | 0.36     | 0.5 | 1          | ug/L    |
| 75-25-2                   | Bromoform                   | 0.5     | U         | 0.47     | 0.5 | 1          | ug/L    |
| 98-82-8                   | Isopropylbenzene            | 0.5     | U         | 0.45     | 0.5 | 1          | ug/L    |
| 79-34-5                   | 1,1,2,2-Tetrachloroethane   | 0.5     | U         | 0.31     | 0.5 | 1          | ug/L    |
| 541-73-1                  | 1,3-Dichlorobenzene         | 0.5     | U         | 0.43     | 0.5 | 1          | ug/L    |
| 106-46-7                  | 1,4-Dichlorobenzene         | 0.5     | U         | 0.32     | 0.5 | 1          | ug/L    |
| 95-50-1                   | 1,2-Dichlorobenzene         | 0.5     | U         | 0.45     | 0.5 | 1          | ug/L    |
| 96-12-8                   | 1,2-Dibromo-3-Chloropropane | 0.5     | U         | 0.46     | 0.5 | 1          | ug/L    |
| 120-82-1                  | 1,2,4-Trichlorobenzene      | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 87-61-6                   | 1,2,3-Trichlorobenzene      | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 123-91-1                  | 1,4-Dioxane                 | 10      | U         | 50       | 10  | 20         | ug/L    |
| <b>SURROGATES</b>         |                             |         |           |          |     |            |         |
| 17060-07-0                | 1,2-Dichloroethane-d4       | 45.7    |           | 61 - 141 |     | 91%        | SPK: 50 |
| 1868-53-7                 | Dibromofluoromethane        | 47.5    |           | 69 - 133 |     | 95%        | SPK: 50 |
| 2037-26-5                 | Toluene-d8                  | 50.2    |           | 65 - 126 |     | 101%       | SPK: 50 |
| 460-00-4                  | 4-Bromofluorobenzene        | 48.2    |           | 58 - 135 |     | 96%        | SPK: 50 |
| <b>INTERNAL STANDARDS</b> |                             |         |           |          |     |            |         |
| 363-72-4                  | Pentafluorobenzene          | 2416270 | 7.58      |          |     |            |         |
| 540-36-3                  | 1,4-Difluorobenzene         | 4012700 | 8.5       |          |     |            |         |
| 3114-55-4                 | Chlorobenzene-d5            | 3596480 | 11.32     |          |     |            |         |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4      | 1718730 | 13.26     |          |     |            |         |

**Report of Analysis**

|                    |                      |                 |               |
|--------------------|----------------------|-----------------|---------------|
| Client:            | Arcadis Inc.         | Date Collected: | 02/01/12      |
| Project:           | DEC Gladding Cordage | Date Received:  | 03/24/12      |
| Client Sample ID:  | TRIPBLANK            | SDG No.:        | D1971         |
| Lab Sample ID:     | D1971-04             | Matrix:         | WATER         |
| Analytical Method: | SW8260C              | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5 Units: mL          | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  | uL                   | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624 ID : 0.25    | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004468.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|------------|-----------|-------|-----------|-----|-----|------------|-------|
|------------|-----------|-------|-----------|-----|-----|------------|-------|

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

**D1971 SUMMARY**



## Surrogate Summary

SDG No.: D1971

Client: Arcadis Inc.

Analytical Method: EPA SW846 8260

| Lab Sample ID | Client ID | Parameter             | Spike | Result | Recovery | Qual | Limits |      |
|---------------|-----------|-----------------------|-------|--------|----------|------|--------|------|
|               |           |                       |       |        |          |      | Low    | High |
| BSR0328W1     | BSR0328W1 | 1,2-Dichloroethane-d4 | 50    | 43.44  | 87       |      | 61     | 141  |
|               |           | Dibromofluoromethane  | 50    | 46.84  | 94       |      | 69     | 133  |
|               |           | Toluene-d8            | 50    | 47.16  | 94       |      | 65     | 126  |
|               |           | 4-Bromofluorobenzene  | 50    | 46.76  | 94       |      | 58     | 135  |
| D1942-05MS    | MW-34SMS  | 1,2-Dichloroethane-d4 | 50    | 43.12  | 86       |      | 61     | 141  |
|               |           | Dibromofluoromethane  | 50    | 45.8   | 92       |      | 69     | 133  |
|               |           | Toluene-d8            | 50    | 45.06  | 90       |      | 65     | 126  |
|               |           | 4-Bromofluorobenzene  | 50    | 43.6   | 87       |      | 58     | 135  |
| D1942-06MSD   | MW-34SMSD | 1,2-Dichloroethane-d4 | 50    | 56.55  | 113      |      | 61     | 141  |
|               |           | Dibromofluoromethane  | 50    | 60.93  | 122      |      | 69     | 133  |
|               |           | Toluene-d8            | 50    | 61.01  | 122      |      | 65     | 126  |
|               |           | 4-Bromofluorobenzene  | 50    | 58.3   | 117      |      | 58     | 135  |
| D1971-01      | RW-1      | 1,2-Dichloroethane-d4 | 50    | 46.54  | 93       |      | 61     | 141  |
|               |           | Dibromofluoromethane  | 50    | 49.66  | 99       |      | 69     | 133  |
|               |           | Toluene-d8            | 50    | 50.07  | 100      |      | 65     | 126  |
|               |           | 4-Bromofluorobenzene  | 50    | 48.13  | 96       |      | 58     | 135  |
| D1971-02      | RW-2      | 1,2-Dichloroethane-d4 | 50    | 46.73  | 93       |      | 61     | 141  |
|               |           | Dibromofluoromethane  | 50    | 49.16  | 98       |      | 69     | 133  |
|               |           | Toluene-d8            | 50    | 49.63  | 99       |      | 65     | 126  |
|               |           | 4-Bromofluorobenzene  | 50    | 48.05  | 96       |      | 58     | 135  |
| D1971-03      | EFF-46HZ  | 1,2-Dichloroethane-d4 | 50    | 46.08  | 92       |      | 61     | 141  |
|               |           | Dibromofluoromethane  | 50    | 47.37  | 95       |      | 69     | 133  |
|               |           | Toluene-d8            | 50    | 49.94  | 100      |      | 65     | 126  |
|               |           | 4-Bromofluorobenzene  | 50    | 47.74  | 95       |      | 58     | 135  |
| D1971-04      | TRIPBLANK | 1,2-Dichloroethane-d4 | 50    | 45.66  | 91       |      | 61     | 141  |
|               |           | Dibromofluoromethane  | 50    | 47.47  | 95       |      | 69     | 133  |
|               |           | Toluene-d8            | 50    | 50.25  | 101      |      | 65     | 126  |
|               |           | 4-Bromofluorobenzene  | 50    | 48.2   | 96       |      | 58     | 135  |
| VBR0328W1     | VBR0328W1 | 1,2-Dichloroethane-d4 | 50    | 46.12  | 92       |      | 61     | 141  |
|               |           | Dibromofluoromethane  | 50    | 48.23  | 96       |      | 69     | 133  |
|               |           | Toluene-d8            | 50    | 50.34  | 101      |      | 65     | 126  |
|               |           | 4-Bromofluorobenzene  | 50    | 48.81  | 98       |      | 58     | 135  |



## WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: Arcadis Inc.

Lab Code: CHEM Cas No: D1971 SAS No : D1971 SDG No: D1971

Matrix Spike - EPA Sample No : D1942-05 Analytical Method: EPA SW846 8260 Datafile : VR004480.D

| COMPOUND                       | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>CONCENTRATION<br>(ug/L) | MS<br>CONCENTRATION<br>(ug/L) | MS<br>%<br>REC# | QC<br>LIMITS<br>REC |
|--------------------------------|--------------------------|-----------------------------------|-------------------------------|-----------------|---------------------|
| Dichlorodifluoromethane        | 50                       | 0                                 | 51                            | 102             | (47-161)            |
| Chloromethane                  | 50                       | 0                                 | 42                            | 84              | (53-157)            |
| Vinyl Chloride                 | 50                       | 0                                 | 47                            | 94              | (57-149)            |
| Bromomethane                   | 50                       | 0                                 | 39                            | 78              | (45-165)            |
| Chloroethane                   | 50                       | 0                                 | 52                            | 104             | (47-166)            |
| Trichlorofluoromethane         | 50                       | 0                                 | 53                            | 106             | (51-165)            |
| 1,1,2-Trichlorotrifluoroethane | 50                       | 0                                 | 51                            | 102             | (61-145)            |
| 1,1-Dichloroethene             | 50                       | 0                                 | 49                            | 98              | (55-148)            |
| Acetone                        | 250                      | 0                                 | 180                           | 72              | (11-159)            |
| Carbon Disulfide               | 50                       | 0                                 | 49                            | 98              | (13-149)            |
| Methyl tert-butyl Ether        | 50                       | 0                                 | 52                            | 104             | (60-145)            |
| Methyl Acetate                 | 50                       | 0                                 | 58                            | 116             | (27-167)            |
| Methylene Chloride             | 50                       | 0                                 | 56                            | 112             | (56-146)            |
| trans-1,2-Dichloroethene       | 50                       | 0                                 | 52                            | 104             | (60-141)            |
| 1,1-Dichloroethane             | 50                       | 0                                 | 51                            | 102             | (61-144)            |
| Cyclohexane                    | 50                       | 0                                 | 48                            | 96              | (57-142)            |
| 2-Butanone                     | 250                      | 0                                 | 220                           | 88              | (42-145)            |
| Carbon Tetrachloride           | 50                       | 0                                 | 63                            | 126             | (60-140)            |
| cis-1,2-Dichloroethene         | 50                       | 0                                 | 53                            | 106             | (48-156)            |
| Bromochloromethane             | 50                       | 0                                 | 54                            | 108             | (59-146)            |
| Chloroform                     | 50                       | 0                                 | 52                            | 104             | (63-140)            |
| 1,1,1-Trichloroethane          | 50                       | 0                                 | 52                            | 104             | (65-140)            |
| Methylcyclohexane              | 50                       | 0                                 | 49                            | 98              | (62-128)            |
| Benzene                        | 50                       | 0                                 | 54                            | 108             | (62-134)            |
| 1,2-Dichloroethane             | 50                       | 0                                 | 56                            | 112             | (67-136)            |
| Trichloroethene                | 50                       | 0                                 | 54                            | 108             | (64-131)            |
| 1,2-Dichloropropane            | 50                       | 0                                 | 53                            | 106             | (69-130)            |
| Bromodichloromethane           | 50                       | 0                                 | 58                            | 116             | (66-132)            |
| 4-Methyl-2-Pentanone           | 250                      | 0                                 | 290                           | 116             | (57-148)            |
| Toluene                        | 50                       | 0                                 | 54                            | 108             | (68-129)            |
| t-1,3-Dichloropropene          | 50                       | 0                                 | 56                            | 112             | (54-136)            |
| cis-1,3-Dichloropropene        | 50                       | 0                                 | 54                            | 108             | (56-133)            |
| 1,1,2-Trichloroethane          | 50                       | 0                                 | 56                            | 112             | (68-134)            |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits





## WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: Arcadis Inc.

Lab Code: CHEM Cas No: D1971 SAS No : D1971 SDG No: D1971

Matrix Spike - EPA Sample No : D1942-05 Analytical Method: EPA SW846 8260 Datafile : VR004480.D

| COMPOUND                    | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>CONCENTRATION<br>(ug/L) | MS<br>CONCENTRATION<br>(ug/L) | MS<br>%<br>REC# | QC<br>LIMITS<br>REC |
|-----------------------------|--------------------------|-----------------------------------|-------------------------------|-----------------|---------------------|
| 2-Hexanone                  | 250                      | 0                                 | 270                           | 108             | (46-158)            |
| Dibromochloromethane        | 50                       | 0                                 | 59                            | 118             | (59-136)            |
| 1,2-Dibromoethane           | 50                       | 0                                 | 56                            | 112             | (65-138)            |
| Tetrachloroethene           | 50                       | 0                                 | 71                            | 142*            | (29-137)            |
| Chlorobenzene               | 50                       | 0                                 | 55                            | 110             | (68-126)            |
| Ethyl Benzene               | 50                       | 0                                 | 53                            | 106             | (61-131)            |
| m/p-Xylenes                 | 100                      | 0                                 | 110                           | 110             | (64-125)            |
| o-Xylene                    | 50                       | 0                                 | 54                            | 108             | (65-126)            |
| Styrene                     | 50                       | 0                                 | 59                            | 118             | (40-140)            |
| Bromoform                   | 50                       | 0                                 | 60                            | 120             | (42-134)            |
| Isopropylbenzene            | 50                       | 0                                 | 53                            | 106             | (58-132)            |
| 1,1,2,2-Tetrachloroethane   | 50                       | 0                                 | 55                            | 110             | (61-136)            |
| 1,3-Dichlorobenzene         | 50                       | 0                                 | 51                            | 102             | (63-125)            |
| 1,4-Dichlorobenzene         | 50                       | 0                                 | 52                            | 104             | (64-124)            |
| 1,2-Dichlorobenzene         | 50                       | 0                                 | 54                            | 108             | (64-126)            |
| 1,2-Dibromo-3-Chloropropane | 50                       | 0                                 | 49                            | 98              | (57-139)            |
| 1,2,4-Trichlorobenzene      | 50                       | 0                                 | 54                            | 108             | (57-130)            |
| 1,2,3-Trichlorobenzene      | 50                       | 0                                 | 56                            | 112             | (57-131)            |
| 1,4-Dioxane                 | 1000                     | 0                                 | 820                           | 82              | (50-150)            |

RPD : 0 Out of 52 outside limits

Spike Recovery : 1 Out of 52 outside limits

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits



## WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: Arcadis Inc.

Lab Code: CHEM Cas No: D1971 SAS No : D1971 SDG No: D1971

Matrix Spike - EPA Sample No : D1942-06 Analytical Method: EPA SW846 8260 Datafile : VR004481.D

| COMPOUND                       | SPIKE<br>ADDED<br>(ug/L) | MSD<br>CONCENTRATION<br>(ug/L) | MSD<br>% %<br>(ug/L) |    | QC LIMITS |          |
|--------------------------------|--------------------------|--------------------------------|----------------------|----|-----------|----------|
|                                |                          |                                |                      |    | RPD       | REC      |
| Dichlorodifluoromethane        | 50                       | 47                             | 94                   | 8  | 20        | (47-161) |
| Chloromethane                  | 50                       | 39                             | 78                   | 7  | 20        | (53-157) |
| Vinyl Chloride                 | 50                       | 43                             | 86                   | 9  | 20        | (57-149) |
| Bromomethane                   | 50                       | 44                             | 88                   | 12 | 20        | (45-165) |
| Chloroethane                   | 50                       | 46                             | 92                   | 12 | 20        | (47-166) |
| Trichlorofluoromethane         | 50                       | 48                             | 96                   | 10 | 20        | (51-165) |
| 1,1,2-Trichlorotrifluoroethane | 50                       | 47                             | 94                   | 8  | 20        | (61-145) |
| 1,1-Dichloroethene             | 50                       | 45                             | 90                   | 9  | 20        | (55-148) |
| Acetone                        | 250                      | 160                            | 64                   | 12 | 20        | (11-159) |
| Carbon Disulfide               | 50                       | 45                             | 90                   | 9  | 20        | (13-149) |
| Methyl tert-butyl Ether        | 50                       | 49                             | 98                   | 6  | 20        | (60-145) |
| Methyl Acetate                 | 50                       | 53                             | 106                  | 9  | 20        | (27-167) |
| Methylene Chloride             | 50                       | 50                             | 100                  | 11 | 20        | (56-146) |
| trans-1,2-Dichloroethene       | 50                       | 47                             | 94                   | 10 | 20        | (60-141) |
| 1,1-Dichloroethane             | 50                       | 47                             | 94                   | 8  | 20        | (61-144) |
| Cyclohexane                    | 50                       | 45                             | 90                   | 6  | 20        | (57-142) |
| 2-Butanone                     | 250                      | 210                            | 84                   | 5  | 20        | (42-145) |
| Carbon Tetrachloride           | 50                       | 57                             | 114                  | 10 | 20        | (60-140) |
| cis-1,2-Dichloroethene         | 50                       | 48                             | 96                   | 10 | 20        | (48-156) |
| Bromochloromethane             | 50                       | 53                             | 106                  | 2  | 20        | (59-146) |
| Chloroform                     | 50                       | 48                             | 96                   | 8  | 20        | (63-140) |
| 1,1,1-Trichloroethane          | 50                       | 47                             | 94                   | 10 | 20        | (65-140) |
| Methylcyclohexane              | 50                       | 45                             | 90                   | 9  | 20        | (62-128) |
| Benzene                        | 50                       | 49                             | 98                   | 10 | 20        | (62-134) |
| 1,2-Dichloroethane             | 50                       | 49                             | 98                   | 13 | 20        | (67-136) |
| Trichloroethene                | 50                       | 49                             | 98                   | 10 | 20        | (64-131) |
| 1,2-Dichloropropane            | 50                       | 48                             | 96                   | 10 | 20        | (69-130) |
| Bromodichloromethane           | 50                       | 52                             | 104                  | 11 | 20        | (66-132) |
| 4-Methyl-2-Pentanone           | 250                      | 270                            | 108                  | 7  | 20        | (57-148) |
| Toluene                        | 50                       | 49                             | 98                   | 10 | 20        | (68-129) |
| t-1,3-Dichloropropene          | 50                       | 51                             | 102                  | 9  | 20        | (54-136) |
| cis-1,3-Dichloropropene        | 50                       | 49                             | 98                   | 10 | 20        | (56-133) |
| 1,1,2-Trichloroethane          | 50                       | 50                             | 100                  | 11 | 20        | (68-134) |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits



## WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: Arcadis Inc.

Lab Code: CHEM Cas No: D1971 SAS No : D1971 SDG No: D1971

Matrix Spike - EPA Sample No : D1942-06 Analytical Method: EPA SW846 8260 Datafile : VR004481.D

| COMPOUND                    | SPIKE<br>ADDED<br>(ug/L) | MSD<br>CONCENTRATION<br>(ug/L) | MSD<br>% %<br>(ug/L) |     | QC LIMITS |          |
|-----------------------------|--------------------------|--------------------------------|----------------------|-----|-----------|----------|
|                             |                          |                                |                      |     | RPD       | REC      |
| 2-Hexanone                  | 250                      | 250                            | 100                  | 8   | 20        | (46-158) |
| Dibromochloromethane        | 50                       | 54                             | 108                  | 9   | 20        | (59-136) |
| 1,2-Dibromoethane           | 50                       | 51                             | 102                  | 9   | 20        | (65-138) |
| Tetrachloroethene           | 50                       | 50                             | 100                  | 35* | 20        | (29-137) |
| Chlorobenzene               | 50                       | 50                             | 100                  | 10  | 20        | (68-126) |
| Ethyl Benzene               | 50                       | 50                             | 100                  | 6   | 20        | (61-131) |
| m/p-Xylenes                 | 100                      | 100                            | 100                  | 10  | 20        | (64-125) |
| o-Xylene                    | 50                       | 49                             | 98                   | 10  | 20        | (65-126) |
| Styrene                     | 50                       | 51                             | 102                  | 15  | 20        | (40-140) |
| Bromoform                   | 50                       | 54                             | 108                  | 11  | 20        | (42-134) |
| Isopropylbenzene            | 50                       | 49                             | 98                   | 8   | 20        | (58-132) |
| 1,1,2,2-Tetrachloroethane   | 50                       | 50                             | 100                  | 10  | 20        | (61-136) |
| 1,3-Dichlorobenzene         | 50                       | 47                             | 94                   | 8   | 20        | (63-125) |
| 1,4-Dichlorobenzene         | 50                       | 48                             | 96                   | 8   | 20        | (64-124) |
| 1,2-Dichlorobenzene         | 50                       | 49                             | 98                   | 10  | 20        | (64-126) |
| 1,2-Dibromo-3-Chloropropane | 50                       | 49                             | 98                   | 0   | 20        | (57-139) |
| 1,2,4-Trichlorobenzene      | 50                       | 55                             | 110                  | 2   | 20        | (57-130) |
| 1,2,3-Trichlorobenzene      | 50                       | 60                             | 120                  | 7   | 20        | (57-131) |
| 1,4-Dioxane                 | 1000                     | 850                            | 85                   | 4   | 20        | (50-150) |

RPD : 1 Out of 52 outside limits

Spike Recovery : 0 Out of 52 outside limits

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits



## WATER VOLATILE LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Client: Arcadis Inc.

Lab Code: CHEM Cas No: D1971 SAS No : D1971 SDG No: D1971

Matrix Spike - EPA Sample No : BSR0328W1 Analytical Method: EPA SW846 8260 Datafile : VR004464.D

| COMPOUND                       | SPIKE<br>ADDED<br>(ug/L) | CONCENTRATION<br>(ug/L) | LCS<br>CONCENTRATION<br>(ug/L) | LCS<br>%<br>REC# | QC<br>LIMITS<br>REC |
|--------------------------------|--------------------------|-------------------------|--------------------------------|------------------|---------------------|
| Dichlorodifluoromethane        | 20                       |                         | 21                             | 105              | (46-139)            |
| Chloromethane                  | 20                       |                         | 17                             | 85               | (58-139)            |
| Vinyl Chloride                 | 20                       |                         | 19                             | 95               | (65-137)            |
| Bromomethane                   | 20                       |                         | 21                             | 105              | (50-162)            |
| Chloroethane                   | 20                       |                         | 21                             | 105              | (54-160)            |
| Trichlorofluoromethane         | 20                       |                         | 21                             | 105              | (67-143)            |
| 1,1,2-Trichlorotrifluoroethane | 20                       |                         | 21                             | 105              | (71-136)            |
| 1,1-Dichloroethene             | 20                       |                         | 20                             | 100              | (69-134)            |
| Acetone                        | 100                      |                         | 93                             | 93               | (41-181)            |
| Carbon Disulfide               | 20                       |                         | 20                             | 100              | (63-138)            |
| Methyl tert-butyl Ether        | 20                       |                         | 21                             | 105              | (72-136)            |
| Methyl Acetate                 | 20                       |                         | 23                             | 115              | (51-158)            |
| Methylene Chloride             | 20                       |                         | 22                             | 110              | (67-138)            |
| trans-1,2-Dichloroethene       | 20                       |                         | 21                             | 105              | (72-132)            |
| 1,1-Dichloroethane             | 20                       |                         | 20                             | 100              | (74-135)            |
| Cyclohexane                    | 20                       |                         | 19                             | 95               | (67-132)            |
| 2-Butanone                     | 100                      |                         | 97                             | 97               | (64-146)            |
| Carbon Tetrachloride           | 20                       |                         | 24                             | 120              | (71-134)            |
| cis-1,2-Dichloroethene         | 20                       |                         | 21                             | 105              | (74-130)            |
| Bromochloromethane             | 20                       |                         | 18                             | 90               | (71-136)            |
| Chloroform                     | 20                       |                         | 21                             | 105              | (74-134)            |
| 1,1,1-Trichloroethane          | 20                       |                         | 20                             | 100              | (74-133)            |
| Methylcyclohexane              | 20                       |                         | 20                             | 100              | (71-125)            |
| Benzene                        | 20                       |                         | 21                             | 105              | (75-125)            |
| 1,2-Dichloroethane             | 20                       |                         | 21                             | 105              | (76-130)            |
| Trichloroethene                | 20                       |                         | 21                             | 105              | (73-127)            |
| 1,2-Dichloropropane            | 20                       |                         | 21                             | 105              | (76-125)            |
| Bromodichloromethane           | 20                       |                         | 23                             | 115              | (78-127)            |
| 4-Methyl-2-Pentanone           | 100                      |                         | 110                            | 110              | (71-140)            |
| Toluene                        | 20                       |                         | 21                             | 105              | (74-125)            |
| t-1,3-Dichloropropene          | 20                       |                         | 21                             | 105              | (74-131)            |
| cis-1,3-Dichloropropene        | 20                       |                         | 21                             | 105              | (74-128)            |
| 1,1,2-Trichloroethane          | 20                       |                         | 22                             | 110              | (75-129)            |
| 2-Hexanone                     | 100                      |                         | 110                            | 110              | (62-153)            |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

Comments: \_\_\_\_\_

\_\_\_\_\_

**WATER VOLATILE LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY**

Lab Name: CHEMTECH Client: Arcadis Inc.

Lab Code: CHEM Cas No: D1971 SAS No : D1971 SDG No: D1971

Matrix Spike - EPA Sample No : BSR0328W1 Analytical Method: EPA SW846 8260 Datafile : VR004464.D

| COMPOUND                    | SPIKE<br>ADDED<br>(ug/L) | CONCENTRATION<br>(ug/L) | LCS<br>CONCENTRATION<br>(ug/L) | LCS<br>%<br>REC# | QC<br>LIMITS<br>REC |
|-----------------------------|--------------------------|-------------------------|--------------------------------|------------------|---------------------|
| Dibromochloromethane        | 20                       |                         | 23                             | 115              | (74-131)            |
| 1,2-Dibromoethane           | 20                       |                         | 22                             | 110              | (74-129)            |
| Tetrachloroethene           | 20                       |                         | 21                             | 105              | (46-157)            |
| Chlorobenzene               | 20                       |                         | 22                             | 110              | (76-123)            |
| Ethyl Benzene               | 20                       |                         | 21                             | 105              | (75-126)            |
| m/p-Xylenes                 | 40                       |                         | 44                             | 110              | (74-126)            |
| o-Xylene                    | 20                       |                         | 22                             | 110              | (73-127)            |
| Styrene                     | 20                       |                         | 23                             | 115              | (75-126)            |
| Bromoform                   | 20                       |                         | 23                             | 115              | (66-130)            |
| Isopropylbenzene            | 20                       |                         | 21                             | 105              | (70-127)            |
| 1,1,2,2-Tetrachloroethane   | 20                       |                         | 22                             | 110              | (66-131)            |
| 1,3-Dichlorobenzene         | 20                       |                         | 20                             | 100              | (70-125)            |
| 1,4-Dichlorobenzene         | 20                       |                         | 21                             | 105              | (71-124)            |
| 1,2-Dichlorobenzene         | 20                       |                         | 21                             | 105              | (71-126)            |
| 1,2-Dibromo-3-Chloropropane | 20                       |                         | 20                             | 100              | (62-134)            |
| 1,2,4-Trichlorobenzene      | 20                       |                         | 22                             | 110              | (62-129)            |
| 1,2,3-Trichlorobenzene      | 20                       |                         | 19                             | 95               | (58-130)            |
| 1,4-Dioxane                 | 400                      |                         | 310                            | 78               | (50-150)            |

RPD : 0 Out of 52 outside limits

Spike Recovery : 0 Out of 52 outside limits

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

Comments: \_\_\_\_\_

\_\_\_\_\_



## VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBR0328W1

Lab Name: CHEMTECHContract: MALC02Lab Code: CHEM Case No.: D1971SAS No.: D1971 SDG NO.: D1971Lab File ID: VR004463.DLab Sample ID: VBR0328W1Date Analyzed: 03/28/2012Time Analyzed: 12:45GC Column: RXI-624 ID: 0.25 (mm)Heated Purge: (Y/N) NInstrument ID: MSVOA\_R

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

| EPA<br>SAMPLE NO. | LAB<br>SAMPLE ID | LAB<br>FILE ID | DATE<br>ANALYZED |
|-------------------|------------------|----------------|------------------|
| BSR0328W1         | BSR0328W1        | VR004464.D     | 03/28/2012       |
| TRIPBLANK         | D1971-04         | VR004468.D     | 03/28/2012       |
| RW-1              | D1971-01         | VR004473.D     | 03/28/2012       |
| RW-2              | D1971-02         | VR004474.D     | 03/28/2012       |
| EFF-46HZ          | D1971-03         | VR004475.D     | 03/28/2012       |
| MW-34SMS          | D1942-05MS       | VR004480.D     | 03/28/2012       |
| MW-34SMSD         | D1942-06MSD      | VR004481.D     | 03/28/2012       |

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

D1971 SUMMARY

## Report of Analysis

|                    |                      |           |                 |               |
|--------------------|----------------------|-----------|-----------------|---------------|
| Client:            | Arcadis Inc.         |           | Date Collected: |               |
| Project:           | DEC Gladding Cordage |           | Date Received:  |               |
| Client Sample ID:  | VBR0328W1            |           | SDG No.:        | D1971         |
| Lab Sample ID:     | VBR0328W1            |           | Matrix:         | WATER         |
| Analytical Method: | SW8260C              |           | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5                    | Units: mL | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  |                      | uL        | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624              | ID : 0.25 | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004463.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number     | Parameter                      | Conc. | Qualifier | MDL  | LOD | LOQ / CRQL | Units |
|----------------|--------------------------------|-------|-----------|------|-----|------------|-------|
| <b>TARGETS</b> |                                |       |           |      |     |            |       |
| 75-71-8        | Dichlorodifluoromethane        | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 74-87-3        | Chloromethane                  | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-01-4        | Vinyl Chloride                 | 0.5   | U         | 0.34 | 0.5 | 1          | ug/L  |
| 74-83-9        | Bromomethane                   | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-00-3        | Chloroethane                   | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-69-4        | Trichlorofluoromethane         | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 76-13-1        | 1,1,2-Trichlorotrifluoroethane | 0.5   | U         | 0.45 | 0.5 | 1          | ug/L  |
| 75-35-4        | 1,1-Dichloroethene             | 0.5   | U         | 0.47 | 0.5 | 1          | ug/L  |
| 67-64-1        | Acetone                        | 2.5   | U         | 0.5  | 2.5 | 5          | ug/L  |
| 75-15-0        | Carbon Disulfide               | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 1634-04-4      | Methyl tert-butyl Ether        | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 79-20-9        | Methyl Acetate                 | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 75-09-2        | Methylene Chloride             | 0.5   | U         | 0.41 | 0.5 | 1          | ug/L  |
| 156-60-5       | trans-1,2-Dichloroethene       | 0.5   | U         | 0.41 | 0.5 | 1          | ug/L  |
| 75-34-3        | 1,1-Dichloroethane             | 0.5   | U         | 0.36 | 0.5 | 1          | ug/L  |
| 110-82-7       | Cyclohexane                    | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 78-93-3        | 2-Butanone                     | 2.5   | U         | 1.3  | 2.5 | 5          | ug/L  |
| 56-23-5        | Carbon Tetrachloride           | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 156-59-2       | cis-1,2-Dichloroethene         | 0.5   | U         | 0.35 | 0.5 | 1          | ug/L  |
| 74-97-5        | Bromochloromethane             | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 67-66-3        | Chloroform                     | 0.5   | U         | 0.34 | 0.5 | 1          | ug/L  |
| 71-55-6        | 1,1,1-Trichloroethane          | 0.5   | U         | 0.4  | 0.5 | 1          | ug/L  |
| 108-87-2       | Methylcyclohexane              | 0.5   | U         | 0.2  | 0.5 | 1          | ug/L  |
| 71-43-2        | Benzene                        | 0.5   | U         | 0.32 | 0.5 | 1          | ug/L  |
| 107-06-2       | 1,2-Dichloroethane             | 0.5   | U         | 0.48 | 0.5 | 1          | ug/L  |
| 79-01-6        | Trichloroethene                | 0.5   | U         | 0.28 | 0.5 | 1          | ug/L  |
| 78-87-5        | 1,2-Dichloropropane            | 0.5   | U         | 0.46 | 0.5 | 1          | ug/L  |
| 75-27-4        | Bromodichloromethane           | 0.5   | U         | 0.36 | 0.5 | 1          | ug/L  |
| 108-10-1       | 4-Methyl-2-Pentanone           | 2.5   | U         | 2.1  | 2.5 | 5          | ug/L  |
| 108-88-3       | Toluene                        | 0.5   | U         | 0.37 | 0.5 | 1          | ug/L  |
| 10061-02-6     | t-1,3-Dichloropropene          | 0.5   | U         | 0.29 | 0.5 | 1          | ug/L  |

## Report of Analysis

|                    |                      |           |                 |               |
|--------------------|----------------------|-----------|-----------------|---------------|
| Client:            | Arcadis Inc.         |           | Date Collected: |               |
| Project:           | DEC Gladding Cordage |           | Date Received:  |               |
| Client Sample ID:  | VBR0328W1            |           | SDG No.:        | D1971         |
| Lab Sample ID:     | VBR0328W1            |           | Matrix:         | WATER         |
| Analytical Method: | SW8260C              |           | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5                    | Units: mL | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  |                      | uL        | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624              | ID : 0.25 | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004463.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number                | Parameter                   | Conc.   | Qualifier | MDL      | LOD | LOQ / CRQL | Units   |
|---------------------------|-----------------------------|---------|-----------|----------|-----|------------|---------|
| 10061-01-5                | cis-1,3-Dichloropropene     | 0.5     | U         | 0.31     | 0.5 | 1          | ug/L    |
| 79-00-5                   | 1,1,2-Trichloroethane       | 0.5     | U         | 0.38     | 0.5 | 1          | ug/L    |
| 591-78-6                  | 2-Hexanone                  | 2.5     | U         | 1.9      | 2.5 | 5          | ug/L    |
| 124-48-1                  | Dibromochloromethane        | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 106-93-4                  | 1,2-Dibromoethane           | 0.5     | U         | 0.41     | 0.5 | 1          | ug/L    |
| 127-18-4                  | Tetrachloroethene           | 0.5     | U         | 0.27     | 0.5 | 1          | ug/L    |
| 108-90-7                  | Chlorobenzene               | 0.5     | U         | 0.49     | 0.5 | 1          | ug/L    |
| 100-41-4                  | Ethyl Benzene               | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 179601-23-1               | m/p-Xylenes                 | 1       | U         | 0.95     | 1   | 2          | ug/L    |
| 95-47-6                   | o-Xylene                    | 0.5     | U         | 0.43     | 0.5 | 1          | ug/L    |
| 100-42-5                  | Styrene                     | 0.5     | U         | 0.36     | 0.5 | 1          | ug/L    |
| 75-25-2                   | Bromoform                   | 0.5     | U         | 0.47     | 0.5 | 1          | ug/L    |
| 98-82-8                   | Isopropylbenzene            | 0.5     | U         | 0.45     | 0.5 | 1          | ug/L    |
| 79-34-5                   | 1,1,2,2-Tetrachloroethane   | 0.5     | U         | 0.31     | 0.5 | 1          | ug/L    |
| 541-73-1                  | 1,3-Dichlorobenzene         | 0.5     | U         | 0.43     | 0.5 | 1          | ug/L    |
| 106-46-7                  | 1,4-Dichlorobenzene         | 0.5     | U         | 0.32     | 0.5 | 1          | ug/L    |
| 95-50-1                   | 1,2-Dichlorobenzene         | 0.5     | U         | 0.45     | 0.5 | 1          | ug/L    |
| 96-12-8                   | 1,2-Dibromo-3-Chloropropane | 0.5     | U         | 0.46     | 0.5 | 1          | ug/L    |
| 120-82-1                  | 1,2,4-Trichlorobenzene      | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 87-61-6                   | 1,2,3-Trichlorobenzene      | 0.5     | U         | 0.2      | 0.5 | 1          | ug/L    |
| 123-91-1                  | 1,4-Dioxane                 | 10      | U         | 50       | 10  | 20         | ug/L    |
| <b>SURROGATES</b>         |                             |         |           |          |     |            |         |
| 17060-07-0                | 1,2-Dichloroethane-d4       | 46.1    |           | 61 - 141 |     | 92%        | SPK: 50 |
| 1868-53-7                 | Dibromofluoromethane        | 48.2    |           | 69 - 133 |     | 96%        | SPK: 50 |
| 2037-26-5                 | Toluene-d8                  | 50.3    |           | 65 - 126 |     | 101%       | SPK: 50 |
| 460-00-4                  | 4-Bromofluorobenzene        | 48.8    |           | 58 - 135 |     | 98%        | SPK: 50 |
| <b>INTERNAL STANDARDS</b> |                             |         |           |          |     |            |         |
| 363-72-4                  | Pentafluorobenzene          | 2458790 | 7.58      |          |     |            |         |
| 540-36-3                  | 1,4-Difluorobenzene         | 4057190 | 8.5       |          |     |            |         |
| 3114-55-4                 | Chlorobenzene-d5            | 3662640 | 11.32     |          |     |            |         |
| 3855-82-1                 | 1,4-Dichlorobenzene-d4      | 1798770 | 13.26     |          |     |            |         |



## Report of Analysis

|                    |                      |           |                 |               |
|--------------------|----------------------|-----------|-----------------|---------------|
| Client:            | Arcadis Inc.         |           | Date Collected: |               |
| Project:           | DEC Gladding Cordage |           | Date Received:  |               |
| Client Sample ID:  | VBR0328W1            |           | SDG No.:        | D1971         |
| Lab Sample ID:     | VBR0328W1            |           | Matrix:         | WATER         |
| Analytical Method: | SW8260C              |           | % Moisture:     | 100           |
| Sample Wt/Vol:     | 5                    | Units: mL | Final Vol:      | 5000 uL       |
| Soil Aliquot Vol:  |                      | uL        | Test:           | VOC-TCLVOA-10 |
| GC Column:         | RXI-624              | ID : 0.25 | Level :         | LOW           |

|                   |           |           |               |               |
|-------------------|-----------|-----------|---------------|---------------|
| File ID/Qc Batch: | Dilution: | Prep Date | Date Analyzed | Prep Batch ID |
| VR004463.D        | 1         |           | 03/28/12      | VR032812      |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOD | LOQ / CRQL | Units |
|------------|-----------|-------|-----------|-----|-----|------------|-------|
|------------|-----------|-------|-----------|-----|-----|------------|-------|

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

### D1971 SUMMARY



## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: MALC02  
Lab Code: CHEM Case No.: D1971 SAS No.: D1971 SDG NO.: D1971  
Lab File ID: VR004462.D Date Analyzed: 03/28/2012  
Instrument ID: MSVOA\_R Time Analyzed: 11:42  
GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

|                | IS1<br>AREA # | RT # | IS2<br>AREA # | RT # | IS3<br>AREA # | RT #  |
|----------------|---------------|------|---------------|------|---------------|-------|
| 12 HOUR STD    | 2464647       | 7.58 | 4082601       | 8.50 | 3678896       | 11.32 |
| UPPER LIMIT    | 4929294       | 8.08 | 8165202       | 9    | 7357792       | 11.82 |
| LOWER LIMIT    | 1232324       | 7.08 | 2041301       | 8    | 1839448       | 10.82 |
| EPA SAMPLE NO. |               |      |               |      |               |       |
| BSR0328W1      | 2382888       | 7.57 | 3967235       | 8.50 | 3583294       | 11.31 |
| MW-34SMS       | 1171735 *     | 7.58 | 1917068 *     | 8.50 | 1749703 *     | 11.31 |
| MW-34SMSD      | 1755580       | 7.58 | 2914026       | 8.50 | 2609534       | 11.31 |
| RW-1           | 2219422       | 7.58 | 3712844       | 8.50 | 3336532       | 11.31 |
| RW-2           | 2207795       | 7.58 | 3692846       | 8.50 | 3300969       | 11.32 |
| EFF-46HZ       | 2198869       | 7.58 | 3645166       | 8.50 | 3257510       | 11.32 |
| TRIPBLANK      | 2416274       | 7.58 | 4012695       | 8.50 | 3596483       | 11.32 |
| VBR0328W1      | 2458787       | 7.58 | 4057189       | 8.50 | 3662638       | 11.32 |

IS1 = Pentafluorobenzene

IS2 = 1,4-Difluorobenzene

IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

\* Values outside of QC limits.



## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: MALC02  
Lab Code: CHEM Case No.: D1971 SAS No.: D1971 SDG NO.: D1971  
Lab File ID: VR004462.D Date Analyzed: 03/28/2012  
Instrument ID: MSVOA\_R Time Analyzed: 11:42  
GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

|                | IS4<br>AREA # | RT #  |  |  |  |  |
|----------------|---------------|-------|--|--|--|--|
| 12 HOUR STD    | 1811007       | 13.26 |  |  |  |  |
| UPPER LIMIT    | 3622014       | 13.76 |  |  |  |  |
| LOWER LIMIT    | 905503.5      | 12.76 |  |  |  |  |
| EPA SAMPLE NO. |               |       |  |  |  |  |
| BSR0328W1      | 1738666       | 13.26 |  |  |  |  |
| MW-34SMS       | 831509 *      | 13.26 |  |  |  |  |
| MW-34SMSD      | 1249365       | 13.26 |  |  |  |  |
| RW-1           | 1621684       | 13.26 |  |  |  |  |
| RW-2           | 1609042       | 13.26 |  |  |  |  |
| EFF-46HZ       | 1571448       | 13.26 |  |  |  |  |
| TRIPBLANK      | 1718732       | 13.26 |  |  |  |  |
| VBR0328W1      | 1798774       | 13.26 |  |  |  |  |

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT UPPER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

\* Values outside of QC limits.