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Environmental  
Construction  
Operations &  
Remediation

16 July 2007

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Re: First Quarter Report 2007  
Byron Barrel & Drum Site - Byron, New York

Dear Mr. Jacob,

Enclosed is the report for remedial activities at the Byron Barrel & Drum Area 2 Site for the First Quarter of 2007. This report is submitted on behalf of the Potentially Responsible Parties, who are jointly fulfilling the requirements of the Administrative Order.

If you have any questions regarding this report, or any other questions regarding activities at the Site, please contact me at (484) 887-7510, extension 207.

Sincerely,  
ECOR Solutions, Inc.

Matthew Lapp  
Project Engineer

cc: Mr. John Grathwol - NYSDEC  
Mr. Chris Rockwell - Garlock Sealing Technologies  
Mr. Terry Etter, P.E. - Unisys Corporation  
Mr. R. William Stephens - Stephens & Stephens, LLP (General Railway Signal)  
Keith Rapp - ECOR Solutions  
Project File - ECOR Solutions

**BYRON BARREL & DRUM SITE**  
**QUARTERLY REPORT**  
**FIRST QUARTER 2007**  
**January through March 2007**

Byron Barrel & Drum Site  
Area 2  
Byron, New York

16 July 2007

Prepared for:  
**BYRON BARREL & DRUM PRP GROUP**

Prepared by:

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## **1.0 INTRODUCTION**

This quarterly report of remedial activities at the Byron Barrel & Drum, Area 2 Site (Site) presents data obtained through the first quarter 2007. A Site map is provided as **Figure 1**. The purpose of this report is to summarize and document ongoing remedial and monitoring activities at the Site during the previous quarter. This report discusses the remedial activities and Site monitoring activities conducted during the first calendar quarter of 2007. A brief description of the background of the Site is included, as well as, information regarding remedial activities and monitoring activities planned for the next quarter.

## ***LI SITE BACKGROUND***

The Byron Barrel and Drum Area 2 Site is located at 6065 Transit Road, in Byron Township, Genesee County, NY. The Site is set back approximately 1,000 feet from the east side of Transit Road. In 1982, two drum disposal locations were discovered at the Site. New York State Department of Environmental Conservation's (NYSDEC) subsequent investigation led to the Site's inclusion on the Superfund National Priorities List (April 1984).

A remedial investigation and feasibility study (RI/FS) was conducted, which identified three areas of concern at the Site. Based on the findings of the RI, it was concluded that further action in two of the areas, Area 1 and Area 3, was not warranted. However, the RI detected volatile organic compounds (VOCs); including trichloroethene (TCE) and 1,1,1-trichloroethane (TCA) in groundwater samples collected from locations in Area 2.

The remedial activities discussed in this report include only activities for Area 2. The selected remedy for Area 2 was in-situ soil flushing and groundwater pumping, treatment, and discharge. The Remedial Action construction was performed during the summer of 2001. The implementation of the Remedial Design included excavation and characterization of potentially impacted soil, and installation of additional two groundwater pumping wells (PWs) to supplement the one previously installed (PW-1), a ground water treatment system, and an infiltration gallery.

## **1.2 CHRONOLOGY OF EVENTS**

The chronology of events regarding the investigation and remediation of the Site are summarized below:

<b>Event or Document</b>	<b>Date</b>	<b>Notes</b>
Record of Decision (ROD)	Sept. 29, 1989	EPA/ROD/R02-89-089
Consent Decree	January 5, 1995	89-CV-748A Unisys Corp. and Garlock, Inc., settling defendants
Draft Explanation of Significant Differences	February, 1999	
Pre-Remedial Design Investigation and Remedial Design Report	December, 1999	
100 Percent Remedial Design Submittal	December, 1999	
Remedial Action Work Plan	September, 2001	
Construction Health and Safety Plan	December, 2001	
Quality Assurance Project Plan	June, 2001	
RA Construction Mobilization	June 11, 2001	
RA Construction	June 11 -July 15,2001	
Initial UZ Soil Sampling Event	June 27,2001	
EPA RA Pre-Final Inspection	July 19,2001	
GWTS Performance Testing	July 29, 2001	
GWTS Startup Testing	August, 2001	Extended Startup & Testing
GWTS Continuous O & M	October 1,2001	Continuous Operation
EPA Interim Inspection	July 17,2002	
Second UZ Soil Sampling Event	August 14, 2002	
RA Report	September, 2002	Final RA for Site Soils Interim RA for Site Groundwater
EPA RA Approval	September, 2002	
Effluent Sampling reduced to Quarterly	September, 2002	
Discontinuation of SVOC Sampling	May 23, 2003	
EPA Site Inspection	May 2, 2007	5 year review

## ***2.0 CONSTRUCTION OF REMEDIAL DESIGN***

Remediation system installation and activation was completed in July 2001. A Pre-Final inspection was performed on July 19, 2001. A few action items were itemized during the Pre-Final inspection as summarized in the First Quarter 2002 Quarterly Report (ECOR, May 2001) and the Remedial Action Report (ECOR, September 2002). The action items were completed during late 2001 and early 2002. An Interim Inspection was completed by the Environmental Protection Agency (EPA) on July 17, 2002. No major problems were discovered during the inspection.

The system operated intermittently until September 2001 due to initial system debugging during the start up phase. Since September 2001, the system has operated almost continuously. Use of the infiltration gallery was discontinued in August 2002 upon regulatory approval. During this reporting period (1st Quarter 2007), no significant activities occurred relative to the Remedial Design.

### **3.0 OPERATION OF GROUNDWATER TREATMENT SYSTEM**

Groundwater recovered from the three pumping wells (PW-1, PW-2, and PW-3) is treated through one bag filter and an air stripper prior to discharge. The bag filter removes suspended solids greater than 50 microns in diameter. The low-profile air stripper removes the VOCs from the groundwater. Following air stripping, the groundwater is discharged to surface water. **Figure 1** illustrates the PW locations and the Groundwater Treatment System. A Flow Diagram of the Groundwater Treatment System equipment and process piping is presented in **Figure 2**.

At present, due to a partial closing of the effluent discharge pipe caused from scale buildup, it is not possible to handle the flow from all three wells at one time. Pumping well PW-1 has routinely maintained a steady flowrate while PW-2 and PW-3 have typically have been turned off and cycled intermittently during operation. While pumping flowrates have decreased, VOC concentrations continue to remain low, approaching asymptotic levels.

#### **3.1 ROUTINE OPERATION**

Scheduled O&M activities include weekly Site visits by the local Chief Operator, Steve Rodland. The Chief Operator is the first responder to autodialer alarms from the Site. Weekly Site visits include performing an overall Site inspection, GWTP system inspection, including checking the bag filter for solids loading, gauging air flow through the stripper, and noting flow rates and totalized flow. Preventive maintenance items performed by the operator include monthly inspections of the air stripper blower, and air stripper trays are inspected for sediment and mineral deposits. The trays require cleaning on a quarterly basis as a preventative maintenance and system operation performance item.

#### **3.2 SYSTEM OPERATIONS AND MONITORING HISTORY THROUGH FIRST QUARTER 2007**

A total of 20,370,400 gallons of groundwater and approximately 37.8 pounds of dissolved-phase total VOCs have been recovered via the pumping well network since system activation. All of this groundwater was treated in the GWTS. Of that total, 19,546,400 gallons, or 96.0% of the total flow, was discharged to the surface water, into the drainage ditch that flows adjacent to the Site. The remaining 824,000 gallons, or 4.0 % of the total, was directed to the Infiltration Gallery. Soil flushing through the Infiltration Gallery ceased in August of 2002. In September of 2002, EPA concurred with the conclusion of the Final RA Report for soils that Site soil has been effectively remediated. Therefore, there are no plans to re-initiate operation the Infiltration Gallery.

At the beginning of 2002, Treatment System Influent and Effluent were sampled and analyzed on a twice-monthly basis, as per the initial DEC discharge approval document. The Treatment System sampling schedule was reduced to quarterly during the third quarter 2002 following approval of the NYSDEC. Effluent samples have been collected and analyzed during subsequent quarterly sampling events. The analytical results of the effluent have consistently met the DEC's Effluent Limitations, and have generally had non-detectable concentrations of VOCs.

**Tables 1** and **2** summarize influent and effluent analytical data for the system since startup.

**Figure 3** presents a graph of the influent VOC concentrations over time. Cumulative dissolved-phase mass recovered is depicted on **Figure 4**. This data indicates that the influent VOC concentration has reached asymptotic levels. Quarterly effluent compliance sampling events coincide with the quarterly groundwater monitoring events.

On May 2, 2007 a site inspection was performed by the EPA's George Jacob as part of the project's five year review. Also in attendance were Richard Krauser (EPA), John Grathwol (DEC), Chris Rockwell (PRP Group), Matt Lapp and Will Torres (ECOR). No issues were identified during the inspection.

### **3.3 OPERATIONAL PROBLEMS ENCOUNTERED**

As mentioned in Section 3.0, normal operation of the GWTS was stopped due to clogging of the effluent pipe. The system would only remain on by keeping PW-1 running and intermittently cycling PW-2 and PW-3. The following list summarizes additional operational problems encountered during the first quarter 2007:

- On January 18 system power was lost due to an ice storm. The freezing conditions and slow flow led to the freezing and subsequent splitting of the effluent discharge pipe. The end of the pipe was removed.
- On January 24 it was discovered that the flow meters on PW-2 and PW-3 were frozen due to extreme cold. (No flow readings were available.)
- On January 31, there was a high level alarm in the air stripper sump. The flow of PW-I was reduced to prevent a future high level alarm.
- On February 7 system power was lost to inclement weather.
- On March 14 it was noted that the effluent discharge pipe was under 18 inches of water due to rain and thawing snow.
- On March 28 system power was lost due to a severe electrical storm with heavy rains.

Since it is undetermined how long the treatment system will remain in operation due to an alternative in-situ remediation technique which is being proposed, the system will continue to be run utilizing only PW-1 with PW-2 and PW-3 cycled intermittently.

#### **4.0 QUARTERLY SITE MONITORING EVENT**

##### **4.1 MONITORING WELL SAMPLING EVENT**

The quarterly sampling event occurred on 22 March 2007 and was conducted in accordance with the agreed upon modifications to the QAPP in telephone conversations between ECOR, EPA, and DEC's Project Managers on 23 May 2003. Groundwater samples were collected from monitoring wells MW-1, MW-4, MW10B, MW-Residential, and MW-21 as well as pumping wells PW-1, PW-2 and PW-3 using EPA's low-flow sampling procedures, in accordance with the QAPP. A summary of the field parameter measurements is presented in **Table 3**. The purging and sampling procedures utilized during collection of the quarterly samples were consistent with the procedures outlined in the QAPP. A copy of field notes collected during the sampling event is included in **Appendix A**. The preserved groundwater samples were collected and analyzed by Severn Trent Laboratories (STL), Buffalo, New York. In addition, groundwater elevations were measured from Site monitoring wells. A summary of Site groundwater elevations is provided in **Table 4**.

##### **4.2 LABORATORY ANALYSIS / GROUNDWATER SAMPLING RESULTS**

Recent and historical groundwater quality data for monitoring and pumping wells (2001 to present) for select compounds is summarized in **Table 5**. The sample specific analysis performed included VOC analysis in accordance with USEPA SW-846 Method 8260B. The groundwater samples (MW-1, MW-4, MW-10B, MW-Residential and MW-21) were analyzed for the following twenty (20) project specific compounds: 1,1 -dichloroethane (1,1 -DCA), 1,1-dichloroethene (1,1 -DCE), methylene chloride (MeCl), toluene, 1,1,1 -trichloroethane (TCA), trichloroethene (TCE), vinyl chloride (VC), benzene, total xylenes, chlorobenzene, 1,1,2-trichloroethane (1,1,2-TCA), 1,2-dichloroethane (1,2-DCA), tetrachloroethene, chloroform, bromodichloromethane, dibromochloromethane, 2-butanone, carbon tetrachloride, 1,2-dichlorobenzene and 1,4-dichlorobenzene. The pumping well samples (PW-1, PW-2, and PW-3) were analyzed for the following eight (8) compounds: 1,1-DCA, 1,1-DCE, MeCl, TCA, TCE, toluene, VC and cis-1,2-dichloroethene. A review of the previous data indicates that the primary compounds of concern detected at the Site are: TCA and degradation products 1,1-DCA and 1,1-DCE. The concentrations of these VOCs range from non-detect to 210 micrograms per liter (ug/L) (TCA at monitoring well PW-3). Currently, only 1,1-DCA, and TCA are present above the applicable clean up standards at the Site.

The groundwater cleanup standards are summarized below:

<b>Chptiiciil v'uv-mivni</b>	<b>Groundwater Cleanup Level (<math>\mu\text{g/L}</math>)</b>
1,1-Dichloroethane	5
1,1 -Diclhloroethene	5
Toluene	5
Methylene chloride	5
1,1,1 -Trichloroethane	5
Trichloroethene	5
Vinyl Chloride	2

Groundwater quality data is depicted on **Figure 5** with those constituents detected above the applicable clean-up standard are highlighted in yellow.

#### 4.3 DATA VALIDATION

As per Section 4.0 of the QAPP, the data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the SAP, the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (October 1999), the USEPA Region II Data Review Standard Operating Procedure (SOP) Number HW-24, Revision 1, September 1999: Validating Volatile Organic Compounds by SW-846 Method 8260B, and the reviewer's professional judgment. The Data Validation Report is included in **Appendix B**.

## **5.0 PLANS FOR NEXT QUARTER**

The next quarterly groundwater sampling event will be performed in June 2007. Operation and maintenance plans for the next quarter include continued routine operation as well as preventative maintenance of the pumping wells and GWTP.

ECOR submitted an in-situ bioremediation applicability study to the PRP group for review. The PRP Group requested an independent assessment of the data and recommendation prior to implementation. The independent assessment was completed during June 2006. The findings indicate that an in-situ bioremediation process may be an effective remediation technology. A work plan has been prepared and is awaiting the approval of the EPA.

Upon approval, the treatment system will be shut down temporarily in order to establish baseline conditions prior to implementation of the in-situ bioremediation workplan.

## TABLES

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event Date	01/GW 7/28/2001	02/GW 8/8/2001	03/GW 8/18/2001	04/GW 9/18/2001	05/GW 9/27/2001	06/GW 10/5/2001
Field Influent pH, std pH units			7.87	7.57	7.55	7.5
Total Suspended Solids, mg/L	6.5	4.0 U	4.0 U	4.0 U	4.0 U	4
1,1-Dichloroethane, ug/L	23	47	60	19 J	58 D	43 J
1,1-Dichloroethene, ug/L	5.1	12	16	12J	16 DJ	50 U
Cis -1,2 - Dichloroethene, ug/L	1.0J	1.4 J	1.0 J	50 U	50 U	50 U
Methylene Chloride, ug/L	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U
1,1,1 - Trichloroethane, ug/L	460 E	840 E	1200 E	1100	1100 D	780
Trichloroethene, ug/L	1.9J	3.0 J	4.7 J	50 U	50 U	50 U
Toluene, ug/L	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U
Vinyl Chloride, ug/L	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U
Total Confident VOCs, ug/L	499	899	1276	1124	1174	823
Sampling Event Date	07/GW 10/17/2001	08/GW 11/8/2001	09/GW 11/28/2001	10/GW 12/13/2001	11/GW 12/27/2001	12/GW 1/18/2002
Field Influent pH, std pH units	7.39	7.57	7.42	7.43	7.54	7.64
Total Suspended Solids, mg/L	4.0 U	7	15	4.0 U		4.0 U
1,1-Dichloroethane, ug/L	46 J	32 J	20 J	13	9.3	11
1,1-Dichloroethene, ug/L	13J	13J	9.4 J	4.2 J	4.6 J	4.3 J
Cis -1,2 - Dichloroethene, ug/L	50 U	50 U	25 U	10 U	5.0 U	5.0 U
Methylene Chloride, ug/L	50 U	50 U	25 U	10 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, ug/L	1200	580	530	260	220 E	250 E
Trichloroethene, ug/L	50 U	50 U	25 U	3.3 J	4.2 J	4.9 J
Toluene, ug/L	50 U	50 U	25 U	10U	5.0 U	5.0 U
Vinyl Chloride, ug/L	50 U	50 U	25 U	10 U	5.0 U	5.0 U
Total Confident VOCs, ug/L	1259	635	559	277	237	270
Sampling Event Date	13/GW 1/30/2002	14/GW 2/13/2002	15/GW 2/23/2002	16/GW 3/8/2002	17/GW 3/20/2002	18/GW 4/8/2002
Field Influent pH, std pH units	7.71	7.84	7.48	7.79	7.72	7.09
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, ug/L	10	16	10	11	11	10
1,1-Dichloroethene, ug/L	4.0 J	5.2 J	3.5 J	3.7 J	4.1 J	2.5 J
Cis -1,2 - Dichloroethene, ug/L	10 U	10 U	5.0 U	5.0 U	5.0 U	10U
Methylene Chloride, ug/L	10U	10U	5.0 U	5.0 U	1.8 BJ	10U
1,1,1 - Trichloroethane, ug/L	220	320	240 E	320 E	330 E	240
Trichloroethene, ug/L	4.3 J	3.2 J	3.3 J	3.4 J	3.4 J	3.3 J
Toluene, ug/L	10U	10 U	3.3 J	5.0 U	5.0 U	10 U
Vinyl Chloride, ug/L	10 U	10 U	5.0 U	5.0 U	5.0 U	10U
Total Confident VOCs, ug/L	238	339	256	337	348	253

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event Date	19/GW 4/24/2002	20/GW 5/8/2002	21/GW 5/21/2002	22/GW 6/4/2002	23/GW 6/13/2002	24/GW 7/11/2002
Field Influent pH, std pH units	6.99	7.07	7.41	7.11	7.34	7.19
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	10	12	20	19J	18D,J	20
1,1-Dichloroethene, pg/L	2.5 J	2.4 J	3.5 J	25 U	20 U	3.4 J
Cis -1,2 - Dichloroethene, ug/L	10U	10 U	10 U	25 U	20 U	10U
Methylene Chloride, ug/L	15B	10 U	3.1 BJ	16 J	12B.D.J	8.5 B,J
1,1,1 - Trichloroethane, pg/L	230	260	350	390	360 D	380
Trichloroethene, pg/L	2.8 J	2.7 J	3.3 J	25 U	20 U	3.7 J
Toluene, ug/L	2.6 J	10 U	10 U	25 U	20 U	10U
Vinyl Chloride, pg/L	10U	10 U	10 U	25 U	20 U	10U
Total Confident VOCs, pg/L	246	276	376	425	390	407

Sampling Event Date	25/GW 7/23/2002	26/GW 8/29/2002	27/GW 9/18/2002	28/GW 10/29/2002	29/GW 11/25/2002	30/GW 12/18/2002
Field Influent pH, std pH units	6.45	6.97	7.74	7.91	6.8	7.25
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	NA	NA	4.0 U
1,1-Dichloroethane, pg/L	9.0 J	8.8	7.7	8.6	9.1 DJ	6.6
1,1-Dichloroethene, pg/L	2.6 J	1.3J	1.8J	3.0 J	2.4 DJ	2.8 J
Cis -1,2 - Dichloroethene, pg/L	10U	5.0 U	5.0 U	5.0 U	10U	5.0 U
Methylene Chloride, pg/L	10U	5.0 U	5.0 U	5.0 U	10U	5.0 U
1,1,1 -Trichloroethane, pg/L	210	150	190	170	160 D	150
Trichloroethene, pg/L	10 U	1.9 J	1.9 J	2.5 J	10U	1.9J
Toluene, pg/L	10 U	5.0 U	5.0 U	5.0 U	10U	5.0 U
Vinyl Chloride, pg/L	10 U	5.0 U	5.0 U	5.0 U	10U	5.0 U
Total Confident VOCs, pg/L	222	162	202	184	172	161

Sampling Event Date	31/GW 1/17/2003	32/GW 2/19/2003	33/GW 4/30/2003	34/GW 6/23/2003	35/GW 7/30/2003	36/GW 8/27/2003
Field Influent pH, std pH units	7.6	6.93	7.06	7.03	7.12	NA
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	8.4	6.2	8.4 DJ	6.6 DJ	7.6	2.4 J
1,1-Dichloroethene, pg/L	5.0 U	2.4 J	10U	10 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, pg/L	5.0 U	5.0 U	10U	10U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	10U	10U	5.0 U	5.0 U
1,1,1 -Trichloroethane, pg/L	160	140	190 D	140 D	150	66
Trichloroethene, pg/L	2.4 J	1.6 J	10U	10U	1.2 J	5.0 U
Toluene, pg/L	5.0 U	5.0 U	10 U	10 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	10 U	10 U	5.0 U	5.0 U
Total Confident VOCs, pg/L	171	150	198	147 •	159	68

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event Date	37/GW 9/24/2003	38/GW 10/23/2003	39/GW 11/20/2003	40/GW 12/3/2003	41/GW 1/29/2004	42/GW 3/30/2004
Field Influent pH, std pH units	NA	NA	NA	7.18	NA	6.84
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	8.8 DJ	7.4 DJ	4.7 J	6.1	5.0 U	6.7
1,1-Dichloroethene, ug/L	10 U	10U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, ug/L	10 U	10U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, ug/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, ug/L	180 D	170 D	92	110	1.9 J	96
Trichloroethene, ug/L	2.0 DJ	10U	1.1 J	1.6 J	5.0 U	1.0J
Toluene, ug/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, ug/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
Total Confident VOCs, ug/L	191	174	98	118	2	104

Sampling Event Date	43/GW 5/20/2004	44/GW 6/16/2004	45/GW 7/15/2004	46/GW 8/26/2004	47/GW 9/14/2004	48/GW 10/28/2004
Field Influent pH, std pH units	NA	7.32	NA	NA	NA	NA
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	5.5	10D	7.5	3.3 J	9.1 DJ	4.1 J
1,1-Dichloroethene, ug/L	5.0 U	10 U	2.3 J	5.0 U	10 U	2.3 J
Cis -1,2 - Dichloroethene, ug/L	5.0 U	10 U	5.0 U	5.0 U	10 U	5.0 U
Methylene Chloride, ug/L	5.0 U	10 U	5.0 U	5.0 U	10 U	5.0 U
1,1,1 -Trichloroethane, ug/L	150	180 D	190	74	170 D	90
Trichloroethene, pg/L	5.0 U	10U	1.6 J	5.0 U	10U	1.1 J
Toluene, pg/L	5.0 U	10U	5.0 U	5.0 U	10U	5.0 U
Vinyl Chloride, pg/L	5.0 U	10U	5.0 U	5.0 U	10 U	5.0 U
Total Confident VOCs, pg/L	156	190	201	77	179	97

Sampling Event Date	49/GW 12/14/2004	50/GW 1/27/2005	51/GW 3/22/2005	52/GW 4/26/2005	53/GW 5/30/2005	54/GW 6/7/2005
Field Influent pH, std pH units	6.23	NA	7.04	NA	NA	7.50
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	7.4	9.8	2.9 J	2.5 J	6.3	2.5
1,1-Dichloroethene, pg/L	2.5 J	3.0 J	5.0 U	5.0 U	1.9	0.84 J
Cis-1,2- Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 u	1.0 U
1,1,1 -Trichloroethane, pg/L	130	180	65	67	230	65
Trichloroethene, pg/L	1.6J	2.2 J	5.0 U	5.0 U	1.2 J	0.68 J
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U
Total Confident VOCs, pg/L	141.5	195	67.9	69.5	239.4	69.0

**Table 1**  
**Byron Barret and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event Date	55/GW 7/28/2005	56/GW 8/29/2005	57/GW 9/13/2005	58/GW 10/18/2005	59/GW 11/22/2005	60/GW 12/19/2005
Field Influent pH, std pH units	NA	NA	7.25	NA	NA	6.85
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	10	9.5 J	2.3 J	7.1J	5.2 J	2.7 J
1,1-Dichloroethene, pg/L	4.8	3.1J	0.64 J	1.5J	2.7 J	0.84 J
Cis -1,2 - Dichloroethene, ug/L	1.0 U	25 U	5.0 U	10U	20 U	5.0 U
Methylene Chloride, ug/L	1.0 U	2.4 J	5.0 U	10U	2.0 J	5.0 U
1,1,1 - Trichloroethane, ug/L	260	220	53	180	130	61
Trichloroethene, ug/L	1.7	25 U	0.49 J	2.9 BJ	20 U	0.64 J
Toluene, ug/L	1.0 U	25 U	5.0 U	10U	20 U	5.0 U
Vinyl Chloride, ug/L	1.0 U	25 U	5.0 U	10U	20 U	5.0 U
Total Confident VOCs, ug/L	276.5	235.0	56.4	191.5	139.9	65.2
Sampling Event Date	61/GW 1/19/2006	62/GW 2/24/2006	63/GW 3/27/2006	64/GW 4/20/2006	65/GW 5/25/2006	66/GW 6/20/2006
Field Influent pH, std pH units	NA	NA	6.99	NA	NA	NA
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	6	4.7 J	4.5 J	5.5 J	6.2 J	3.6 J
1,1-Dichloroethene, ug/L	1.7J	1.3J	1.1 J	1.3 J	1.5 J	0.94 J
Cis -1,2 - Dichloroethene, ug/L	5.0 U	10 U	5.0 U	10 U	10U	5.0 U
Methylene Chloride, pg/L	5.0 U	2.1 BJ	5.0 U	10 U	1.3 J	5.0 U
1,1,1 -Trichloroethane, ug/L	170	100	110	140	160	80
Trichloroethene, ug/L	1.3J	0.87 J	0.95 J	1.0J	1.2 J	0.72 J
Toluene, ug/L	5.0 U	10U	5.0 U	10U	10U	5.0 U
Vinyl Chloride, ug/L	5.0 U	10U	5.0 U	10U	10U	5.0 U
Total Confident VOCs, pg/L	179.0	109.0	116.6	147.8	170.2	85.3
Sampling Event Date	67 7/18/2006	68 8/7/2006	69 9/14/2006	70 10/12/2006	71 11/22/2006	72 12/14/2006
Field Influent pH, std pH units	NA	7.46	7.5	7.7	7.38	7.56
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	6.3	5.7 J	4.0 J	5.5	9.5 J	2.8 J
1,1-Dichloroethene, pg/L	1.6 J	1.2 J	4.7 J	1.4J	2.3 J	1.3J
Cis -1,2 - Dichloroethene, pg/L	5.0 U	10U	5.0 U	5.0 U	10.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	2.8 BJ	5.0 U	5.0 U	10.0 U	5.0 U
1,1,1 -Trichloroethane, pg/L	155 E	140	94	82 D	140 D	56
Trichloroethene, pg/L	1.1 J	2.2 J	0.83 J	1.0J	1.8 J	0.64 J
Toluene, pg/L	5.0 U	10U	5.0 U	5.0 U	10.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	10U	5.0 U	5.0 U	10.0 U	5.0 U
Total Confident VOCs, pg/L	162.4	151.9	103.53	89.9	153.6	60.74

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	73 1/18/2007	74 2/28/2007	75 3/21/2007
Date			
Field Influent pH, std pH units	7.64	7.62	7.53
Total Suspended Solids, mg/L	NA	NA	NA
1,1-Dichloroethane, ug/L	1.8J	5.6 DJ	6.2 J
1,1-Dichloroethene, ug/L	0.64 J	2.7 DJ	15 J
Cis -1,2 - Dichloroethene, ug/L	5.0 U	10U	10 U
Methylene Chloride, ug/L	5.0 U	1.0 DJ	10 U
1,1,1 - Trichloroethane, ug/L	62	170 D	230
Trichloroethene, ug/L	0.78 J	1.3 DJ	10 U
Toluene, ug/L	5.0 U	10U	10 U
Vinyl Chloride, ug/L	5.0 U	10U	10 U
<u>Total Confident VOCs, ug/L</u>	<u>65.22</u>	<u>180.6</u>	<u>245.5</u>

Data Qualifiers: U - Undetectable at listed detection limit. J - Estimated value, less than the detection limit.  
E - CC exceeds calibration range. D - Identified in the secondary dilution factor. B - Analyte found in blank as well as sample.

**Table 2**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Effluent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	01/GW	02/GW	03/GW	04/GW	05/GW	06/GW
Date	7/28/2001	8/8/2001	8/18/2001	9/18/2001	9/27/2001	10/5/2001
Field Effluent pH, std pH units	8.44	8.44	8.5	8.38	8.38	8.32
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis-1,2 - Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, ug/L	1.5J	5.0 U	1.5 J	5.0 U	5.0 U	5.0 U
Trichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	07/GW	08/GW	09/GW	10/GW	11/GW	12/GW
Date	10/17/2001	11/8/2001	11/28/2001	12/13/2001	12/27/2001	1/18/2002
Field Effluent pH, std pH units	8.35	8.35	8.29	8.43	8.30	8.38
Total Suspended Solids, mg/L	4.0 U	4.0 U	8.0	4.0 U	4.0 U	4.0U
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Cis -1,2 - Dichloroethene, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
1,1,1 -Trichloroethane, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Toluene, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Sampling Event	13/GW	14/GW	15/GW	16/GW	17/GW	18/GW
Date	1/30/2002	2/13/2002	2/23/2002	3/8/2002	3/20/2002	4/8/2002
Field Effluent pH, std pH units	8.39	8.31	8.22	8.39	8.47	8.05
Total Suspended Solids, mg/L	4.0U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0U	5.0 U	5.0 U	5.0 U	1.3 J	2.8 B,J
1,1,1 -Trichloroethane, pg/L	5.GU	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	5.0U	5.0 U	2.5 J	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

**Table 2**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Effluent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	19/GW	20/GW	21/GW	22/GW	23/GW	24/GW
Date	4/24/2002	5/8/2002	5/21/2002	6/4/2002	6/13/2002	7/11/2002
Field Effluent pH, std pH units	8.0	8.08	8.23	8.23	8.16	8.06
Total Suspended Solids, mg/L	4.0 U	4.0	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, ug/L	7.6 B	5.0 U	1.2 BJ	1.1 J	1.7 BJ	2.6 BJ
1,1,1 - Trichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	1.2 J	5.0 U	5.0 U	5.0 U	1.5 J	5.0 U
Vinyl Chloride, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	25/GW	26/GW	27/GW	28/GW	29/GW	30/GW
Date	7/23/02	9/18/02	12/18/02	4/30/03	6/23/03	9/24/03
Field Effluent pH, std pH units	6.66	7.11	7.22	7.72	7.68	7.81
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	NA	NA	NA
1,1-Dichloroethane, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	31/GW	32/GW	33/GW	34/GW	35/GW	36/GW
Date	12/2/03	3/30/04	6/16/04	9/14/04	12/14/04	3/22/05
Field Effluent pH, std pH units	7.63	7.47	7.86	7.61	6.93	6.97
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1.2 - Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 'Trichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Table 2  
 Byron Barrel and Drum Site  
**Groundwater Treatment System**  
**Effluent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	37/GW	38/GW	39/GW	40/GW	41/GW	42/GW
Date	6/7/2005	9/13/2005	12/19/2005	3/27/2006	6/20/2006	9/14/2006
Field Effluent pH, std pH units	8.01	7.95	7.64	7.74	7.71	8.4
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, M9"-	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, yg/L	1.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 -Trichloroethane, ug/L	1.0U	5.0 U	0.58 J	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, ug/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	43/GW	44/GW				
Date	12/14/2006	3/21/2007				
Field Effluent pH, std pH units	8.36	6.44				
Total Suspended Solids, mg/L	NA	NA				
1,1-Dichloroethane, pg/L	5.0 U	5.0 U				
1,1-Dichloroethene, ug/L	5.0 U	5.0 U				
Cis-1,2- Dichloroethene, ug/L	5.0 U	5.0 U				
Methylene Chloride, pg/L	5.0 U	5.0 U				
1,1,1 - Trichloroethane, pg/L	5.0 U	5.0 U				
Trichloroethene, pg/L	5.0 U	5.0 U				
Toluene, ug/L	5.0 U	5.0 U				
Vinyl Chloride, ug/L	5.0 U	5.0 U				

**Data Qualifiers:** U - Undetectable at listed detection limit. J - Estimated value, less than the detection limit.

E - CC exceeds calibration range. D - Identified in the secondary dilution factor. B - Analyte found in blank as well as sample.

**Table 3**  
 Byron Barrel and Drum Site  
 Field Chemistry Readings  
 March 22, 2007 Quarterly Sampling Event

Parameter Units	Time	Temp. °C	ORP mV	PH Std. Units	TDS	DO mg/L	Spec. Cond. mS/cm
MW-1-9/GW21	1000	11.4	45	7.13	0.5	2.52	770
	1005	10.9	49	7.17	0.5	2.48	725
	1010	10.7	50	7.19	0.5	2.40	720
	1015	10.4	53	7.20	0.5	2.38	716
	1020	10.3	54	7.23	0.5	2.36	715
	1025	10.2	55	7.25	0.5	2.31	715
	1030	10.2	56	7.25	0.5	2.28	710
MW-4-9/GW21	1045	11.9	54	7.40	0.4	2.47	677
	1050	11.7	53	7.40	0.4	2.25	667
	1055	11.5	52	7.41	0.4	2.20	660
	1100	11.6	51	7.42	0.4	2.19	658
	1105	11.7	49	7.44	0.4	2.11	655
	1110	11.5	48	7.43	0.4	2.08	656
	1115	11.3	47	7.44	0.4	1.99	655
MW-10B-9/GW21	1130	12.3	53	7.29	0.4	2.84	675
	1135	12.4	51	7.29	0.4	2.83	676
	1140	12.3	50	7.29	0.4	2.81	676
	1145	12.1	50	7.29	0.4	2.79	675
	1150	11.9	50	7.30	0.4	2.77	674
	1155	11.7	50	7.32	0.4	2.75	675
	1200	11.8	50	7.34	0.4	2.70	674
MW-Residential-9/GW21	1215	11.4	-37	7.62	0.2	2.67	323
	1220	11.5	-44	7.68	0.2	2.55	320
	1225	11.2	-50	7.77	0.2	2.43	317
	1230	11.4	-50	7.83	0.2	2.39	317
	1235	11.1	-51	7.83	0.2	2.35	317
	1240	11.3	-52	7.85	0.2	2.33	319
	1245	11.1	-51	7.83	0.2	2.30	317

**Table 3**  
**Byron Barrel and Drum Site**  
**Field Chemistry Readings**  
**March 22, 2007 Quarterly Sampling Event**

Parameter Units	Time	Temp. °C	ORP mV	PH Std. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
MW-21-9/GW21	1305	8.7	-21	7.33	1.2	4.70	1860
	1310	8.7	-23	7.33	1.2	4.69	1840
	1315	8.7	-25	7.35	1.2	4.68	1840
	1320	8.7	-25	7.37	1.2	4.66	1830
	1325	8.8	-27	7.38	1.2	4.63	1830
	1330	8.8	-27	7.38	1.2	4.60	1830
PW-1/GW21	1340	9.8	-21	7.68	0.5	7.45	714
PW-2/GW21	1345	9.7	-14	7.66	0.5	7.17	712
PW-3/GW21	1350	9.7	-2	7.64	0.3	7.82	518

**Note:** Flow through cell was calibrated for all chemistry parameters prior to gauging.

Table 4  
 Byron Barrel and Drum Site  
 Groundwater Elevations for  
 December 2006 Sampling Event  
 ECOR Solutions, Inc.

**Operator:** P. Little

**Date:** 3/22/2007

<b>Pumping Wells</b>	TOC		GW		<b>wc ft</b>
	<b>DTW</b>	<b>Elevation</b>	<b>Elevation</b>	<b>TD</b>	
PW-1	<b>14.50</b>	<b>642.82</b>	<b>628.32</b>	—	—
PW-2	<b>4.19</b>	<b>641.34</b>	<b>637.15</b>	—	—
PW-3	<b>5.45</b>	<b>641.11</b>	<b>635.66</b>	—	—

<b>Monitoring Wells</b>	<b>DTW</b>	<b>Elevation</b>	<b>Elevation</b>	<b>TD</b>	<b>wc ft</b>
MW-1	<b>4.19</b>	<b>639.63</b>	<b>635.44</b>	<b>11.65</b>	<b>7.46</b>
MW-2	<b>10.36</b>	<b>646.36</b>	<b>636.00</b>	<b>15.10</b>	<b>4.74</b>
MW-4	<b>3.24</b>	<b>638.56</b>	<b>635.32</b>	<b>11.50</b>	<b>8.26</b>
MW-10B	<b>8.44</b>	<b>644.44</b>	<b>636.00</b>	<b>20.35</b>	<b>11.91</b>
MW-21	<b>7.38</b>	<b>642.52</b>	<b>635.14</b>	<b>27.90</b>	<b>20.52</b>
Residential	<b>15.09</b>	<b>650.78</b>	<b>635.69</b>	<b>35.17</b>	<b>20.08</b>

<b>Piezometers</b>	<b>DTW</b>	<b>Elevation</b>	<b>Elevation</b>	<b>TD</b>	<b>wc ft</b>
PZ-1	<b>7.12</b>	<b>643.11</b>	<b>635.99</b>	<b>27.58</b>	<b>20.46</b>
PZ-2	<b>6.64</b>	<b>642.39</b>	<b>635.75</b>	<b>27.29</b>	<b>20.65</b>

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	o os o x: b	o o s: o	a c 2 o a w to "o	o o o c fl. .£	o e o c u	« C o o TM	« c o o H	o a o "c v	
		<b>Groundwater Cleanup Levels (ug/L):</b>				5	5	NA	5	5	5	5	2
<b>MW-1</b>	3/20/2002	639.63	5.24	634.39	<b>86</b>	49	NA	5 U	<b>1700</b>	<b>2 J</b>	<b>5 U</b>	<b>2 J</b>	
	6/12/2002	639.63	5.07	634.56	<b>81</b>	<b>38</b>	NA	5 U	<b>1600</b>	<b>3 J</b>	<b>5 U</b>	<b>5 U</b>	
	9/18/2002	639.63	7.15	632.48	<b>13</b>	13 J	NA	5 UJ	<b>350</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	
	12/18/2002	639.63	5.62	634.01	42	37 J	NA	25 U	<b>1200</b>	<b>5 J</b>	<b>25 U</b>	<b>25 U</b>	
	4/29/2003	639.63	4.53	635.10	<b>57</b>	<b>34</b>	NA	25 U	<b>1300</b> J	<b>25 U</b>	<b>25 U</b>	<b>25 U</b>	
	6/24/2003	639.63	5.36	634.27	32	24	NA	5 U	<b>720</b>	<b>4 J</b>	<b>5 U</b>	<b>5 U</b>	
	9/24/2003	639.63	6.72	632.91	24 J	17 J	NA	25 U	<b>580</b>	<b>25 U</b>	<b>25 U</b>	<b>25 U</b>	
	12/3/2003	639.63	5.53	634.10	33 J	28 J	NA	40 U	<b>860</b> J	<b>40 U</b>	<b>40 U</b>	<b>40 U</b>	
	3/30/2004	639.63	3.40	636.23	30 J	<b>31</b>	NA	25 U	<b>830</b> J	<b>25 UJ</b>	<b>25 U</b>	<b>25 U</b>	
	6/16/2004	639.63	4.20	635.43	26	22 J	NA	25 UJ	<b>870</b>	<b>25 U</b>	<b>25 U</b>	<b>25 U</b>	
	9/14/2004	639.63	4.56	635.07	28	26	NA	25 U	<b>730</b>	<b>25 U</b>	<b>25 U</b>	<b>25 U</b>	
	12/14/2004	639.63	4.61	635.02	<b>31</b>	26	NA	25 U	<b>760</b>	<b>25 UJ</b>	<b>25 U</b>	<b>25 U</b>	
	3/22/2005	639.63	4.32	635.31	41	<b>110</b>	NA	5 U	<b>830</b>	<b>5</b>	<b>5 U</b>	<b>5 U</b>	
	6/7/2005	639.63	5.45	634.18	10 J	14 J	NA	13 J	<b>340</b>	<b>50 U</b>	<b>50 UJ</b>	<b>50 U</b>	
	9/13/2005	639.63	6.89	632.74	<b>14</b>	<b>16</b>	NA	5 U	<b>410</b>	<b>2 J</b>	<b>5 UJ</b>	<b>5 U</b>	
	12/20/2005	639.63	4.78	634.85	24 J	24 J	NA	40 U	<b>580</b>	<b>40 U</b>	<b>40 U</b>	<b>40 U</b>	
	3/26/2006	639.63	5.07	634.56	29	24	NA	5 U	<b>540</b>	<b>4 J</b>	<b>5 U</b>	<b>5 U</b>	
	6/22/2006	639.63	5.68	633.95	7	9	NA	5 U	<b>220</b>	<b>2 J</b>	<b>5 U</b>	<b>5 U</b>	
	9/14/2006	639.63	5.15	634.48	5 J	6 J	NA	10 U	<b>190</b>	<b>2 J</b>	<b>10 U</b>	<b>10 U</b>	
	12/7/2006	639.63	4.54	635.09	6 J	9 J	NA	10 U	<b>170</b>	<b>2 J</b>	<b>10 U</b>	<b>10 U</b>	
	3/22/2007	639.63	4.19	635.44	2 J	4 J	NA	10 U	<b>100</b>	<b>2 J</b>	<b>10 U</b>	<b>10 U</b>	

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	01 at £ o o a *- T-	ai at 0) o o u 9	c at S o o o Ci r- d)	at £ o o at c at E	at £ o o at c at H ^1	at £ o o at c at H ^1	at at 4-1 at S o at 3 1-	at o o c v	
		<b>Groundwater Cleanup Levels (pg/L):</b>				5	5	NA	5	5	5	5	2
MW-4	3/20/2002	638.56	4.79	633.77	17 J	14 J	NA	25 U	450	10 J	25 U	25 U	
	6/12/2002	638.56	4.48	634.08	3 J	2 J	NA	5 U	83	8	5 U	5 U	
	9/18/2002	638.56	6.04	632.52	5 U	5 UJ	NA	5 UJ	27	5	5 U	5 U	
	12/18/2002	638.56	5.22	633.34	40	24	NA	5 U	200	8	5 U	5 U	
	4/29/2003	638.56	4.50	634.06	31	13 J	NA	25 U	530	25 U	25 U	25 U	
	6/24/2003	638.56	4.58	633.98	5 UJ	5 UJ	NA	5 U	17 J	4 J	5 U	5 UJ	
	9/24/2003	638.56	5.91	632.65	35	9 J	NA	10 U	240	8 J	10 U	10 U	
	12/3/2003	638.56	4.98	633.58	65	17 J	NA	20 U	550	11 J	20 U	20 U	
	3/30/2004	638.56	4.15	634.41	12	5	NA	5 U	130	3 J	5 U	5 U	
	6/16/2004	638.56	3.64	634.92	15 J	25 UJ	NA	25 UJ	150	25 U	25 U	25 U	
	9/14/2004	638.56	3.71	634.85	11 J	25 U	NA	25 U	87	25 U	25 U	25 U	
	12/14/2004	638.56	3.97	634.59	11 J	25 U	NA	25 U	67	25 U	25 U	25 U	
	3/22/2005	638.56	3.55	635.01	50 U	50 U	NA	50 UJ	87	50 U	50 U	50 U	
	6/7/2005	638.56	4.25	634.31	5 U	5 U	NA	5 U	8	1 J	5 U	5 U	
	9/13/2005	638.56	5.84	632.72	5 U	5 U	NA	5 U	11	2 J	5 U	5 U	
	12/20/2005	638.56	4.75	633.81	4 J	25 U	NA	25 U	48	25 U	25 U	25 U	
	3/25/2006	638.56	4.32	634.24	5 U	5 U	NA	5 U	8	1 J	5 U	5 U	
	6/22/2006	638.56	4.50	634.06	5 U	5 U	NA	5 U	9	1 J	5 U	5 U	
	9/14/2006	638.56	3.92	634.64	5 U	5 U	NA	5 U	13	2 J	5 U	5 U	
	12/7/2006	638.56	3.64	634.92	25 U	25 U	NA	25 U	6 J	25 U	25 U	25 U	
	3/22/2007	638.56	3.24	635.32	5 U	5 U	NA	5 U	10	1 J	5 U	5 U	

Table 5  
 Byron Barrel and Drum Site  
 Historic Groundwater Quality Table - Select Analytes  
 ECOR Solutions, Inc.

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	© C e o u O	© S i M O o	D C 2 5 h '5	4 TJ O SZ	© c > E	© m £1 O O	© c ** S o £ 'c	0 c v 3 o	0 TJ O £
		Groundwater Cleanup Levels (Mg/L):			5	5	NA	5	5	5	15	2	
MW-10B	3/21/2002	644.44	9.43	635.01	5 U	5 U	NA	5 U	42	5 U	5 U	5 U	
	6/12/2002	644.44	9.12	635.32	5 U	5 U	NA	5 U	11	5 U	5 U	5 U	
	9/18/2002	644.44	11.05	633.39	5 U	5 UJ	NA	5 UJ	7	5 U	5 U	5 U	
	12/18/2002	644.44	10.20	634.24	5U	5 U	NA	5 U	52	5 U	5 U	5 U	
	4/30/2003	644.44	9.28	635.16	5 U	5 U	NA	5 U	8	5 U	5 U	5 U	
	6/23/2003	644.44	9.39	635.05	5 U	5 U	NA	5 U	3 J	5 U	5 U	5 U	
	9/24/2003	644.44	10.93	633.51	5 U	5 U	NA	5 U	7	5 U	5 U	5 U	
	3/30/2004	644.44	8.99	635.45	5 U	5 U	NA	5 U	17	5 U	5 U	5 U	
	9/14/2004	644.44	8.76	635.68	5 U	5 U	NA	5 U	14	5 U	5 U	5 U	
	3/22/2005	644.44	8.69	635.75	5 U	5 U	NA	5 U	11	5 U	5 U	5 U	
	9/13/2005	644.44	10.84	633.60	5 U	5 U	NA	5 U	5	5 U	5 U	5 U	
	3/25/2006	644.44	9.28	635.16	5 U	5 U	NA	5 U	6	5 U	5 U	5 U	
	9/14/2006	644.44	9.82	634.62	5 U	5 U	NA	5 U	6	5 U	5 U	5 U	
	3/22/2007	644.44	8.44	636.00	5 U	5 U	NA	5 U	6	5 U	5 U	5 U	

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	c n e o 9	c n e o c o O	m c d S S o u O	4-1 S o E	U C S o T-	C C o o t-	a c 3 o t-	o o u c v
		<b>Groundwater Cleanup Levels (ug/L):</b>			5	5	NA	5	5	5	5	2
MW-21	3/26/1999	NA	NA	NA	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U
	3/21/2002	642.52	7.70	634.82	25 U	25 U	NA	25 U	25 U	25 U	25 U	25 U
	6/12/2002	642.52	7.69	634.83	25 U	25 U	NA	25 U	25 U	25 U	25 U	25 U
	9/17/2002	642.52	9.50	633.02	5 U	5 UJ	NA	5 UJ	5 U	5 U	5 U	5 U
	12/17/2002	642.52	8.23	634.29	5 U	5 UJ	NA	5 U	5 UJ	5 U	5 U	5 U
	4/30/2003	642.52	7.91	634.61	25 U	25 U	NA	25 U	25 U	25 U	25 U	25 U
	3/30/2004	642.52	7.56	634.96	5 UJ	5 UJ	NA	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
	3/22/2005	642.52	7.42	635.10	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
	3/25/2006	642.52	7.78	634.74	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
	3/22/2007	642.52	7.38	635.14	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
MW-Residential	3/21/2002	650.78	15.79	634.99	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
	6/12/2002	650.78	15.62	635.16	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
	9/17/2002	650.78	17.50	633.28	5 U	5 UJ	NA	5 UJ	5 U	5 U	5 U	5 U
	12/17/2002	650.78	16.52	634.26	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
	4/30/2003	650.78	17.74	633.04	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
	3/30/2004	650.78	15.47	635.31	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
	3/22/2005	650.78	15.24	635.54	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
	3/25/2006	650.78	15.75	635.03	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U
	3/22/2007	650.78	15.09	635.69	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top Of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	9	20	2	a	c	o	o	2	o	o	o	
<b>Groundwater Cleanup Levels (ug/L):</b>																
PW-1	12/21/1998	NA	NA	NA	20 U	5 J	20 U	9 BJ	270	11 J	20 U	20 U	5.2	5 U	5 U	
	12/27/2001	NA	NA	NA	15	6.2	5 U	5 U	280	3 J	5 U	5 U	320	2 J	5 U	5 U
	3/20/2002	642.82	NM	NM	11	5	5 U	5 U	380	2 J	5 U	5 U	5 UJ	2 J	5 U	5 U
	6/12/2002	642.82	NM	NM	18	3 J	5 U	5 U	270	5 U	5 U	5 U	320	3 J	5 U	5 U
	9/18/2002	642.82	NM	NM	12	2 J	5 U	5 UJ	270	2 J	5 U	5 U	20 U	1 J	5 U	5 U
	12/18/2002	642.82	18.43	624.39	8	5	5 U	5 U	160	2 J	5 U	5 U	160	5 U	5 U	5 U
	4/30/2003	642.82	20.96	621.86	11	2 J	5 U	5 U	180	2 J	5 U	5 U	180	2 J	5 U	5 U
	6/23/2003	642.82	22.41	620.41	12	2 J	5 U	5 U	190	2 J	5 U	5 U	190	2 J	5 U	5 U
	9/24/2003	642.82	22.59	620.23	8	5 U	5 U	5 U	120	5 U	5 U	5 U	120	5 U	5 U	5 U
	12/3/2003	642.82	21.74	621.08	8	2 J	5 U	5 U	150	2 J	5 U	5 U	150	2 J	5 U	5 U
	3/30/2004	642.82	21.80	621.02	6	2 J	5 U	5 U	150	5 U	5 U	5 U	150	5 U	5 U	5 U
	6/16/2004	642.82	19.08	623.74	13	3 J	5 U	5 UJ	380	2 J	5 U	5 U	380	2 J	5 U	5 U
	9/14/2004	642.82	20.62	622.20	10	2 J	5 U	5 U	210	5 U	5 U	5 U	210	5 U	5 U	5 U
	12/14/2004	642.82	21.23	621.59	6	2 J	5 U	5 U	140	5 U	5 U	5 U	140	5 U	5 U	5 U
	3/22/2005	642.82	22.65	620.17	15	23	5 U	5 U	200 J	2 J	5 U	5 U	200 J	2 J	5 U	5 U
	6/7/2005	642.82	21.50	621.32	10	2 J	10 U	2 U	59	1 J	10 U	10 U	59	1 J	10 U	10 U
	9/13/2005	642.82	21.73	621.09	3 J	0.9 J	5 U	5 U	73	0.5 J	5 U	5 U	73	0.5 J	5 U	5 U
	12/19/2005	642.82	20.98	621.84	9	2 J	5 U	5 U	140	2 J	5 U	5 U	140	2 J	5 U	5 U
	3/26/2006	642.82	21.44	621.38	4 J	0.9 J	5 U	5 U	76	0.6 J	5 U	5 U	76	0.6 J	5 U	5 U
	6/22/2006	642.82	21.28	621.54	4 J	1 J	5 U	5 U	77	0.8 J	5 U	5 U	77	0.8 J	5 U	5 U
	9/14/2006	642.82	8.23	634.59	9 DJ	25 U	25 U	25 U	230	25 U	25 U	25 U	230	25 U	25 U	25 U
	12/7/2006	642.82	20.82	622.00	6 J	2 J	10 U	10 U	160	1 J	10 U	10 U	160	1 J	10 U	10 U
	3/22/2007	642.82	14.50	628.32	6 J	2 J	10 U	10 U	170	1 J	10 U	10 U	170	1 J	10 U	10 U

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	C	S	O	H	E	M	S	C	G	V
<b>Groundwater Cleanup Levels (ug/L):</b>														
PW-2	12/27/2001	NA	NA	NA	68	23	1.4 J	5 U	960	4 J	5 U	1.1 J		
	3/20/2002	641.34	NM	NM	24	13	5 U	5 U	720	2 J	5 U	5 U		
	6/12/2002	641.34	<b>NM</b>	<b>NM</b>	18	10	5 U	5 U	370	2 J	5 U	5 U		
	9/18/2002	641.34	<b>NM</b>	<b>NM</b>	5	4 J	5 U	5 UJ	160	5 U	5 U	5 U		
	12/18/2002	641.34	17.68	623.66	12	14	10 U	10 U	280	10 U	10 U	10 U		
	4/30/2003	641.34	16.82	624.52	11	6	5 U	5 U	200	2 J	5 U	5 U		
	6/23/2003	641.34	19.41	621.93	8	5	5 U	5 U	180	5 U	5 U	5 U		
	9/24/2003	641.34	17.45	623.89	6	2 J	5 U	5 U	120	5 U	5 U	5 U		
	12/3/2003	641.34	18.78	622.56	6	3 J	5 U	5 U	160	5 U	5 U	5 U		
	3/30/2004	641.34	19.24	622.10	4 J	3 J	5 U	5 U	140	5 U	5 U	5 U		
	6/16/2004	641.34	18.58	622.76	5	5 U	5 U	5 UJ	120	5 U	5 U	5 U		
	9/14/2004	641.34	18.25	623.09	5	4 J	5 U	5 U	160	5 U	5 U	5 U		
	12/14/2004	641.34	17.63	623.71	8	5	5 U	5 U	160	2 J	5 U	5 U		
	3/22/2005	641.34	19.33	622.01	5	11	5 U	5 U	140	5 U	5 U	5 U		
	6/7/2005	641.34	19.40	621.94	3 J	2 J	5 U	5 U	70	1 J	5 U	5 U		
	9/13/2005	641.34	19.52	621.82	3 J	3 J	5 U	5 U	94 J	2 J	5 U	5 U		
	12/19/2005	641.34	17.35	623.99	1 J	5 U	5 U	5 U	30	0.5 J	5 U	5 U		
	3/26/2006	641.34	17.22	624.12	5	1 J	5 U	5 U	54	0.8 J	5 U	5 U		
	6/22/2006	641.34	18.59	622.75	4 J	2 J	10 U	10 BL	170	1 J	10 U	10 U		
	9/14/2006	641.34	6.75	634.59	3DJ	1 DJ	10 U	10 U	92	1 DJ	10 U	10 U		
	12/7/2006	641.34	6.11	635.23	9DJ	3DJ	10 U	10 U	230	2 J	10 U	10 U		
	3/22/2007	641.34	4.19	637.15	8 J	4 J	10 U	10 U	90	1 J	10 U	10 U		

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	BOD DO pH TDS Total Sulfide Iron Manganese Chloride Sulfate Ammonium Dissolved Oxygen Total Organic Carbon Total Volatile Organic Carbons	Groundwater Cleanup Levels (pg'L):	5	5	NA	5	5	5	5	5	5	2
PW-3	12/27/2001	NA	NA	NA	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>16</b>	1.7 J	5 U	<b>5 U</b>			
	3/20/2002	641.11	NM	NM	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	8	1 J	5 U	<b>5 U</b>			
	6/12/2002	641.11	NM	NM	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	6	5 U	5 U	<b>5 U</b>			
	9/18/2002	641.11	NM	NM	<b>5 U</b>	<b>5 UJ</b>	<b>5 U</b>	<b>5 UJ</b>	<b>4 J</b>	5 U	5 U	5 U	<b>5 U</b>			
	12/18/2002	641.11	19.90	621.21	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	4 J	5 U	5 U	<b>5 U</b>			
	4/30/2003	641.11	19.46	621.65	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	3 J	5 U	5 U	<b>5 U</b>			
	6/23/2003	641.11	18.55	622.56	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	3 J	5 U	5 U	<b>5 U</b>			
	9/24/2003	641.11	20.97	620.14	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	2 J	5 U	5 U	<b>5 U</b>			
	12/3/2003	641.11	20.28	620.83	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	3 J	5 U	5 U	<b>5 U</b>			
	3/30/2004	641.11	20.52	620.59	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	2 J	5 U	5 U	<b>5 U</b>			
	6/16/2004	641.11	19.65	621.46	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 UJ</b>	2 J	5 U	5 U	<b>5 U</b>			
	9/14/2004	641.11	20.91	620.20	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	2 J	5 U	5 U	<b>5 U</b>			
	12/14/2004	641.11	18.33	622.78	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	2 J	5 U	5 U	<b>5 U</b>			
	3/22/2005	641.11	22.17	618.94	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	2 J	5 U	5 U	<b>5 U</b>			
	6/7/2005	641.11	20.30	620.81	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	5 U	5 U	5 U	<b>5 U</b>			
	9/13/2005	641.11	21.52	619.59	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	1 J	5 U	5 U	<b>5 U</b>			
	12/19/2005	641.11	20.36	620.75	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	1 J	5 U	5 U	<b>5 U</b>			
	3/26/2006	641.11	22.31	618.80	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	1 J	5 U	5 U	<b>5 U</b>			
	6/22/2006	641.11	20.72	620.39	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	1 J	5 U	5 U	<b>5 U</b>			
	9/14/2006	641.11	6.53	634.58	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	2 J	5 U	5 U	<b>5 U</b>			
	12/7/2006	641.11	7.81	633.30	<b>6 DJ</b>	<b>2 DJ</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	170	1 J	5 U	<b>5 U</b>			
	3/22/2007	641.11	5.45	635.66	7	4 J	5 U	5 U	5 U	210	1 J	5 U	<b>5 U</b>			

Notes:

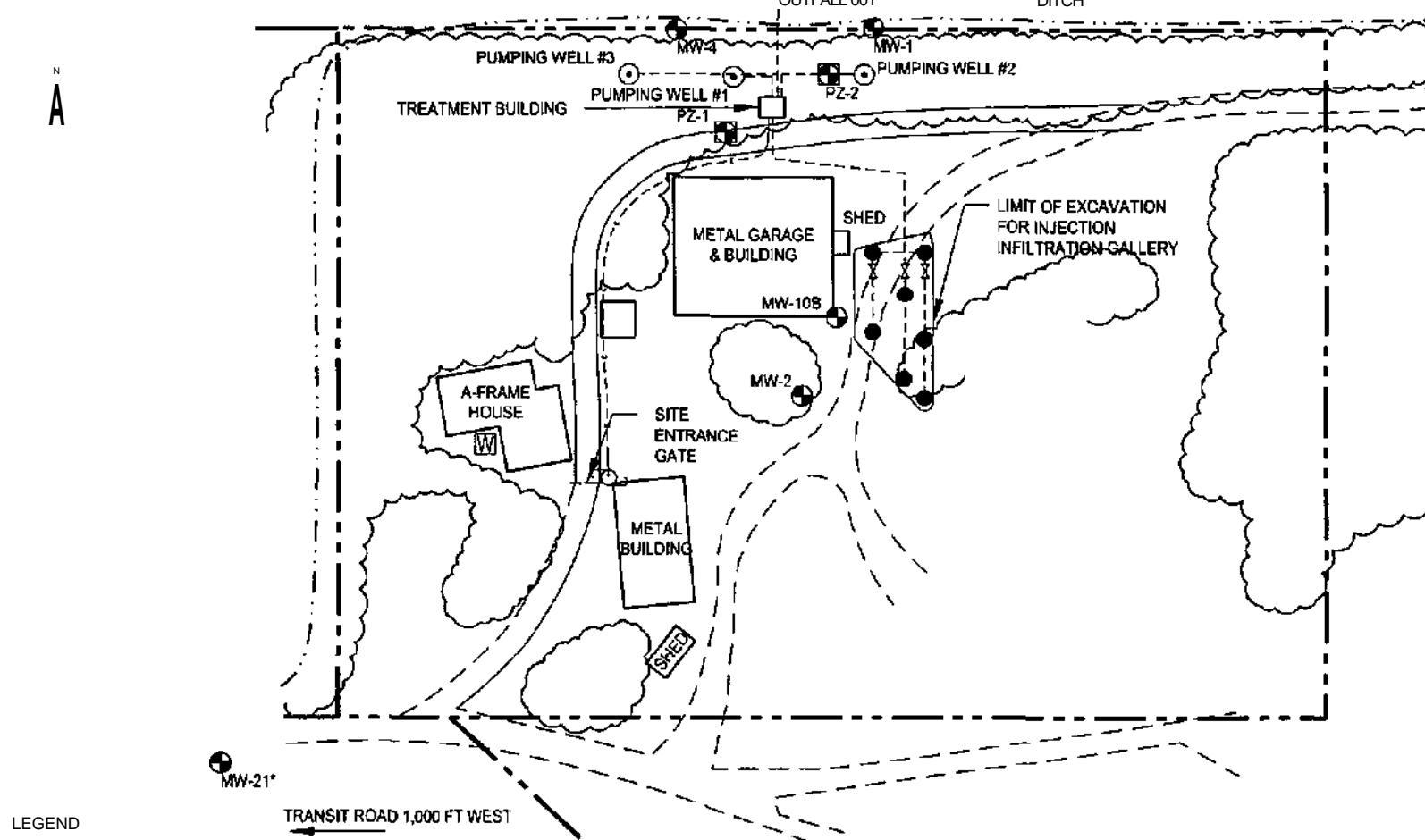
All concentrations in micrograms per liter (pg/L)

Exceedences of the groundwater cleanup standard are indicated in bold.

NM = Not Measured

NA = Not Available

## FIGURES



LEGEND

MONITORING WELL

FORMER RESIDENTIAL WELL

PIEZOMETER WELL

INJECTION GALLERY PIEZOMETER WELL

INJECTION GALLERY VALVE

PUMPING WELL

UTILITY POLE

PROPERTY LINE

FENCE

TREELINE

NEW GRAVEL ROAD

PRE-EXISTING GRAVEL ROAD

DITCH

ELECTRIC & PHONE LINE

REINJECTION PIPING

SITE PLAN

BYRON BARREL AND DRUM  
AREA 2 SITE  
BYRON, NY

ECOR Solutions

1075 Andrew Drive, Suite I, West Chester, PA 19380

SCALE IN FEET

DATE

FIGURE

07-25-06

1

**fe**  
WELL NO. 1  
1/3 HP

**b**  
WELL NO. 2  
1/3 HP

**b**  
WELL NO. 3  
1/3 HP

-C»O-

-C\*H>-

-IXJ-W-

AIR  
STRIPPER

TO ATMOSPHERE

BAG FILTER

AIR OUT  
r —  
J.

\$

| a&H

TO REINJECTION (OR)  
SURFACE DISCHARGE

-D\*J-

**TD**  
REINJECTION  
PUMP  
2 HP

TO SURFACE DISCHARGE  
OUTFALL 001

150 CFM  
&  
BLOWER  
3 HP

LEGEND

**H\*3** SAMPLING PORT

**a** REDUCER

**W** CHECK VALVE

**ii-** FLANGE FITTING

**r^j** BUTTERFLY VALVE

**C<3** BALL VALVE

AIR LINE

PROCESS PIPING

GROUND WATER TREATMENT SYSTEM  
FLOW DIAGRAM

BYRON BARREL AND DRUM  
AREA 2 SITE  
BYRON, NY

ECOR Solutions

1075 Andrew Drive, Suite I, West Chester, PA 19380

SCALE IN FEET

DATE

FIGURE

80

09-02-05

2



Figure 3  
Byron Barrel and Drum Site  
Influent Concentration (Total VOCs) Vs. Time

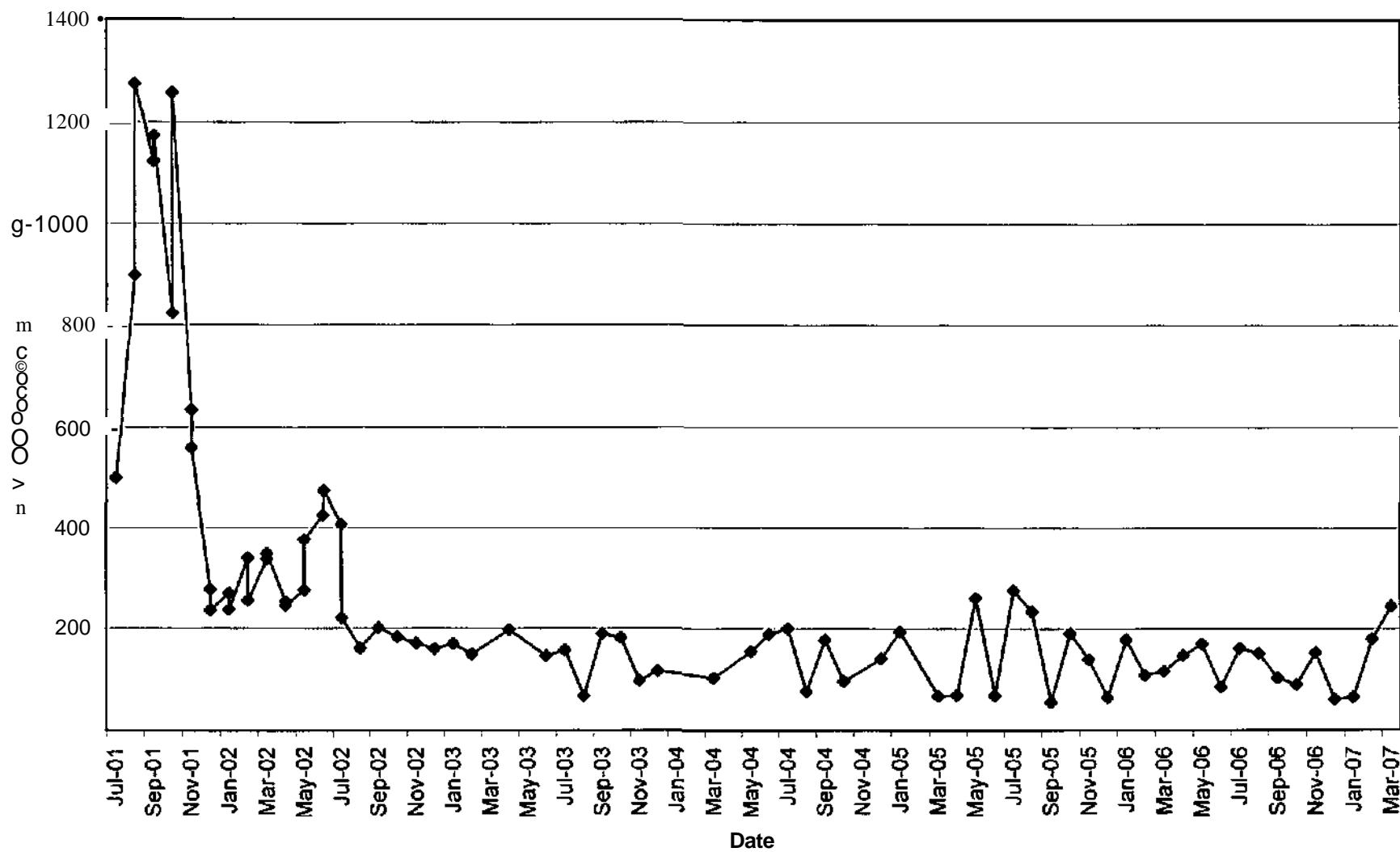
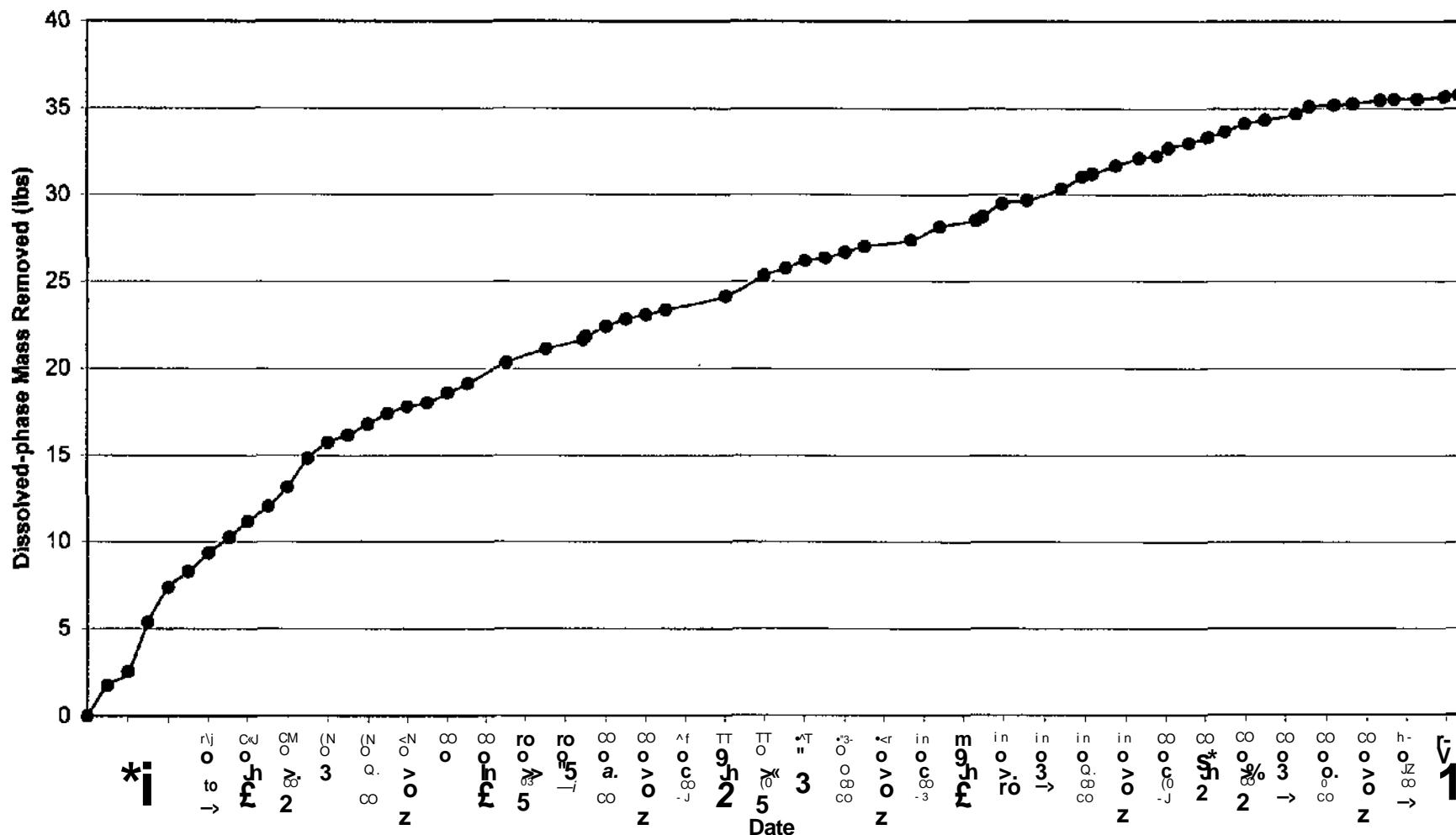
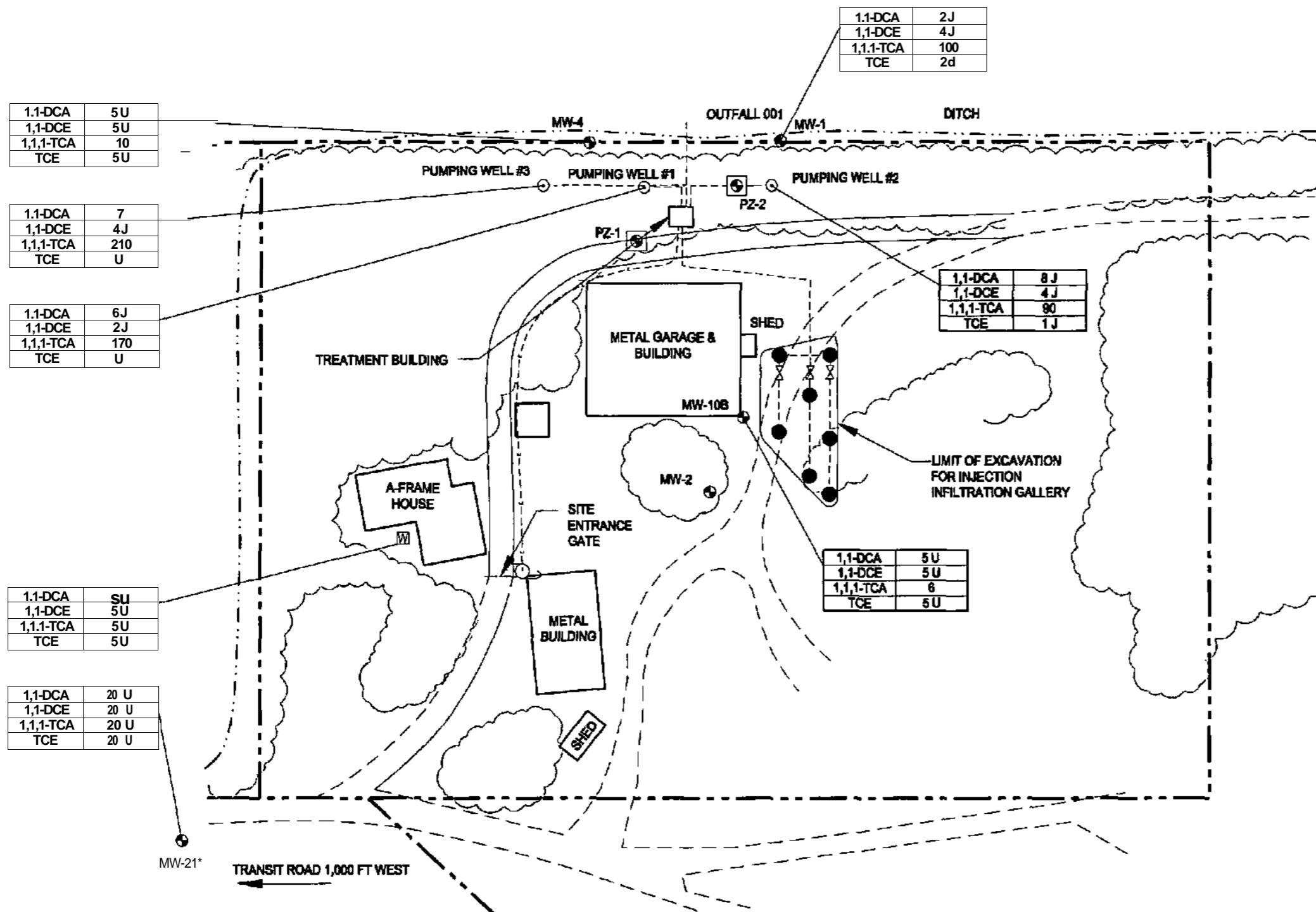


Figure 4  
Byron Barrel and Drum Site  
Cumulative Dissolved-phase Mass Removed (Total VOCs)



N  
A

\*NOTE MW-21 IS 200 FEET WEST OF PROPERTY UNE

## GROUNDWATER QUAITY MAP

22 MARCH 2007

BYRON BARREL AND DRUM  
AREA 2 SITE  
BYRON, NY

ECO &amp; Solutions

1076 Antow Driv\*. &amp; \* I, W Mt Chaster, PA 19880

SCALE W FEET

DATE

FIGURE

06-1&amp;07

60

**APPENDIX A**  
**Field Notes**

## Field Data

**ECOR Solutions, Inc.**  
**Byron Barrel & Drum Site**  
**Field Sampling Record Form**

**Site:** Byron Barrel and Drum**Date:** ?,?:??"**Job #:** 01501.002**Sample ID:** /rsw-Y-I /s^-jf**Well ID:** y\J-j

Time onsite: Time Offsite:

**Samplers:** / X //'«»\* -Depth of Well (from top of casing) .5\$ Time: useStatic water level (from top of casing) X2^/ Time: t&3&**Purging Viet hod:**

Dedicated bladder pump, QED SamplePro MP-SP-4C

**Field Tests:**

Time	Flowrate(mL/min)/ purge volume (mL)	Temp. °C	ORP mV	pH 3rd. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
<u>/sY&gt;"</u>	<u>*j\$/&amp;&gt;/»*</u>	<u>//.?</u>	<u>si</u>	<u>I.fo</u>	<u>A y</u>	<u>2^L n</u>	<u>^77</u>
<u>/oSo</u>		<u>It.I</u>	<u>S3</u>	<u>~J.&lt;/o</u>	<u>O.J</u>	<u>*.-? :r</u>	<u>a-y</u>
<u>10S&lt;</u>		<u>H.f</u>	<u>\$y~</u>	<u>I.^/I</u>	<u>M</u>	<u>3..2*</u>	<u>£6&lt;?</u>
<u>(I oo</u>		<u>U.c</u>	<u>sri</u>	<u>I.K</u>	<u>C&lt;i</u>	<u>Z/9</u>	<u>6 S3</u>
<u>ft of</u>	<u>1</u>	<u>nn</u>	<u>11</u>	<u>7.yy</u>	<u>&amp;-i</u>	<u>3../?</u>	<u>I - O "</u>
<u>a to</u>		<u>I i' *</u>	<u>ve</u>	<u>1-13</u>	<u>0&lt;i</u>	<u>2,e3</u>	<u>£r*</u>
<u>//&lt;I</u>	<u>v</u>	<u>it. J</u>	<u>*n</u>	<u>n-LH</u>	<u>0-1</u>	<u>hi&lt;?</u>	<u>£&lt;rr</u>

**Sampling:**Time of Sample Collectio      tus-*Collection Method:*

X Dedicated pump

*Analyses:*

X VOCs

*Analytical Method:*

8260 X 503 Other:

**Observations:**Weather/Temperature:      jw/cksf/      £#\*Sample Description:      CUi/Free Product?      Yes      No  X      Descript.:Sheen?      Yes      No  ^      Descript.:Odor?      Yes      No  \*      Descript.:**Comments:**/^J//\*JJ>      Jfa/^{<      -TAf<f\*J      /hcv'V

ECOR Solutions, Inc.  
Byron Barrel & Drum Site  
Field Sampling Record Form

Site: Byron Barrel and Drum \_\_\_\_\_

Date: 3-32~\*->

**Job #:** 01501.002

**Sample ID** fT)»J . ^ / f a -21

**Well ID:** Mw- /  
f.tt\*f<\*

**Samplers:** /T.S\*\*\*\*-

Time onsite: Time Offsite:

Depth of Well (from top of casing) j f . t f

Time: i>if

Static water level (from top of casing) y, /<

Time: ofs\*

Purging Method:

Dedicated bladder pump, QED SamplePro MP-SP-4C \_\_\_\_\_

Field Tests:

Time	Flowrate(mUmin)/ purge volume (mL)	Temp. °C	ORP mV	pH 3td. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
foo&	3o/»i/+*	// . *	* /	7-/3	<b>t.f</b>	Zs*	~)1C
joof		16.9	¥1	7 -/7	Q*?	a.f0	7J?J"
10*0		10.1	<b>S*</b>	7 „/f	<b>o.f</b>	2.Y0	7A*
to IS		<i>it-i</i>	S3	7 -^	o,<	2,3S	7 / 6
foZo		jo.z	<b>SV</b>	7,^3	o*s~	2,}£	7**
iffStf		jo,7	Ss	7 -^r	0'S^	2.3/	<b>7/r</b>
/C3*	\J	fCK	S'C	<b>I***r</b>	<b>e.f</b>	2>*sr	J to

**Sampling:**Time of Sample Collectio / o 3°*Collection Method:* Dedicated pump*Analyses:* VOCs*Analytical Method:* 6260     503    Other:**Observations:**

Weather/Temperature:

Sample Description: \_\_\_\_\_

Free Product? Yes No \_\_\_\_\_ Descript.: \_\_\_\_\_

Sheen? Yes No \_\_\_\_\_ Descript.: \_\_\_\_\_

Odor? Yes No \_\_\_\_\_ Descript.: \_\_\_\_\_

**Comments:****f<sub>H</sub>M      JvS      JX\*\*\*\***

ECOR Solutions, Inc.  
Byron Barrel & Drum Site  
Field Sampling Record Form

Site: Byron Barrel and Drum

Date: :?>.\*TJ

Job #: 01501.002

Sample ID MK- /oS'f /(^W •?/

Well ID: /\l.tv-/e6

Time onsite: Time Offsite:

Samplers: A t.4t#\* A /Vd\*—

Depth of Well (from top of casing) ze.jtf Time: t^er

Static water level,(from top of casing) \$-99 Time: jjo

**Purging Method:**

Dedicated bladder pump, QED SamplePro MP-SP-4C

**Field Tests:**

Time	Flowrate(ml./min)/ purge volume (mL)	Temp. °C	ORP mV	pH 5td. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
<u>j/3o</u>	<u>¥Or*/tw</u>	<u>J3.3</u>	<u>S3</u>	<u>?J9</u>	<u>&amp;&lt;/</u>	<u>2.BY</u>	<u>tif</u>
<u>V3f</u>		<u>1JL-H</u>	<u>SI</u>	<u>I.#</u>	<u>o-y</u>	<u>X\$3</u>	<u>^</u>
<u>fIVc?</u>		<u>/Z1</u>	<u>fO</u>	<u>7-19</u>	<u>OA/</u>	<u>2.3*</u>	<u>£1C</u>
<u>Jf¥f</u>		<u>12/</u>	<u>sre?</u>	<u>7*19</u>	<u>\$4</u>	<u>2.1*7</u>	<u>£7^</u>
<u>11*0</u>		<u>/A?</u>	<u>£&amp;</u>	<u>1.1°</u>	<u>#4</u>	<u>W&gt;</u>	<u>£IY</u>
<u>Htf</u>		<u>/A 7</u>	<u>S~o</u>	<u>7*3*</u>	<u>O-Y</u>	<u>2*xr</u>	<u>^ 7 5 "</u>
<u>l£e0</u>	" ^	<u>It,a</u>	<u>J°</u>	<u>7.J^Y</u>	<u>£&gt;A/</u>	<u>2.7*</u>	<u>ay</u>

**Sampling:**Time of Sample Collectio /JQ°*Collection Method:* Dedicated pump*Analyses:* VOCs*Analytical Method:*8260  503  Other:**Observations:**Weather/Temperature: C/Q^J £7Sample Description:       d/-Free Product? Yes      **No**      **Y-** Descript.:Sheen? Yes      **No** \* Descript.:Odor? Yes      **No** **X** Descript.:**Comments:**

**ECOR Solutions, Inc.**  
**Byron Barrel & Drum Site**  
**Field Sampling Record Form**

**Site:** Byron Barrel and Drum      **Date:** g-f?-?"?

**Job #:** 01501.002

**Sample ID:** /^\_u.jUn0~rM - 9 /jr^ - z f

**Well** W^K, /j\*jq»'T\*\*i      Time onsite: Time Offsite:

**Samplers:** P-t^A /% Ate^~      ,\_J\_Q      ,&<>

Depth of Well (from top of casing)      3f.Q      Time: 1Q£O

Static water level (from top of casing)      /\$•&?      Time: /?r>9

**Purging Method:**

Dedicated bladder pump, QED SamplePro MP-SP-4C

**Field Tests:**

Time	Flowrate (mL/min) / purge volume (mL)	Temp. °C	ORP mV	pH Std. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
<u>u/f</u>	%<?*#/**;	<b>&gt;i-j</b>	- 3 9	<b>y.te</b>	£>.X	Z61	3*3
<u>I^ZP</u>	<b>I</b>	<b>ii.f</b>	-11	-).(&	0-7-	2.^	310
<u>n*f</u>	<b>/</b>	<b>n+</b>	-J0	7.77	0.?~	<b>a.n</b>	311
<u>/Z3^</u>		<b>ii, 1</b>	-So	1-81	a-X	as*?	3/7
<u>lair</u>		<b>/i,i</b>	-S'l	<b>i-ei</b>	f~~>~	3L.2*~	3/1
<u>lite</u>	<b>1</b>	<b>//J</b>	-Xz>	<b>j.ef</b>	0-X	2.33	3/<f
<u>j i i f</u>	<b>1</b>	<b>H-i</b>	-J7	<b>7,3J</b>	0,Z~	<b>J.J*</b>	3V7

**Sampling:**Time of Sample Collection /ZI/S'Collection Method: Dedicated Analyses: pump X VOCs Analytical Method: 8260 X 503 Other**Observations:**Weather/Temperature: ^A//J S& \* \_\_\_\_\_Sample Description: C^ \_\_\_\_\_Free Product? Yes \_\_\_\_\_ No A Descript.: \_\_\_\_\_Sheen? Yes \_\_\_\_\_ No -A Descript.: \_\_\_\_\_Odor? Yes \_\_\_\_\_ No '^ Descript.: \_\_\_\_\_**Comments:**

**ECOR Solutions, Inc.**  
**Byron Barrel & Drum Site**  
**Field Sampling Record Form**

**Sit©:** Byron Barrel and Drum      **Date:** 3-22-e7

**Job #:** 01501.002

**SampleID:** /H « / - , 3 / - < ? / V ~ <x.t

**Well ID:** fAUJ\Lf      Time onsite: Time Offsite:

**Samplers:** r    /rs\*\*^      W\*    JjSE

Depth of Well (from top of casing)      &r), 9Q      Time: / 33-\*"

Static water level (from top of casing)      7>3&      Time: iasf

**Purging Method:**

Dedicated bladder pump, QED SamplePro MP-SP-4C

**Field Tests:**

Time	Flowrate (mL/min)/ purge volume (mL)	Temp. °C	ORP mV	PH 3rd. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
<u>/Sosf</u>	<u>tyOri/ji'tJ</u>	<b>8~~&gt;</b>	<u>^ ? /</u>	<u>y.31</u>	<u>/. *</u>	<u>y.?&amp;</u>	<b>I</b> <u>96o</u>
<u>/ J' »</u>		<b>gn</b>	<u>' * }</u>	<u>7J3</u>	<u>/ . A</u>	<u># * ?</u>	<u>/S¥°</u>
<u>13 i f</u>		<b>gn</b>	<u>*&amp;*</u>	<u>7 - 3 J "</u>	<u>h*</u>	<u>f.te</u>	<u>/§¥o</u>
<u>}S2o</u>		<b>8.7</b>		<u>, T?</u>	<u>A ^</u>	<u>i.t*</u>	<u>fB3°</u>
<u>111?</u>		<b>\$&gt;e</b>	<u>-£1</u>	<u>7.W</u>	<u>A A</u>	<u>H.€*</u>	<u>J8?°</u>
<u>)23&gt;c</u>	<u>J</u>	<b>\$&lt;s</b>	<u>-21</u>	<u>•7.J8</u>	<u>(&lt;K</u>	<u>if.4*</u>	<u>/A **</u>

**Sampling:**

Time of Sample Collectio /3S<sup>a</sup>  
. Collection Method: Analyses: Analytical Method:  
 Dedicated pump X VOCs 8260\_X\_ 503 Other

**Observations:**

Weather/Temperature: j?Aiv J~6 \*

Sample Description: e / f

Free Product? Yes No -^ Descript.:

Sheen? Yes No \_\_\_\_\_ Descript.:

Odor? Yes No ^~^ Descript.:

**Comments:**

**ECOR Solutions, Inc.**  
**Byron Barrel & Drum Site**  
**Pumping Well Field Chemistry Parameters**

Parameter Units	Time	Temp. °C	ORP mV	pH Std. Units	TDS	DO mg/L	Spec. Cond. mS/cm
PW-1/GW.2'	13*0	1.8		y.te	0*>	i. yr	I <sup>L</sup> /
PW-2/GW.2I	I3i*	i.n	-/y	I."	oS	i,n	7«
PW-3/GW <2/	I2&	<j<7	-2	I.tY	0,1	1.SX	S'8

**Note:** Flow through cell was calibrated for all chemistry parameters prior to gauging.

ECOR Solutions, Inc  
 Byron Barrels Drum Site  
 Groundwater Elevations

Operator: PAUL Little  
 Date: 3-22-07

Pumping Wells	TOC		GW	
	DTW	Elevation	ID	WC, ft.
PW-1	14.50	642.82	628.32	.
PW-2	4.19	641.34	637.15	.
PW-3	5.45	641.11	635.66	.

Monitoring Wells

MW-1	4.19	639.63	635.44	11.65	7.46
MW-2	10.36	646.36	636.00	15.10	4.74
MW-4	3.24	638.56	635.32	11.50	8.26
MW-10B	8.44	644.44	636.00	20.35	11.91
MW-21	7.38	642.52	635.14	27.90	20.52
Residential	15.09	650.78	635.69	35.17	20.00

Piezometers

PZ-1	7.12	643.11	635.99	27.28	20.16
PZ-2	6.64	642.39	635.75	27.29	20.65

"Took ft \*!\*\* Ar JJ.jAiT ft\*^ fie/n\*\*\*iAI

**APPENDIX B**  
**Data Validation Report**

**Project**      Byron Barrel and Drum Site  
**Laboratory:** Severn Trent Laboratories  
**Sample Delivery Group:** A07-2683/A07-2746  
**Fraction:**      Organic  
**Matrix:**          Aqueous  
**Report Date:** 6/18/2007

This analytical quality assurance report is based upon a review of analytical data generated for groundwater samples. The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1. All analyses were performed by Severn Trent Laboratories.

The samples were analyzed for volatile organic compounds and total suspended solids. The sample analyses were performed in accordance with the procedures outlined in the method referenced at the end of this report. The data deliverables provided by the laboratory were New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category B format.

All sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. Results have been validated or qualified according to Region II "Validating Volatile Organic Compounds by SW-846 Method 8260B", SOP HVV-24, Revision 1, June 1999. The parameters presented on the following page were evaluated.

X	▷	Data Completeness
X	i	Chain of Custody Documentation
X	«i	Holding Times
X	»»	Instrument Performance
X	i▷	Initial and Continuing Calibrations
X	»»	Laboratory and Field Blank Analysis Results
X	i»»	Surrogate Compound Recoveries
X	«»»	Matrix Spike/Matrix Spike Duplicate Recoveries and Reproducibility
X	•	Field Duplicate Analysis Results
X	•	Laboratory Control Sample Results
X	•	Internal Standard Performance
X	*	Qualitative Identification
X	«▷	Quantitation/Reporting Limits

X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By

Shawne^^ Rodgers  
President

tjoktr\*  
Date

*1.0 DATA COMPLETENESS*

The data package was complete.

*2.0 CHAIN OF CUSTODY DOCUMENTATION*

The chain of custody documentation was complete.

*3.0 HOLDING TIMES*

The holding times were met for all analyses.

*4.0 INSTRUMENT PERFORMANCE*

All criteria were met. No qualifiers were applied.

*5.0 INITIAL AND CONTINUING CALIBRATIONS*

All criteria were met. No qualifiers were applied.

*6.0 LABORATORY AND FIELD BLANK ANALYSIS RESULTS*

The positive methylene chloride result reported for sample INF-7S/GW is qualitatively invalid due to the presence of this compound in associated laboratory method blank. USEPA protocol requires positive results for common contaminants, such as methylene chloride, that are less than or equal to ten times the associated blank contamination level, to be considered qualitatively invalid. The result has been replaced by the quantitation limit.

*7.0*

*SURROGATE COMPOUNDS*

All criteria were met. No qualifiers were applied.

*8.0*

*MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND  
REPRODUCIBILITY*

All criteria were met. No qualifiers were applied.

*9.0*

*FIELD DUPLICATE RESULTS*

Duplicate samples MW-1-9/GW-21 and DUP-9/GW21 were submitted to the laboratory to evaluate sampling and analytical precision for those organic compounds determined to be present. Results for these duplicate samples are presented in Table 2. Precision is evaluated by calculating the relative percent difference (%RPD) between duplicate pair results. There are no USEPA-established acceptance criteria for field duplicate samples. EDQ uses an internal acceptance criteria of twenty percent for volatile detected compounds to evaluate field duplicate samples.

*10.0*

*LABORATORY CONTROL SAMPLE RESULTS*

All criteria were met. No qualifiers were applied.

*11.0*

*INTERNAL STANDARD PERFORMANCE*

All criteria were met. No qualifiers were applied.

*12.0*

*QUALITATIVE IDENTIFICATION*

All criteria were met. No qualifiers were applied.

**13.0****QUANTIFICATION/REPORTING LIMITS**

The following samples were re-analyzed at dilutions for volatile organic compounds. The reanalyses were performed because the responses for volatile compounds exceeded the linear range of the GC/MS instrument for the initial undiluted analyses. The affected results were reported from the dilution analyses. All other results have been reported from the initial analyses.

Sample	Dilution Factor	Compound reported from Dilution
EFF-44/GW	4.0	1,1,1-Trichloroethane
PW-2/GW-21	4.0	1,1,1-Trichloroethane
PW-3/GW-21	4.0	1,1,1-Trichloroethane

The samples presented below were analyzed at dilutions. The dilution analyses were performed because of the suspected presence of high levels of target compounds and/or interferences. Quantitation limits are elevated by the dilution factor for these samples for target compounds that were not detected. The elevated quantitation limits should be noted when assessing the data for these samples-

<u>Sample</u>	Dilution Factor
EFF^4/GW	2.0
MW-1-9/GW-21	2.0
MW-21-9/GW-21	4.0
PW-1/GW-21	2.0
PW-2/GW-21	2.0

As required by USEPA protocol all compounds, which were qualitatively identified at concentrations below their respective quantitation limits (QLs), have been marked with "J" qualifiers to indicate that they are quantitative estimates.

*METHODOLOGY REFERENCES*

Analysis	Reference
Volatile Organic Compounds	Method 8260B, "Test Methods for Evaluating Solid Wastes", SW-846, third edition. Promulgated Updates u, HA, and HI, June 1997
Total Suspended Solids	Method 160.2, "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983, and revisions

**Table 1 Samples For Data Validation Review**  
**Byron Barrel and Drum Site**  
**Groundwater Samples Collected March 2007**  
**Severn Trent Laboratories Sample Delivery Group A07-2683**

SAMPLE I.D.	LABORATOR	DATE COLLECTED	MATRIX	ANALYSES PERFORMED	
				I.D.	VOC
EFF^4/GW	A7268302	3/21/2007	Groundwater		X
INF-7S/GW	A7268301	3/21/2007	Groundwater		X
Trip Blank	A723B303	3/21/2007	Trip Blank		X

VOC: Volatile Organic Compounds

**Table 1 Samples For Data Validation Review**  
**Byron Barrel and Drum Site**  
**Groundwater Samples Collected March 2007**  
**Severn Trent Laboratories Sample Delivery Group A07-2746**

SAMPLE I.D.	ABORATOR I.D.	DATE COLLECTED	MATRTX	ANALYSES PERFORMED	
				VOC	TSS
DUP-9/GW-21	A7274603	3/22/2007	Groundwater	X	
MW-1-9/GW-21	A7274601	3/22/2007	Groundwater	X	
MW-10B-9/GW-21	A7274604	3/22/2007	Groundwater	X	
MW-21-9/GW-21	A7274605	3/22/2007	Groundwater	X	
MW-4-9/GW-21	A7274602	3/22/2007	Groundwater	X	
MW-RESIDENTIAL-9/GW2	A7274606	3/22/2007	Groundwater	X	
PW-1/GW-21	A7274607	3/22/2007	Groundwater	X	
PW-2/GW-21	A7274608	3/22/2007	Groundwater	X	
PW-3/GW-21	A7274609	3/22/2007	Groundwater	X	
TRIP BLANK	A7274610.	3/22/2007	Trip Blank	X	

VOC: Volatile Organic Compounds

TSS: Total Suspended Solids

Table 2 Field Duplicate Sample Results for Organic Analyses  
 DupUcate Samples MW-1-9/GW-21 and DUP-9/GW-21

	MW-1-9/GW-21	DUP-9/GW-21	RPD	Comments
		<math>\text{Mg/L}</math>		
1,1-Dichloroethane	2	<b>2</b>	<b>0</b>	
1,1-Dichloroethene	4	<b>3</b>	<b>29</b>	
Toluene	1	<b>ND</b>	<b>NC</b>	
1,14-Trichloroethane	100	<b>86</b>	15	
Trichloroethene	2	<b>2</b>	0	

# STL

## **DATA QUALIFIER PAGE**

*These definitions are provided in the event the data in this report requires the use of one or more of the qualifiers. Not all qualifiers defined below are necessarily used in the accompanying data package.*

### ORGANIC DATA QUALIFIERS

- ND or U Indicates compound was analyzed for, but not detected.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank, as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
- P This flag is used for CLP methodology only. For Pesticide/Aroclor target analytes, when a difference for detected concentrations between the two GC columns is greater than 25%, the lower of the two values is reported on the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product
- 1 Indicates coelution.
- " Indicates analysis is not within the quality control limits.

### INORGANIC DATA QUALIFIERS

- ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.
- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- E Indicates a value estimated or not reported due to the presence of interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- G Indicates a value greater than or equal to the project reporting limit but less than the laboratory quantitation limit
- \* Indicates the spike or duplicate analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

BOOR SCSLOTTCNS  
 BOOR SQLUITCNS - BYRCN BARREL & DRUM SHEET  
 UNISYS - METHOD 8260 - 8 COMPOUNDS  
 ANALYSIS DATA SHEET

Client No. \_\_\_\_\_

EFF-44/GW

Lab Name: SIL Buffalo Contract: \_\_\_\_\_Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SD3 No.: \_\_\_\_\_Matrix: (soil/water) WATER Lab Sample ID: A7268302Sample wt/vol: 5.00 (g/ml) ML lab File ID: N5957.RRLevel: (low/med) LW Date Samp/Recv: 03/21/2007 03/22/2007% Moisture: not dec. \_\_\_\_\_ Heated Purge: N Date Analyzed: 04/04/2007GC Column: ZB-624 ID: 0.25 (rem) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/lfcf)	UG/L	Q
75-34-3	1,1-Dichloroethane	5.0	U	
75-35-4	1,1-Dichloroethylene	5.0	U	
156-59-2	cis-1^-Dichloroethene	5.0	U	
75-09-2	Methylene chloride	5.0	U	
71-55-6	1,1,1-Trichloroethane	5.0	U	
79-01-6	Trichloroethylene	5.0	U	
108-88-3	Toluene	5.0	U	
75-01-4	Vinyl chloride	5.0	U	

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ECDR SOLUTIONS  
ECER. SOLUTIONS - BYRON BARREL & DRDM SITE  
UNISYS - MBHTD 8260 - 8 COMPOUNDS  
ANALYSIS DATA SHEET

Client No.

TNF-7S/GW

Lab Name: STL Buffalo

Contract:

Lab Code: RBCNY Case No.: \_\_\_\_\_ SAS No.:

SDGNb.:

Matrix: (soil/water) WATERLab Sample ID: A7268301Sample wt/vol: 5.00 (g/ml) MLLab File ID: N5958.RRLevel: (low/msd) LOWDate Samp/Recv: 03/21/2007 03/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 04/04/2007GC Column: ZB-624 ID: 0.25 (mm)Dilution Factor: 2.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
75-34-3	1,1-Dichloroethane	10 a	6.2	J
75-35-4	1,1-Dichloroethene		1.5	J
156-59-2	cis-1,2-Dichloroethene		10	U
75-09-2	Methylene chloride		-2if1	ft
71-55-6	1,1,1-Trichloroethane		10	U
79-01-6	Trichloroethene		10	U
108-88-3	Toluene		10	U
75-01-4	Vinyl chloride		10	U

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\* Report for OYYV AALAK&

SMK  
6/16/2007

BOOR SOLUTIONS  
ECCR SCOITICNH - BYRCN BARREL & DRLM SITE  
UNISYS - MEIB3D 8260 - 8 COMPOUNDS  
ANALYSIS DATA SHEET

Client No. .

INF-7S/GW DL

Lab Name: SIX, Buffalo

Contract:

Lab Cede: RBCNY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_

SDGNb.: \_\_\_\_\_

Matrix: (soil/water) WATERLab Sarrple ID: A7268301DLSarrple wt/vol: 5.00 (g/mL.) MLLab File ID: N5982.RRLevel: (low/med) LOWDate Sarnp/Recv: 03/21/2007 03/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 04/04/2007GC Column: ZB-624 ID: 0.25 (mm)Dilution Factor: 4.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	COSICENTRATION UNITS:		
		(UQ/L or uq/Ka)	UG/L	Q
75-34-3	1,1-Dichloroethane		8.1	DJ
75-35-4	1,1-Dichlorcethene		20	U
156-59-2	cis-1,2-Dichloroethene		20	U
75-09-2	Methylene chloride		4.1	BDJ
71-55-6	1,1,1-Trichloroethane		230	" ST'jft
79-01-6	Trichloroethene		20	U
108-88-3	Toluene		3.3	DJ
75-01-4	Vinyl chloride		20	U

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*SMK 6/16/07*

ECOR. SOLUTIONS  
 ECOR SOLUTIONS - BYRON BARREL & DRUM SITE  
 UNISYS - METHOD 8260 - 8 OCMPOUNDS  
 ANALYSIS DATA SHEET

Client No.

## TRIP BLANK

Lab Name: STL Buffalo Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS Mb.: \_\_\_\_\_ SD3 No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: A7268303

Sample wt/vol: 5.00 (g/triL) ML Lab File ID: N5956.RR

Level: (low/msd) LCW Date Samp/Recv: 03/21/2007 03/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N Date Analyzed: 04/04/2007

GC Column: ZB-624 ID: 0.25 (ram) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (tL)

## CONCENTRATION UNITS:

CAS NO.	CCMPC03D	(ug/L or ug/Kg)	UG/L	Q
75-34-3	1,1-Dichloroethane	5.0	U	
75-35-4	1,1-Dichloroethene	5.0	U	
156-59-2	cis-1,2-Dichloroethene	5.0	U	
75-09-2	Methylene chloride	5.0	U	
71-55-6	1,1,1-Trichloroethane	5.0	U	
79-01-6	Trichloroethene	5.0	u	
108-88-3	Toluene	5.0	u	
75-01-4	Vinyl chloride	5.0	u	



SMH  
6/16/2007

ECOR SOLUTIONS  
 ECOR SOLUTICNS - BYRON BARREL & DRUM SITE  
 AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
 ANALYSIS DATA SHEET

Client No.

DUP-9/GW-21

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY

Case No.:

SAS No.:

SDG No.:

Matrix: (soil/water) MATERLab Sample ID: A7274603Sample wt/vol: 5.00 (g/ml) ML

Lab File ID: G2010.RR

Level: (lcw/ned) LOW

Date Samp/Recv: 03/22/2007 03/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 03/28/2007GC Column: ZB-624 ID: 0.18 (nm)

Dilution Factor: 1.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>U3/L</u>
---------	----------	-----------------	-------------

75-34-3	1,1-Dichloroethane	2	J
75-35-4	1,1-Dichloroethene	3	J
75-09-2	Methylene chloride	5	U
108-88-3	Toluene	5	u
71-55-6	1,1,1-Trichloroethane	86	
79-01-6	Trichloroethene	2	J
75-01-4	Vinyl chloride	5	u
71-43-2	Benzene	5	u
1330-20-7	Total Xylenes	15	u
108-90-7	Chlorobenzene	5	u
79-00-5	1,1,2-Trichloroethane	5	u
107-06-2	1,2-Dichloroethane	5	u
127-18-4	Tetrachloroethene	5	u
67-66-3	Chloroform	5	u
75-27-4	Bronrdic^oronietharje	5	u
124-48-1	Dibro^ochlorcme thane	5	u
78-93-3	2-Butanone	10	u
56-23-5	Carbon Tetrachloride	5	u
95-50-1	1,2-Dichlorobenzene	5	u
106-46-7	1,4-Dichlorobenzene	5	u

ECOR SOLUTIONS  
ECOR SOLUTIONS - EICRCN BARREL & DRUM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
ANALYSIS DATA SHEET

Client No.

MW-1-9/GW-21

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.:

SAS No.:

SDGNb.:

Matrix: (soil/water) WATERLab Sample ID: A7274601Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: G1986.RR

Level: (low/msd) LOWDate Sanp/Recv: 03/22/2007 03/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 03/28/2007GC Column: ZB-624 ID: 0.18 (fm)Dilution Factor: 2.00

Soil Extract Volume; (uL)

Soil Aliquot Volume: (uL)

## CONCENTRATION UNITS:

(ug/L or ug/Kg)

UG/L

Q

75-34-3	1,1-Dichloroetbane	2	J
75-35-4	1,1-Dichloroetbene	4	J
75-09-2	Methylene chloride	10	u
108-88-3	Toluene	1	J
71-55-6	1,1,1-Trichloroethaiie	100	
79-01-6	Trichloroethene	2	J
75-01-4	Vinyl chloride	10	u
71-43-2	Benzene	10	u
1330-20-7	Total Xylenes	30	u
108-90-7	Chloroberizene	10	u
79-00-5	1A,2-Trichloroethane	10	u
107-06-2	1,2-Dichloroethane	10	u
127-18-4	Tetrachloroethene	10	u
67-66-3	Chloroform	10	u
75-27-4	Brairxh\chlorc*rethane	10	u
124-48-1	Dibrcmochlorarethane	10	u
78-93-3	2-Butanane	20	u
56-21-5	Carbon TptrarHlaridp	10	u
95-50-1	1,2-Dichlorobenzene	10	u
106-46-7	1,4-Dic^orobenzene	10	u

ECOR SOLUTIONS  
ECOR SOUTIOSIS - BYRON BARREL & IMJM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
ANALYSIS DATA SHEET

Client No.

MW-10B-9/GW-21

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.:

SAS No.:

SDG No.:

Matrix: (soil/water) WATERlab Sample ID: A7274604Sample wt/vol: 5.00 (g/mL) ML.Lab File ID: G1991.RR

Level: (low/med) LOW

Date Samp/Recv: 03/22/2007 03/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 03/28/2007GC Column: ZB-624 ID: 0.18 (ram)Dilution Factor: 1.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

## CONCENTRATION UNITS:

(ug/L or vg/Yg) XJ3/L

CAS NO.	COMPOUND		
75-34-3	-1,1-Dichloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
75-09-2	Methylene chloride	5	u
108-88-3	Toluene	5	u
71-55-6	1,1,1-Trichloroethane	6	
79-01-6	Trichloroethene	5	u
75-01-4	Vinyl chloride	5	u
71-43-2	Benzene	5	u
1330-20-7	Total Xylenes	15	u
108-90-7	Chlorobenzene	5	u
79-00-5	1,1,2-Trichloroethane	5	u
107-06-2	1,2-Dichloroethane	5	u
127-18-4	Tetrachloroethene	5	u
67-66-3	Chloroform	5	u
75-27-4	Brcm^chcnloromethane	5	u
124-48-1	Dibrcnicchloromethane	5	u
78-93-3	2-Butanone	10	u
56-23-5	Carbon Tetrachloride	5	u
95-50-1	1,2-Dichlorobenzene	5	u
106-46-7	1,4-Dichlorobenzene	5	u

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ECOR SOLUTIONS  
ECOR SOLUTIONS - BYRON BARREL & DRUM SITE  
AQUBXJS ASP 2000/8260 - SELECT LIST-TABLE 5  
ANALYSIS DATA SHEET

Client No.

MW-21-9/GW-21

Lab Name: STL Buffalo

Contract:

Lab Code: RB3JY Case No.:

SAS No.:

SDG No.:

Matrix: (soil/water) WATERLab Sample ID: A7274605Sample wt/vol: 5.00 (g/mL) MLLab File ID: G1992.BR

Level: (low/med) LCW

Date Samp/Recv: 03/22/2007 03/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 03/28/2007GC Column: ZB-624 ID: Q.18 (rim)Dilution Factor: 4.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

## CONCENTRATION UNITS:

(ug/L or ug/Kg) U3/L

75-34-3	1,1-Dichloroethane	20	U
75-35-4	1,1-Dichloroethene	20	u
75-09-2	Methylene chloride	20	u
108-88-3	Toluene	20	u
71-55-6	1,1,1 Trichloroethane	20	u
79-01-6	Trichloroethene	20	u
75-01-4	Vinyl chloride	20	u
71-43-2	Benzene	20	u
1330-20-7	Total Xylenes	60	u
108-90-7	Chlorobenzene	20	u
79-00-5	1A/2-Trichloroethane	20	u
107-06-2	1,2-Dichloroethane	20	u
127-18-4	Tetrachloroethene	20	u
67-66-3	' Chloroform	20	u
75-27-4	Bronodicihlaxmethane	20	u
124-48-1	DzUorornochlorcmethane	20	u
78-93-3	2-Butanone	40	u
56-23-5	Carbon Tetrachloride	20	u
95-50-1	1,2-mchlorobenzene	20	u
106-46-7	1,4-Dichlorobenzene	20	u

**ECOR SOUNRCWS**  
**ECOR SOLUTIONS - BYPQN BARREL & DRUM SI1E**  
**A3JEOUS ASP 2000/8260 - SELECT LIST-TABLE 5**  
**ANALYSIS DATA SHEET**

Client No.

MW-4-9/GW-21

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.:

SAS No.:

SD3 No.:

Matrix: (soil/water) WATERLab Sample ID: A7274602Sample wt/vol: 5.00 (g/mL) MLLab File ID: G1987.RRLevel: (low/med) LOWDate Samp/Recv: 03/22/2007 03/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 03/28/2007GC Column: ZB-624 ID: 0.18 (im)Dilution Factor: 1.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

## CONCENTRATION USHTS :

CAS NO.	COMPOUND	(ug/L or ug/Kg)	U3/L	Q
75-34-3	1,1-Dichloroethane	5	u	
75-35-4	1,1-Dichloroethene	5	u	
75-09-2	Methylene chloride	5	u	
108-88-3	Toluene	5	u	
71-55-6	1,1,1-Trichloroethane	10		
79-01-6	Trichloroethene	1	J	
75-01-4	Vinyl chloride	5	u	
71-43-2	Benzene	5	u	
1330-20-7	Total Xylenes	15	u	
108-90-7	Chlorobenzene	5	u	
79-00-5	1A,2~Tricbloroethane	5	u	
107-06-2	1,2-Dichloroethane	5	u	
127-18-4	Tetrachloroethene	5	u	
67-66-3	Chloroform	5	u	
75-27-4	BronDdicnloraTethane	5	u	
124-48-1	DibroTnochloronethane	5	u	
78-93-3	2-Butanone	10	u	
56-23-5	Carbon Tetrachloride	5	u	
95-50-1	1,2-DidxLorobenzene	5	u	
106-46-7	1,4-Dichlorobenzene	5	u	

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6/2007*

ECOR SOLUTIONS  
ECOR SOLOTICKS - BYRON BARREL & DRUM SITE  
AQUEOUS ASP 2000/8260 - SELBCT LIST-TABLE 5  
ANALYSIS DATA SHEET

Client No.

MW-RESIDENTIAL-9/GW2

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.:

SAS No.:

SDG No.:

Matrix: (soil/water) WATERLab Sample ID: A7274606Sample wt/vol: 5.00 (g/mL) MLLab File ID: G1993.RRLevel: (low/rasd) LOWDate Samp/Recv: 03/22/2007 03/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 03/28/2007GC Column: ZB-624 ID: 0.18 (mm)Dilution Factor: 1.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:  
(ug/L or ug/Kg)      UG/L

CAS NO.	COMPOUND	5	U
75-34-3	1,1-Dichloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
75-09-2	Methylene chloride	5	u
108-88-3	Toluene	5	u
71-55-6	1,1,1-Trichloroethane	5	u
79-01-6	Trichloroethene	5	u
75-01-4	Vinyl chloride	5	u
71-43-2	Benzene	5	u
1330-20-7	Total Xylenes	15	u
108-90-7	Chlorobenzene	5	u
79-00-5	1,1,2-Trichloroethane	5	u
107-06-2	1,2-Dichloroethane	5	U
127-18-4	Tetrachloroethene	5	u
67-66-3	Chloroform	5	u
75-27-4	Bxjuu<JeMpi.uufc:LjdJe	5	u
124-48-1	Dibromoethane	5	u
78-93-3	2-Butanone	10	u
56-23-5	Carbon Tetrachloride	5	u
95-50-1	1,2-Dichlorobenzene	5	u
106-46-7	1,4-Dichlorobenzene	5	u

ECOR SOLUTIONS  
BOOR SOLUTIONS - BYRON BARREL & DRUM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST - 8 CMPDS  
ANALYSIS DATA SHEET

Client No. \_\_\_\_\_

PW-1/GW-21

Lab Name: STL Buffalo

Contract: \_\_\_\_\_

Lab Code: RECNY CaseNo.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_Matrix: (soil/water) WATER Lab Sample ID: A7274607Sample wt/vol: 5.00 (g/ml) ML Lab File ID: G2019.RRLevel: (low/ned) LpW Date Samp/Recv: 03/22/2007 03/22/2007% Moisture: not dec. \_\_\_\_\_ Heated Purge-. N Date Analyzed: 03/29/2007GC Column: 2B-624 ID: 0.18 (nm) Dilution Factor: 2.00

Soil Extract Volume: CuL Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	U3/L	Q
75-34-3	1,1-Dichloroethane	6	J	
75-35-4	1,1-Dichloroethene	2	J	
156-59-2	cis-1^-Dichloroethene	10	u	
75-09-2	Methylene chloride	10	u	
108-88-3	Toluene	10	u	
71-55-6-----	1,1A-Trichloroethane	170		
79-01-6	Trichloroethene	1	J	
75-01-4	Vinyl chloride	10	u	

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ECOR SOLUTIONS - BYRON BARREL & DKOM SITE  
 AQUEOUS ASP 2000/8260 - SELECT LIST - 8 CMPDS  
 ANALYSIS DATA SHEET

Client No.

PW-2/GW-21

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No. :

SAS No.:

SD3 No.:

Matrix: (soil/water) WATERLab Sample ID: A7274608Sample wt/vol: 5.00 Cg/mL MLLab File ID: G1995.RRLevel: (low/med) LOWDate Samp/Recv: 03/22/2007 03/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 03/28/2007GC Column: 2B-624 ID: 0.18 {mm}Dilution Factor: 2.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	• (uA/L or uCT/Kar)	UG/L	Q
75-34-3	1,1-Dichloroethane	8	J	
75-35-4	1,1-Dichloroethene	4	J	
156-59-2	cis-1,2-Dichloroethene	10	u	
75-09-2	Methylene chloride	10	u	
108-88-3	Toluene	10	u	
71-55-6	1,1,1-Trichloroethane	-220		
79-01-6	Trichloroethene	1	J	
75-01-4	Vinyl chloride	10	u	

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*SMR 6/2007*

EOOR SOLUTIONS  
 ECCR SOLUTIONS - BYJOTF BARREL & DRUM SITE  
 AQUEOUS ASP 2000/8260 - SELECT LIST - 8 CMPDS  
 ANALYSIS DATA SHEET

Client No.

FW-2/GW-21 DL

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_

SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATERLab Sample ID: A7274608DLSample wt/vol: 5.00 (g/mL) MLLab File ID: G2Q17.RR

Level: (low/med) LCW

Date Samp/Recv: 03/22/2007 Q3/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 03/29/2007GC Column: ZB-624 ID: 0.18 {im}Dilution Factor: 4.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
75-34-3	1,1-Dichloroethane	5	DJ	
75-35-4	1,1-Dichloroethene	20	U	
156-59-2	cis-1,2-Dichloroethene	20	U	
75-09-2	Methylene chloride	20	U	
108-88-3	Toluene			
71-55-6	1,1,1-Trichloroethane	<b>90</b>	<b>rffr</b>	
79-01-6	Trichloroethene	20	U	
75-01-4	Vinyl chloride	20	U	

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ECQR SOLUTIONS  
ECCR SOLUTIONS - BYRCN BARREL fc DRUM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST - 8 CMPDS  
ANALYSIS DATA SHEET

Client No.

PW-3/GW-21

Lab Name: STL Buffalo Contract:Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_Matrix: (soil/water) WATER Lab Sample ID: A72746Q9Sample wt/vol: 5.00 (g/ml) ML Lab File ID: G1996.RRLevel: (low/med) LOW Date Samp/Recv: 03/22/2007 03/22/2007% Moisture: not dec. \_\_\_\_\_ Heated Purge: N Date Analyzed: 03/28/2007GC Coluitn: ZB-624 3D: 0.1B (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CCNCEWIRAXICN LHSHTS: (up/L or uet/Kcr)	UG/L	Q
75-34-3	1,1-Dichloroethane		7	
75-35-4	1,1-Dichloroethene		4	J
156-59-2	cis-1,2-Dichloroethene		5	U
75-09-2	Methylene chloride		5	u
108-88-3	Toluene		5	u
71-55-6	1,1,1-Trichloroethane	310		
79-01-6	Trichloroethene		1	J
75-01-4	Vinyl chloride		5	u

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*SAM  
6/19/2007*

ECOR SOLUTIONS  
ECOR SOLUTIONS - BYRON BARREL & DRUM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST - 8 CMPDS  
ANALYSIS DATA SHEET

Client No.

PW-3/GW-21 DL

Lab Name: STL Buffalo Contract:

lab Code: RECNY Case No.: SAS No.: SDG No.:

Matrix: (soil/water) MATER Lab Sample ID: A7274609DL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: G2018.RR

Level: (lcw/ned) LOW Date Samp/Recv: 03/22/2007 03/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N Date Analyzed: 03/29/2007

GC Column: ZB-624 TO: 0.18 (nm) Dilution Factor: 4.00

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	tJG/L	Q
75-34-3	1,1-Dichlorcethane	7	DJ	
75-35-4	1,1-Dichlorcethene	3	OJ	
156-59-2	cis-1,2-Dichlorcethene	20	U	
75-09-2	Methylene chloride	2	DJ	
108-88-3	Toluene	20		
71-55-6	1,1,1-Trichloroethane	210		
79-01-6	Trichloroethene	20	U	
75-01-4	Vinyl chloride	20	U	

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*SMH  
6/18/2007*

ECCR SOLUTIONS  
 ECOR SOLUTIONS - BYRON BARREL & DRUM SITE  
 AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
 ANALYSIS DATA SHEET

Client No.

Trip Blank

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.:

SAS No.:

SDG No.:

Matrix: (soil/water) WATERLab Sample ID: A7274610Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: G1997.RR

Level: (low/med) LOWDate Samp/Recv: 03/22/2007 03/22/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 03/26/2007GC Column: ZB-624 ID: 0.18 (mm)Dilution Factor: 1.00

Soil Extract Volume: &lt;UL)

Soil Aliquot Volume: CuL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	XIGL	Q
75-34-3	1,1-Dichloroethane	5	U	
75-35-4	1,1-Dichloroethene	5	U	
75-09-2	Methylene chloride	5	u	
108-88-3	Toluene	5	u	
71-55-6	1,1,1-Trichloroethane	5	u	
79-01-6	Trichloroethene	5	u	
75-01-4	Vinyl chloride	5	u	
71-43-2	Benzene	5	u	
1330-20-7	Total Xylenes	15	u	
108-90-7	Chlorobenzene	5	u	
79-00-5	1,1,2-Trichloroethane	5	u	
107-06-2	1,2-Dichloroethane	5	u	
127-18-4	Tetrachloroethene	5	u	
67-66-3	Chloroform	5	u	
75-27-4	Bromodichlorornethane	5	u	
124-48-1	Dibroniochlororethane	5	u	
78-93-3	2-Butanone	10	u	
56-23-5	Carbon Tetrachloride	5	u	
95-50-1	1,2-Dichlorobenzene	5	u	
106-46-7	1,4-Dichlorobenzene	5	u	

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Ecor Solutions  
 Ecor Solutions - Byron Barrel & Drum Site  
 Wet Crjemistry Analysis

Client Sample No.

FW-1/GW-21

lab Name: STL Buffalo

Contract:

lab Code: RECNY

Case No. • \_\_\_\_\_ SAS No. :

SDG No. :

Matrix (soil/water): WATERLab Sample ID: A7274607

% Solids: 0.0

• Date Sartp/Recv: 03/22/2007 03/22/2007

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Total Suspended Solids	M3/L	4.0	U			160.2	03/26/2007

Garments:

wcm i - wc

27/260

Ecor Solutions  
Ecor Solutions - Byron Barrel & Drum Site  
Wet Chemistry Analysis

Client Sample No.

PW-2/GW-21

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.

SAS No.:

SDG NO.:

Matrix (aoil/vater): WATER

Lab Sample ID: A7274608

% Solids: 0.0

Date Samp/Recv: 03/22/2007 03/22/2007

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Total Suspended Solids	NE/L	4.0	D			160.2	03/26/2007

Comments:

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28/260

Ecor Solutions  
Ecor Solutions - Byron Barrel & Drum Site  
Wet Chemistry Analysis

Client Sample No.

PW-3/GW-21

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY

Case No.:

SAS No.:

SDG No.:

Matrix (soil/water): WATER

Lab Sample ID: A7274609

% Solids:

0.0

Date Samp/Recv: 03/22/2007 03/22/2007

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Total Suspended Solids	M3/L	4.0	U			160.2	03/26/2007

Comments:

*SMH  
6/16/07*

Environmental  
Construction  
Operations &  
Remediation

OCT 17 2007

5 October 2007

ECOR Solutions, Inc.  
1075 Andrew Drive, Suite 1  
West Chester, PA 19380  
Main (610)431-8731  
Phone (610) 840-9200  
Fax (610)431-2852



Mr. George Jacob  
Remedial Project Manager  
Central New York Remediation Section  
Emergency & Remedial Response Division  
USEPA Region 2  
290 Broadway Avenue, 20th Floor  
New York, New York 10007-1866

Re: Second Quarter Report 2007  
Byron Barrel & Drum Site - Byron, New York

Dear Mr. Jacob,

Enclosed is the report for remedial activities at the Byron Barrel & Drum Area 2 Site for the Second Quarter of 2007. This report is submitted on behalf of the Potentially Responsible Parties, who are jointly fulfilling the requirements of the Administrative Order.

If you have any questions regarding this report, or any other questions regarding activities at the Site, please contact me at (484) 887-7510, extension 207.

Sincerely,  
ECOR Solutions, Inc.

A handwritten signature in black ink, appearing to read "Matthew Lapp".

Matthew Lapp  
Project Engineer

cc: Mr. John Grathwol - NYSDEC  
Mr. Chris Rockwell - Garlock Sealing Technologies  
Mr. Terry Etter, P.E. - Unisys Corporation  
Mr. R. William Stephens - Stephens & Stephens, LLP (General Railway Signal)  
Keith Rapp - ECOR Solutions  
Project File - ECOR Solutions

***FINAL***  
***BYRON BARREL & DRUM SITE***  
**QUARTERLY REPORT**  
**SECOND QUARTER 2007**

Byron Barrel & Drum Site  
Area 2  
Byron, New York

28 September 2007

Prepared for;  
BYRON BARREL & DRUM PRP GROUP

Prepared by:

ECOR Solutions, Inc.  
1075 Andrew Drive, Suite I  
West Chester, PA 19380



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- A. Field Notes
- B. Data Validation Report

## **1.0 INTRODUCTION**

This quarterly report of remedial activities at the Byron Barrel & Drum, Area 2 Site (Site) presents data obtained through the second quarter 2007. A Site map is provided as **Figure 1**. The purpose of this report is to summarize and document ongoing remedial and monitoring activities at the Site conducted during the second calendar quarter of 2007. A brief description of the background of the Site is included, as well as, information regarding remedial activities and monitoring activities planned for the next quarter.

## **1.1 SITE BACKGROUND**

The Byron Barrel and Drum Area 2 Site is located at 6065 Transit Road, in Byron Township, Genesee County, NY. The Site is set back approximately 1,000 feet from the east side of Transit Road. In 1982, two drum disposal locations were discovered at the Site. New York State Department of Environmental Conservation's (NYSDEC) subsequent investigation led to the Site's inclusion on the Superfund National Priorities List (April 1984).

A remedial investigation and feasibility study (RI/FS) was conducted, which identified three areas of concern at the Site. Based on the findings of the RI, it was concluded that further action in two of the areas, Area 1 and Area 3, was not warranted. However, the RI detected volatile organic compounds (VOCs); including trichloroethene (TCE) and 1,1,1-trichloroethane (TCA) in groundwater samples collected from locations in Area 2.

The remedial activities discussed in this report include only activities for Area 2. The selected remedy for Area 2 was in-situ soil flushing and groundwater pumping, treatment, and discharge. The Remedial Action construction was performed during the summer of 2001. The implementation of the Remedial Design included excavation and characterization of potentially impacted soil, and installation of additional two groundwater pumping wells (PWs) to supplement the one previously installed (PW-1), a ground water treatment system, and an infiltration gallery.

## **1.2 CHRONOLOGY OF EVENTS**

The chronology of events regarding the investigation and remediation of the Site are summarized below:

<b>Event or Document</b>	<b>Date</b>	<b>Notes</b>
Record of Decision (ROD)	Sept. 29, 1989	EPA/ROD/R02-89-089
Consent Decree	January 5, 1995	89-CV-748A Unisys Corp. and Garlock, Inc., settling defendants
Draft Explanation of Significant Differences	February, 1999	
Pre-Remedial Design Investigation and Remedial Design Report	December, 1999	
100 Percent Remedial Design Submittal	December, 1999	
Remedial Action Work Plan	September, 2001	
Construction Health and Safety Plan	December, 2001	
Quality Assurance Project Plan	June, 2001	
RA Construction Mobilization	June 11,2001	
RA Construction	June 11 -July 15, 2001	
Initial UZ Soil Sampling Event	June 27,2001	
EPA RA Pre-Final Inspection	July 19,2001	
GWTS Performance Testing	July 29, 2001	
GWTS Startup Testing	August, 2001	Extended Startup & Testing
GWTS Continuous O & M	October 1,2001	Continuous Operation
EPA Interim Inspection	July 17, 2002	
Second UZ Soil Sampling Event	August 14,2002	
RA Report	September, 2002	Final RA for Site Soils Interim RA for Site Groundwater
EPA RA Approval	September, 2002	
Effluent Sampling reduced to Quarterly	September, 2002	
Discontinuation of SVOC Sampling	May 23, 2003	
EPA Site Inspection	May 2, 2007	5 year review

## **2.0 CONSTRUCTION OF REMEDIAL DESIGN**

Remediation system installation and activation was completed in July 2001. A Pre-Final inspection was performed on July 19, 2001. A few action items were itemized during the Pre-Final inspection as summarized in the First Quarter 2002 Quarterly Report (ECOR, May 2001) and the Remedial Action Report (ECOR, September 2002). The action items were completed during late 2001 and early 2002. An Interim Inspection was completed by the Environmental Protection Agency (EPA) on July 17, 2002. No major problems were discovered during the inspection.

The system operated intermittently until September 2001 due to initial system debugging during the start up phase. Since September 2001, the system has operated almost continuously. Use of the infiltration gallery was discontinued in August 2002 upon regulatory approval. During this reporting period (Second Quarter 2007), no significant activities occurred relative to the Remedial Design.

### **3.0 OPERATION OF GROUNDWATER TREATMENT SYSTEM**

Groundwater recovered from the three pumping wells (PW-1, PW-2, and PW-3) is treated through one bag filter and an air stripper prior to discharge. The bag filter removes suspended solids greater than 50 microns in diameter. The low-profile air stripper removes the VOCs from the groundwater. Following air stripping, the groundwater is discharged to surface water. **Figure 1** illustrates the PW locations and the Groundwater Treatment System. A Flow Diagram of the Groundwater Treatment System equipment and process piping is presented in **Figure 2**.

At present, due to a partial closing of the effluent discharge pipe caused from scale buildup, it is not possible to handle the flow from all three wells at one time. Pumping well PW-1 has routinely maintained a steady flowrate while PW-2 and PW-3 have typically have been turned off and cycled intermittently during operation. While pumping flowrates have decreased, VOC concentrations continue to remain low, approaching asymptotic levels.

#### **3.1 ROUTINE OPERATION**

Scheduled O&M activities include weekly Site visits by the local Chief Operator, Steve Rodland. The Chief Operator is the first responder to autodialer alarms from the Site. Weekly Site visits include performing an overall Site inspection, GWTP system inspection, including checking the bag filter for solids loading, gauging air flow through the stripper, and noting flow rates and totalized flow. Preventive maintenance items performed by the operator include monthly inspections of the air stripper blower, and air stripper trays are inspected for sediment and mineral deposits. The trays require cleaning on a quarterly basis as a preventative maintenance and system operation performance item.

#### **3.2 SYSTEM OPERATIONS AND MONITORING HISTORY THROUGH SECOND QUARTER 2007**

A total of 20,526,060 gallons of groundwater and approximately 37.9 pounds of dissolved-phase VOCs have been recovered via the pumping well network since system activation. All of this groundwater was treated in the GWTS. Of that total, 19,702,060 gallons, or 96.0% of the total flow, was discharged to the surface water, into the drainage ditch that flows adjacent to the Site. The remaining 824,000 gallons, or 4.0 % of the total, was directed to the Infiltration Gallery. Soil flushing through the Infiltration Gallery ceased in August of 2002. In September of 2002, EPA concurred with the conclusion presented in the Final RA Report stating that Site soil has been effectively remediated. Therefore, there are no plans to re-initiate operation the Infiltration Gallery.

At the beginning of 2002, Treatment System Influent and Effluent were sampled and analyzed on a twice-monthly basis, as per the initial DEC discharge approval document. The Treatment System sampling schedule was reduced to quarterly during the third quarter 2002 following approval of the NYSDEC. Effluent samples have been collected and analyzed during subsequent quarterly sampling events. The analytical results of the effluent have consistently met the DEC's Effluent Limitations, and have generally had non-detectable concentrations of VOCs.

**Tables 1** and **2** summarize influent and effluent analytical data for the system since startup. **Figure 3** presents a graph of the influent VOC concentrations over time. Cumulative dissolved-phase mass recovered is depicted on **Figure 4**. This data indicates that the influent VOC concentration has reached asymptotic levels. Quarterly effluent compliance sampling events coincide with the quarterly groundwater monitoring events.

On May 2, 2007 a Site inspection was performed by the EPA's George Jacob as part of the project's Five Year Review. Also in attendance were Richard Krauser (EPA), John Grathwol (DEC), Chris Rockwell (PRP Group), Matt Lapp and Will Torres (ECOR). No issues were identified during the inspection.

### **3.3 OPERATIONAL PROBLEMS ENCOUNTERED**

As mentioned in Section 3.0, normal operation of the GWTS was stopped due to clogging of the effluent pipe. The system would only remain on by keeping PW-1 running and intermittently cycling PW-2 and PW-3.

The system will continue to be run utilizing only PW-1 with PW-2 and PW-3 cycled intermittently until the system is shut down to perform an in-situ bioremediation injection scheduled for September 2007.

#### **4.9 QUARTERLY SITE MONITORING EVENT**

##### **4.1 MONITORING WELL SAMPLING EVENT**

The quarterly sampling event occurred on 14 June 2007 and was conducted in accordance with the agreed upon modifications to the QAPP (May 23, 2003). Groundwater samples were collected from monitoring wells MW-1 and pumping wells PW-1, PW-2 and PW-3 using EPA's low-flow sampling procedures, in accordance with the QAPP. A summary of the field parameter measurements is presented in **Table 3**. A copy of field notes collected during the sampling event is included in **Appendix A**. The preserved groundwater samples were collected and analyzed by Severn Trent Laboratories (STL), Buffalo, New York. A summary of Site groundwater elevations is provided in **Table 4**.

#### **4.2 LABORATORY ANALYSIS / GROUNDWATER SAMPLING RESULTS**

Recent and historical groundwater quality data for monitoring and pumping wells (2001 to present) for select compounds is summarized in **Table 5**. The sample specific analysis performed included VOC analysis in accordance with USEPA SW-846 Method 8260B. The groundwater sample (MW-1) was analyzed for the following twenty (20) project specific compounds: 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), methylene chloride (MeCl), toluene, 1,1,1-trichloroethane (TCA), trichloroethene (TCE), vinyl chloride (VC), benzene, total xylenes, chlorobenzene, 1,1,2-trichloroethane (1,1,2-TCA), 1,2-dichloroethane (1,2-DCA), tetrachloroethene, chloroform, bromodichloromethane, dibromochloromethane, 2-butanone, carbon tetrachloride, 1,2-dichlorobenzene and 1,4-dichlorobenzene. The pumping well samples (PW-1, PW-2, and PW-3) were analyzed for the following eight (8) compounds: 1,1-DCA, 1,1-DCE, MeCl, TCA, TCE, toluene, VC and cis-1,2-dichloroethene. A review of the previous data indicates that the primary compounds of concern detected at the Site are: TCA and degradation products 1,1 -DCA and 1,1 -DCE. The concentrations of these VOCs range from non-detect to 280 micrograms per liter (ug/L) (TCA at monitoring well PW-1). Currently, only 1,1-DCA, and TCA are present above the applicable clean up standards at the Site.

The groundwater cleanup standards are summarized below:

<b>Chemical</b>	<b>Groundwater Cleanup Level</b>
1,1 -Dichloroethane	5
1,1 -Diclhloroethene	5
Toluene	5
Methylene chloride	5
1,1,1 -Trichloroethane	5
Trichloroethene	5
Vinyl Chloride	2

Groundwater quality data is depicted on **Figure 5** with those constituents detected above the applicable clean-up standard are highlighted in yellow.

#### **4.3 DA TA VAUDA TION**

As per Section 4.0 of the QAPP, the data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the SAP, the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (October 1999), the USEPA Region II Data Review Standard Operating Procedure (SOP) Number HW-24, Revision 1, September 1999: Validating Volatile Organic Compounds by SW-846 Method 8260B, and the reviewer's professional judgment. The Data Validation Report is included in Appendix B.

## *5.0 PLANS FOR NEXT QUARTER*

ECOR submitted an in-situ bioremediation applicability study to the PRP group for review. The PRP Group requested an independent assessment of the data and recommendation prior to implementation. The independent assessment was completed during June 2006. The findings indicate that an in-situ bioremediation process may be an effective remediation technology. A work plan was prepared and approved by the EPA. An injection is scheduled for September 2007.

The next quarterly groundwater sampling event will be performed in September 2007 just prior to the shutdown of the GWTP in order to establish baseline conditions prior to the injection.

Operation and maintenance plans for the next quarter include continued routine operation as well as preventative maintenance of the pumping wells and GWTP up until the system is shut down.

## TABLES

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event Date	01/GW 7/28/2001	02/GW 8/8/2001	03/GW 8/18/2001	04/GW 9/18/2001	05/GW 9/27/2001	06/GW 10/5/2001
Field Influent pH, std pH units			7.87	7.57	7.55	7.5
Total Suspended Solids, mg/L	6.5	4.0 U	4.0 U	4.0 U	4.0 U	4
1,1-Dichloroethane, ug/L	23	47	60	19J	58 D	43 J
1,1-Dichloroethene, ug/L	5.1	12	16	12 J	16 DJ	50 U
Cis-1,2- Dichloroethene, ug/L	1.0J	1.4J	1.0 J	50 U	50 U	50 U
Methylene Chloride, ug/L	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U
1,1,1 - Trichloroethane, ug/L	460 E	840 E	1200 E	1100	1100 D	780
Trichloroethene, ug/L	1.9 J	3.0 J	4.7 J	50 U	50 U	50 U
Toluene, ug/L	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U
Vinyl Chloride, ug/L	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U
Total Confident VOCs, ug/L	499	899	1276	1124	1174	823
Sampling Event Date	07/GW 10/17/2001	08/GW 11/8/2001	09/GW 11/28/2001	10/GW 12/13/2001	11/GW 12/27/2001	12/GW 1/18/2002
Field Influent pH, std pH units	7.39	7.57	7.42	7.43	7.54	7.64
Total Suspended Solids, mg/L	4.0 U	7	15	4.0 U		4.0 U
1,1-Dichloroethane, ug/L	46 J	32 J	20 J	13	9.3	11
1,1-Dichloroethene, ug/L	13J	13J	9.4 J	4.2 J	4.6 J	4.3 J
Cis -1,2 - Dichloroethene, ug/L	50 U	50 U	25 U	10U	5.0 U	5.0 U
Methylene Chloride, ug/L	50 U	50 U	25 U	10U	5.0 U	5.0 U
1,1,1 -Trichloroethane, ug/L	1200	580	530	260	220 E	250 E
Trichloroethene, ug/L	50 U	50 U	25 U	3.3 J	4.2 J	4.9 J
Toluene, ug/L	50 U	50 U	25 U	10U	5.0 U	5.0 U
Vinyl Chloride, ug/L	50 U	50 U	25 U	10U	5.0 U	5.0 U
Total Confident VOCs, [ug/L]	1259	635	559	277	237	270
Sampling Event Date	13/GW 1/30/2002	14/GW 2/13/2002	15/GW 2/23/2002	16/GW 3/8/2002	17/GW 3/20/2002	18/GW 4/8/2002
Field Influent pH, std pH units	7.71	7.84	7.48	7.79	7.72	7.09
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, ug/L	10	16	10	11	11	10
1,1-Dichloroethene, ug/L	4.0 J	5.2 J	3.5 J	3.7 J	4.1 J	2.5 J
Cis -1,2 - Dichloroethene, ug/L	10U	10U	5.0 U	5.0 U	5.0 U	10 U
Methylene Chloride, ug/L	10U	10U	5.0 U	5.0 U	1.8 BJ	10 U
1,1,1 -Trichloroethane, ug/L	220	320	240 E	320 E	330 E	240
Trichloroethene, ug/L	4.3 J	3.2 J	3.3 J	3.4 J	3.4 J	3.3 J
Toluene, ug/L	10U	10 U	3.3 J	5.0 U	5.0 U	10 U
Vinyl Chloride, ug/L	10U	10 u	5.0 U	5.0 U	5.0 U	10 u
Total Confident VOCs, ug/L	238	339	256	337	348	253

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event Date	19/GW 4/24/2002	20/GW 5/8/2002	21/GW 5/21/2002	22/GW 6/4/2002	23/GW 6/13/2002	24/GW 7/11/2002
Field Influent pH, std pH units	6.99	7.07	7.41	7.11	7.34	7.19
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	10	12	20	19 J	18D,J	20
1,1-Dichloroethene, pg/L	2.5 J	2.4 J	3.5 J	25 U	20 U	3.4 J
Cis -1,2 - Dichloroethene, ug/L	10 U	10U	10U	25 U	20 U	10U
Methylene Chloride, ug/L	15 B	10U	3.1 BJ	16 J	12B,D,J	8.5 B.J
1,1,1 - Trichloroethane, ug/L	230	260	350	390	360 D	380
Trichloroethene, ug/L	2.8 J	2.7 J	3.3 J	25 U	20 U	3.7 J
Toluene, ug/L	2.6 J	10U	10 U	25 U	20 U	10 U
Vinyl Chloride, ug/L	10U	10U	10 U	25 U	20 U	10U
Total Confident VOCs, ug/L	246	276	376	425	390	407

Sampling Event Date	25/GW 7/23/2002	26/GW 8/29/2002	27/GW 9/18/2002	28/GW 10/29/2002	29/GW 11/25/2002	30/GW 12/18/2002
Field Influent pH, std pH units	6.45	6.97	7.74	7.91	6.8	7.25
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	NA	NA	4.0 U
1,1-Dichloroethane, ug/L	9.0 J	8.8	7.7	8.6	9.1 DJ	6.6
1,1-Dichloroethene, pg/L	2.6 J	1.3J	1.8 J	3.0 J	2.4 DJ	2.8 J
Cis -1,2 - Dichloroethene, ug/L	10U	5.0 U	5.0 U	5.0 U	10U	5.0 U
Methylene Chloride, pg/L	10U	5.0 U	5.0 U	5.0 U	10U	5.0 U
1,1,1 -Trichloroethane, pg/L	210	150	190	170	160 D	150
Trichloroethene, pg/L	10 U	1.9 J	1.9J	2.5 J	10U	1.9 J
Toluene, pg/L	10 U	5.0 U	5.0 U	5.0 U	10U	5.0 U
Vinyl Chloride, pg/L	10 U	5.0 U	5.0 U	5.0 U	10U	5.0 U
Total Confident VOCs, pg/L	222	162	202	184	172	161

Sampling Event Date	31 /GW 1/17/2003	32/GW 2/19/2003	33/GW 4/30/2003	34/GW 6/23/2003	35/GW 7/30/2003	36/GW 8/27/2003
Field Influent pH, std pH units	7.6	6.93	7.06	7.03	7.12	NA
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	8.4	6.2	8.4 DJ	6.6 DJ	7.6	2.4 J
1,1-Dichloroethene, pg/L	5.0 U	2.4 J	10U	10U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, pg/L	5.0 U	5.0 U	10U	10U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	10U	10U	5.0 U	5.0 U
1,1,1 -Trichloroethane, pg/L	160	140	190 D	140 0	150	66
Trichloroethene, pg/L	2.4 J	1.6 J	10 U	10U	1.2 J	5.0 U
Toluene, pg/L	5.0 U	5.0 U	10 U	10U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	10 U	10U	5.0 U	5.0 U
Total Confident VOCs, pg/L	171	150	198	147	159	68

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	37/GW	38/GW	39/GW	40/GW	41/GW	42/GW
Date	9/24/2003	10/23/2003	11/20/2003	12/3/2003	1/29/2004	3/30/2004
Field Influent pH, std pH units	NA	NA	NA	7.18	NA	6.84
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	8.8 DJ	7.4 DJ	4.7 J	6.1	5.0 U	6.7
1,1-Dichloroethene, pg/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, pg/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, pg/L	180 D	170 D	92	110	1.9 J	96
Trichloroethene, pg/L	2.0 DJ	10U	1.1 J	1.6 J	5.0 U	1.0J
Toluene, pg/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
Total Confident VOCs, pg/L	191	174	98	118	2	104

Sampling Event	43/GW	44/GW	45/GW	46/GW	47/GW	48/GW
Date	5/20/2004	6/16/2004	7/15/2004	8/26/2004	9/14/2004	10/28/2004
Field Influent pH, std pH units	NA	7.32	NA	NA	NA	NA
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	5.5	10D	7.5	3.3 J	9.1 DJ	4.1 J
1,1-Dichloroethene, pg/L	5.0 U	10U	2.3 J	5.0 U	10U	2.3 J
Cis -1,2 - Dichloroethene, pg/L	5.0 U	10U	5.0 U	5.0 U	10U	5.0 U
Methylene Chloride, pg/L	5.0 U	10U	5.0 U	5.0 U	10U	5.0 U
1,1,1 -Trichloroethane, pg/L	150	180 D	190	74	170 D	90
Trichloroethene, pg/L	5.0 U	10U	1.6J	5.0 U	10U	1.1 J
Toluene, pg/L	5.0 U	10U	5.0 U	5.0 U	10U	5.0 U
Vinyl Chloride, pg/L	5.0 U	10U	5.0 U	5.0 U	10U	5.0 U
Total Confident VOCs, pg/L	156	190	201	77	179	97

Sampling Event	49/GW	50/GW	51/GW	52/GW	53/GW	54/GW
Date	12/14/2004	1/27/2005	3/22/2005	4/26/2005	5/30/2005	6/7/2005
Field Influent pH, std pH units	6.23	NA	7.04	NA	NA	7.50
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	7.4	9.8	2.9 J	2.5 J	6.3	2.5
1,1-Dichloroethene, pg/L	2.5 J	3.0 J	5.0 U	5.0 U	1.9	0.84 J
Cis -1,2 - Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 u	1.0 U
1,1,1 -Trichloroethane, pg/L	130	180	65	67	230	65
Trichloroethene, pg/L	1.6 J	2.2 J	5.0 U	5.0 U	1.2J	0.68 J
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U
Total Confident VOCs, pg/L	141.5	195	67.9	69.5	239.4	69.0

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	55/GW	56/GW	57/GW	58/GW	59/GW	60/GW
Date	7/28/2005	8/29/2005	9/13/2005	10/18/2005	11/22/2005	12/19/2005
Field Influent pH, std pH units	NA	NA	7.25	NA	NA	6.85
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	10	9.5 J	2.3 J	7.1 J	5.2 J	2.7 J
1,1-Dichloroethene, pg/L	4.8	3.1 J	0.64 J	1.5J	2.7 J	0.84 J
Cis -1,2 - Dichloroethene, ug/L	1.0 U	25 U	5.0 U	10U	20 U	5.0 U
Methylene Chloride, ug/L	1.0 U	2.4 J	5.0 U	10U	2.0 J	5.0 U
1,1,1 - Trichloroethane, ug/L	260	220	53	180	130	61
Trichloroethene, pg/L	1.7	25 U	0.49 J	2.9 BJ	20 U	0.64 J
Toluene, pg/L	1.0 U	25 U	5.0 U	10U	20 U	5.0 U
Vinyl Chloride, pg/L	1.0 u	25 U	5.0 U	10U	20 U	5.0 U
Total Confident VOCs, ug/L	276.5	235.0	56.4	191.5	139.9	65.2
Sampling Event	61/GW	62/GW	63/GW	64/GW	65/GW	66/GW
Date	1/19/2006	2/24/2006	3/27/2006	4/20/2006	5/25/2006	6/20/2006
Field Influent pH, std pH units	NA	NA	6.99	NA	NA	NA
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	6	4.7 J	4.5 J	5.5 J	6.2 J	3.6 J
1,1-Dichloroethene, pg/L	1.7 J	1.3J	1.1 J	1.3J	1.5J	0.94 J
Cis -1,2 - Dichloroethene, pg/L	5.0 U	10 U	5.0 U	10U	10 U	5.0 U
Methylene Chloride, pg/L	5.0 U	2.1 BJ	5.0 U	10U	1.3J	5.0 U
1,1,1 -Trichloroethane, pg/L	170	100	110	140	160	80
Trichloroethene, ug/L	1.3 J	0.87 J	0.95 J	1.0 J	1.2 J	0.72 J
Toluene, pg/L	5.0 U	10U	5.0 U	10U	10 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	10 u	5.0 U	10U	10 u	5.0 U
Total Confident VOCs, pg/L	179.0	109.0	116.6	147.8	170.2	85.3
Sampling Event	67	68	69	70	71	72
Date	7/18/2006	8/7/2006	9/14/2006	10/12/2006	11/22/2006	12/14/2006
Field Influent pH, std pH units	NA	7.46	7.5	7.7	7.38	7.56
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	6.3	5.7 J	4.0 J	5.5	9.5 J	2.8 J
1,1-Dichloroethene, pg/L	1.6 J	1.2 J	4.7 J	1.4 J	2.3 J	1.3J
Cis -1,2 - Dichloroethene, pg/L	5.0 U	10U	5.0 U	5.0 U	10.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	2.8 BJ	5.0 U	5.0 U	10.0 U	5.0 U
1,1,1 -Trichloroethane, pg/L	155 E	140	94	82 D	140 D	56
Trichloroethene, pg/L	1.1 J	2.2 J	0.83 J	1.0J	1.8 J	0.64 J
Toluene, pg/L	5.0 U	10U	5.0 U	5.0 U	10.0 u	5.0 U
Vinyl Chloride, pg/L	5.0 U	10U	5.0 U	5.0 U	10.0 u	5.0 U
Total Confident VOCs, pg/L	162.4	151.9	103.53	89.9	153.6	60.74

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	73	74	75	76	77	78
Date	1/18/2007	2/28/2007	3/21/2007	4/30/2007	5/23/2007	6/27/2007
Field Influent pH, std pH units	7.64	7.62	7.53	7.61	7.52	7.69
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1 -Dichloroethane, ug/L	1.8 J	5.6 DJ	6.2 J	8.2	8.7	5.0
1,1 -Dichloroethene, ug/L	0.64 J	2.7 DJ	1.5J	2.8 J	2.0 J	0.88 J
Cis -1,2 - Dichloroethene, ug/L	5.0 U	10U	10U	5.0 U	5.0 U	5.0 U
Methylene Chloride, ug/L	5.0 U	1.0 DJ	10U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, ug/L	62	170 D	230	210 D	200 D	180 D
Thchloroethene, ug/L	0.78 J	1.3 DJ	10U	1.1 J	1.2 J	0.67J
Toluene, ug/L	5.0 U	10U	10U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, ug/L	5.0 U	10U	10U	5.0 U	5.0 U	5.0 U
Total Confident VOCs, ug/L	65.22	180.6	245.5	222.1	211.9	186.55

Data Qualifiers: U - Undetectable at listed detection limit. J - Estimated value, less than the detection limit.

E - CC exceeds calibration range. D - Identified in the secondary dilution factor. B - Analyte found in blank as well as sample.

**Table 2**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Effluent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	01/GW	02/GW	03/GW	04/GW	05/GW	06/GW
Date	7/28/2001	8/8/2001	8/18/2001	9/18/2001	9/27/2001	10/5/2001
Field Effluent pH, std pH units	8.44	8.44	8.5	8.38	8.38	8.32
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis-1,2- Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 -Trichloroethane, ug/L	1.5 J	5.0 U	1.5J	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	07/GW	08/GW	09/GW	10/GW	11/GW	12/GW
Date	10/17/2001	11/8/2001	11/28/2001	12/13/2001	12/27/2001	1/18/2002
Field Effluent pH, std pH units	8.35	8.35	8.29	8.43	8.30	8.38
Total Suspended Solids, mg/L	4.0 U	4.0 U	8.0	4.0 U	4.0 U	4.0U
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Cis-1,2- Dichloroethene, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
1,1,1 -Trichloroethane, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Toluene, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Sampling Event	13/GW	14/GW	15/GW	16/GW	17/GW	18/GW
Date	1/30/2002	2/13/2002	2/23/2002	3/8/2002	3/20/2002	4/8/2002
Field Effluent pH. std pH units	8.39	8.31	8.22	8.39	8.47	8.05
Total Suspended Solids, mg/L	4.0U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis-1,2- Dichloroethene, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0U	5.0 U	5.0 U	5.0 U	1.3 J	2.8 B,J
1,1,1 -Trichloroethane, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	5.0U	5.0 U	2.5J	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

**Table 2**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Effluent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	19/GW	20/GW	21/GW	22/GW	23/GW	24/GW
Date	4/24/2002	5/8/2002	5/21/2002	6/4/2002	6/13/2002	7/11/2002
Field Effluent pH, std pH units	8.0	8.08	8.23	8.23	8.16	8.06
Total Suspended Solids, mg/L	4.0 U	4.0	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis-1,2- Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	7.6 B	5.0 U	1.2 BJ	1.1 J	1.7 B,J	2.6 B,J
1,1,1 - Trichloroethane, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	1.2 J	5.0 U	5.0 U	5.0 U	1.5J	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	25/GW	26/GW	27/GW	28/GW	29/GW	30/GW
Date	7/23/02	9/18/02	12/18/02	4/30/03	6/23/03	9/24/03
Field Effluent pH, std pH units	6.66	7.11	7.22	7.72	7.68	7.81
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	NA	NA	NA
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis-1,2- Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	31/GW	32/GW	33/GW	34/GW	35/GW	36/GW
Date	12/2/03	3/30/04	6/16/04	9/14/04	12/14/04	3/22/05
Field Effluent pH, std pH units	7.63	7.47	7.86	7.61	6.93	6.97
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 -Trichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

**Table 2**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Effluent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	37/GW	38/GW	39/GW	40/GW	41/GW	42/GW
Date	6/7/2005	9/13/2005	12/19/2005	3/27/2006	6/20/2006	9/14/2006
Field Effluent pH, std pH units	8.01	7.95	7.64	7.74	7.71	8.4
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	1.0 u	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, ug/L	1.0 u	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, ug/L	1.0 u	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 -Trichloroethane, ug/L	1.0 u	5.0 U	0.58 J	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	1.0 u	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	1.0 u	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	43/GW	44/GW	45/GW			
Date	12/14/2006	3/21/2007	6/27/2007			
Field Effluent pH, std pH units	8.36	8.44	8.39			
Total Suspended Solids, mg/L	NA	NA	NA			
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U			
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U			
Cis -1,2 - Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U			
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U			
1,1,1 -Trichloroethane, pg/L	5.0 U	5.0 U	5.0 U			
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U			
Toluene, pg/L	5.0 U	5.0 U	5.0 U			
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U			

**Data Qualifiers:** **U** - Undetectable at listed detection limit. **J** - Estimated value, less than the detection limit.

E - CC exceeds calibration range. D - Identified in the secondary dilution factor. B - Analyte found in blank as well as sample.

Table 3  
 Byron Barrel and Drum Site  
 Field Chemistry Readings  
 June 14, 2007 Quarterly Sampling Event

Parameter Units	Time	Temp. °C	ORP mV	PH Std. Units	TDS gfl-	DO mg/L	Spec. Cond. mS/cm
MW-1-9/GW22	1300	15.8	9	7.13	0.5	1.87	718
	1305	15.5	10	7.10	0.5	1.85	720
	1310	14.9	10	7.08	0.5	1.82	719
	1315	14.5	10	7.06	0.5	1.80	718
	1320	14.2	10	7.04	0.5	1.77	718
	1325	14.3	9	7.04	0.5	1.75	717
	1330	14.1	9	7.02	0.5	1.72	717
MVNM-9/GW22	1355	16.8	8	7.72	0.5	1.71	719
	1400	15.4	8	7.73	0.5	1.70	715
	1405	15.6	8	7.75	0.5	1.68	710
	1410	15.7	8	7.76	0.5	1.67	707
	1415	15.6	9	7.75	0.5	1.66	704
	1420	15.7	9	7.75	0.5	1.66	704
	1425	15.7	9	7.75	0.5	1.65	705
PW-1/GW22	1410	10.2	2	7.37	4.24	3.67	611
PW-2/GW22	1415	10.0	3	7.45	4.19	3.41	609
PW-3/GW22	1420	10.1	6	7.38	4.21	3.20	606

**Note:** Flow through cell was calibrated for all chemistry parameters prior to gauging.

**Table 4**  
**Byron Barrel and Drum Site**  
**Groundwater Elevations for**  
**June 2007 Sampling Event**  
**ECOR Solutions, Inc.**

**Operator:** P. Little

**Date:** 6/14/2007

<b>Pumping Wells</b>	<b>DTW</b>	<b>TOC</b>	<b>GW</b>	<b>TD</b>	<u>w.c &gt; ft</u>
		<b>Elevation</b>	<b>Elevation</b>		
PW-1	13.43	642.82	629.39	—	—
PW-2	4.72	641.34	636.62	—	—
PW-3	5.18	641.11	635.93	—	—

<b>Monitoring Wells</b>					
MW-1	5.30	639.63	634.33	11.61	6.31
MW-2	11.20	646.36	635.16	15.06	3.86
MW-4	4.50	638.56	634.06	11.50	7.00
MW-1 OB	9.28	644.44	635.16	20.32	11.04
MW-21	8.09	642.52	634.43	27.87	19.78
Residential	15.84	650.78	634.94	35.16	19.32

<b>Piezometers</b>					
PZ-1	7.54	643.11	635.57	27.02	19.48
PZ-2	7.32	642.39	635.07	27.26	19.94

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	5	5	NA	5	5	5	5	5	2
Groundwater Cleanup Levels (pg/L):				5	5	NA	5	5	5	5	5	5	2
<b>MW-1</b>	3/20/2002	639.63	5.24	634.39	86	49	NA	5 U	1700	2 J	5 U	2 J	
	6/12/2002	639.63	5.07	634.56	81	38	NA	5 U	1600	3 J	5 U	5 U	
	9/18/2002	639.63	7.15	632.48	13	13 J	NA	5 UJ	350	5 U	5 U	5 U	
	12/18/2002	639.63	5.62	634.01	42	37 J	NA	25 U	1200	5 J	25 U	25 U	
	4/29/2003	639.63	4.53	635.10	57	34	NA	25 U	1300 J	25 U	25 U	25 U	
	6/24/2003	639.63	5.36	634.27	32	24	NA	5 U	720	4 J	5 U	5 U	
	9/24/2003	639.63	6.72	632.91	24 J	17 J	NA	25 U	580	25 U	25 U	25 U	
	12/3/2003	639.63	5-53	634.10	33 J	28 J	NA	40 U	860 J	40 U	40 U	40 U	
	3/30/2004	639.63	3.40	636.23	30 J	31	NA	25 U	830 J	25 UJ	25 U	25 U	
	6/16/2004	639.63	4.20	635.43	26	22 J	NA	25 UJ	870	25 U	25 U	25 U	
	9/14/2004	639.63	4.56	635.07	28	26	NA	25 U	730	25 U	25 U	25 U	
	12/14/2004	639.63	4.61	635.02	31	26	NA	25 U	760	25 UJ	25 U	25 U	
	3/22/2005	639.63	4.32	635.31	41	110	NA	5 U	830	5	5 U	5 U	
	6/7/2005	639.63	5.45	634.18	10 J	14 J	NA	13 J	340	50 U	50 UJ	50 U	
	9/13/2005	639.63	6.89	632.74	14	16	NA	5 U	410	2 J	5 UJ	5 U	
	12/20/2005	639.63	4.78	634.85	24 J	24 J	NA	40 U	580	40 U	40 U	40 U	
	3/26/2006	639.63	5.07	634.56	29	24	NA	5 U	540	4 J	5 U	5 U	
	6/22/2006	639.63	5.68	633.95	7	9	NA	5 U	220	2 J	5 U	5 U	
	9/14/2006	639.63	5.15	634.48	5 J	6 J	NA	10 U	190	2 J	10 U	10 U	
	12/7/2006	639.63	4.54	635.09	6 J	9 J	NA	10 U	170	2 J	10 U	10 U	
	3/22/2007	639.63	4.19	635.44	2 J	4 J	NA	10 U	100	2 J	10 U	10 U	
	6/14/2007	639.63	5.30	634.33	6	3 J	NA	5 U	200	2 J	5 U	5 U	



Table 5  
 Byron Barrel and Drum Site  
 Historic Groundwater Quality Table - Select Analytes  
 ECOR Solutions, Inc.

Sample Location ID	Date	Top Of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	u c £ ◊ o f v	c a n 4-1 £ o	a c a ◊ o f o	b if w 'o	:o o c c o	o E	© £ o i o JZ o	8 4-1 V S o o	c 3	4) C o JZ o c v
Groundwater Cleanup Levels (ug/L):														
MW-10B	3/21/2002	644.44	9.43	635.01	5 U	5 U	NA	5 U	5	5	H	5	2	
	6/12/2002	644.44	9.12	635.32	5 U	5 U	NA	5 U	11	5 U	5 U	5 U		
	9/18/2002	644.44	11.05	633.39	5 U	5 UJ	NA	5 UJ	7	5 U	5 U	5 U		
	12/18/2002	644.44	10.20	634.24	5 U	5 U	NA	5 U	52	5 U	5 U	5 U		
	4/30/2003	644.44	9.28	635.16	5 U	5 U	NA	5 U	8	5 U	5 U	5 U		
	6/23/2003	644.44	9.39	635.05	5 U	5 U	NA	5 U	3 J	5 U	5 U	5 U		
	9/24/2003	644.44	10.93	633.51	5 U	5 U	NA	5 U	7	5 U	5 U	5 U		
	3/30/2004	644.44	8.99	635.45	5 U	5 U	NA	5 U	17	5 U	5 U	5 U		
	9/14/2004	644.44	8.76	635.68	5 U	5 U	NA	5 U	14	5 U	5 U	5 U		
	3/22/2005	644.44	8.69	635.75	5 U	5 U	NA	5 U	11	5 U	5 U	5 U		
	9/13/2005	644.44	10.84	633.60	5 U	5 U	NA	5 U	5	5 U	5 U	5 U		
	3/25/2006	644.44	9.28	635.16	5 U	5 U	NA	5 U	6	5 U	5 U	5 U		
	9/14/2006	644.44	9.82	634.62	5 U	5 U	NA	5 U	6	5 U	5 U	5 U		
	3/22/2007	644.44	8.44	636.00	5 U	5 U	NA	5 U	6	5 U	5 U	5 U		

Table 5  
 Byron Barrel and Drum Site  
 Historic Groundwater Quality Table • Select Analytes  
 ECOR Solutions, Inc.

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	5	Ca	£e	Bj	%	5	5	Ca	!2
		Groundwater Cleanup Levels (ug/L):				5	5	NA	5	5	5	5	2
MW-21	3/26/1999	NA	NA	NA	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	
	3/21/2002	642.52	7.70	634.82	25 U	25 U	NA	25 U					
	6/12/2002	642.52	7.69	634.83	25 U	25 U	NA	25 U	25 U	25 U	25 U	5 BJ	25 U
	9/17/2002	642.52	9.50	633.02	5 U	5 UJ	NA	5 UJ	5 U	5 U	5 U	5 U	5 U
	12/17/2002	642.52	8.23	634.29	5 U	5 UJ	NA	5 U	5 UJ	5 U	5 U	5 U	5 U
	4/30/2003	642.52	7.91	634.61	25 U	25 U	NA	25 U					
	3/30/2004	642.52	7.56	634.96	5 UJ	5 UJ	NA	5 UJ					
	3/22/2005	642.52	7.42	635.10	25 U								
	3/25/2006	642.52	7.78	634.74	25 U								
	3/22/2007	642.52	7.38	635.14	20 U								
MW-Residential	3/21/2002	650.78	15.79	634.99	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	6/12/2002	650.78	15.62	635.16	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	9/17/2002	650.78	17.50	633.28	5 U	5 UJ	NA	5 UJ	5 U	5 U	5 U	5 U	5 U
	12/17/2002	650.78	16.52	634.26	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	4/30/2003	650.78	17.74	633.04	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	3/30/2004	650.78	15.47	635.31	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	3/22/2005	650.78	15.24	635.54	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	3/25/2006	650.78	15.75	635.03	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	3/22/2007	650.78	15.09	635.69	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	5	5	S	O	5	5	5	5	5	2
Groundwater Cleanup Levels (ug/L):					5	5	NA	5	5	5	5	5	5	2
PW-1	12/21/1998	NA	NA	NA	20 U	5 J	20 U	9 BJ	270	11 J	20 U	20 U		
	12/27/2001	NA	NA	NA	15	6.2	5 U	5 U	280	5.2	5 U	5 U		
	3/20/2002	642.82	NM	NM	11	5	5 U	5 U	320	3 J	5 U	5 U		
	6/12/2002	642.82	NM	NM	18	3 J	5 U	5 U	380	2 J	5 U	5 U		
	9/18/2002	642.82	NM	NM	12	2 J	5 U	5 UJ	270	2 J	5 U	5 U		
	12/18/2002	642.82	18.43	624.39	8	5	5 U	5 U	160	2 J	5 U	5 U		
	4/30/2003	642.82	20.96	621.86	11	2 J	5 U	5 U	180	2 J	5 U	5 U		
	6/23/2003	642.82	22.41	620.41	12	2 J	5 U	5 U	190	2 J	5 U	5 U		
	9/24/2003	642.82	22.59	620.23	8	5 U	5 U	5 U	120	5 U	5 U	5 U		
	12/3/2003	642.82	21.74	621.08	8	2 J	5 U	5 U	150	2 J	5 U	5 U		
	3/30/2004	642.82	21.80	621.02	6	2 J	5 U	5 U	150	5 U	5 U	5 U		
	6/16/2004	642.82	19.08	623.74	13	3 J	5 U	5 UJ	380	2 J	5 U	5 U		
	9/14/2004	642.82	20.62	622.20	10	2 J	5 U	5 U	210	5 U	5 U	5 U		
	12/14/2004	642.82	21.23	621.59	6	2 J	5 U	5 U	140	5 U	5 U	5 U		
	3/22/2005	642.82	22.65	620.17	15	23	5 U	5 U	200 J	2 J	5 U	5 U		
	6/7/2005	642.82	21.50	621.32	10	2 J	10 U	2 U	59	1 J	10 U	10 U		
	9/13/2005	642.82	21.73	621.09	3 J	0.9 J	5 U	5 U	73	0.5 J	5 U	5 U		
	12/19/2005	642.82	20.98	621.84	9	2 J	5 U	5 U	140	2 J	5 U	5 U		
	3/26/2006	642.82	21.44	621.38	4 J	0.9 J	5 U	5 U	76	0.6 J	5 U	5 U		
	6/22/2006	642.82	21.28	621.54	4 J	1 J	5 U	5 U	77	0.8 J	5 U	5 U		
	9/14/2006	642.82	8.23	634.59	9 DJ	25 U	25 U	25 U	230	25 U	25 U	25 U		
	12/7/2006	642.82	20.82	622.00	6 J	2 J	10 U	10 U	160	1 J	10 U	10 U		
	3/22/2007	642.82	14.50	628.32	6 J	2 J	10 U	10 U	170	1 J	10 U	10 U		
	6/14/2007	642.82	13.43	629.39	9 J	2 J	10 U	10 U	280	2 J	10 U	10 U		

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table • Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	Chromium	Cadmium	Chloride	Chloroform	Chlorophenol	Chloroacetic Acid	Chloroformate	Chloroformate	Chloroformate	Chloroformate	Chloroformate
Groundwater Cleanup Levels (ug/L):															
PW-2	12/27/2001	NA	NA	NA	68	23	1.4 J	5 U	960	4 J	5 U	1.1 J			
	3/20/2002	641.34	NM	NM	24	13	5 U	5 U	720	2 J	5 U	5 U			
	6/12/2002	641.34	NM	NM	18	10	5 U	5 U	370	2 J	5 U	5 U			
	9/18/2002	641.34	NM	NM	5	4 J	5 U	5 UJ	160	5 U	5 U	5 U			
	12/18/2002	641.34	17.68	623.66	12	14	10 U	10 U	280	10 U	10 U	10 U			
	4/30/2003	641.34	16.82	624.52	11	6	5 U	5 U	200	2 J	5 U	5 U			
	6/23/2003	641.34	19.41	621.93	8	5	5 U	5 U	180	5 U	5 U	5 U			
	9/24/2003	641.34	17.45	623.89	6	2 J	5 U	5 U	120	5 U	5 U	5 U			
	12/3/2003	641.34	18.78	622.56	6	3 J	5 U	5 U	160	5 U	5 U	5 U			
	3/30/2004	641.34	19.24	622.10	4 J	3 J	5 U	5 U	140	5 U	5 U	5 U			
	6/16/2004	641.34	18.58	622.76	5	5 U	5 U	5 UJ	120	5 U	5 U	5 U			
	9/14/2004	641.34	18.25	623.09	5	4 J	5 U	5 U	160	5 U	5 U	5 U			
	12/14/2004	641.34	17.63	623.71	8	5	5 U	5 U	160	2 J	5 U	5 U			
	3/22/2005	641.34	19.33	622.01	5	11	5 U	5 U	140	5 U	5 U	5 U			
	6/7/2005	641.34	19.40	621.94	3 J	2 J	5 U	5 U	70	1 J	5 U	5 U			
	9/13/2005	641.34	19.52	621.82	3 J	3 J	5 U	5 U	94 J	2 J	5 U	5 U			
	12/19/2005	641.34	17.35	623.99	1 J	5 U	5 U	5 U	30	0.5 J	5 U	5 U			
	3/26/2006	641.34	17.22	624.12	5	1 J	5 U	5 U	54	0.8 J	5 U	5 U			
	6/22/2006	641.34	18.59	622.75	4 J	2 J	10 U	10 BL	170	1 J	10 U	10 U			
	9/14/2006	641.34	6.75	634.59	3 DJ	1 DJ	10 U	10 U	92	1 DJ	10 U	10 U			
	12/7/2006	641.34	6.11	635.23	9 DJ	3 DJ	10 U	10 U	230	2 J	10 U	10 U			
	3/22/2007	641.34	4.19	637.15	8 J	4 J	10 U	10 U	90	1 J	10 U	10 U			
	6/14/2007	641.34	4.72	636.62	8 J	2 J	20 U	20 U	270	20 U	20 U	20 U			

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	5 o u 5	f s 2 o 5	v o 2 o a	15 o O a s s	5 o c o U 17	5 o c o U 17	e o e H 5	c o 3 o 1	c o 5	
<b>Groundwater Cleanup Levels (ug/L):</b>														
PW-3	12/27/2001	NA	NA	NA	5 U	<b>5 U</b>	5 U	<b>5 U</b>	16	1.7 J	5 U	5 U		
	3/20/2002	641.11	NM	NM	5 U	<b>5 U</b>	5 U	<b>5 U</b>	8	1 J	5 U	5 U		
	6/12/2002	641.11	NM	NM	5 U	<b>5 U</b>	5 U	<b>5 U</b>	6	5 U	5 U	5 U		
	9/18/2002	641.11	NM	NM	5 U	<b>5 UJ</b>	5 U	<b>5 UJ</b>	4 J	5 U	5 U	5 U		
	12/18/2002	641.11	19.90	621.21	5 U	<b>5 U</b>	5 U	<b>5 U</b>	4 J	5 U	5 U	5 U		
	4/30/2003	641.11	19.46	621.65	5 U	<b>5 U</b>	5 U	<b>5 U</b>	3 J	5 U	5 U	5 U		
	6/23/2003	641.11	18.55	622.56	5 U	<b>5 U</b>	5 U	<b>5 U</b>	3 J	5 U	5 U	5 U		
	9/24/2003	641.11	20.97	620.14	5 U	<b>5 U</b>	5 U	<b>5 U</b>	2 J	5 U	5 U	5 U		
	12/3/2003	641.11	20.28	620.83	5 U	<b>5 U</b>	5 U	<b>5 U</b>	3 J	5 U	5 U	5 U		
	3/30/2004	641.11	20.52	620.59	5 U	<b>5 U</b>	5 U	<b>5 U</b>	2 J	5 U	5 U	5 U		
	6/16/2004	641.11	19.65	621.46	5 U	<b>5 U</b>	5 U	<b>5 UJ</b>	2 J	5 U	5 U	5 U		
	9/14/2004	641.11	20.91	620.20	5 U	<b>5 U</b>	5 U	<b>5 U</b>	2 J	5 U	5 U	5 U		
	12/14/2004	641.11	18.33	622.78	5 U	<b>5 U</b>	5 U	<b>5 U</b>	2 J	5 U	5 U	5 U		
	3/22/2005	641.11	22.17	618.94	5 U	<b>5 U</b>	5 U	<b>5 U</b>	2 J	5 U	5 U	5 U		
	6/7/2005	641.11	20.30	620.81	5 U	<b>5 U</b>	5 U	<b>5 U</b>	5 U	5 U	5 U	5 U		
	9/13/2005	641.11	21.52	619.59	5 U	<b>5 U</b>	5 U	<b>5 U</b>	1 J	5 U	5 U	5 U		
	12/19/2005	641.11	20.36	620.75	5 U	<b>5 U</b>	5 U	<b>5 U</b>	1 J	5 U	5 U	5 U		
	3/26/2006	641.11	22.31	618.80	5 U	<b>5 U</b>	5 U	<b>5 U</b>	1 J	5 U	5 U	5 U		
	6/22/2006	641.11	20.72	620.39	5 U	<b>5 U</b>	5 U	<b>5 U</b>	1 J	5 U	5 U	5 U		
	9/14/2006	641.11	6.53	634.58	5 U	<b>5 U</b>	5 U	<b>5 U</b>	2 J	5 U	5 U	5 U		
	12/7/2006	641.11	7.81	633.30	<b>6 DJ</b>	<b>2 DJ</b>	5 U	<b>5 U</b>	<b>170</b>	1 J	5 U	5 U		
	3/22/2007	641.11	5.45	635.66	<b>7</b>	<b>4 J</b>	5 U	<b>5 U</b>	<b>210</b>	1 J	5 U	5 U		
	6/14/2007	641.11	5.18	635.93	<b>9 J</b>	<b>3 J</b>	20 U	<b>20 U</b>	<b>260</b>	20 U	20 U	20 U		

Notes:

All concentrations in micrograms per liter (ug/L)

Exceedences of the groundwater cleanup standard are indicated in bold.

NM = Not Measured

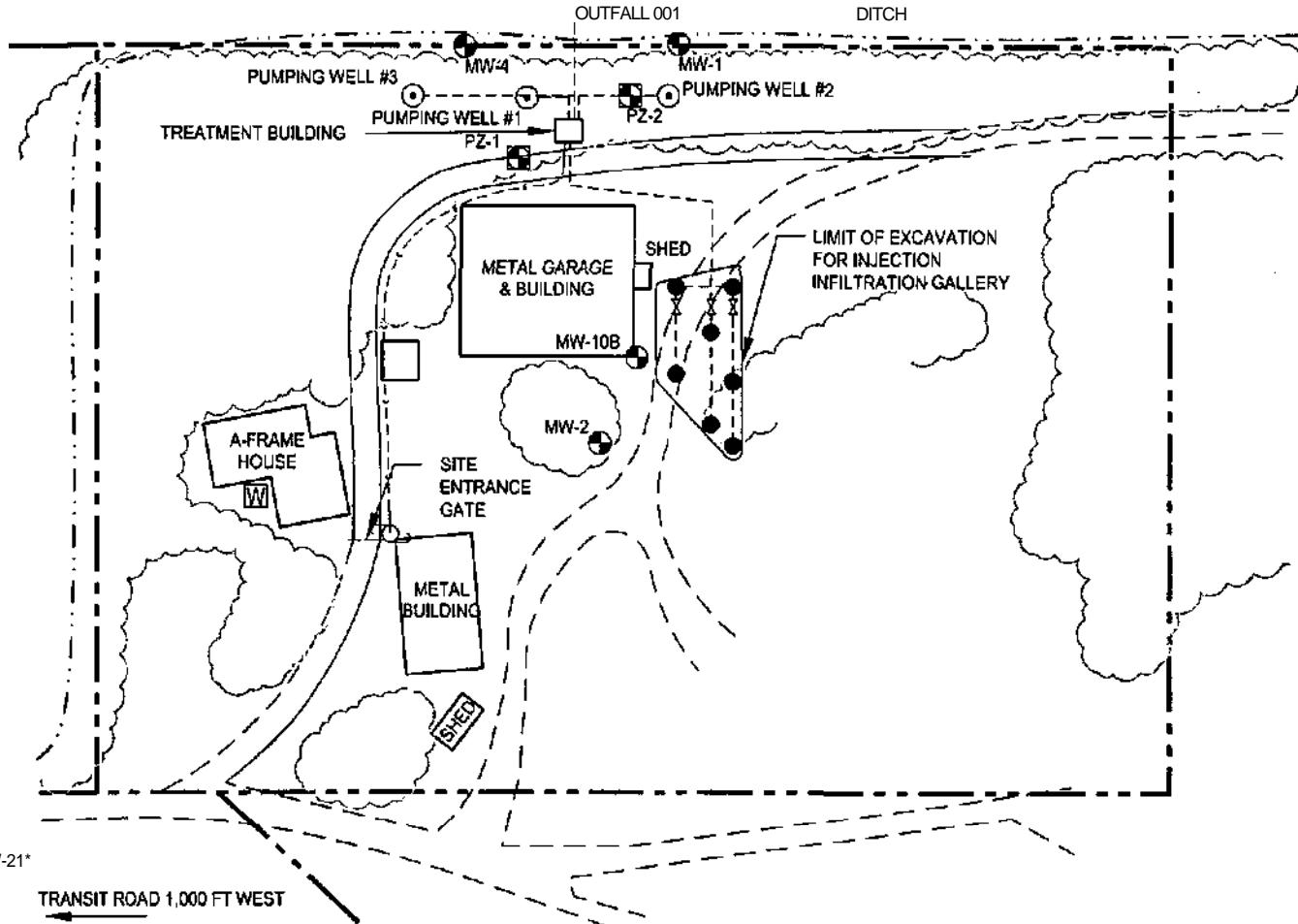
NA= Not Available

**Table 6**  
**Schedule of Sampling and Analysis for 2007**  
**Byron Barrel & Drum Site**  
**Byron, New York**

<b>Month</b>	<b>Event</b>	<b>Monitoring Well to be Sampled</b>	<b>Constituents to be Analyzed</b>
March 2007	First Quarter 2007 Monitoring Event	MW-1 MW-4 MW-10B MW-21 MW-Residential	Five VOCs: 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,1,1-Trichloroethane, Trichloroethene, Vinyl Chloride
June 2007	Second Quarter 2007 Monitoring Event	MW-1 and MW-4	Five VOCs: 1,1-Dichloroethane, 1,1 -Dichloroethylene, 1,1,1-Trichloroethane, Trichloroethene, Vinyl Chloride
September 2007	Third Quarter 2007 Monitoring Event	MW-1 and MW-4 MW-10B	Five VOCs: 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,1,1-Trichloroethane, Trichloroethene, Vinyl Chloride
December 2007	Fourth Quarter 2007 Monitoring Event	MW-1 and MW-4	Five VOCs: 1,1-Dichloroethane, 1,1 -Dichloroethylene, 1,1,1-Trichloroethane, Trichloroethene, Vinyl Chloride

## FIGURES

k  
N



LEGEND

® MONITORING WELL

FORMER RESIDENTIAL WELL

PIEZOMETER WELL

INJECTION GALLERY PIEZOMETER WELL

INJECTION GALLERY VALVE,

© PUMPING WELL

UTILITY POLE

PROPERTY LINE

FENCE

TREELINE

NEW GRAVEL ROAD

PRE-EXISTING GRAVEL ROAD

DITCH

ELECTRIC & PHONE LINE

REINJECTION PIPING

SITE PLAN

BYRON BARREL AND DRUM  
AREA 2 SITE  
BYRON, NY

ECOR Solutions

1075 Andrew Drive, Suite I, West Chester, PA 19380

SCALE IN FEET

DATE

FIGURE

1



NOTE: MW-21 IS 200 FEET WEST OF PROPERTY LINE  
SOURCE: ERM C\*O SERVICES

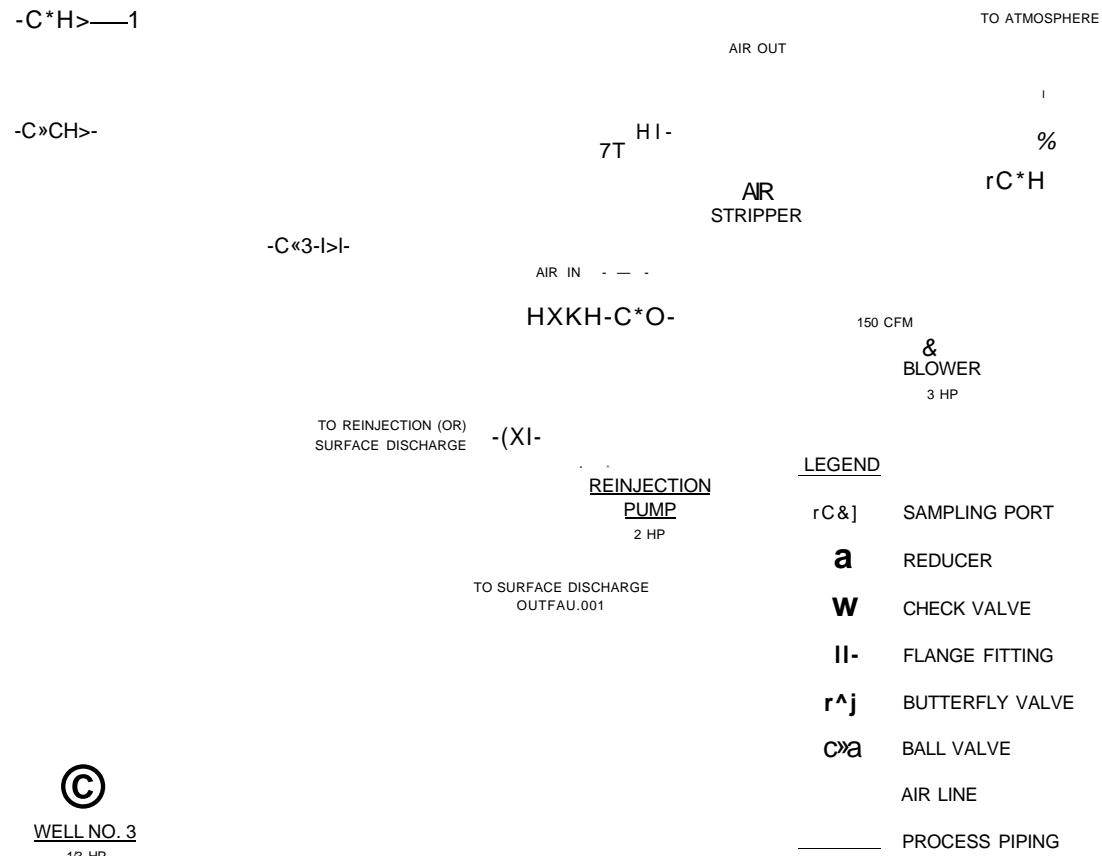
80

07-25-06

**(C)**  
WELL NO. 1  
1/3 HP

**0**  
WELL NO. 2  
1/3 HP

**(C)**  
WELL NO. 3  
1/3 HP



GROUND WATER TREATMENT SYSTEM  
FLOW DIAGRAM  
BYRON BARREL AND DRUM  
AREA 2 SITE  
BYRON, NY

ECOR Solutions  
1075 Andrew Drive, Suite I, West Chester, PA 19380

SCALE IN FEET

DATE

FIGURE

80

09-02-05

2



Figure 3  
Byron Barrel and Drum Site  
Influent Concentration (Total VOCs) Vs. Time

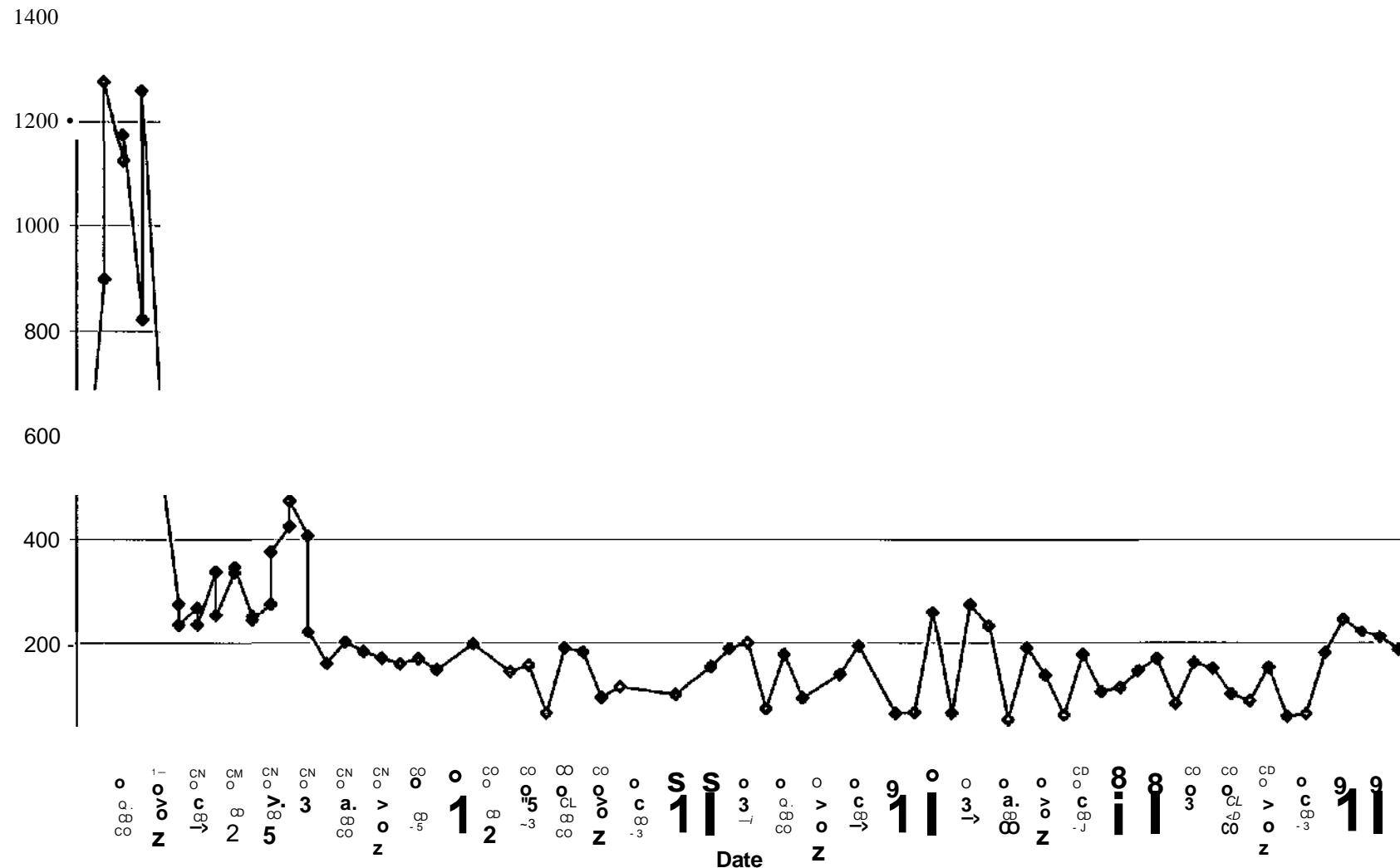
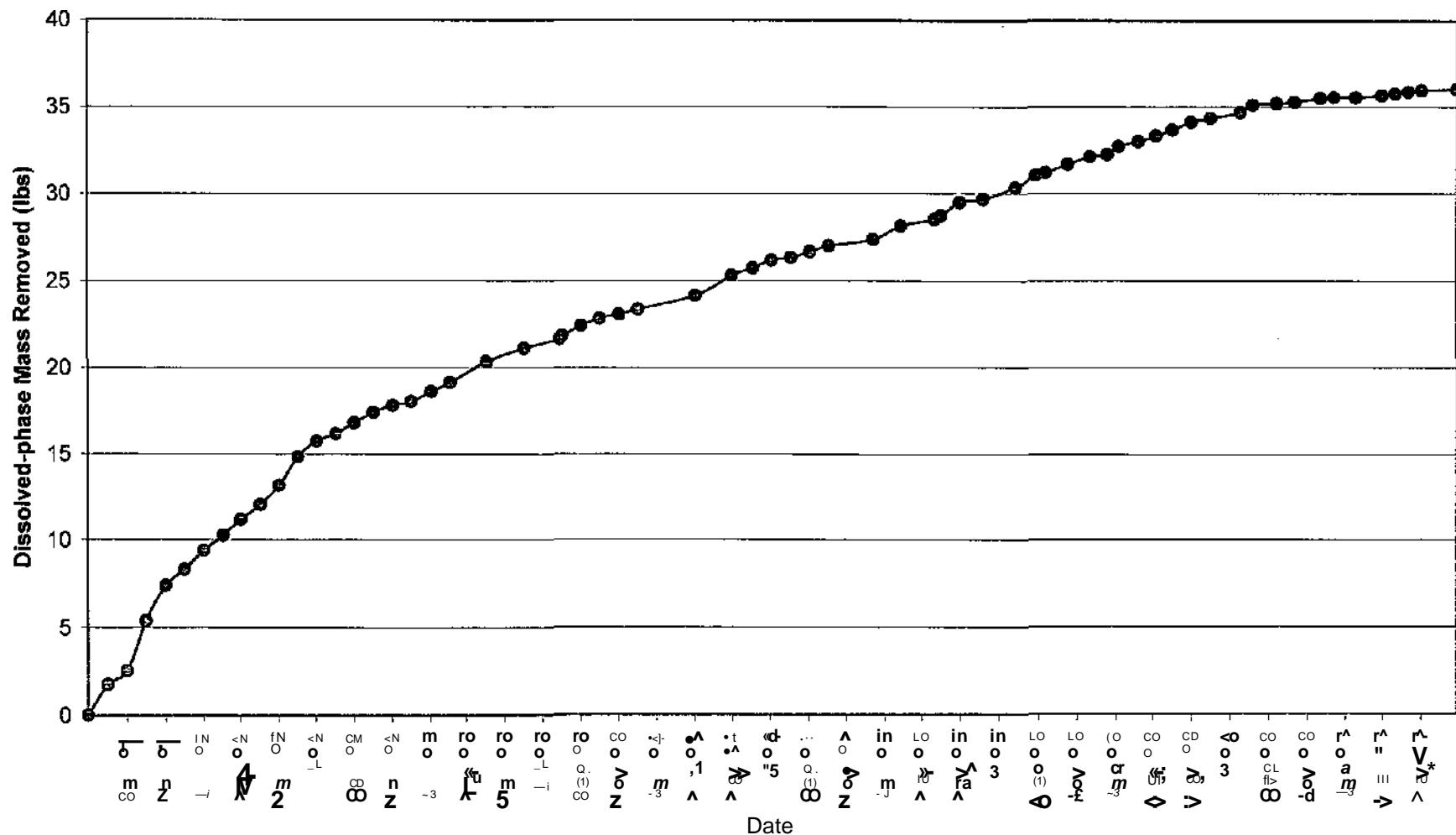
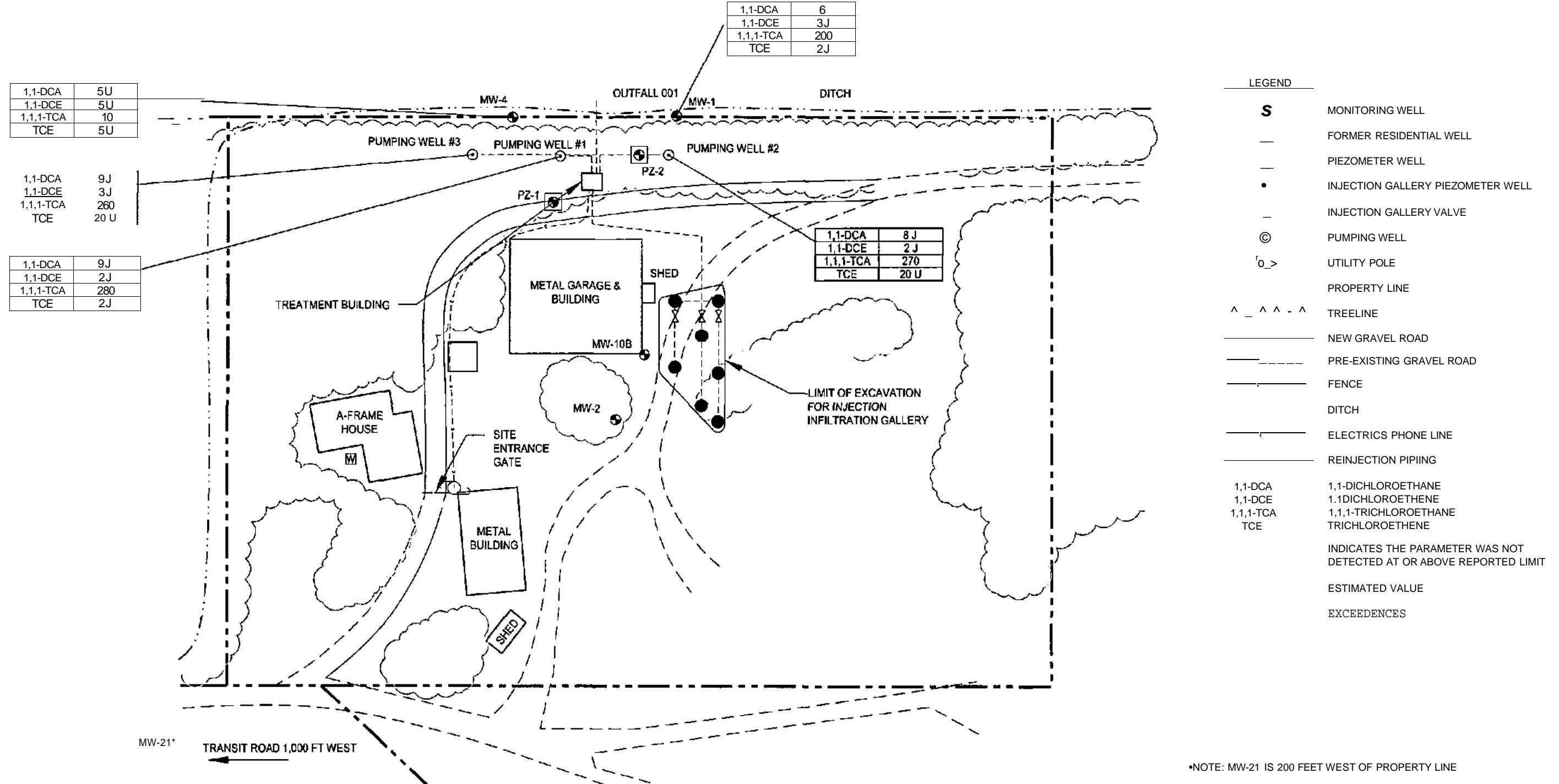


Figure 4  
Byron Barrel and Drum Site  
Cumulative Dissolved-phase Mass Removed (Total VOCs)





GROUNDWATER QUALITY MAP  
16 JUNE 2007  
BYRON BARREL AND DRUM  
AREA 2 SITE  
BYRON, NY

ECOR Solutions  
1075 Andrew Drive, Suite I, West Chester, PA 19380

SCALE IN FEET DATE FIGURE  
60 07-24-07 5 ECOR Solutions, Inc.

**APPENDIX A**  
Field Notes

**ECOR Solutions, Inc.**  
**Byron Barrel & Drum Site**  
**Groundwater Elevations**

**Operator:**

Date: **6-iH-o-)**

<b>Pumping Wells</b>	TOC		GW		<b>WC.ft.</b>
	D	T W	Elevation	Elevation	
PW-1	W>		642.82	619.31	"
PW-2	4-1 Z		641.34	6ZL-62-	"
PW-3	S'-iV		641.11	asr. 93	-

<b>Monitoring Wells</b>					
MW-1	S'lo	639.63	£39.33	1 ,61	£.2t
MW-2	.20	646.36	6is-.tc	S.0O	3>8£
MW-4	H.^o	638.56	£\$y-o&	lso	7. 6o
MW-1 OB	<n	644.44	Cv-'t	Zotf-	tt-°y
MW-21	\$£f	642.52	£ZH>VJ	91*1	/Lie
Residential	t^.?i	650.78	r3y. ?y	35. iC	f<?<2~Z

<b>Piezometers</b>					
PZ-1	I S A	643.11	f3S,f7	9-%ol	/4-</0
PZ-2	-7-3-2-	642.39	63S.07	37.36	t?.?y

**ECOR Solutions, Inc.**  
**Byron Barrel & Drum Site**  
**Field Sampling Record Form**

**Site:** Byron Barrel and Drum

Date: £-M'<P

**Job #:** 01501.002

**Sample ID:** /nv- / - f Set\*/-?\*\*

**Well ID:** /n\*t/-/

Time onsite: Time Offsite:

**Samplers:** /lftt-U /?./\*-\*\*•

Depth of Well (from top of casing) ft£f

Time: i3Y\*>

Static water level (from top of casing) 5\$Q

Time: WSo

**Purging Method:**

Dedicated bladder pump, QED SamplePro MP-SP-4C

---

**Field Tests:**

Time	Flowrate (mL/min) / purge volume (ml)	Temp. °C	ORP mV	PH 3rd. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
}3°#	3e? /nt/fAt*>	IS.&	J	1./3	OS	1-01	lie
{V&		I\$.f	(O	Uo	O^	I>OST	13°
I3t*		IH-1	ID	-7.0&	OS	1*8*-	7/7
13 if		IV-S	/o	1.0 6	OS	I.Bo	1/3
I3>2°		IH.X	IO	I.oH	OJ	\ni	-J/6
I3Zf		MS	?	7*0^	O^	i-->s-	111
III*	\ s	H.i	7	7,02.	OS	i.ix	HI
			-				

**Sampling:**

Time of Sample Collectio	/3 3 <sup>0</sup>		
<i>Collection Method:</i>		<i>Analyses:</i>	<i>Analytical Method:</i>
X Dedicated pump		X VOCs	8260 X 503 Other:

**Observations:**

Weather/Temperature: 50\*&gt; 73 '

Sample Description: \_\_\_\_\_

Free Product?	Yes	No	<u>Descript:</u> _____
Sheen?	Yes	No	<u>Descript.:</u> _____
Odor?	Yes	No	<u>Descript.:</u> _____

**Comments:**

f,el\*      fi\*f      7Ahir,,      AT      /nw f

ECOR Solutions, Inc.  
Byron Barrel & Drum Site  
Field Sampling Record Form

Site: Byron Barrel and Drum

Date: ^"-/y. 61

**Job #:** 01501.002

**Sample ID:** /\*|t\*>~'~1/qu-zx-

**WellID:** A\uj' L/

Time onsite: Time Offsite:

**Samplers:** /{ti+4-I\* r 7^ /4c\*>

3YT W2f

Depth of Well (from top of casing) 1/. S Z

Time: i ^ f

Static water level (from top of casing) V'so

Time: /JY3

**Purging Method:**

Dedicated bladder pump, QED SamplePro MP-SP-4C

---

Field Tests:

Time	Flowrate (mL/min) / purge volume (mL)	Temp. °C	ORP mV	PH 3rd. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
t3Sf	<b>fo/I*!**</b>	<u>I</u> 8	<b>6</b>	<u>1,12</u>	<u>0»£</u>	<u>nt</u>	<b>7/7</b>
I^co		<u>IS.*/</u>	&	<u>113</u>	<b>OS</b>	<u>1.1 o</u>	<b>lis-</b>
Ifof		<u>IS J</u>	<b>e</b>	<u>I:if</u>	<b>frf</b>	<u></u> . 66	<b>I/o</b>
Iito		<u>isn</u>	<b>e</b>	<u>n.nc</u>	<u>OrS'</u>	<u>f ^ I</u>	<b>not</b>
IHX		<u>ISX</u>	<u>7</u>	<u>1-If</u>	<u>o*f</u>	<u>1-66</u>	<b>lo*/</b>
H**	<b>n</b>	<u>&amp;&lt;~&gt;</u>	<b>?</b>	<u>7&lt;?r</u>	<u>tf.jT"</u>	<u>l.E&amp;</u>	<b>los-</b>
IH*\$	<b>7</b>	<u>IS. 7</u>	<b>7</b>	<b>?r</b>	<u>D.f</u>	<u>l.Ef</u>	<b>loS~</b>

**Sampling:**

Time of Sample Collection	<i>IH2f</i>		
<i>Collection Method:</i>		<i>Analyses:</i>	<i>Analytical Method:</i>
X Dedicated pump		X VOCs	8260 X 503 Other:

**Observations:**Weather/Temperature: *fa -7S\**

Sample Description:	<i>cir*^</i>
---------------------	--------------

Free Product?	Yes	No <b>X</b>	Descript.: _____
Sheen?	Yes	No <b>X</b>	Descript.: _____
Odor?	Yes	No	Descript.: _____

**Comments:***fV/ptf SJ+/+  $\tau^A /c/T^A A^A$* *M<sup>A</sup>-y*

**ECOR Solutions, Inc.**  
**Byron Barrel & Drum Site**  
**Pumping Well Field Chemistry Parameters**

Parameter Units	Time	Temp. °C	ORP mV	PH Std. Units	TDS	DO mg/L	Spec. Cond. mS/cm
PW-1/GwS"	1Hio	10.t	2	737	q/H	111	6«l
PW-2/GW^	im*	10-0	b	1.M5	•In	3.MI	6 ^
pw-3/Gw2_r"	1H/Q	10-\	Q	nVi	L2I	6.^0	6oC

Note: Flow through cell was calibrated for all chemistry parameters prior to gauging.

**APPENDIX B**  
**Data Validation Report**

**Project:** Byron Barrel and Drum Site  
**Laboratory:** Severn Trent Laboratories  
**Sample Delivery Group:** A07-6684/A07-7215  
**Fraction:** Organic  
**Matrix:** Aqueous  
**Report Date:** 9/18/2007

This analytical quality assurance report is based upon a review of analytical data generated for groundwater samples. The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1. All analyses were performed by Severn Trent Laboratories.

The samples were analyzed for volatile organic compounds and total suspended solids. The sample analyses were performed in accordance with the procedures outlined in the method referenced at the end of this report. The data deliverables provided by the laboratory were New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category B format.

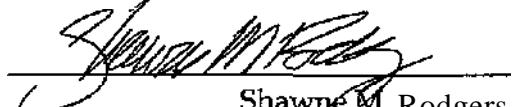
All sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. Results have been validated or qualified according to Region H "Validating Volatile Organic Compounds by SW-846 Method 8260B", SOP HW-24, Revision 1, June 1999. The parameters presented on the following page were evaluated.

- Data Completeness
  - Chain of Custody Documentation
  - Holding Times
  - Instrument Performance
  - Initial and Continuing Calibrations
  - Laboratory and Field Blank Analysis Results
  - Surrogate Compound Recoveries
  - Matrix Spike/Matrix Spike Duplicate Recoveries and Reproducibility
  - Field Duplicate Analysis Results
  - Laboratory Control Sample Results
  - Internal Standard Performance
  - Qualitative Identification
  - Quantitation/Reporting Limits
- 

X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By:



---

Shawne M. Rodgers  
President

Woh^y

Date

**1.0      *DATA COMPLETENESS***

The laboratory incorrectly logged sample DUP-9/GW-22 in as DUP-6/GW-22. The sample identification has been manually corrected on the laboratory forms.

**2.0      *CHAIN OF CUSTODY DOCUMENTATION***

The chain of custody documentation was complete.

**3.0      *HOLDWGTIMES***

The holding times were met for all analyses.

**4.0      *INSTRUMENT PERFORMANCE***

All criteria were met. No qualifiers were applied.

**5.0      *INITIAL AND CONTINUING CALIBRATIONS***

All criteria were met. No qualifiers were applied.

**6.0      *LABORATORY AND FIELD BLANK ANALYSIS RESULTS***

The positive methylene chloride result reported for sample INF-7S/GW is qualitatively invalid due to the presence of this compound in associated laboratory method blank. USEPA protocol requires positive results for common contaminants, such as methylene chloride, that are less than or equal to ten times the associated blank contamination level, to be considered qualitatively invalid. The result has been replaced by the quantitation limit.

**7.0      *SURROGATE COMPOUNDS***

All criteria were met. No qualifiers were applied.

**8.0      *MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND REPRODUCIBILITY***

All criteria were met. No qualifiers were applied.

**9.0      *FIELD DUPLICATE RESULTS***

Duplicate samples MW-1-9/GW-22 and DUP-9/GW-22 were submitted to the laboratory to evaluate sampling and analytical precision for those organic compounds determined to be present. Results for these duplicate samples are presented in Table 2. Precision is evaluated by calculating the relative percent difference (%RPD) between duplicate pair results. There are no USEPA-established acceptance criteria for field duplicate samples. EDQ uses an internal acceptance criteria of twenty percent for volatile detected compounds to evaluate field duplicate samples.

**10.0     *LABORATORY CONTROL SAMPLE RESULTS***

All criteria were met. No qualifiers were applied.

**11.0     *INTERNAL STANDARD PERFORMANCE***

All criteria were met. No qualifiers were applied.

**12.0     *QUALITATIVE IDENTIFICATION***

All criteria were met. No qualifiers were applied.

The following samples were re-analyzed at dilutions for volatile organic compounds. The reanalyses were performed because the responses for volatile compounds exceeded the linear range of the GC/MS instrument for the initial undiluted analyses. The affected results were reported from the dilution analyses. All other results have been reported from the initial analyses.

Sample	Dilution Factor	Compound reported from Dilution
LNF-78/GW	2.0	1,1/1 "Trichloroethane
DUP-9/GW-22	4.0	1,1,1-Trichloroethane
MW-1-9/GW-22	4.0	1,1,1 -Trichloroethane
PW-1-9/GW-22	4.0	- 1,1,1-Trichloroethane

The samples presented below were analyzed at dilutions for volatile organic compounds. The dilution analyses were performed because of the suspected presence of high levels of target compounds and/or interferences. Quantitation limits are elevated by the dilution factor for these samples for target compounds that were not detected. The elevated quantitation limits should be noted when assessing the data for these samples.

Sample	Dilution Factor
PW-1-9/GW-22	2.0
PW-2-9/GW-22	2.0
PW-3-9/GW-22	4.0

As required by USEPA protocol, all compounds, which were qualitatively identified at concentrations below their respective quantitation limits (QLs), have been marked with "J" qualifiers to indicate that they are quantitative estimates.

## *METHODOLOGY REFERENCES*

Analysis	Reference
Volatile Organic Compounds	Method 8260B, "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, HA, and HI, June 1997
Total Suspended Solids	Method 160.2, "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983, and revisions

**Table 1 Samples For Data Validation Review**  
**Byron Barrel and Drum Site**  
**Groundwater Samples Collected June 2007**  
**Severn Trent Laboratories Sample Delivery Group A07-6684**

SAMPLE ID.	LABORATORY I.D	DATE COLLECTED	MATRIX	ANALYSES PERFORMED	
				VOC	TSS
MW-1-9/GW-22	A76684G	1	6/14/2007	Groundwater	X
MW-4-9/GW-22	A766840	2	6/14/2007	Groundwater	X
DUP-9/GW-22	A766840	3	6/14/2007	Groundwater	X
PW-1-9/GW-22	A766840	4	6/14/2007	Groundwater	X X
FW-2-9/GW-22	A766840	5	6/14/2007	Groundwater	X X
PW-3-9/GW-22	A766840	6	6/14/2007	Trip Blank	X X
Trip Blank	A766840	8	6/14/2007	Groundwater	X

VOC: Volatile Organic Compounds

TSS: Total Suspended Solids

Table 1 Samples For Data Validation Review  
Byron Barrel and Drum Site  
Groundwater Samples Collected June 2007  
Severn Trent Laboratories Sample Delivery Group A07-7215

SAMPLE ID.	LABORATORY I.D	DATE COLLECTED	MATRIX	ANALYSES PERFORMED	
				VOC	
EFF-46/GW	A772150	1	6/27/2007	Groundwater	X
INF-78/GW	A772150	2	6/27/2007	Groundwater	X
Temp Blank	A772150	3	6/27/2007	Trip Blank	X

VOC: Volatile Organic Compounds

**Table 2 Field Duplicate Sample Results for Organic Analyses**  
**Duplicate Samples MW-1-9/GW-22 and DUP-9/GW-22**

	MW-1-9/GW-22 (Hg/L)	DUP-9/GW-22	RPD	Comments
1,1-Dichloroethane	6	6	0	
1,1-Dichloroethene	3	J	4	J
1,1,1-Trichloroethane	200		220	10
Trichloroethane	2	J	2	J
				0

ECOR SOLUTIONS  
ECOR SQLUITCNS - BYRCN BARREL, & EftJM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
ANALYSIS DATA SHEET

?

Client No.

DUP<sup>^</sup> / GW-22Lab Name: STL Buffalo

Contract:

*mi*Lab Code: REGNY Case No.: \_\_\_\_\_ SAS No.:SPG No. : 061407 G-tf-&QJMatrix: (soil/water) WATERLab Sample ID: A7668403Sample wt/vol: 5.00 (g/irrL) MLLab File ID: R6698 .RR  
Date Samp/Recv: 06/14/2007 06/14/2007

Level: (lcw/msd) LCW

Date Analyzed: 06/21/2007

% Moisture: riot dec. \_\_\_\_\_ Heated Purge: N

Dilution Factor: 1.00GC Column: ZB-624 ID: 0.25 (nm)

Soil Extract Volurre: (uL) Soil Aliquot Volume: (uL)

## GCNEOTRATCN UNITS:

CAS NO.	GCMPOUND	(ug/L or ug/Kg)	U3/L	Q
75-34-3	1,1-Dichlorcethane	6		
75-35-4	1,1-Dichloroethene	4	J	
75-09-2	Methylene chloride	5	U	
108-88-3	Toluene	5	U	
71-55-6	1,1/1-Trichloroethane			
79-01-6	Trichloroethene	2		
75-01-4	Vinyl chloride	5	u	
71-43-2	Benzene	5	u	
1330-20-7	Total Xylenes	15	u	
108-90-7	Chlorobenzene	5	u	
79-00-5	1,1,2-Trichlaxethane	5	u	
107-06-2	1,2-Dichloroethane	5	u	
127-18-4	Tetrachloroethene	5	u	
67-66-3	Chloroform	5	u	
75-27-4	Bromodichloroethane	5	u	
124-48-1	DibronxiiIorortiethane	5	u	
78-93-3	2-Butanone	10	u	
56-23-5	Carbon Tetrachloride	5	u	
95-50-1	1^-Dichlorobenzene	5	u	
106-46-7	1,4-Dichlorobenzene	5	u	

^~£etc&lt;V jf^&lt;Wuh(W

A  
all 16/100)

ECQR SOLUTIONS  
ECOR SOLUITCNS - BYRON BARREL & DRUM SITE  
AQU03US ASP 2000/8260 - SELECT LIST-TABLE 5  
ANALYSIS DATA SHEET

Client No.

DUP-6/GW-22 EL

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case Kb.:

SAS No.:

SEGNO.: 061407Matrix: (soil/water) MATERLab Sample ID: A7668403DLSairple wt/vol: 5.00 (g/mL) MLLab File ID: R6709.RR

Level: (low/ned) LOW

Date Samp/Recv: 06/14/2007 06/14/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 06/21/2007GC Column: ZB-624 ID: 0.25 (mm)Dilution Factor: 4.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

aa^CEWIKATICW UNITS:

CAS NO.	CCMPOUND	(ug/L or ug/Kg)	UG/L
75-34-3	1,1-Dichloroethane	6	DJ
75-35-4	1,1-Dichloroethene	3	EG"
75-09-2	Methylene chloride	20	U
108-88-3	Toluene	20	
71-55-6	1,1,1-Trichloroethane	220	
79-01-6	Trichloroethene	2	DJ
75-01-4	Vinyl chloride	20	U
71-43-2	Benzene	20	u
1330-20-7	Total Xylenes	60	u
108-90-7	Chlorobenzene	20	u
79-00-5	1,1,2-Trichloroethane	20	u
107-06-2	1,2-Dichloroethane	20	u
127-18-4	Tetrachloroethene	20	u
67-66-3	Chloroform	20	u
75-27-4	Bromo dichloromethane	20	u
124-48-1	DIBIJIU:DCIIIOXUUfciiUclifci	20	u
78-93-3	2-Butanone	40	u
Sfi-ZVS	Carbon Tetrachloride	20	u
95-50-1	1,2-Dichlorobenzene	20	u
106-46-7	1,4-Dichlorobenzene	20	u

*Report*

#

ECQR somrroNs  
EXXR SOLUTIONS - BYRCN BARREL & DRUM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
ANALYSIS DATA SHEET

Client No.

MW-1-9/GW-22

Lab Narte: STL Buffalo

Contract:

Lab Code: RECNY Case No.: SAS No.:

SDG No.: 061407Matrix: (soil/water) WATERLab Sample ID: A7668401Sartple wt/vol: 5.00 (g/irL) ML

Lab File ID: R6678.RR

Level: (low/ired) LOT

Date Samp/Recv: 06/14/2007 06/14/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 06/20/2007GC Column: ZB-624 ID: 0.25 <mm>Dilution Factor: 1.00

Soil Extract Volute: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CCWCEKTOATION UNITS: (vp/h or ug/Kfcr)		Q
		U3/L		
75-34-3	1,1-Dichloroethane	6		
75-35-4	1,1-Dichloroethene	3	J	
75-09-2	Methylene chloride	5	U	
108-88-3	Toluene	5	U	
71-55-6	1,1,1-Trichloroethane			
79-01-6	Trichloroethene	2	J	
75-01-4	Vinyl chloride	5	u	
71-43-2	Benzene	5	u	
1330-20-7	Total Xylenes	15	u	
108-90-7	Chlorobenzene	5	u	
79-00-5	1,1,2-Trichloroethane	5	u	
107-06-2	1,2-Dichloroethane	5	u	
127-18-4	Tetrachloroethene	5	u	
67-66-3	Chloroform	5	u	
75-27-4	BranodiciKlororethane	5	u	
124-48-1	Dibromoноchloronithane	5	u	
78-93-3	2-Butanone	10	u	
56-23-5	Carbon Tetrachloride	5	u	
95-50-1	1,2-Dichlorobenzene	5	u	
106-46-7	1,4-Dichlorobenzene	5	u	

*\* Report from AlutiCPI*

ECOR SOLUTIONS  
ECOR SOLUTIONS - BYRON BARREL & DRUM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
ANALYSIS DATA SHEET

Client No. \_\_\_\_\_

MW-1-9/GW-22 DL

Lab Name: STL Buffalo

Contract: \_\_\_\_\_

Lab Code: RECNY Case No.: \_\_\_\_\_

SAS No.: \_\_\_\_\_

SDG No.: 061407Matrix: (soil/water) WATERlab Sample ID: A7668401DLSample wt/vol: 5.00 (g/mL) MLlab File ID: R6696.RR

Level: (low/ned) LOT

Date Sarrp/Recv: 06/14/2007 06/14/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 06/21/2007GC Colurtn: ZB-624 ID: 0.25 (im0Dilution Factor: 4.00

Soil Extract Volume: &lt;uL)

Soil Aliquot Volume: (uL)

## CCNCENTRATiAUNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L
---------	----------	-----------------	------

75-34-3	1,1-Dichloroethane	6	DJ
75-35-4	1,1-Dichloroethene	4	DJ
75-09-2	Methylene chloride	20	U
108-88-3	Toluene	20	U
71-55-6	1,1,1-Trichloroethane	200	
79-01-6	Trichlorcethene	20	u
75-01-4	Vinyl chloride	20	u
71-43-2	Benzene	20	u
1330-20-7	Total Xylenes	60	u
108-90-7	Chlorobenzene	20	u
79-00-5	1,1,2-Trichlorcethane	20	u
107-06-2	1,2-Dichloroethane	20	u
127-18-4	Tetrachloroethene	20	u
67-66-3	Chloroform	20	u
75-27-4	Brcnrxiiicnloromethane	20	u
124-48-1	DihromochlororrEthane	20	u
78-93-3	2-Butanone	40	u
56-23-5	Carbon Tetrachloride	20	u
95-50-1	1,2-Dichlorobenzene	20	u
106-46-7	1,4-Dichlorobenzene	20	u

*fi!\*eflA*

ECDR SOLUTIONS  
E03R SOLUTIONS - BXRCN BARREL & DRUM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
ANALYSIS DATA SHEET

Client No.

MW-4-9/GW-22

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.:

SAS Kb.:

SD3 No.: 061407Matrix: (soil/water) WATERLab Sample ID: A7668402Sample wt/vol: 5.00 (g/mL) MLLab File ID: R6S95.RR

Level: (low/msd) LOW

Date Samp/Recv: 06/14/2007 06/14/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 06/21/2007GC Column: ZB-624 ID: 0.25 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_(uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	UG/L	
75-34-3	1,1-Dichloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
75-09-2	Methylene chloride	5	u
108-88-3	Toluene	5	u
71-55-6	1,1,1-Trichloroethane	10	
79-01-6	Trichloroethene	1	J
75-01-4	Vinyl chloride	5	u
71-43-2	Benzene	5	u
1330-20-7	Total Xylenes	15	u
108-90-7	Chlordbenzene	5	u
79-00-5	1,1,2-Trichloroethane	5	u
107-06-2	1,2-Dichloroethane	5	u
127-18-4	Tetrachloroethene	5	u
67-66-3	Chloroform	5	u
75-27-4	BrcmodichloronEthane	5	u
124-48-1	Dibrcood^lorCTTEthane	5	u
78-93-3	2-Butanone	10	u
56-23-5	Carbon Tetrachloride	5	u
95-50-1	1,2-Dichlorobenzene	5	u
10S-46-7	1,4-Dicnlorobenzene •	5	u

ECOR SOLUTIONS  
ECOR SOLUTIONS - EKRON BARREL & DRUM SITE  
ACPEOJS ASP 2000/8260 - SELECT LIST - 8 OVIPDS  
ANALYSIS DATA SHEET

Client No.

FW-1/GW-22

Lab Name: STL Buffalo

Contract:

Lab Cede: RECNY Case No.: \_\_\_\_\_ SAS No.: SDGNb.: 061407Matrix: (soil/water) WATER Lab Sample ID: A7668404Sample wt/vol: 5.00 (g/mL) ML Lab Pile ID: R6682.RRLevel: (low/med) LOW Date Sairp/Recv: 06/14/2007 06/14/2007% Moisture: not dec. \_\_\_\_\_ Heated Purge: N Date Analyzed: 06/20/2007GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 2.00

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ua/L or ua/Kg)	UG/L	Q
75-34-3	1,1-Dichloroethane		9	J
75-35-4	1,1-Dichloroethene		2	J
156-59-2	cis-1,2-Dichloroethene		10	U
75-09-2	Methylene chloride		10	u
108-88-3	Toluene		10	u
71-55-6	1,1,1-Trichloroethane		2 fv	&\$3
79-01-6	Trichloroethene		2	J
75-01-4	Vinyl chloride		10	U

*th Report f<Jfil Ailuiicm*

*SMR  
9/18/2007*

EOT SOLUTIONS  
ECCR SOLUTIONS - BYRCN BARREL & DKLM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST - 8 CMTOS  
ANALYSIS DATA SHEET

Client No.

PW-1/GW-22 DL

Lab Name: STL Buffalo Contract:Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: 061407Matrix: (soil/water) WATER Lab Sample TD: A7668404DLSample wt/vol: 5.00 (g/mL) ML Lab Pile ID: R6697.RRLevel: Clow/med LCW Date Samp/Recv: 06/14/2007 06/14/2007% Moisture: not dec. \_\_\_\_\_ Heated Purge: N Date Analyzed: 06/21/2007GC Column: ^-624 ID: 0.25 (irm) Dilution Factor: 4.00

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ . (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(uC/L or ug/Ka)	UG/L	Q
75-34-3	1,1-Dichloroethane		9	DJ
75-35-4	1,1-Dichloroethene		2	DJ
156-59-2	cis-1,2-Dichloroethene		20	U
75-09-2	Methylene chloride		20	U
108-88-3	Toluene		20	U
71-55-6	1,1,1-Trichloroethane		280	effe
79-01-6	Trichloroethene		20	U
75-01-4	Vinyl chloride		20	U

**X^k**


  
 SM  
 6/18/2007

## ECGR sauriasis

ECGR SOLUTIONS - BMEST BARREL & ERUM SITE  
 AQUECUS ASP 2000/8260 - SETSCT LIST - 8 CMEDS  
 ANALYSIS DATA SHEET

Client No.

PW-2/GW-22

Lab Name: STL Buffalo

Contract:

Lab Cede: KEQFT Case Kb.: \_\_\_\_\_ SAS No.:SDGNb. : 061407Matrix: (soil/water) WATERLab Sample ID: A7668405Sample wt/vol: 5.00 (g/ml) ML

Lab File ID: R6683.RR

Level: (low/med) LOWDate Samp/Recv: 06/14/2007 06/14/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 06/20/2007GC Column: ZB-624 ID: 0.25 (mm)Dilution Factor: 4.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

(ug/L or ug/Kg)

U3/L

Q

<u>75-34-3</u>	<u>1,1-Dichloroethane</u>	<u>8</u>	<u>J</u>
<u>75-35-4</u>	<u>-1,1-Dichloroethene</u>	<u>2</u>	<u>J</u>
<u>156-59-2</u>	<u>cis-1,2-Dichloroethene</u>	<u>20</u>	<u>U</u>
<u>75-09-2</u>	<u>Methylene chloride</u>	<u>20</u>	<u>U</u>
<u>108-88-3</u>	<u>Toluene</u>	<u>20</u>	<u>U</u>
<u>71-55-6</u>	<u>--1,1,1-Trichloroethane</u>	<u>270</u>	
<u>79-01-6</u>	<u>Trichloroethene</u>	<u>20</u>	<u>U</u>
<u>75-01-4</u>	<u>Vinyl chloride</u>	<u>20</u>	<u>U</u>

EOOR SOLUTIONS  
ECDR SOLUTIONS - BXRON BARREL & DRUM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST - 8 CMPDS  
ANALYSIS DATA SHEET

Client Mb.

PW-3/GW-22

Lab Name: STL Buffalo

Contract:

Lab Code: REQjy Case No.: \_\_\_\_\_ SAS No.:

SDG Nb.: 061407

Matrix: (soil/water) WATERLab Sample ID: A7668406Sample wt/vol: 5.00 (g/ml) MLLab File ID: R6684.RRLevel: (low/msd) LOWDate Samp/Recv: 06/14/2007 06/14/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 06/20/2007GC Column: ZB-624 ID: 0.25 (Tm)Dilution Factor: 4.00

Soil Extract Volute: (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

## O2KETRATION UNITS:

(ug/L or ug/l^a)

UG/L

Q

75-34-3	1,1-Dichloroethane	9	J
75-35-4	1,1-Dichloroethene	3	J
156-59-2	cis-1,2-Dichloroethene	20	V
75-09-2	Methylene chloride	20	V
108-88-3	Toluene	20	V
71-55-6	1,1,1-Trichloroethane	260	
79-01-6	Trichloroethene	20	V
75-01-4	Vinyl chloride	20	u

## ECQR SOLUTIONS

EOQR SOLUTIONS - BYRON BARREL & DRUM SITE  
 AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
 ANALYSIS DATA. SHEET

Client No.

Trip Blank

Lab Nams: STL Buffalo

Contract:

Lab Code: RBCMY Case Kb.: SAS No.: SD3NO.: 061407Matrix: (soil/water) WATER Lab Sample ID: A766B40BSample wt/vol: 5.00 (g/ml) ML Lab File ID: R6663.RRLevel: (low/med) LOW Date Sarrp/Recv: 06/14/2007 06/14/2007% Moisture: not dec. , Heated Purge: N Date Analyzed: 06/20/2007GC Column: ZB-624 ID: 0.25 (tm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	{ug/L or ug/Kg}	UG/L	Q
75-34-3	1,1-Dichloroethane	5	U	
75-35-4	1,1-Dichloroethene	5	U	
75-09-2	Methylene chloride	5	<b>u</b>	
108-88-3	Toluene	5	<b>u</b>	
71-55-6	1,1,1-Trichloroethane	5	<b>u</b>	
79-01-6	Trichloroethene	5	<b>u</b>	
75-01-4	Vinyl chloride	5	<b>u</b>	
71-43-2	Benzene	5	U	
1330-20-7	Total Xylenes	15	<b>u</b>	
108-90-7	Chlorobenzene	5	U	
79-00-5	1,1,2-Trichloroethane	5	<b>u</b>	
107-06-2	1,2-Dichloroethane	5	U	
127-18-4	Tetrachloroethene	5	<b>u</b>	
67-66-3	Chloroform	5	<b>u</b>	
75-27-4	BromoDichloromethane	5	<b>u</b>	
124-48-1	Dibromochloroethane	5	<b>u</b>	
78-93-3	2-Butanone	10	<b>u</b>	
56-23-5	Carbon Tetrachloride	5	<b>u</b>	
95-50-1	1,2-Dichloroethene	5	<b>u</b>	
106-46-7	1,4-Dichlorobenzene	5	<b>u</b>	

A

24/245

Ecor Solutions  
 Ecor Solutions - Byron Barrel & Drum Site  
 Wet Chemistry Analysis

Client Sample No.

EW-1/GW-22

Lab Name: STL Buffalo

Contract:

Lab Code: REQY Case No.:

SAS No.:

SDG No.: 051407

Ifetrix (soil/water) : WATERLab Sample ID: A7668404

% Solids: 0.0

Date Samp/Recv: 06/14/2007 06/14/2007

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Total Suspended Solids	M3/L	4.0	U			160.2	06/15/2007

Comments:

Ecor Solutions  
 Ecor Solutions - Byron Barrel & Drum Site  
 Wet Chemistry Analysis

Client Sample No.

FW-2/GW-22

Lab Name: STL Buffalo

Contract:

Lab Cede: RECNY

Case No.

SAS No.:

SDG No.: 061407

Matrix (soil/water): WATERLab Sample ID: A7668405

% Solids: 0.0

Date Samp/Recv: 06/14/2007 06/14/2007

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Total Suspended Solids	M3/L	4.0	U			160.2	06/15/2007

Ccctments:

*Shawn*

Ecor Solutions  
 Ecor Solutions - Byron Barrel & Drum Site  
 Wet Chemistry Analysis

Client Sample No.

PW-3/GW-22

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY

Case No.:

SAS No.:

SDG No.: 061407

Matrix (soil/water): WATERLab Sample ID: A7668406

% Solids:

0.0

Date Samp/Recv: 06/14/2007 06/14/2007

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Total Suspended Solids	MG/L	4.0	U			160.2	06/15/2007

Comments:



ECOR SOLUTIONS  
ECOR SOLUTIONS - BYRON BARREL & DRUM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
WATER SURROGATE RECOVERY

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY

Case No.:

SAS No.:

SDG No.: 061407

	client Sample ID	Lab Sample ID	BFB %REC	OCE %REC	TOL %REC							TOT CUT
1	DUP-6/GU-22	A7668403	107	114	98							0
Z	DUP-6/GW-22 DL	A7668403DL	101	100	94							0
3	MSB 70	A780969201	107	94	97							0
4	WSB71	A7B0970501	105	98	94							0
5	MU-1-9/GU-22	A766S401	99	106	92							0
6	MU-1-9/GU-22 DL	A7668401DL	103	109	95							0
7	NW-4-9/GW-22	A766840Z	99	106	93							0
8	HW-4-9/GW-22	A766640ZMS	102	101	91							0
9	KW-4-9/GU-22	A7668402SD	106	105	94							0
10	Trip Blank	A7668408	107	102	101							0
11	VBLK70	A7B0969202	105	98	98							0
12	VBLK71	A7B0970502	103	107	96							0
13	Volatile Holding Blk	A7668407	100	96	94							0

## QC LIMITS

BFB = p-Bromofluorobenene

( 73-120)

DCE = 1,2-Dichloroethane-D4

( 66-137)

TOL = Toluene-D8

( 71-126)

Colum to be used to flag recovery values  
 Values outside of contract required QC limits  
 Surrogates diluted out

EGOR SOLUTIONS  
ECOR SOLUTIONS - BYRGN BARREL & DRUM SITE  
UNISYS - METHOD 8260 - 8 COMPOUNDS  
ANALYSIS DATA SHEET

Client No.

Trip Blank

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.:

SDG No.:

Matrix: (soil/water) WATERLab Sample ID: A7721503Sample wt/vol: 5.00 (g/ml) MLLab File ID: G7021.RRLevel: (Icw/msd) LOWDate Samp/Recv: 06/27/2007 06/28/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 07/09/2007GC Column: ZB-624 ID: 0.18 (mm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
75-34-3	1,1-Dichlorcethane		5.0	U
75-35-4	1,1-Dichloroethene		5.0	U
156-59-2	cis-1,2-Dichloroethene		5.0	U
75-09-2	Methylene chloride		5.0	U
71-55-6	1,1A-Trichloroethane		5.0	U
79-01-6	Trichlorcethene		5.0	U
108-88-3	Toluene		5.0	U
75-01-4	Vinyl chloride		5.0	U

12/135

ECOR SOLOTCNS  
EQOR SOLUTIONS - BYRON BARREL & DRUM SITE  
UNISYS - METHOD 8260 - 8 CCMPOUNDS  
ANALYSIS DATA SHEET

Client No.

EFF-46/GW

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No. :

SDGNb.

Matrix: (soil/water) WATERLab Sample ID: A7721502Sample wt/vol: 5.00 (g/mL) MLLab File ID: G7020.RR

Level: (low/mad) LOW

Date Sairp/Recv: 06/27/2007 06/28/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 07/09/2007GC Column: ZB-624 ID: 0.18 (mO)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

(ug/L or ug/Kg)

T33/L

Q

<u>75-34-3</u>	1,1-Dichloroethane	5.0	U
<u>75-35-4</u> -r	1,1-Dichloroethene	5.0	U
<u>156-59-2</u>	cis-1^-Dichloroethene	5.0	U
<u>75-09-2</u>	Methylene chloride	5.0	O
<u>71-55-6</u>	1^A-Trichloroethane	5.0	U
<u>79-01-6</u>	Trichloroethene	5.0	U
<u>108-88-3</u>	Toluene	5.0	U
<u>75-01-4</u>	Vinyl chloride	5.0	<b>u</b>

SMK  
9/18/2007

ECCR SOLUTIONS  
ECCR SOLUTIONS - BYRON BARREL & DRUM SITE  
UNISYS - MEHKD 8260 - 8 COMPOUNDS  
ANALYSIS DATA SHEET

Client No.

INF-78/GW .

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_

SDGNo.: \_\_\_\_\_

Matrix: (soil/water) WATERLab Sample ID: A7721501Sample wt/vol: 5.00 (g/mL> MLLab File ID: G7Q19.RRLevel: (low/med) LCWDate Samp/Recv: 06/27/2007 06/28/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 07/09/2007GC Column: ZB-624 ID: 0.18 (im)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_(uL)

Soil Aliquot Volume: \_\_\_\_\_{uL}

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	fug/L or ua/Ka)	UG/L	/
75-34-3	1,1-Dichloroethane -	5.0	/	
75-35-4	1,1-Dichloroethene	0.88	/	J
156-59-2	cis-1,2-Dichloroethene	5.0	U	
75-09-2	Methylene chloride	5.0	U	^
71-55-6	1,1,1-Trichloroethane			
79-01-6	Trichloroethene	0.67	J	
108-88-3	Toluene	5.0	u	
75-01-4	Vinyl chloride	5.0	u	

A W4 WcLiU i(fn

*SARAH HENDERSON*

ECCR SOLUTIONS  
ECOR SQLUTICNS - BXRCN BARREL & DRUM SITE  
UNISYS - METB3D 8260 - 8 COMPOUNDS  
ANALYSIS DATA SHEET

Client No.,

INF-78/GW

Lab Name: STL Buffalo Contract:

Lab Code: RBCNY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDGNo.

Matrix: {soil/water} MATER Lab Sample ID: A7721B01DL

Sample wt/vol: 5.00 (g/ml) ML Lab Pile ID: G7055.RR

Level: (low/med) lfW Date Samp/Recv: 06/27/2007 06/26/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N Date Analyzed: 07/10/2007

GC Column: 2B-624 ID: 0.18 (nra) Dilution Factor: 2.00

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	CCMPCOND	CONCENTRATION UNITS: <ug/L or ug/Kg)		
		UG/L	Q	
75-34-3	1,1-Dichloroethane	5.5	DJ	
75-35-4	1,1-Dichloroethene	1.1	DJ	
156-59-2	cis-1,2-Dichloroethene	10	U	
75-09-2	Methylene chloride	1.1	DJ	
71-55-6	1,1,1-Trichloroethane	180	jy%	
79-01-6	Trichloroethene	10	U	
108-88-3	Toluene	10	U	
75-01-4	Vinyl chloride	10	u	

*Report**& h  
q/b*

*Chain of  
Custody Record*

STI-4124 (0901)

Client

ECoA

Address

City

Project Name and Location (State)

Contract/Purchase Order/Quote No.

Project Manager

£ S^

Telephone Number (Area Code/Fax Number)

Date  
t^'/y-o

Lab Number

SEVERN  
TRENT

Severn Trent Laboratories, Inc.

Chain of Custody Number  
325197  
Page. LO, ±

Site Contact

Lab Contact

Analysis (Attach list if  
more space is needed)

State Zip Code

Carrier/Waybill Number

Matrix

Containers S  
Preservatives

Special Instructions/  
Conditions of Receipt

Sample t.D. No. and Description  
(Containers for each sample may be combined on one line)

Date

Time

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Au+>'9~ ?SS%\*s-2A  
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/?u^~f /S^~-2X  
/\*H/-f /^W-ZA\*  
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Possible Hazard Identification

Q Non-Hazard D Flammable

Q Skin Irritant

D Poison B

C Unknown

Sample Disposal

O Return To Client

CD Disposal By Lab

D Archive For

(A fee may be assessed if samples are retained  
longer than 1 month)

Months

Turn Around Time Required

D 24 Hours D 48 Hours

Q 7 Days

• 14 Days

D 21 Days

D Other.

Date

IS60

"Received By

1. Relinquished By

Date

Time

2. Relinquished By

Date

Time

3. Relinquished By

Date

Time

2. Received By

3. Received By

Date/ I Time\_\_\_\_\_  
rJuUs 1 As rr>  
Date Time  
J/1

Comments

Q. & c^

DISTRIBUTION: WHITE - Returned to Client with Report: CANARY • Slays with the Sample: PINK • Field Copy

*Chain of  
Custody Record*

S E V E R N  
T R E N T  
Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client		Project Manager <i>/77#7T~L^pp</i>						Date / 1	Chain of Custody Number			
Address <i>al Severn &amp;?// sr z. FUO^~</i>		Telephone Number (Area Code)/Fax Number <i>m^JSgi- 7-SVo /#37 -7S77</i>						Lab*Number	<b>349544</b>			
City <i>PA</i>	State <i>PA</i>	Zip Code <i>^</i>	Site Contact		Lab Contact		Analysis (Attach list if more space is needed)			Special Instructions/ Conditions of Receipt		
Project Name and Ideation (State) <i>f</i>		Carrier/Waybill Number										
Contract/Purchase Order/Quote No. <i>JZZJJC- 7*/&amp;OS</i>		Matrix			Containers & Preservatives							
Sample I.D. No. and Description (Containers for each sample may be combined on one line) <i>£FF- %/CU&gt;</i>		Date <i>iM4n t</i>	Time <i>3&gt;'Wf\ /</i>	<i>i 3</i>	<i>I 9</i>	<b>1</b>	<i>S</i>	<i>I 55</i>				
<i>~l£fi?P &amp;*/&amp;&gt; 0)</i>		<i>6/?i/o7</i>	<i>3'SHfi, /</i>			<i>0.</i>						
<i>JjiA-7</i>												
<i>•Pi WJP - y./pf</i>												
<i>£&amp;= - g.zi</i>												
Possible Hazard Identification Q Non-Hazard    Q Flammable    D Skin Irritant    Q Poison 8 <u>13Unknown</u>					Sample Disposal • Return To Client    ^ - ^ • Disposal By Lab    • Archive For		(A fee may be assessed if samples are retained Months longer than 1 month)					
Turn Around Time Required D 24 Hours    D 48 Hours    %%7Days    • 14 Days    Q 21 Days i. Relinquished By    I J 7 T / F "					QC Requirements (Specify) • Other _____							
					Date <i>6/28/07</i>	Time	1. Received By <i>[Signature]</i>				Date <i>thttfltt</i>	Time <i>P'-oofi/h</i>
					Date	Time	2. Received By <i>[Signature]</i>				Date	Time
					Date	Time	3. Received By <i>[Signature]</i>					
Comments <b>d .0 0</b>												

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY • Stays with the Sample; PINK • Field Copy

ECOR SOLUTIONS  
ECOR SOLUTIONS - BYRON BARREL & DRUM SITE  
UNISYS - MEHKD 8260 - 8 COMPOUNDS  
ANALYSIS DATA SHEET

Client No.

EFF-46/GW

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.:

SAS No.:

SDG No.:

Matrix: (soil/water) WATERLab Sample ID: A7721502Sample wt/vol: 5.00 (g/mL) MLLab File ID: G7020.RRLevel: (low/med) DOWDate Samp/Recv: 06/27/2007 06/28/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 07/09/2007GC Column: ZB-624 ID: 0.18 (mm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CXM^KIRATION UNITS:

CAS NO.	COMPOUND	fua/L or ua/Kg	UG/L	Q
75-34-3	1,1-Dichloroethane		5.0	U
75-35-4	1,1-Dichloroethene		5.0	U
156-59-2	cis-1,2-Dichloroethene		5.0	U
75-09-2	Methylene chloride		5.0	U
71-55-6	1,1,1-Trichloroethane		5.0	U
79-01-6	Trichloroethene		5.0	U
108-88-3	Toluene		5.0	U
75-01-4	Vinyl chloride		5.0	U

**ECOR sauriasis**  
**ECOR SOLUTIONS - BYRON BARREL & DRLM SITE**  
**UNISYS - METEKD 8260 - 8 COMPOUNDS**  
**ANALYSIS DATA SHEBT**

Client No.

INF-78/GW

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.:

SDG No.:

Matrix: (soil/water) WATERLab Sample ID: A7721501Sample wt/vol: 5.00 (g/mL> MLLab File ID: G7019.RRLevel: (low/med) LCWDate Samp/Recv: 06/27/2007 06/28/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 07/09/2007GC Column: ZB-624 ID: 0.18 (mm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ &lt;uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
75-34-3	1,1-Dichloroethane •	5.0		
75-35-4	1,1-Dichloroethene	0.88	J	
156-59-2	cis-1,2-Dichloroethene	5.0	U	
75-09-2	Methylene chloride	5.0	U	
71-55-6	1,1,1-Trichloroethane	160	E	
79-01-6	Trichloroethene	0.67	J	
108-88-3	Toluene	5.0	U	
75-01-4	Vinyl chloride	5.0	<b>u</b>	

ECOR SOLUTIONS  
ECOR SOLUTIONS - BYRON BARREL & DRUM SITE  
UNISYS - METFCD 8260 - 8 COMPOUNDS  
ANALYSIS DATA SHEET

Client No.

INF-78/GW

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_

SAS No.:

SDGNb.:

Matrix: (soil/vater) MATERLab Sample ID: A772150LDLSample wt/vol: 5.00 (g/mL) MLLab File ID: G7055.RR

Level: (low/mid) LOT

Date Samp/Recv: 06/27/2007 06/28/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 07/10/2007GC Column: 2B-624 ID: 0.18 (mm)Dilution Factor: 2.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		
		(ug/L or ug/Kg)	UG/L.	Q
75-34-3	1,1-Dichloroethane	5.5	DJ	
75-35-4	1,1-Dichloroethene	1.1	DJ	
156-59-2	cis-1,2-Dichlorcethene	10	U	
75-09-2	Methylene chloride	1.1	DJ	
71-55-6	1,1,1-Trichloroethane	180	D	
79-01-6	Trichloroethene	10	U	
108-88-3	Toluene	10	U	
75-01-4	Vinyl chloride	10	U	

ECOR SOLUTIONS  
ECOR SOLUTIONS - BYRCN BARREL & DRUM SITE  
UNISYS - METHOD 8260 - 8 COMPOUNDS  
ANALYSIS DATA SHEET

Client No.

Lab Name: STL Buffalo

Contract:

Trip Blank

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_

SDGNb.: \_\_\_\_\_

Matrix: (soil/water) WATERLab Sample ID: A7721503Sample wt/vol: 5.00 (g/ml) MLLab File ID: G7021.RRLevel: (low/med) LOTDate Sarrp/Recv: 06/27/2007 06/28/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 07/09/2007GC Column: ZB-624 XD: 0.18 (mm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/LQ

<u>75-34-3</u>	<u>1,1-Dichloroethane</u>	<u>5.0</u>	<u>U</u>
<u>75-35-4</u>	<u>1,1-Dichloroethene</u>	<u>5.0</u>	<u>U</u>
<u>156-59-2</u>	<u>cis-1,2-Dichloroethene</u>	<u>5.0</u>	<u>U</u>
<u>75-09-2</u>	<u>Methylene chloride</u>	<u>5.0</u>	<u>U</u>
<u>71-55-6</u>	<u>1,1,1-Trichloroethane</u>	<u>5.0</u>	<u>U</u>
<u>79-01-6</u>	<u>Trichloroethene</u>	<u>5.0</u>	<u>U</u>
<u>108-88-3</u>	<u>Toluene</u>	<u>5.0</u>	<u>U</u>
<u>75-01-4</u>	<u>Vinyl chloride</u>	<u>5.0</u>	<u>U</u>

**Chain of  
Custody Record**

SEVERN  
TRENT  
**STL**  
Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client <i>frost. ^/u7JhAi.s . "ZA/C</i>			Project Manager <i>/MATT jUfP</i>						Date			Chain of Custody Number <i>325313</i>						
Address <i>?r^fzjcce_</i>			Telephone Number (Area Code)/Fax Number						Lab Number			Pay* <i>nf</i>						
City <i>P/9-</i>		State <i>If</i>	Zip Code <i>32^</i>	Site Contact		Lab Contact <i>6. r/scMtr/C-</i>		Analysis (Attach list if more space is needed)										
Project Name and Location (State)			Carrier AVaybill Number						Special Instructions/ Conditions of Receipt									
Contract/Purchase Order/Quote No.			Matrix			Containers & Preservatives												
Sample I.D. No. and Description (Containers (or each sample may be combined on one line))			Date <i>5j*j/7</i>	Time <i>3-^fK</i>	J <i>1</i>	i <i>3</i>	T <i>1</i>	x <i>S</i>	S <i>3</i>	11	2.							
<i>~H&gt;F~ 77 M^</i>																		
<i>--71i.'? /;&gt; J?/J/t_r.</i>			<i>S/JTSA?</i>															
<i>? // JJJF - 7 5-2.</i>																		
1																		
Possible Hazard Identification Q Non-Hazard D Flammable D Skin Irritant • Poison B Jefunknown					Sample	Disposal	^	^	S	^	fgR	may	De	assessci	,f	samples	are	retained
					• Return To Client	^Disposal By Lab	• Archive For					Months	longer than	1 month)				
Turn Around Time Required																		
• 24 Hours     • 48 Hours     07 Days     d M Days     • 21 Days 1. Relinquished By <i>l»</i> , <i>s?</i>					G Other _____	OC Requirements (Specify)												
					<i>1/23/07</i>	Date	Time	1. Received By <i>Dal J. Z.</i>								Date	,   Time	
								2. Received By <i>Dal J. Z.</i>										
								3. Received By <i>Dal J. Z.</i>										
Comments <i>2.0 °C</i>																		

ECOR SOLUTIONS  
ECOR SOLUTIONS - BYRON BARREL & DRUM SITE  
UNISYS - METHOD 8260 - 8 COMPOUNDS  
ANALYSIS DATA SHEET

Client No.

INF-77/GW

Lab Nams: STL Buffalo

Cbntract:

Lab Code: RECNY

Case No.: \_\_\_\_\_

SAS No.: \_\_\_\_\_

SCG No.: \_\_\_\_\_

Matrix: (soil/water) WATERLab Sample ID: A7562901Sairple wt/vol: 5.00 (g/mL) MLLab File ID: 01267.RRLevel: (low/med) LOWDate Samp/Recv: 05/23/2007 05/24/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 05/31/2007GC Column: ZB-624 ID: 0.25 (nm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volurre: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(uq/L or uq/Ka)	UG/L	Q
75-34-3	1,1-Dichlarcethane		8.7	
75-35-4	1,1-Dichloroethene		2.0	J
156-59-2	cis-1,2-Dichloroethene		5.0	U
75-09-2	Methylene chloride		5.0	U
71-55-6	1,1,1-Trichloroethane		270	E
79-01-6	Trichloroethene		1.2	J
108-88-3	Toluene		5.0	U
75-01-4	Vinyl chloride		5.0	U

EOOR SOLUTIONS  
ECOR SOLUTIONS - BYRON BARREL & DRUM SITE  
UNISYS - METHOD 8260 - 8 (XMPOUNDS  
ANALYSIS DATA SHEET

Client No.

TNF-77/GW DL

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.:

SAS No.:

SDG No.:

Matrix: (soil/water) HATERLab Sample ID: A7562901DLSample wt/vol: 5.00 (g/mL) ML

Lab File ID: N8071.RR

Level: (Icw/ired) LOT

Date Samp/Recv: 05/23/2007 05/24/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 05/31/2007GC Column: ZB-624 ID: 0.25 (mm)Dilution Factor: 5.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	<u>UG/L</u>	Q
75-34-3	1,1-Dichloroethane	6.6	DJ	
75-35-4	1,1-Dichloroethene	9.5	DJ	
156-59-2	cis-1,2-Dichloroethene	25	U	
75-09-2	Methylene chloride	25	U	
71-55-6	1,1,1-Trichloroethane	200	D	
79-01-6	Trichloroethene	25	U	
108-88-3	Toluene	25	U	
75-01-4	Vinyl chloride	25	U	

ECOR SOLUTIONS  
EOOR SOLUTIONS - BYRON BARREL & DRUM SITE  
UNISYS - METHOD 8260 - 8 COMPOUNDS  
ANALYSIS DATA SHEET

Client No.

Trip Blank

Lab Name: STL Buffalo Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix; (soil/water) WATER Lab Sample 3D: A7562902

Sample wt/vol: 5.00 (g/mL) ML, Lab File ID: 01251.RR

Level: (low/med) LOW Date Samp/Recv: 05/23/2007 05/24/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N Date Analyzed: 05/30/2007

GC Column: ZB-624 ID: 0.25 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		
		(ug/L or ug/Kg)	Q3/L	Q
75-34-3	1,1-Didilorcethane	5.0	U	
75-35-4	1,1-Dichloroethene	5.0	U	
156-59-2	cis-1 <sup>1</sup> -Dichloroethene	5.0	U	
75-09-2	Methylene chloride	5.0	U	
71-55-6	1,1,1-Trichloroetbane	5.0	U	
79-01-6	Trichloroethene	5.0	U	
108-88-3	Toluene	5.0	U	
75-01-4	Vinyl chloride	5.0	U	

Chain of  
Custody Record

STL-4124 (0901)

SEVERN  
TRENT  
Severn Trent Laboratories, Inc.

Client			Project Manager						Date / , <b>V/sJt-7</b>	Chain of Custody Number <b>325558</b>		
Address <b>£1 SouT/J fJ/qNsT. Z^&amp;M/L-</b>			Telephone Number (Area Code/Fax Number) <b>tyftl W1 - 7S70 / gs-i - IS/ 7</b>						Lab Number	Page of		
City <b>P/h</b>	State	Zip Code	Site Contact <b>A7/97T lk</b>	Lab Contact <b>ft. f/scJjEfZ</b>	Analysis (Attach list if more space is needed)							
Project Name and Location (Stately) <b>/JA/SL/S / &amp;/EAAJ A/-V</b>			Carrier/Waybill Number						Special Instructions/ Conditions of Receipt			
Contract/Purchase Order/Quote No/ /			Matrix									
Sample I.D. No. and Description (Containers for each sample may be combined on one line)			Date	Time	1	1	<b>1</b>	s	<b>§</b>	<b>5</b>	<b>3</b>	<b>11</b>
<b>zrv^~ y6 /&lt;5cJ</b>			<b>y&amp;fa</b>	<b>3'Mg^ /</b>			*					
<b>~7&amp;np fiUfJjts (oT^</b>			<b>VAs/t7</b>	v /								
PH. JT*JF- '7>4/												
Possible Hazard Identification						Sample Disposal						
D Non-Hazard	• Flammable	D Skin Irritant	D Poison B	^Unknown	D Return To Client	^Disposal By Lab	• Archive For	Months	(A leg may be assessed if samples are retained longer than 1 month)			
Turn Around Time Required						OC Requirements (Specify)						
• 24 Hours	D 48 Hours	&7Pays	D 14 Days	D 21 Days	D Other	Date <i>4/30/67</i>	Time	1. Received By <i>James P. Bell</i>	Date			
I. Relinquished by, <i>Steve Koller</i>												
2. Relinquished By	Date	Time	2. Received By					Date	Time			
3. Relinquished By	Date	Time	3. Received By					Date	Time			
Comments <i>2.0°C</i>												

*m,*  
Time

Time \_\_\_\_\_

ECOR SOLUTIONS  
 ECOR SOLUTIONS - BYRON BARREL & DRIM SITE  
 UNISYS - METHOD 8260 - 8 (XMPOUNDS  
 ANALYSIS DATA SHEET

Client No.,

INF-76/GW

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.: SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: A7459301

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: P8492.RR

Level: (low/med) LOW

Date Samp/Recv: 04/30/2007 05/01/2007

% IVBisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 05/04/2007

GC Column: ZB-624 ID: 0.25 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ <uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
75-34-3	1,1-Dichloroethane	8.2		
75-35-4	1,1-Dichloroethene	2.8	J	
156-59-2	cis-1,2-Dichloroethene	5.0	U	
75-09-2	Methylene chloride	5.0	U	
71-55-6	1,1,1-Trichloroethane	230	E	
79-01-6	Trichloroethene	1.1	J	
108-88-3	Toluene	5.0	U	
75-01-4	Vinyl chloride	5.0	U	

ECOR SOLUTIONS  
 ECOR SOLUTIONS - BYRON BARREL & DRUM SITE  
 UNISYS - METHOD 8260 - 8 COMPOUNDS  
 ANALYSIS DATA SHEET

Client No.,

TNF-76/GW DL

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: A7459301DL

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: P8508.RR

Level: (low/med) LOW

Date Samp/Recv: 04/30/2007 05/01/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 05/04/2007

GC Column: ZB-624 ID: 0.25 (ran)

Dilution Factor: 5.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (tL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
75-34-3	1,1-Dichloroethane	7.6	DJ	
75-35-4	1,1-Dichloroethene	2.5	DJ	
156-59-2	cis-1,2-Dichloroethene	25	U	
75-09-2	Methylene chloride	5.8	DJ	
71-55-6	1,1,1-Trichloroethane	210	D	
79-01-6	Trichloroethene	25	U	
108-88-3	Toluene	25	U	
75-01-4	Vinyl chloride	25	U	

ECDR SOLUTIONS  
 ECOR SOLUTIONS - BYRON BARREL & DRUM SITE  
 UNISYS - METHOD 8260 - 8 COMPOUNDS  
 ANALYSIS DATA SHEET

Client No.

TRIP BLANK

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No. :

SDG No. :

Matrix: (soil/water) WATER

Lab Sample ID: A7459302

Sample wt/vol: 5.00 (g/triL) ML

Lab File ID: P8493.RR

Level: (low/med) LOW

Date Samp/Recv: 04/30/2007 05/01/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 05/04/2007

GC Column: ZB-624 ID: 0.25 (nm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
75-34-3	1,1-Dichloroethane	5.0	U	
75-35-4	1,1-Dichloroethene	5.0	U	
156-59-2	cis-1,2-Dichloroethene	5.0	U	
75-09-2	Methylene chloride	5.0	U	
71-55-6	1,1,1-Trichloroethane	5.0	u	
79-01-6	Trichloroethene	5.0	u	
108-88-3	Toluene	5.0	u	
75-01-4	Vinyl chloride	5.0	u	

**KEY CLIENT MATRIX - COMMERCIAL**

October 1,2007

Key Client	KCM	Sales			Deltok Opportunities	Deltek Face-to Face	November Action Items
		Actual VTD	Budget	Goal			
BASF Corp	FM/SD	\$394k			Eastport ME -Win Carteret NJ - Win	9/27/07 - Ernest Behm - Kickoff Mtg Carteret NJ	1. Network with Florham Park NJ envir group 2. Work regional enq / env group Geiamar LA
CSX Transportation	EM				Rail Car Demo-\$2.4M		1. Face time with decision makers 2. Draft final proposal
Cycle Systems	EM/	\$305k			NC Plant Demo- \$2M	10/5/07 Neal Brenner Set up meeting wk of 10/15 with all Brenners	1. Build new friendship 2. Move forward with larger teaming NC 3. Mine joint venture
Douglas Development	SM/ EM	\$649k			Interbake Demo/ SR -\$1.3M Completed ATC Demo former Hess Bldg		1. Build on success at FD Bridge 2. Leverage success of FDB Court Paul Millstein. 3. Differentiate ECOR for Interbake project Richmond.
DuPont	TM/ SD/ MW	\$13k			Rail Car Demo-loss StineHaskell Fac#6 Demo-Win Spruance Pond Closure-\$t.5M Bid List Quals	9/26/07-M.Brill &T.Stammler regarding Invista work	1. Position ECOR to rec multi-yr pre-Qual pkq for future work 2. Meet with Ron T., Doug F.. Ed L. by 7/31 to assure ECOR qualifies for above 3. Meet with Pit Personnel at Parkersburg, Chamber Works & Edgmoor for CS & DD opps
ERM	BL/ AG/ SD	S423K			ERM Honeywell/FrontRoyal-\$200k	9/19/07-Mtgw/B.Bennett	1. Follow up w/Dave Dusing and Pete King on Pepsi. 2, Follow-up w/D.Reinke (Minneapolis)
Forest Cities	EM	S3.1M			Additional Soil Haul-ff-\$1.5M		1, Execute® Richmond 2. Golf with Val East 3, Sailing w/Amon, Wichmann, Richardson, May
GE	SD/	S53K			GE Newberg - Win GE Energy Hamilton NJ - Win GE Susquehanna PA - Win		1. Meet with Ed Jamison/Dawn Varrachi 2. Visit Pat Rabideau to leverage into GE. 3. Leverage MWH into GE
Jarden	PK	\$251 k			OwnOper.etc Toll dryer S2M		1. Contract coffee drying regional facility in Northampton PA 2. Win Dairy Farmers of America coffee opps 3. Develop similar coffee drying opps nationally.
MACTEC / Honeywell	TM/MM				ERM Honeywell/FrontRoyal-\$200k MACTEC-Sear SR-S1.6M	9/27/07-met w/D.Newton & M.Faith Plymouth PA 9/27/07-Mtg w/D.Guest SB.Worden	1. Visit Plymouth Mtg PA /Hamilton NJ offices - develop potential opportunities 2. Develop relationship map for both offices 3. Assure updated MSA in place
Nestle USA / Nestle Frozen Foods	PK	S1486M			Nestle-Jarden (Jul-Aug)-Win	9/25/07 Me w/J.Burrell in Gaffney to handle additional waste stream plant 9/5/07 met w/L.Brandlein discuss coffee drying	1. Extend contract or concide w/Jarden 5yr term 2. Expand Gaffney SC work beyond current contract. 3. Develop regional facility in SC for Nestle
URS	TM/SD				URS Andrews AFB DBR2 Landfill-\$4M	9/19/07-Mtg w/B.Slomeana. P.Dudko, O.Lamprerell. B.Murray URS bidders list	1. Complete 2 visits Ft Washington office for opps & build relationship map for this office 2, Complete visit to Herndon/Gaithersburg offices w/E King 3. Phone Bob Murphy to determine next steps w/Buffalo office

**KEY CLIENT MATRIX - FEDERAL**

October 1,2007

Key Client	KCM	Sales			Deltek Opportunities	Deltek Face-to Face (Name, date, objective)	November Action Items
		Actual YTD	Budget	Goal			
AM EC	EK						1. Meet w/L.Hambro about Cape opps 2. Monitor Navy opps that would benefit from anECOR/AMECteam  7/26/07-met w/J.Tarsavage regarding WERC contract  3
NAVFAC MidLant	EK/ SM/ PS	\$2.1 M			Calverton FireTraining-\$2M Philadelphia Navy Yd \$20K Bethoage Asbestos S350K		1. Continue trying to meet with Tim Reisch & Nina Johnson 2. Seek info on when Calverton FTA will be released *i. Meet with Philadelphia Navy personne about CS & O&M opps
NAVFAC Washington	EK/ SM/ PS	\$30K			NAS Patuxent Refuel-Win NASPR SPCC Closure, CTO 140. 141. 142 -S181k		1. Meet with Terri Regin NFESabou opps at NASPR & DESC related sites 2. Meet with Dietrice Shields-NAVFAC Wash SADBU  3. Meet with Bob Williams
TetraTech	EK/ PS						1. Meet with J.Trepanoski for teaming opps 2. Meet with Dave Brayack, 757-461-3824 about TetraTech NUS opportunities 3. Monitor I-LUBIZopps and NAVFAC e-solicitations for teaming opps

**Environmental  
Construction  
Operations &  
Remediation**

**January 7, 2008**

ECOR Solutions, Inc.  
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West Chester, PA 19380  
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Mr. George Jacob  
Remedial Project Manager  
Central New York Remediation Section  
Emergency & Remedial Response Division  
USEPA Region 2  
290 Broadway Avenue, 20th Floor  
New York, New York 10007-1866



Re: Third Quarter Report 2007  
Byron Barrel & Drum Site - Byron, New York

Dear Mr. Jacob,

Enclosed is the report for remedial activities at the Byron Barrel & Drum Area 2 Site for the Third Quarter of 2007. This report is submitted on behalf of the Potentially Responsible Parties, who are jointly fulfilling the requirements of the Administrative Order.

If you have any questions regarding this report, or any other questions regarding activities at the Site, please contact me at (484) 887-7510, extension 207.

Sincerely,  
ECOR Solutions, Inc.

*l^U^v^d^ rriX^I\_\_\_\_\_• / ^ i o 2008*

Matthew Lapp  
Project Engineer

cc: Mr. John Grathwol -NYSDEC  
Mr. Chris Rockwell - Garlock Sealing Technologies  
Mr. Terry Etter, P.E. - Unisys Corporation  
Mr. R. William Stephens - Stephens & Stephens, LLP (General Railway Signal)  
Keith Rapp - ECOR Solutions  
Project File - ECOR Solutions

*Final*  
**BYRON BARREL & DRUM SITE**  
QUARTERLY REPORT  
THIRD QUARTER 2007

Byron Barrel & Drum Site  
Area 2  
Byron, New York

January 7, 2008

Prepared for:  
BYRON BARREL & DRUM PRP GROUP

Prepared by:

ECOR Solutions, Inc.  
1075 Andrew Drive, Suite I  
West Chester, PA 19380

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- B. Data Validation Report

## **1.0 INTRODUCTION**

This quarterly report of remedial activities at the Byron Barrel & Drum, Area 2 Site (Site) presents data obtained through the third quarter 2007. A Site map is provided as **Figure 1**. The purpose of this report is to summarize and document ongoing remedial and monitoring activities at the Site conducted during the third calendar quarter of 2007. A brief description of the background of the Site is included, as well as, information regarding remedial activities and monitoring activities planned for the next quarter.

### **1.1 SITE BACKGROUND**

The Byron Barrel and Drum Area 2 Site is located at 6065 Transit Road, in Byron Township, Genesee County, NY. The Site is set back approximately 1,000 feet from the east side of Transit Road. In 1982, two drum disposal locations were discovered at the Site. New York State Department of Environmental Conservation's (NYSDEC) subsequent investigation led to the Site's inclusion on the Superfund National Priorities List (April 1984).

A remedial investigation and feasibility study (RI/FS) was conducted, which identified three areas of concern at the Site. Based on the findings of the RI, it was concluded that further action in two of the areas, Area 1 and Area 3, was not warranted. However, the RJ detected volatile organic compounds (VOCs); including trichloroethene (TCE) and 1,1,1-trichloroethane (TCA) in groundwater samples collected from locations in Area 2.

The remedial activities discussed in this report include only activities for Area 2. The selected remedy for Area 2 was in-situ soil flushing and groundwater pumping, treatment, and discharge. The Remedial Action construction was performed during the summer of 2001. The implementation of the Remedial Design included excavation and characterization of potentially impacted soil, and installation of additional two groundwater pumping wells (PWs) to supplement the one previously installed (PW-1), a ground water treatment system, and an infiltration gallery.

## 1.2 CHRONOLOGY OF EVENTS

The chronology of events regarding the investigation and remediation of the Site are summarized below:

<b>Event or Document</b>	<b>Date *</b>	<b>Notes- „ „; „ „&gt;</b>
Record of Decision (ROD)	Sept. 29, 1989	EPA/ROD/R02-89-089
Consent Decree	January 5, 1995	89-CV-748A Unisys Corp. and Garlock, Inc., settling defendants
Draft Explanation of Significant Differences	February, 1999	
Pre-Remedial Design Investigation and Remedial Design Report	December, 1999	
100 Percent Remedial Design Submittal	December, 1999	
Remedial Action Work Plan	September, 2001	
Construction Health and Safety Plan	December, 2001	
Quality Assurance Project Plan	June, 2001	
RA Construction Mobilization	June 11,2001	
RA Construction	June 11 -July 15,2001	
Initial UZ Soil Sampling Event	June 27,2001	
EPA RA Pre-Final Inspection	July 19,2001	
GWTS Performance Testing	July 29, 2001	
GWTS Startup Testing	August, 2001	Extended Startup & Testing
GWTS Continuous 0 & M	October 1,2001	Continuous Operation
EPA Interim Inspection	July 17,2002	
Second UZ Soil Sampling Event	August 14,2002	
RA Report	September, 2002	Final RA for Site Soils Interim RA for Site GW
EPA RA Approval	September, 2002	
Effluent Sampling reduced to Quarterly	September, 2002	
Discontinuation of SVOC Sampling	May 23, 2003	
EPA Site Inspection	May 2,2007	5 year review
GWTS Shut down for In-situ Bioremediation	September 12, 2007	
In-Situ Bioremediation Injection Event	September 18-20,2007	

## 2.0 *CONSTRUCTION OF REMEDIAL DESIGN*

Remediation system installation and activation was completed in July 2001. A Pre-Final inspection was performed on July 19, 2001. A few action items were itemized during the Pre-Final inspection as summarized in the First Quarter 2002 Quarterly Report (ECOR, May 2001) and the Remedial Action Report (ECOR, September 2002). The action items were completed during late 2001 and early 2002. An Interim Inspection was completed by the Environmental Protection Agency (EPA) on July 17, 2002. No major problems were discovered during the inspection.

The system operated intermittently until September 2001 due to initial system debugging during the start up phase. Since September 2001, the system has operated almost continuously. Use of the infiltration gallery was discontinued in August 2002 upon regulatory approval. During this reporting period (Third Quarter 2007), no significant activities occurred relative to the Remedial Design.

### **3.0 OPERATION OF GROUND WATER TREATMENT SYSTEM**

Groundwater recovered from the three pumping wells (PW-1, PW-2, and PW-3) is treated through one bag filter and an air stripper prior to discharge. The bag filter removes suspended solids greater than 50 microns in diameter. The low-profile air stripper removes the VOCs from the groundwater. Following air stripping, the groundwater is discharged to surface water. **Figure 1** illustrates the PW locations and the Groundwater Treatment System. A Flow Diagram of the Groundwater Treatment System equipment and process piping is presented in **Figure 2**.

At present, due to a partial closing of the effluent discharge pipe caused from scale buildup, it is not possible to handle the flow from all three wells at one time. Pumping well PW-1 has routinely maintained a steady flowrate while PW-2 and PW-3 have typically have been turned off and cycled intermittently during operation. While pumping flowrates have decreased, VOC concentrations continue to remain low, approaching asymptotic levels. The Groundwater Treatment System was shut down on September 12, 2007 to allow for the In-Situ Bioremediation (Injection) to take place. The system will remain shut down awaiting the results and evaluation of the Injection. An evaluation will be made following the Fourth Quarter sampling event as to whether or not the Injection was successful.

#### **3.1 ROUTINE OPERATION**

Scheduled O&M activities include weekly Site visits by the local Chief Operator, Steve Rodland. The Chief Operator is the first responder to autodialer alarms from the Site. Weekly Site visits include performing an overall Site inspection, GWTP system inspection, including checking the bag filter for solids loading, gauging air flow through the stripper, and noting flow rates and totalized flow. Preventive maintenance items performed by the operator include monthly inspections of the air stripper blower, and air stripper trays are inspected for sediment and mineral deposits. The trays require cleaning on a quarterly basis as a preventative maintenance and system operation performance item.

#### **3.2 SYSTEM OPERATIONS AND MONITORING HISTORY THROUGH THIRD QUARTER 2007**

A total of 20,572,110 gallons of groundwater and approximately 38.0 pounds of dissolved-phase VOCs have been recovered via the pumping well network since system activation. All of this groundwater was treated in the GWTS. Of that total, 19,748,110 gallons, or 96.0% of the total flow, was discharged to the surface water, into the drainage ditch that flows adjacent to the Site. The remaining 824,000 gallons, or 4.0 % of the total, was directed to the Infiltration Gallery. Soil flushing through the Infiltration Gallery ceased in August of 2002. In September of 2002, EPA concurred with the conclusion presented in the

Final RA Report stating that Site soil has been effectively remediated. Therefore, there are no plans to re-initiate operation the Infiltration Gallery.

At the beginning of 2002, Treatment System Influent and Effluent were sampled and analyzed on a twice-monthly basis, as per the initial DEC discharge approval document. The Treatment System sampling schedule was reduced to quarterly during the third quarter 2002 following approval of the NYSDEC. Effluent samples have been collected and analyzed during subsequent quarterly sampling events. The analytical results of the effluent have consistently met the DEC'S Effluent Limitations, and have generally had non-detectable concentrations of VOCs. **Tables 1** and **2** summarize influent and effluent analytical data for the system since startup. **Figure 3** presents a graph of the influent VOC concentrations over time. Cumulative dissolved-phase mass recovered is depicted on **Figure 4**. This data indicates that the influent VOC concentration has reached asymptotic levels. Quarterly effluent compliance sampling events coincide with the quarterly groundwater monitoring events.

On May 2, 2007 a Site inspection was performed by the EPA's George Jacob as part of the project's Five Year Review. Also in attendance were Richard Krauser (EPA), John Grathwol (DEC), Chris Rockwell (PRP Group), Matt Lapp and Will Torres (ECOR). No issues were identified during the inspection.

### ***3J OPERATIONAL PROBLEMS ENCOUNTERED***

As mentioned in Section 3.0, normal operation of the GWTS was stopped due to clogging of the effluent pipe. The system would only remain on by keeping PW-1 running and intermittently cycling PW-2 and PW-3.

The system continued to be run utilizing only PW-1 with PW-2 and PW-3 cycled intermittently until the system was shut down on September 12 to perform an in-situ bioremediation injection on September 18 2007.

## **4.0 QUARTERLY SITE MONITORING EVENT**

### **4.1 MONITORING WELL SAMPLING EVENT**

The quarterly sampling event occurred on September 12, 2007 and was conducted in accordance with the agreed upon modifications to the QAPP (May 23,2003). Groundwater samples were collected from monitoring wells MW-1, MW-4, MW-10B and pumping wells PW-1, PW-2 and PW-3 using EPA's low-flow sampling procedures, in accordance with the QAPP. A summary of the field parameter measurements is presented in **Table 3**. A copy of field notes collected during the sampling event is included in **Appendix A**. The preserved groundwater samples were collected and analyzed by Severn Trent Laboratories (STL), Buffalo, New York. A summary of Site groundwater elevations is provided in **Table 4**.

### **4.2 LABORATORY ANALYSIS/GROUNDWATER SAMPLING RESULTS**

Recent and historical groundwater quality data for monitoring and pumping wells (2001 to present) for select compounds is summarized in **Table 5**. The sample specific analysis performed included VOC analysis in accordance with USEPA SW-846 Method 8260B. The groundwater sample (MW-1) was analyzed for the following twenty (20) project specific compounds: 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), methylene chloride (MeCl), toluene, 1,1,1-trichloroethane (TCA), trichloroethene (TCE), vinyl chloride (VC), benzene, total xylenes, chlorobenzene, 1,1,2-trichloroethane (1,1,2-TCA), 1,2-dichloroethane (1,2-DCA), tetrachloroethene, chloroform, bromodichloromethane, dibromochloromethane, 2-butanone, carbon tetrachloride, 1,2-dichlorobenzene and 1,4-dichlorobenzene. The pumping well samples (PW-1, PW-2, and PW-3) were analyzed for the following eight (8) compounds: 1,1-DCA, 1,1-DCE, MeCl, TCA, TCE, toluene, VC and cis-1,2-dichloroethene. A review of the previous data indicates that the primary compounds of concern detected at the Site are: TCA and degradation products 1,1-DCA and 1,1-DCE. The concentrations of these VOCs range from non-detect to 200 micrograms per liter (ug/L) (TCA at monitoring well MW-1). Currently, only 1,1-DCA, and TCA are present above the applicable clean up standards at the Site.

The groundwater cleanup standards are summarized below:

Chemical	Groundwater Cleanup Level (ug/L)
1,1-Dichloroethane	5
1,1 -Diclchloroethene	5
Toluene	5
Methylene chloride	5
1,1,1 -Trichloroethane	5
Trichloroethene	5
Vinyl Chloride	2

Groundwater quality data is depicted on **Figure 5** with those constituents detected above the applicable clean-up standard are highlighted in yellow.

#### **43 DATA VALIDATION**

As per Section 4.0 of the QAPP, the data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the SAP, the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (October 1999), the USEPA Region II Data Review Standard Operating Procedure (SOP) Number HW-24, Revision 1, September 1999: Validating Volatile Organic Compounds by SW-846 Method 8260B, and the reviewer's professional judgment. The Data Validation Report is included in **Appendix B**.

## **5.0 PLANS FOR NEXT QUARTER**

ECOR submitted an in-situ bioremediation applicability study to the PRP group for review. The PRP Group requested an independent assessment of the data and recommendation prior to implementation. The independent assessment was completed during June 2006. The findings indicate that an in-situ bioremediation process may be an effective remediation technology. A work plan was prepared and approved by the EPA.

The Injection was performed on September 18-20, 2007. The next quarterly groundwater sampling event will be performed in December 2007 in order to determine the progress of the Bio-remediation. Following the completion of the sampling and analysis of the results it will be determined whether the GWTS will be restarted.

## TABLES

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event Date	01/GW 7/28/2001	02/GW 8/8/2001	03/GW 8/18/2001	04/GW 9/18/2001	05/GW 9/27/2001	06/GW 10/5/2001
Field Influent pH, std pH units			7.87	7.57	7.55	7.5
Total Suspended Solids, mg/L	6.5	4.0 U	4.0 U	4.0 U	4.0 U	4
1,1-Dichloroethane, ug/L	23	47	60	19J	58 D	43 J
1,1-Dichloroethene, ug/L	5.1	12	16	12 J	16 DJ	50 U
Cis-1,2- Dichloroethene, ug/L	1.0J	1.4 J	1.0J	50 U	50 U	50 U
Methylene Chloride, ug/L	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U
1,1,1 - Trichloroethane, ug/L	460 E	840 E	1200 E	1100	1100 D	780
Trichloroethene, ug/L	1.9J	3.0 J	4.7 J	50 U	50 U	50 U
Toluene, ug/L	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U
Vinyl Chloride, ug/L	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U
Total Confident VOCs, ug/L	499	899	1276	1124	1174	823
Sampling Event Date	07/GW 10/17/2001	08/GW 11/8/2001	09/GW 11/28/2001	10/GW 12/13/2001	11/GW 12/27/2001	12/GW 1/18/2002
Field Influent pH, std pH units	7.39	7.57	7.42	7.43	7.54	7.64
Total Suspended Solids, mg/L	4.0 U	7	15	4.0 U		4.0 U
1,1-Dichloroethane, pg/L	46 J	32 J	20 J	13	9.3	11
1,1-Dichloroethene, pg/L	13J	13J	9.4 J	4.2 J	4.6 J	4.3 J
Cis-1,2- Dichloroethene, pg/L	50 U	50 U	25 U	10 U	5.0 U	5.0 U
Methylene Chloride, pg/L	50 U	50 U	25 U	10 U	5.0 U	5.0 U
1,1,1 -Trichloroethane, pg/L	1200	580	530	260	220 E	250 E
Trichloroethene, pg/L	50 U	50 U	25 U	3.3 J	4.2 J	4.9 J
Toluene, pg/L	50 U	50 U	25 U	10 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	50 U	50 U	25 U	10 U	5.0 U	5.0 U
Total Confident VOCs, pg/L	1259	635	559	277	237	270
Sampling Event Date	13/GW 1/30/2002	14/GW 2/13/2002	15/GW 2/23/2002	16/GW 3/8/2002	17/GW 3/20/2002	18/GW 4/8/2002
Field Influent pH, std pH units	7.71	7.84	7.48	7.79	7.72	7.09
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	10	16	10	11	11	10
1,1-Dichloroethene, pg/L	4.0 J	5.2 J	3.5 J	3.7 J	4.1J	2.5 J
Cis -1,2 - Dichloroethene, pg/L	10 U	10U	5.0 U	5.0 U	5.0 U	10U
Methylene Chloride, pg/L	10 U	10 U	5.0 U	5.0 U	1.8 BJ	10U
1,1,1 -Trichloroethane, pg/L	220	320	240 E	320 E	330 E	240
Trichloroethene, pg/L	4.3 J	3.2 J	3.3 J	3.4 J	3.4 J	3.3 J
Toluene, pg/L	10U	10 U	3.3 J	5.0 U	5.0 U	10U
Vinyl Chloride, pg/L	10U	10U	5.0 U	5.0 U	5.0 U	10U
Total Confident VOCs, pg/L	238	339	256	337	348	253

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	19/GW 4/24/2002	20/GW 5/8/2002	21/GW 5/21/2002	22/GW 6/4/2002	23/GW 6/13/2002	24/GW 7/11/2002
Field Influent pH, std pH units	6.99	7.07	7.41	7.11	7.34	7.19
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	10	12	20	19J	18D.J	20
1,1-Dichloroethene, ug/L	2.5 J	2.4 J	3.5 J	25 U	20 U	3.4 J
Cis -1,2 - Dichloroethene, ug/L	10U	10 U	10U	25 U	20 U	10U
Methylene Chloride, ug/L	15 B	10 U	3.1 BJ	16 J	12 B,D,J	8.5 B,J
1,1,1 - Trichloroethane, ug/L	230	260	350	390	360 D	380
Trichloroethene, ug/L	2.8 J	2.7 J	• 3.3 J	25 U	20 U	3.7 J
Toluene, ug/L	2.6 J	10U	10U	25 U	20 U	10 U
Vinyl Chloride, ug/L	10 U	10 U	10U	25 U	20 U	10 U
Total Confident VOCs, ug/L	246	276	376	425	390	407

Sampling Event	25/GW 7/23/2002	26/GW 8/29/2002	27/GW 9/18/2002	28/GW 10/29/2002	29/GW 11/25/2002	30/GW 12/18/2002
Field Influent pH, std pH units	6.45	6.97	7.74	7.91	6.8	7.25
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	NA	NA	4.0 U
1,1-Dichloroethane, ug/L	9.0 J	8.8	7.7	8.6	9.1 DJ	6.6
1,1-Dichloroethene, ug/L	2.6 J	1.3J	1.8J	3.0 J	2.4 DJ	2.8 J
Cis-1,2- Dichloroethene, ug/L	10U	5.0 U	5.0 U	5.0 U	10 U	5.0 U
Methylene Chloride, pg/L	10U	5.0 U	5.0 U	5.0 U	10 U	5.0 U
1,1,1 -Trichloroethane, pg/L	210	150	190	170	160 D	150
Trichloroethene, pg/L	10U	1.9J	1.9 J	2.5 J	10 U	1.9 J
Toluene, pg/L	10 U	5.0 U	5.0 U	5.0 U	10U	5.0 U
Vinyl Chloride, pg/L	10 U	5.0 U	5.0 U	5.0 U	10U	5.0 U
Total Confident VOCs, pg/L	222	162	202	184	172	161

Sampling Event	31/GW 1/17/2003	32/GW 2/19/2003	33/GW 4/30/2003	34/GW 6/23/2003	35/GW 7/30/2003	36/GW 8/27/2003
Field Influent pH, std pH units	7.6	6.93	7.06	7.03	7.12	NA
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	8.4	6.2	8.4 DJ	6.6 DJ	7.6	2.4 J
1,1-Dichloroethene, pg/L	5.0 U	2.4 J	10U	10U	5.0 U	5.0 U
Cis-1,2- Dichloroethene, pg/L	5.0 U	5.0 U	10U	10U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	10U	10U	5.0 U	5.0 U
1,1,1 -Trichloroethane, pg/L	160	140	190 D	140 D	150	66
Trichloroethene, pg/L	2.4 J	1.6J	10U	10U	1.2J	5.0 U
Toluene, pg/L	5.0 U	5.0 U	10U	10 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	10 U	10 U	5.0 U	5.0 U
Total Confident VOCs, pg/L	171	150	198	147	159	68

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	37/GW 9/24/2003	38/GW 10/23/2003	39/GW 11/20/2003	40/GW 12/3/2003	41/GW 1/29/2004	42/GW 3/30/2004
Date						
Field Influent pH, std pH units	NA	NA	NA	7.18	NA	6.84
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	8.8 DJ	7.4 DJ	4.7 J	6.1	5.0 U	6.7
1,1-Dichloroethene, pg/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, pg/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, pg/L	180 D	170 D	92	110	1.9J	96
Trichloroethene, pg/L	2.0 DJ	10U	1.1 J	1.6J	5.0 U	1.0J
Toluene, pg/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	10U	10 U	5.0 U	5.0 U	5.0 U	5.0 U
Total Confident VOCs, pg/L	191	174	98	118	2	104

Sampling Event	43/GW 5/20/2004	44/GW 6/16/2004	45/GW 7/15/2004	46/GW 8/26/2004	47/GW 9/14/2004	48/GW 10/28/2004
Date						
Field Influent pH, std pH units	NA	7.32	NA	NA	NA	NA
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	5.5	10 D	7.5	3.3 J	9.1 DJ	4.1 J
1,1-Dichloroethene, pg/L	5.0 U	10U	2.3 J	5.0 U	10 U	2.3 J
Cis-1,2- Dichloroethene, pg/L	5.0 U	10 U	5.0 U	5.0 U	10 U	5.0 U
Methylene Chloride, pg/L	5.0 U	10 U	5.0 U	5.0 U	10 U	5.0 U
1,1,1 -Trichloroethane, pg/L	150	180 D	190	74	170 D	90
Trichloroethene, pg/L	5.0 U	10U	1.6 J	5.0 U	10 U	1.1 J
Toluene, pg/L	5.0 U	10U	5.0 U	5.0 U	10 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	10U	5.0 U	5.0 U	10 U	5.0 U
Total Confident VOCs, pg/L	156	190	201	77	179	97

Sampling Event	49/GW 12/14/2004	50/GW 1/27/2005	51/GW 3/22/2005	52/GW 4/26/2005	53/GW 5/30/2005	54/GW 6/7/2005
Date						
Field Influent pH, std pH units	6.23	NA	7.04	NA	NA	7.50
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	7.4	9.8	2.9 J	2.5 J	6.3	2.5
1,1-Dichloroethene, pg/L	2.5 J	3.0 J	5.0 U	5.0 U	1.9	0.84 J
Cis -1,2 - Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U
1,1,1 -Trichloroethane, pg/L	130	180	65	67	230	65
Trichloroethene, pg/L	1.6J	2.2 J	5.0 U	5.0 U	1.2J	0.68 J
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0U
Total Confident VOCs, pg/L	141.5	195	67.9	69.5	239.4	69.0

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event Date	55/GW 7/28/2005	56/GW 8/29/2005	57/GW 9/13/2005	58/GW 10/18/2005	59/GW 11/22/2005	60/GW 12/19/2005
Field Influent pH, std pH units	NA	NA	7.25	NA	NA	6.85
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	10	9.5 J	2.3 J	7.1J	5.2 J	2.7 J
1,1-Dichloroethene, ug/L	4.8	3.1J	0.64 J	1.5J	2.7 J	0.84 J
Cis -1,2 - Dichloroethene, ug/L	1.0 U	25 U	5.0 U	10 U	20 U	5.0 U
Methylene Chloride, pg/L	1.0 U	2.4 J	5.0 U	10 U	2.0 J	5.0 U
1,1,1 - Trichloroethane, ug/L	260	220	53	180	130	61
Trichloroethene, ug/L	1.7	25 U	0.49 J	2.9 BJ	20 U	0.64 J
Toluene, ug/L	1.0 U	25 U	5.0 U	10U	20 U	5.0 U
Vinyl Chloride, pg/L	1.0 U	25 U	5.0 U	10U	20 U	5.0 U
Total Confident VOCs, pg/L	276.5	235.0	56.4	191.5	139.9	65.2
Sampling Event Date	61/GW 1/19/2006	62/GW 2/24/2006	63/GW 3/27/2006	64/GW 4/20/2006	65/GW 5/25/2006	66/GW 6/20/2006
Field Influent pH, std pH units	NA	NA	6.99	NA	NA	NA
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	6	4.7 J	4.5 J	5.5 J	6.2 J	3.6 J
1,1-Dichloroethene, pg/L	1.7 J	1.3 J	1.1 J	1.3J	1.5 J	0.94 J
Cis-1,2- Dichloroethene, pg/L	5.0 U	10U	5.0 U	10 U	10 U	5.0 U
Methylene Chloride, pg/L	5.0 U	2.1 BJ	5.0 U	10U	1.3J	5.0 U
1,1,1 -Trichloroethane, pg/L	170	100	110	140	160	80
Trichloroethene, pg/L	13 J	0.87 J	0.95 J	1.0 J	1.2J	0.72 J
Toluene, pg/L	5.0 U	10U	5.0 U	10U	10 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	10U	5.0 U	10U	10 U	5.0 U
Total Confident VOCs, pg/L	179.0	109.0	116.6	147.8	170.2	85.3
Sampling Event Date	67 7/18/2006	68 8/7/2006	69 9/14/2006	70 10/12/2006	71 11/22/2006	72 12/14/2006
Field Influent pH, std pH units	NA	7.46	7.5	7.7	7.38	7.56
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	6.3	5.7 J	4.0 J	5.5	9.5 J	2.8 J
1.1-Dichloroethene, pg/L	1.6J	1.2 J	4.7 J	1.4 J	2.3 J	1.3J
Cis-1,2- Dichloroethene, pg/L	5.0 U	10U	5.0 U	5.0 U	10.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	2.8 BJ	5.0 U	5.0 U	10.0 U	5.0 U
1,1,1 -Trichloroethane, pg/L	155 E	140	94	82 D	140 D	56
Trichloroethene, pg/L	1.1 J	2.2 J	0.83 J	1.0J	1.8J	0.64 J
Toluene, pg/L	5.0 U	10U	5.0 U	5.0 U	10.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	10 U	5.0 U	5.0 U	10.0 U	5.0 U
Total Confident VOCs, pg/L	162.4	151.9	103.53	89.9	153.6	60.74

**Table 1**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Influent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	73 Date 1/18/2007	74 2/28/2007	75 3/21/2007	76 4/30/2007	77 5/23/2007	78 6/27/2007
Field Influent pH, std pH units	7.64	7.62	7.53	7.61	7.52	7.69
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	1.8J	5.6 DJ	6.2 J	8.2	8.7	5.0
1,1-Dichloroethene, ug/L	0.64 J	2.7 DJ	1.5J	2.8 J	2.0 J	0.88 J
Cis-1,2- Dichloroethene, ug/L	5.0 U	10 U	10 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	1.0 DJ	10 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, ug/L	62	170 D	230	210 D	200 D	180 D
Trichloroethene, ug/L	0.78 J	1.3 DJ	10 U	1.1 J	1.2 J	0.67J
Toluene, Mg/L	5.0 U	10U	10 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	10U	10 U	5.0 U	5.0 U	5.0 U
<u>Total Confident VOCs, Mg/L</u>	<u>65.22</u>	<u>180.6</u>	<u>245.5</u>	<u>222.1</u>	<u>211.9</u>	<u>186.55</u>

Sampling Event	79 Date 7/24/2007	80 8/22/2007	81 9/12/2007
Field Influent pH, std pH units	7.57	7.85	7.65
Total Suspended Solids, mg/L	NA	NA	NA
1,1-Dichloroethane, ug/L	6.6	5.9	7.1
1,1-Dichloroethene, ug/L	5.2	1.0 J	10 U
Cis-1,2- Dichloroethene, ug/L	5.0 U	5.0 U	10 U
Methylene Chloride, ug/L	5.0 U	5.0 U	10 U
1,1,1-Trichloroethane, pg/L	230 D	140 D	160
Trichloroethene, ug/L	0.82 J	0.81J	10 U
Toluene, Mg/L	5.0 U	5.0 U	10 U
Vinyl Chloride, M3L	5.0 U	5.0 U	10U
<u>Total Confident VOCs, pg/L</u>	<u>242.62</u>	<u>147.71</u>	<u>167.1</u>

Data Qualifiers: U - Undetectable at listed detection limit. J - Estimated value, less than the detection limit.  
E - CC exceeds calibration range. D - Identified in the secondary dilution factor. B - Analyte found in blank as well as sample.

**Table 2**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Effluent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	01/GW	02/GW	03/GW	04/GW	05/GW	06/GW
Date	7/28/2001	8/8/2001	8/18/2001	9/18/2001	9/27/2001	10/5/2001
Field Effluent pH, std pH units	8.44	8.44	8.5	8.38	8.38	8.32
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, pg/L	1.5 J	5.0 U	1.5J	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	07/GW	08/GW	09/GW	10/GW	11/GW	12/GW
Date	10/17/2001	11/8/2001	11/28/2001	12/13/2001	12/27/2001	1/18/2002
Field Effluent pH, std pH units	8.35	8.35	8.29	8.43	8.30	8.38
Total Suspended Solids, mg/L	4.0 U	4.0 U	8.0	4.0 U	4.0 U	4.0U
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Cis-1,2- Dichloroethene, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
1,1,1 - Trichloroethane, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Toluene, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Sampling Event	13/GW	14/GW	15/GW	16/GW	17/GW	18/GW
Date	1/30/2002	2/13/2002	2/23/2002	3/8/2002	3/20/2002	4/8/2002
Field Effluent pH. std pH units	8.39	8.31	8.22	8.39	8.47	8.05
Total Suspended Solids, mg/L	4.0U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis-1,2 - Dichloroethene, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0U	5.0 U	5.0 U	5.0 U	1.3 J	2.8 B,J
1,1,1 -Trichloroethane, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	5.0U	5.0 U	2.5 J	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

**Table 2**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Effluent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	19/GW	20/GW	21/GW	22/GW	23/GW	24/GW
Date	4/24/2002	5/8/2002	5/21/2002	6/4/2002	6/13/2002	7/11/2002
Field Effluent pH, std pH units	8.0	8.08	8.23	6.23	8.16	8.06
Total Suspended Solids, mg/L	4.0 U	4.0	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	7.6 B	5.0 U	1.2 BJ	1.1 J	1.7 B,J	2.6 B,J
1,1,1 - Trichloroethane, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, ug/L	1.2 J	5.0 U	5.0 U	5.0 U	1.5J	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	25/GW	26/GW	27/GW	28/GW	29/GW	30/GW
Date	7/23/02	9/18/02	12/18/02	4/30/03	6/23/03	9/24/03
Field Effluent pH, std pH units	6.66	7.11	7.22	7.72	7.68	7.81
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	NA	NA	NA
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	31/GW	32/GW	33/GW	34/GW	35/GW	36/GW
Date	12/2/03	3/30/04	6/16/04	9/14/04	12/14/04	3/22/05
Field Effluent pH, std pH units	7.63	7.47	7.86	7.61	6.93	6.97
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

**Table 2**  
**Byron Barrel and Drum Site**  
**Groundwater Treatment System**  
**Effluent Analytical Results**  
**ECOR Solutions, Inc.**

Sampling Event	37/GW	38/GW	39/GW	40/GW	41/GW	42/GW
Date	6/7/2005	9/13/2005	12/19/2005	3/27/2006	6/20/2006	9/14/2006
Field Effluent pH, std pH units	8.01	7.95	7.64	7.74	7.71	8.4
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	1.0 U	5-0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis-1,2- Dichloroethene, pg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, pg/L	1.0 U	5-0 U	0.58 J	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	43/GW	44/GW	45/GW	47/GW		
Date	12/14/2006	3/21/2007	6/27/2007	9/12/2007		
Field Effluent pH, std pH units	8.36	8.44	8-39	8.63		
Total Suspended Solids, mg/L	NA	NA	NA	NA		
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U		
1,1-Dichloroethene, pg/L	5.0 U	5-0 U	5.0 U	5.0 U		
Cis-1.2- Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U		
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U		
1,1,1 -Trichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U		
Trichloroethene, pg/L	5.0 U	5-0 U	5.0 U	5.0 U		
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U		
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U		

**Data Qualifiers:** **U** - Undetectable at listed detection limit. **J** - Estimated value, less than the detection limit.

E - CC exceeds calibration range. D - Identified in the secondary dilution factor. B - Analyte found in blank as well as sample.

Table 3  
 Byron Barrel and Drum Site  
 Field Chemistry Readings  
 Quarterly Sampling Event  
 September 12, 2007

Parameter Units	Time	Temp. °C	ORP mV	PH Std. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
MW-1-9/GW23	1050	13.9	38	7.09	0.5	3.42	721
	1055	13.6	39	7.07	0.5	3.38	721
	1100	13.5	40	7.07	0.5	3.36	722
	1105	13.3	40	7.07	0.5	3.33	723
	1110	13.3	39	7.07	0.5	3.32	723
	1115	13.4	40	7.06	0.5	3.30	723
	1120	13.5	40	7.07	0.5	3.28	723
MW-4-9/GW23	1140	13.8	43	7.62	0.5	3.80	733
	1145	13.7	42	7.64	0.5	3.77	720
	1150	13.5	42	7.64	0.5	3.74	719
	1155	13.4	42	7.65	0.5	3.71	715
	1200	13.5	41	7.66	0.5	3.70	710
	1205	13.6	40	7.67	0.5	3.68	710
	1210	13.6	40	7.65	0.5	3.67	711
MW-10B-9/GW23	1245	13.1	42	7.23	0.4	2.70	674
	1250	12.5	41	7.15	0.4	2.67	672
	1255	12.5	40	7.09	0.4	2.64	673
	1300	12.5	39	7.09	0.4	2.64	673
	1305	12.6	39	7.09	0.4	2.62	673
	1310	12.6	38	7.09	0.4	2.60	672
	1315	12.7	38	7.09	0.4	2.57	672
PW-1/GW22	1330	17.5	35	7.61	0.5	8.16	711
PW-2/GW22	1335	13.7	38	7.63	0.5	8.21	714
PW-3/GW22	1340	16.5	34	7.79	0.5	8.09	705

**Note:** Flow through cell was calibrated for all chemistry parameters prior to gauging.

**Table 4**  
**Byron Barrel and Drum Site**  
**Groundwater Elevations for**  
**September 2007 Sampling Event**

**Operator:** P. Little

**Date:** **9/12/2007**

<b>Pumping Wells</b>	<b>DTW</b>	<b>TOC</b>		<b>GW</b>	
		<b>Elevation</b>	<b>Elevation</b>	<b>TD</b>	<b>w.c. ft</b>
<b>PW-1</b>	<b>9.43</b>	<b>642.82</b>	<b>633.39</b>	—	—
<b>PW-2</b>	<b>7.97</b>	<b>641.34</b>	<b>633.37</b>	—	—
<b>PW-3</b>	<b>7.73</b>	<b>641.11</b>	<b>633.38</b>	—	—

**Monitoring Wells**

<b>MW-1</b>	<b>6.56</b>	<b>639.63</b>	<b>633.07</b>	<b>11.61</b>	<b>5.05</b>
<b>MW-2</b>	<b>12.92</b>	<b>646.36</b>	<b>633.44</b>	<b>15.06</b>	<b>2.14</b>
<b>MW-4</b>	<b>5.30</b>	<b>638.56</b>	<b>633.26</b>	<b>11.50</b>	<b>6.20</b>
<b>MW-1 OB</b>	<b>10.98</b>	<b>644.44</b>	<b>633.46</b>	<b>20.32</b>	<b>9.34</b>
<b>MW-21</b>	<b>9.39</b>	<b>642.52</b>	<b>633.13</b>	<b>27.87</b>	<b>18.48</b>
<b>Residential</b>	<b>17.42</b>	<b>650.78</b>	<b>633.36</b>	<b>35.16</b>	<b>17.74</b>

**Piezometers**

<b>PZ-1</b>	<b>9.22</b>	<b>643.11</b>	<b>633.89</b>	<b>27.02</b>	<b>17.80</b>
<b>PZ-2</b>	<b>8.98</b>	<b>642.39</b>	<b>633.41</b>	<b>27.26</b>	<b>18.28</b>

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top Of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	C S O Q	E L O 5	O E O 5	O E O "3	T3 S	Conc. P	Conc. 5a o	Conc. 3 O	Conc. c v
		<b>Groundwater Cleanup Levels (ug/L):</b>			5	5	NA	5	5	5	5	5	2
<b>MW-1</b>	3/20/2002	639.63	5.24	634.39	86	49	NA	5 U	1700	2 J	5 U	2 J	
	6/12/2002	639.63	5.07	634.56	81	38	NA	5 U	1600	3 J	5 U	5 U	
	9/18/2002	639.63	7.15	632.48	13	13 J	NA	5 UJ	350	5 U	5 U	5 U	
	12/18/2002	639.63	5.62	634.01	42	37 J	NA	25 U	1200	5 J	25 U	25 U	
	4/29/2003	639.63	4.53	635.10	57	34	NA	25 U	1300 J	25 U	25 U	25 U	
	6/24/2003	639.63	5.36	634.27	32	24	NA	5 U	720	4 J	5 U	5 U	
	9/24/2003	639.63	6.72	632.91	24 J	17 J	NA	25 U	580	25 U	25 U	25 U	
	12/3/2003	639.63	5.53	634.10	33 J	28 J	NA	40 U	860 J	40 U	40 U	40 U	
	3/30/2004	639.63	3.40	636.23	30 J	31	NA	25 U	830 J	25 UJ	25 U	25 U	
	6/16/2004	639.63	4.20	635.43	26	22 J	NA	25 UJ	870	25 U	25 U	25 U	
	9/14/2004	639.63	4.56	635.07	28	26	NA	25 U	730	25 U	25 U	25 U	
	12/14/2004	639.63	4.61	635.02	31	26	NA	25 U	760	25 UJ	25 U	25 U	
	3/22/2005	639.63	4.32	635.31	41	110	NA	5 U	830	5	5 U	5 U	
	6/7/2005	639.63	5.45	634.18	10 J	14 J	NA	13 J	340	50 U	50 UJ	50 U	
	9/13/2005	639.63	6.89	632.74	14	16	NA	5 U	410	2 J	5 UJ	5 U	
	12/20/2005	639.63	4.78	634.85	24 J	24 J	NA	40 U	580	40 U	40 U	40 U	
	3/26/2006	639.63	5.07	634.56	29	24	NA	5 U	540	4 J	5 U	5 U	
	6/22/2006	639.63	5.68	633.95	7	9	NA	5 U	220	2 J	5 U	5 U	
	9/14/2006	639.63	5.15	634.48	5 J	6 J	NA	10 U	190	2 J	10 U	10 U	
	12/7/2006	639.63	4.54	635.09	6 J	9 J	NA	10 U	170	2 J	10 U	10 U	
	3/22/2007	639.63	4.19	635.44	2 J	4 J	NA	10 U	100	2 J	10 U	10 U	
	6/14/2007	639.63	5.30	634.33	6	3 J	NA	5 U	200	2 J	5 U	5 U	
	9/12/2007	639.63	6.56	633.07	7 J	3 J	NA	20 U	200	20 U	20 U	20 U	

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top Of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	a c t c o f 5	c o o o 9 n 3	s c a e o 9 n 3	m e o o 17	c m e o o 17	a c o f e o g c 0	0 0 0 0 v	
		<b>Groundwater Cleanup Levels (ug/L):</b>			5	5	NA	5	5	5	5	2
<b>MW-4</b>	3/20/2002	638.56	4.79	633.77	17 J	14 J	NA	25 U	<b>450</b>	10 J	25 U	25 U
	6/12/2002	638.56	4.48	634.08	3 J	2 J	NA	5 U	83	8	5 U	5 U
	9/18/2002	638.56	6.04	632.52	5 U	5 UJ	NA	5 UJ	27	5	5 U	5 U
	12/18/2002	638.56	5.22	633.34	40	24	NA	5 U	<b>200</b>	8	5 U	5 U
	4/29/2003	638.56	4.50	634.06	31	13 J	NA	25 U	<b>530</b>	25 U	25 U	25 U
	6/24/2003	638.56	4.58	633.98	5 UJ	5 UJ	NA	5 U	17 J	4 J	5 U	5 UJ
	9/24/2003	638.56	5.91	632.65	35	9 J	NA	10 U	<b>240</b>	8 J	10 U	10 U
	12/3/2003	638.56	4.98	633.58	65	17 J	NA	20 U	<b>550</b>	11 J	20 U	20 U
	3/30/2004	638.56	4.15	634.41	12	5	NA	5 U	<b>130</b>	3 J	5 U	5 U
	6/16/2004	638.56	3.64	634.92	15 J	25 UJ	NA	25 UJ	<b>150</b>	25 U	25 U	25 U
	9/14/2004	638.56	3.71	634.85	11 J	25 U	NA	25 U	87	25 U	25 U	25 U
	12/14/2004	638.56	3.97	634.59	11 J	25 U	NA	25 U	67	25 U	25 U	25 U
	3/22/2005	638.56	3.55	635.01	50 U	50 U	NA	50 UJ	87	50 U	50 U	50 U
	6/7/2005	638.56	4.25	634.31	5 U	5 U	NA	5 U	8	1 J	5 U	5 U
	9/13/2005	638.56	5.84	632.72	5 U	5 U	NA	5 U	<b>11</b>	2 J	5 U	5 U
	12/20/2005	638.56	4.75	633.81	4 J	25 U	NA	25 U	48	25 U	25 U	25 U
	3/25/2006	638.56	4.32	634.24	5 U	5 U	NA	5 U	8	1 J	5 U	5 U
	6/22/2006	638.56	4.50	634.06	5 U	5 U	NA	5 U	9	1 J	5 U	5 U
	9/14/2006	638.56	3.92	634.64	5 U	5 U	NA	5 U	<b>13</b>	2 J	5 U	5 U
	12/7/2006	638.56	3.64	634.92	25 U	25 U	NA	25 U	6 J	25 U	25 U	25 U
	3/22/2007	638.56	3.24	635.32	5 U	5 U	NA	5 U	<b>10</b>	1 J	5 U	5 U
	6/14/2007	638.56	4.50	634.06	5 U	5 U	NA	5 U	<b>10</b>	1 J	5 U	5 U
	9/12/2007	638.56	5.30	633.26	5 U	5 U	NA	5 U	<b>14</b>	2 J	5 U	5 U

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	© c 8 o £ U Q	© £ o £ o 9 « o	c © c o £ o 9 « o	© o £ o £ E	© £ o £	© £ o £ 1-	« © 5 © £ o £ 1-	© 3 © H	© o £ c 5
		Groundwater Cleanup Levels (ug/L):			5	5	NA	5	5	5	5	5	2
MW-10B	3/21/2002	644.44	9.43	635.01	5 U	5 U	NA	5 U	42	5 U	5 U	5 U	
	6/12/2002	644.44	9.12	635.32	5 U	5 U	NA	5 U	11	5 U	5 U	5 U	
	9/18/2002	644.44	11.05	633.39	5 U	5 UJ	NA	5 UJ	7	5 U	5 U	5 U	
	12/18/2002	644.44	10.20	634.24	5 U	5 U	NA	5 U	52	5 U	5 U	5 U	
	4/30/2003	644.44	9.28	635.16	5 U	5 U	NA	5 U	8	5 U	5 U	5 U	
	6/23/2003	644.44	9.39	635.05	5 U	5 U	NA	5 U	3 J	5 U	5 U	5 U	
	9/24/2003	644.44	10.93	633.51	5 U	5 U	NA	5 U	7	5 U	5 U	5 U	
	3/30/2004	644.44	8.99	635.45	5 U	5 U	NA	5 U	17	5 U	5 U	5 U	
	9/14/2004	644.44	8.76	635.68	5 U	5 U	NA	5 U	14	5 U	5 U	5 U	
	3/22/2005	644.44	8.69	635.75	5 U	5 U	NA	5 U	11	5 U	5 U	5 U	
	9/13/2005	644.44	10.84	633.60	5 U	5 U	NA	5 U	5	5 U	5 U	5 U	
	3/25/2006	644.44	9.28	635.16	5 U	5 U	NA	5 U	6	5 U	5 U	5 U	
	9/14/2006	644.44	9.82	634.62	5 U	5 U	NA	5 U	6	5 U	5 U	5 U	
	3/22/2007	644.44	8.44	636.00	5 U	5 U	NA	5 U	6	5 U	5 U	5 U	
	9/12/2007	644.44	10.98	633.46	5 U	5 U	NA	5 U	1 J	5 U	5 U	5 U	

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	5	5	NA	5	5	5	5	5	5
<b>Groundwater Cleanup Levels (ug/L):</b>													
MW-21	3/26/1999	NA	NA	NA	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U
	3/21/2002	642.52	7.70	634.82	25 U	25 U	NA	25 U					
	6/12/2002	642.52	7.69	634.83	25 U	25 U	NA	25 U					
	9/17/2002	642.52	9.50	633.02	5 U	5 UJ	NA	5 UJ	5 U	5 U	5 U	5 U	5 U
	12/17/2002	642.52	8.23	634.29	5 U	5 UJ	NA	5 U	5 UJ	5 U	5 U	5 U	5 U
	4/30/2003	642.52	7.91	634.61	25 U	25 U	NA	25 U					
	3/30/2004	642.52	7.56	634.96	5 UJ	5 UJ	NA	5 UJ					
	3/22/2005	642.52	7.42	635.10	25 U								
	3/25/2006	642.52	7.78	634.74	25 U								
	3/22/2007	642.52	7.38	635.14	20 U								
MW-Residential	3/21/2002	650.78	15.79	634.99	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	6/12/2002	650.78	15.62	635.16	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	9/17/2002	650.78	17.50	633.28	5 U	5 UJ	NA	5 UJ	5 U	5 U	5 U	5 U	5 U
	12/17/2002	650.78	16.52	634.26	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	4/30/2003	650.78	17.74	633.04	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	3/30/2004	650.78	15.47	635.31	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	3/22/2005	650.78	15.24	635.54	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	3/25/2006	650.78	15.75	635.03	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U
	3/22/2007	650.78	15.09	635.69	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	5	5	5	5	5	5	5	5	5	5
<b>Groundwater Cleanup Levels (ug/L):</b>														
PVM	12/21/1998	NA	NA	NA	20 U	5 J	20 U	9 BJ	270	11 J	20 U	20 U		
	12/27/2001	NA	NA	NA	15	6.2	5 U	5 U	280	5.2	5 U	5 U		
	3/20/2002	642.82	NM	NM	11	5	5 U	5 U	320	3 J	5 U	5 U		
	6/12/2002	642.82	NM	NM	18	3 J	5 U	5 U	380	2 J	5 U	5 U		
	9/18/2002	642.82	NM	NM	12	2 J	5 U	5 UJ	270	2 J	5 U	5 U		
	12/18/2002	642.82	18.43	624.39	8	5	5 U	5 U	160	2 J	5 U	5 U		
	4/30/2003	642.82	20.96	621.86	11	2 J	5 U	5 U	180	2 J	5 U	5 U		
	6/23/2003	642.82	22.41	620.41	12	2 J	5 U	5 U	190	2 J	5 U	5 U		
	9/24/2003	642.82	22.59	620.23	8	5 U	5 U	5 U	120	5 U	5 U	5 U		
	12/3/2003	642.82	21.74	621.08	8	2 J	5 U	5 U	150	2 J	5 U	5 U		
	3/30/2004	642.82	21.80	621.02	6	2 J	5 U	5 U	150	5 U	5 U	5 U		
	6/16/2004	642.82	19.08	623.74	13	3 J	5 U	5 UJ	380	2 J	5 U	5 U		
	9/14/2004	642.82	20.62	622.20	10	2 J	5 U	5 U	210	5 U	5 U	5 U		
	12/14/2004	642.82	21.23	621.59	6	2 J	5 U	5 U	140	5 U	5 U	5 U		
	3/22/2005	642.82	22.65	620.17	15	23	5 U	5 U	200 J	2 J	5 U	5 U		
	6/7/2005	642.82	21.50	621.32	10	2 J	10 U	2 U	59	1 J	10 U	10 U		
	9/13/2005	642.82	21.73	621.09	3 J	0.9 J	5 U	5 U	73	0.5 J	5 U	5 U		
	12/19/2005	642.82	20.98	621.84	9	2 J	5 U	5 U	140	2 J	5 U	5 U		
	3/26/2006	642.82	21.44	621.38	4 J	0.9 J	5 U	5 U	76	0.6 J	5 U	5 U		
	6/22/2006	642.82	21.28	621.54	4 J	1 J	5 U	5 U	77	0.8 J	5 U	5 U		
	9/14/2006	642.82	8.23	634.59	9 DJ	25 U	25 U	25 U	230	25 U	25 U	25 U		
	12/7/2006	642.82	20.82	622.00	6 J	2 J	10 U	10 U	160	1 J	10 U	10 U		
	3/22/2007	642.82	14.50	628.32	6 J	2 J	10 U	10 U	170	1 J	10 U	10 U		
	6/14/2007	642.82	13.43	629.39	9 J	2 J	10 U	10 U	280	2 J	10 U	10 U		
	9/12/2007	642.82	9.43	633.39	5 J	10 U	10 U	10 U	130	10 U	10 U	10 U		

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	Q	0 2 o Q	0 c £ o £ w	0 5 £ o 5 H	0 5 £ o 5 w	0 5 £ o 5 H	0 5 £ o 5 w	0 5 £ o 5 H	0 5 £ o 5 w	0 5 £ o 5 H	0 5 £ o 5 w	0 5 £ o 5 H
		<b>Groundwater Cleanup Levels (ug/L):</b>				5	5	NA	5	5	15	5	5	2		
<b>PW-2</b>	12/27/2001	NA	NA	NA	68	23	1.4 J	5 U	960	4 J	5 U	1.1 J				
	3/20/2002	641.34	NM	NM	24	13	5 U	5 U	720	2 J	5 U	5 U				
	6/12/2002	641.34	NM	NM	18	10	5 U	5 U	370	2 J	5 U	5 U				
	9/18/2002	641.34	NM	NM	5	4 J	5 U	5 UJ	160	5 U	5 U	5 U				
	12/18/2002	641.34	17.68	623.66	12	14	10 U	10 U	280	10 U	10 U	10 U				
	4/30/2003	641.34	16.82	624.52	11	6	5 U	5 U	200	2 J	5 U	5 U				
	6/23/2003	641.34	19.41	621.93	8	5	5 U	5 U	180	5 U	5 U	5 U				
	9/24/2003	641.34	17.45	623.89	6	2 J	5 U	5 U	120	5 U	5 U	5 U				
	12/3/2003	641.34	18.78	622.56	6	3 J	5 U	5 U	160	5 U	5 U	5 U				
	3/30/2004	641.34	19.24	622.10	4 J	3 J	5 U	5 U	140	5 U	5 U	5 U				
	6/16/2004	641.34	18.58	622.76	5	5 U	5 U	5 UJ	120	5 U	5 U	5 U				
	9/14/2004	641.34	18.25	623.09	5	4 J	5 U	5 U	160	5 U	5 U	5 U				
	12/14/2004	641.34	17.63	623.71	8	5	5 U	5 U	160	2 J	5 U	5 U				
	3/22/2005	641.34	19.33	622.01	5	11	5 U	5 U	140	5 U	5 U	5 U				
	6/7/2005	641.34	19.40	621.94	3 J	2 J	5 U	5 U	70	1 J	5 U	5 U				
	9/13/2005	641.34	19.52	621.82	3 J	3 J	5 U	5 U	94 J	2 J	5 U	5 U				
	12/19/2005	641.34	17.35	623.99	1 J	5 U	5 U	5 U	30	0.5 J	5 U	5 U				
	3/26/2006	641.34	17.22	624.12	5	1 J	5 U	5 U	54	0.8 J	5 U	5 U				
	6/22/2006	641.34	18.59	622.75	4 J	2 J	10 U	10 BL	170	1 J	10 U	10 U				
	9/14/2006	641.34	6.75	634.59	3 DJ	1 DJ	10 U	10 U	92	1 DJ	10 U	10 U				
	12/7/2006	641.34	6.11	635.23	9 DJ	3 DJ	10 U	10 U	230	2 J	10 U	10 U				
	3/22/2007	641.34	4.19	637.15	8 J	4 J	10 U	10 U	90	1 J	10 U	10 U				
	6/14/2007	641.34	4.72	636.62	8 J	2 J	20 U	20 U	270	20 U	20 U	20 U				
	9/12/2007	641.34	7.97	633.37	5 J	1 J	10 U	10 U	140	10 U	10 U	10 U				

**Table 5**  
**Byron Barrel and Drum Site**  
**Historic Groundwater Quality Table - Select Analytes**  
**ECOR Solutions, Inc.**

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	c m £ £ o o 5	c a £ £ o o 9	a a £ £ o o 5	o o a a 5 E	c a fi £ o o 17	c Q £ a 2 0 £	c o 3 5	© D G C v
		<b>Groundwater Cleanup Levels (ug/L):</b>			5	5	NA	5	5	5	5	2
<b>PW-3</b>	12/27/2001	NA	NA	NA	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>16</b>	<b>1.7 J</b>	<b>5 U</b>	<b>5 U</b>
	3/20/2002	641.11	NM	NM	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>8</b>	<b>1 J</b>	<b>5 U</b>	<b>5 U</b>
	6/12/2002	641.11	NM	NM	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>6</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	9/18/2002	641.11	<b>NM</b>	NM	<b>5 U</b>	<b>5 UJ</b>	<b>5 U</b>	<b>5 UJ</b>	<b>4 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	12/18/2002	641.11	19.90	621.21	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>4 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	4/30/2003	641.11	19.46	621.65	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>3 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	6/23/2003	641.11	18.55	622.56	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>3 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	9/24/2003	641.11	20.97	620.14	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>2 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	12/3/2003	641.11	20.28	620.83	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>3 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	3/30/2004	641.11	20.52	620.59	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>2 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	6/16/2004	641.11	19.65	621.46	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 UJ</b>	<b>2 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	9/14/2004	641.11	20.91	620.20	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>2 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	12/14/2004	641.11	18.33	622.78	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>2 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	3/22/2005	641.11	22.17	618.94	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>2 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	6/7/2005	641.11	20.30	620.81	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	9/13/2005	641.11	21.52	619.59	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>1 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	12/19/2005	641.11	20.36	620.75	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>1 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	3/26/2006	641.11	22.31	618.80	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>1 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	6/22/2006	641.11	20.72	620.39	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>1 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	9/14/2006	641.11	6.53	634.58	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>	<b>2 J</b>	<b>5 U</b>	<b>5 U</b>	<b>5 U</b>
	12/7/2006	641.11	7.81	633.30	<b>6 DJ</b>	<b>2 DJ</b>	<b>5 U</b>	<b>5 U</b>	<b>170</b>	<b>1 J</b>	<b>5 U</b>	<b>5 U</b>
	3/22/2007	641.11	5.45	635.66	<b>7</b>	<b>4 J</b>	<b>5 U</b>	<b>5 U</b>	<b>210</b>	<b>1 J</b>	<b>5 U</b>	<b>5 U</b>
	6/14/2007	641.11	5.18	635.93	<b>9 J</b>	<b>3 J</b>	<b>20 U</b>	<b>20 U</b>	<b>260</b>	<b>20 U</b>	<b>20 U</b>	<b>20 U</b>
	9/12/2007	641.11	7.73	633.38	<b>4 J</b>	<b>1 J</b>	<b>10</b>	<b>10</b>	<b>130</b>	<b>10 U</b>	<b>10 U</b>	<b>10 U</b>

Notes:

All concentrations in micrograms per liter (ug/L)

Exceedences of the groundwater cleanup standard are indicated in bold.

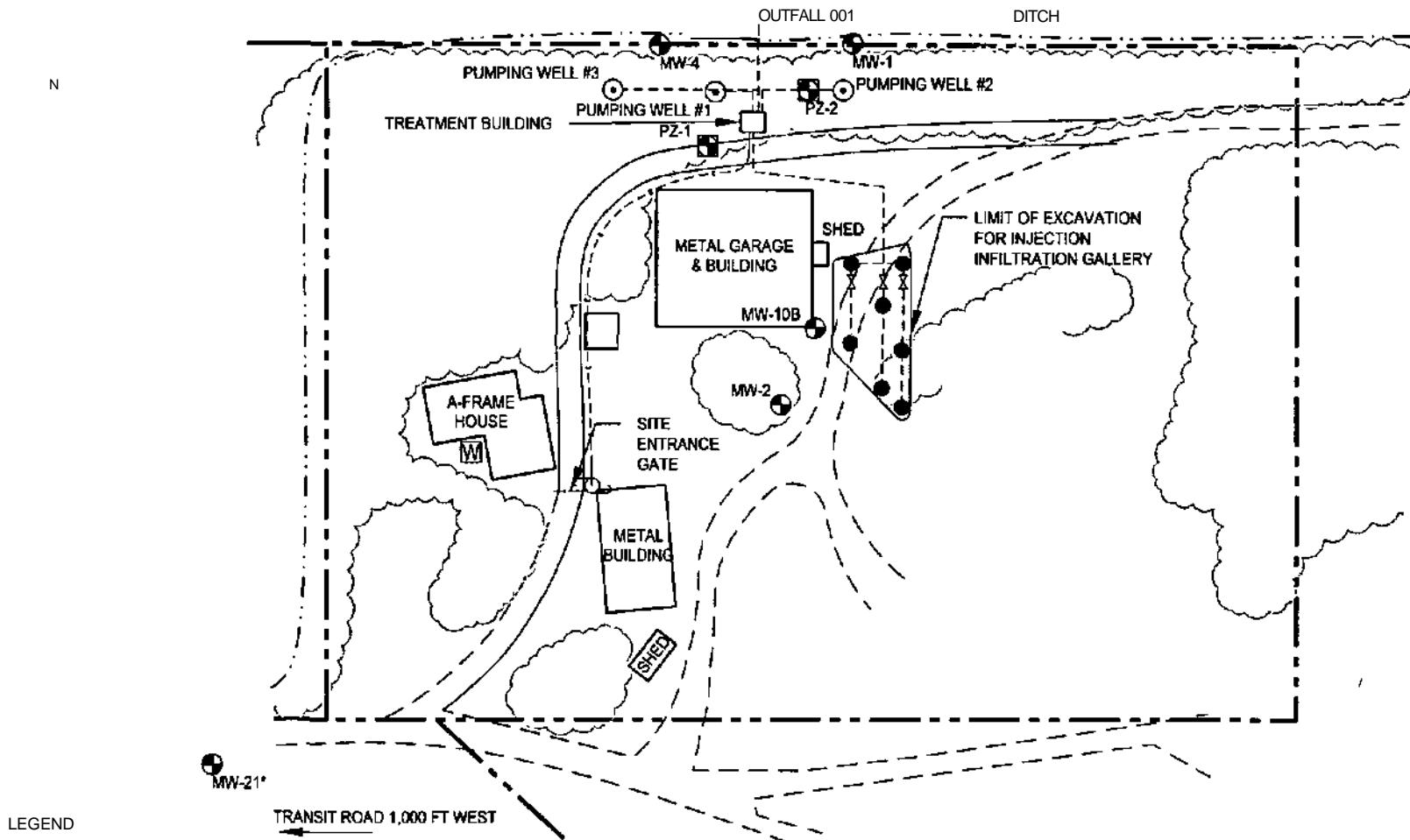
NM = Not Measured

NA = Not Available

**Table 6**  
**Schedule of Sampling and Analysis**  
**Byron Barrel & Drum Site**  
**Byron, New York**

<b>Month</b>	<b>Event</b>	<b>Monitoring Well to be Sampled</b>	<b>Constituents to be Analyzed</b>
March	First Quarter Monitoring Event	MW-1 MW-4 MW-1 OB MW-21 MW- Residential	Five VOCs: 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,1,1-Trichloroethane, Trichloroethene, Vinyl Chloride
June	Second Quarter Monitoring Event	MW-1 and MW-4	Five VOCs: 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,1,1-Trichloroethane, Trichloroethene, Vinyl Chloride
September	Third Quarter Monitoring Event	MW-1 and MW-4 MW-1 OB	Five VOCs: 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,1,1-Trichloroethane, Trichloroethene, Vinyl Chloride
December	Fourth Quarter Monitoring Event	MW-1 and MW-4	Five VOCs: 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,1,1-Trichloroethane, Trichloroethene, Vinyl Chloride

## **FIGURES**



LEGEND

« MONITORING WELL

PROPERTY LINE

FORMER RESIDENTIAL WELL

FENCE

PIEZOMETER WELL

TREELINE

INJECTION GALLERY PIEZOMETER WELL

NEW GRAVEL ROAD

X INJECTION GALLERY VALVE

PRE-EXISTING GRAVEL ROAD

© PUMPING WELL

DITCH

UTILITY POLE

ELECTRIC & PHONE LINE

SITE PLAN

BYRON BARREL AND DRUM  
AREA 2 SITE  
BYRON, NY

ECOR Solutions

1075 Andrew Drive, Suite I, West Chester, PA 19380

SCALE IN FEET

DATE

FIGURE

07-25-06

1

ECOR

NOTE: UW-21 IS 100 FEET WEST OF PROPERTY LINE

SOURCE: EHM CIO SERVICES

-Cxfl-W—1

BAG FILTER

TO ATMOSPHERE

AIROUT  
X

-CecHX-

AIR  
STRIPPER

rOSOH

-t\*H>-

AIR IN - - •—

rCfeKJ-r-DeO-

150 CFM  
& - J  
BLOWER  
3 HP

TO REINJECTION (OR)  
SURFACE DISCHARGE

-C\*3-

•(C)  
REINJECTION  
PUMP  
2 HP

LEGEND

r\*&] SAMPLING PORT

a REDUCER

w CHECK VALVE

b- FLANGE FITTING

rvi BUTTERFLY VALVE

[XI BALL VALVE

AIR LINE

PROCESS PIPING



WELL NO. 1  
1/3 HP



WELL NO. 2  
1/3 HP



WELL NO. 3  
1/3 HP

GROUND WATER TREATMENT SYSTEM  
FLOW DIAGRAM

BYRON BARREL AND DRUM  
AREA 2 SITE  
BYRON, NY

ECOR Solutions

1075 Andrew Drive, Suite I. West Chester, PA 19380

SCALE IN FEET

DATE

FIGURE

80

09-02-05

2



Figure 3  
 Byron Barrel and Drum Site  
 Influent Concentration (Total VOCs) Vs. Time  
 July 2001 to Present

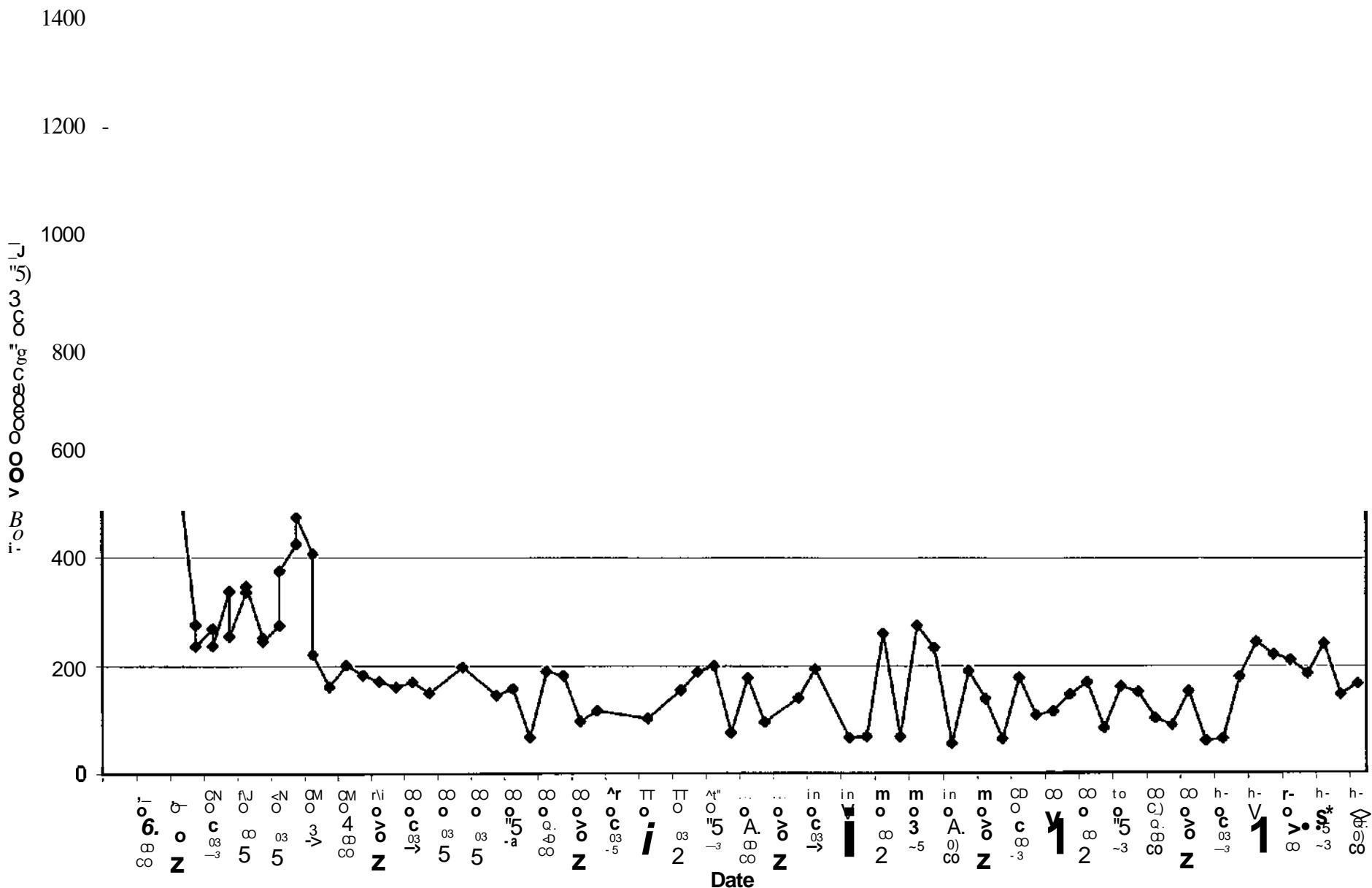
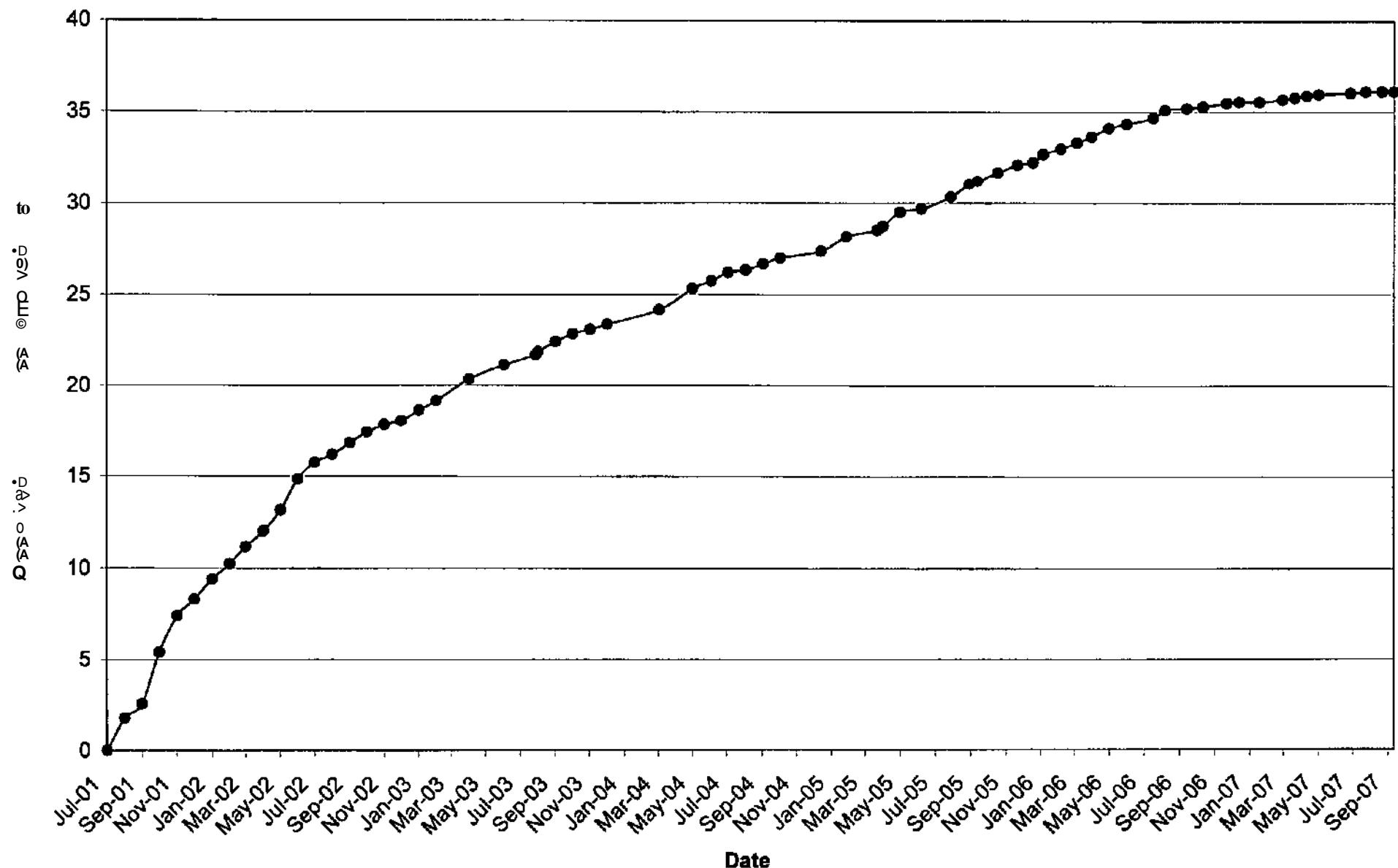
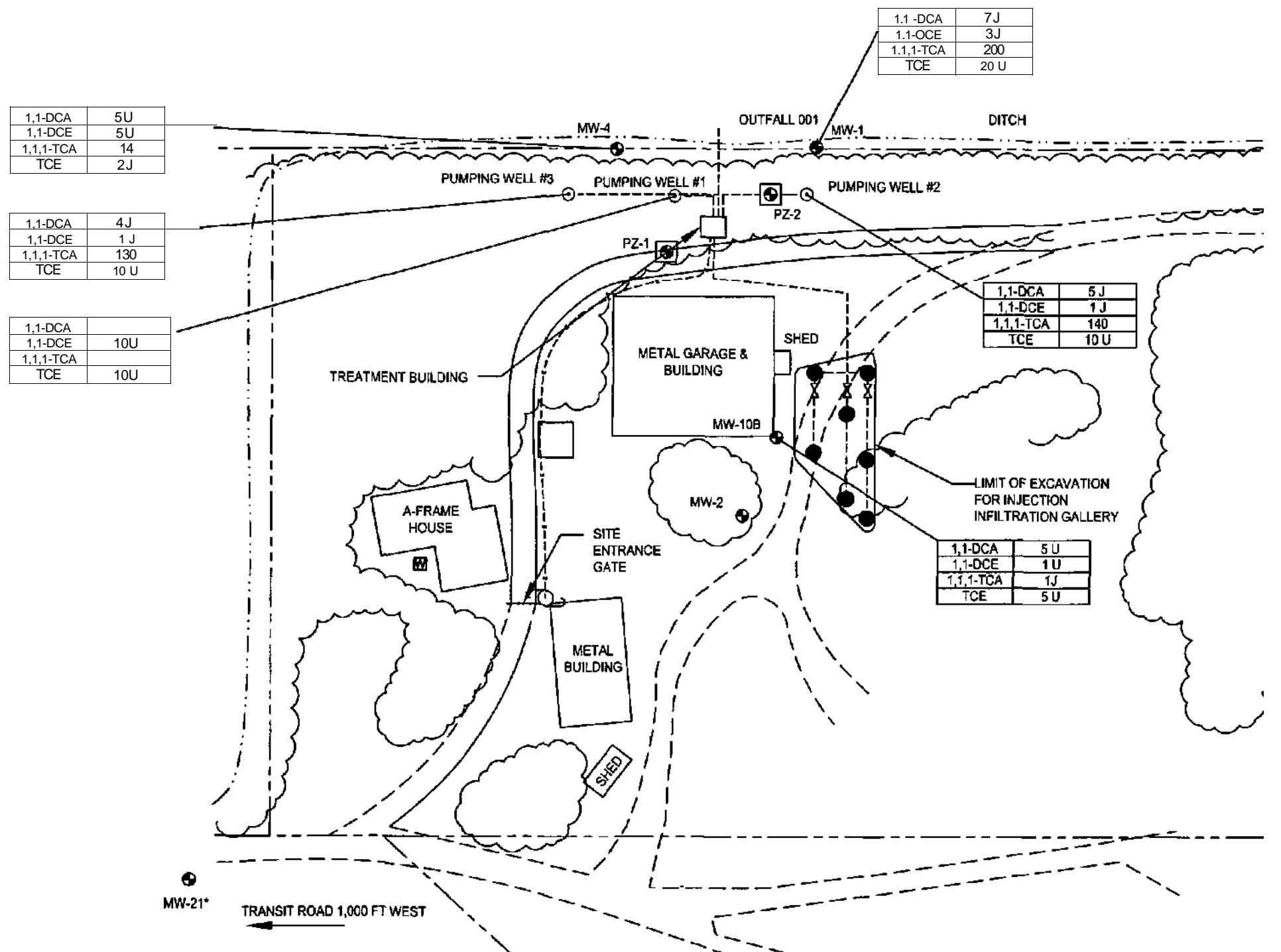


Figure 4  
Byron Barrel and Drum Site  
Cumulative Dissolved-phase Mass Removed (Total VOCs)  
July 2001 To Present





LEGEND	
®	MONITORING WELL
<b>m</b>	FORMER RESIDENTIAL WELL
<b>a</b>	PIEZOMETER WELL
•	INJECTION GALLERY PIEZOMETER WELL
<i>i</i>	INJECTION GALLERY VALVE
©	PUMPING WELL
<u>*	UTILITY POLE
—'	PROPERTY LINE
—'	TREELINE
—'	NEW GRAVEL ROAD
—'	PRE-EXISTING GRAVEL ROAD
—'	FENCE
—'	DITCH
—'	ELECTRIC & PHONE LINE
—'	REINJECTION PIPING
1,1-DCA	1,1-DICHLOROETHANE
1,1-DCE	1,1 DICHLOROETHENE
1,1,1-TCA	1,1,1-TRICHLOROETHANE
TCE	TRICHLOROETHENE
INDICATES THE PARAMETER WAS NOT DETECTED AT OR ABOVE REPORTED LIMIT	
ESTIMATED VALUE	
EXCEEDENCES	

•NOTE: MW-21 IS 200 FEET WEST OF PROPERTY LINE

GROUNDWATER QUALITY MAP  
12 SEPTEMBER 2007  
BYRON BARREL AND DRUM  
AREA 2 SITE  
BYRON, NY

ECOR Solutions

1075 Andrew Drive, Suite I, West Chester, PA 19380

SCALE IN FEET

DATE

FIGURE

5

12-12-07



**APPENDIX A**  
Field Notes

ECOR Solutions, Inc.  
Byron Barrel & Drum Site  
Field Sampling Record Form

Site: Byron Barrel and Drum

Date: <f~a\*<n

Job #: 01501.002

Sample ID: A1\*/- /•? / t v ?3

Well ID: /" \ « / - t

Time onsite: Time Offsite:

Samplers: P.t ,+Jk

***U.&v***

Depth of Well (from top of casing) V - ^ ' / \* Time: //J\*\*\*

Static water level (from top of casing) 6 \*S£ Time: te/X

Purging Method:

Dedicated bladder pump, QED SamplePro MP-SP-4C

Field Tests:

Time	Rowrate (mUmin) / purge volume (mL)	Temp. °C	ORP mV	pH 3td. Units	TDS	DO mg/L	Spec. Cond. mS/cm
10 SO	3 o /*t /&**	13.1	33	1.01	0*&	3-il.	121
iosr		13.6	3?	7.07	O.S	3»3\$	7=2/
// oo		12>,£	it?	~7,ol	0.*	3*s&	72X
jlpf		13.Z	io	I . P I	0-?	3,^1	T3LZ
ft to		/3r3	39	I . e I	0 ^	3*3 x.	723
It If		/3-Y	io	7,06	&<f	3. Jo	1*3
IA*	\ /	t3S	Ho	7.*1	O.S-	3<#	7*3

**Sampling:**Time of Sample Collectio / 1£ 0*Collection Method:* Dedicated pump*Analyses:* VOCs*Analytical Method:*8260  503  Other**Observations:**Weather/Temperature: 6£' &vfAC4srSample Description: c/cFree Product? Yes No >C Descript:Sheen? Yes No % Descript.:Odor? Yes **No** **X** Descript.:**Comments:**

ECOR Solutions, Inc.  
Byron Barrel & Drum Site  
Field Sampling Record Form

Site: Byron Barrel and Drum Date: f- / ^ - ' \* ?

Job #: 01501.002

Sample ID: / \* o -fag- ? / f \*\* - XI

Well ID: A1 \*\* -f°6 Time onsite: Time Offsite:

Samplers: fif/J\*\*< u3f ^Qp

Depth of Well (from top of casing) aa?Z Time: fZ2o

Static water level (from top of casing) I&.^S Time: A?JT

Purging Method:

Dedicated bladder pump, QED SamplePro MP-SP-4C

Field Tests:

Time	Flowrate (mUmin) / purge volume (mL)	Temp. °C	ORP mV	pH Std. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
<u>fclf</u>	<u>f/O / t t // w</u>	<u>13. t</u>	<u>y*</u>	<u>-j.33</u>	<u>o.f</u>	<u>2.1°</u>	<u>67Y</u>
<u>IzJc</u>	<u>1</u>	<u>Iz.S</u>	<u>Hl</u>	<u>I.ff</u>	<u>o.^/</u>	<u>3.-61</u>	<u>£•72</u>
<u>13.5?</u>		<u>IH.S'</u>	<u>Ho</u>	<u>7.*?</u>	<u>O.f</u>	<u>Jl.CY</u>	<u>£73</u>
<u>13*°</u>		<u>n-*</u>	<u>3&lt; i</u>	<u>1-01</u>	<u>0&gt;/&lt;</u>	<u>7..M</u>	<u>/ 7 J</u>
<u>llof</u>		<u>IzC</u>	<u>3°&gt;</u>	<u>1.01</u>	<u>O.i</u>	<u>3.-62.</u>	<u>£73</u>
<u>131°</u>		<u>Iz(&gt;</u>	<u>32&gt;</u>	<u>7°9</u>	<u>O.i</u>	<u>•Z.to</u>	<u>67*</u>
<u>I3if</u>	<u>s/</u>	<u>an</u>	<u>3B</u>	<u>7*1</u>	<u>O.y</u>	<u>a-sn</u>	<u>£-73.</u>

**Sampling:**Time of Sample Collects ***m£****Collection Method:* Dedicated pump*Analyses:* VOCs*Analytical Method:*8260  503  Other:**Observations:**Weather/Temperature: WW CfisT £\$°

Sample Description:

Free Product? Yes \_\_\_\_\_ No sX Descript.:Sheen? Yes \_\_\_\_\_ No ^ Descript.:Odor? Yes \_\_\_\_\_ No ^ Descript.:**Comments:**Λ SAX\*-\* A/ /\*»/\*\*

ECOR Solutions, Inc.  
Byron Barrel & Drum Site  
Field Sampling Record Form

Site: Byron Barrel and Drum

Date: 9.-n->/

Job #: 01501.002

Sample ID: /yji^ H-9/^z-s

Well ID: fxwy

Time onsite: Time Offsite:

Samplers: /< t\*\*f-'t

Depth of Well (from top of casing) //.S\*v Time: ijt/f

Static water level (from top of casing) S.\*\* Time: //-\*>

**Purging Method:**

Dedicated bladder pump, QED SamplePro MP-SP-4C

---

**Field Tests:**

Time	Flowrate (mL/min) / purge volume (mL)	Temp. °C	ORP mV	pH 3rd. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
//V*	y*/£ « v	13.0	H3	7.4*	o.f	3.&0	133
itf*		<b>a</b> n	<b>v</b> a	141	0*5*	3,77	<b>nao</b>
us*		<i>f</i> S	<b>n</b>	I.W	0,=>	3.1*	<b>nit</b>
us?		IZ*H	<b>V</b> z	I-if	o*S	1*il	7tr
13.00		I3S	Hl	I.tt	a,^~	3 no	110
lie*		13.*	V*	7,6">	#.r	3<6S	lio
1*1*	X	I3.C	i/O	1*6S	O'S'	?Cl	-111

**Sampling:**

Time of Sample Collects    A3A&gt;

*Collection Method:* Dedicated pump*Analyses:* VOCs*Analytical Method:*8260     503    Other**Observations:**Weather/Temperature:    f>v?AcAjr &SSample Description:    cV^v-~Free Product?    Yes                  No    x    Descript.:Sheen?                  Yes                  No    y    Descript.:Odor?                  Yes                  **No**    **y**    Descript.:**Comments:**

/\*j //»us sj\*\*fi«\* &amp; ^~ -y

**ECOR Solutions, Inc.**  
**Byron Barrel & Drum Site**  
**Groundwater Elevations**

**Operator**Date: *<j~12-dl*

Pumping Wells	DTW	TOC	GW	TD	WC.ft.
		Elevation	Elevation		
PW-1	?>VJ	642.82	£33,3?	.	-
PW-2	1.11	641.34	633*31	-	-
PW-3	1*73	641.11	£33-33	.	.

**Monitoring Wells**

MW-1	<i>&lt;r.jrf</i>	639.63	<i>g33.c&gt;l</i>	<i>II. Co</i>	<i>S.*J</i>
MW-2	<i>ii-iz.</i>	646.36	<i>633.W</i>	<i>iS-et</i>	<i>5./y</i>
MW-4	<i>S.Jo</i>	638.56	<i>£33.2*</i>	<i>f*SO</i>	<i>C*c&gt;</i>
MW-10B	<i>/&amp;,\$</i>	644.44	<i>€33^H</i>	<i>3.*.*</i>	<i>&lt;?-3y</i>
MW-21	<i>%31</i>	642.52	<i>£33**3</i>	<i>31.n</i>	<i>fe-9&amp;</i>
Residential	<i>/7-V1</i>	650.78	<i>{33-3C</i>	<i>3?Jt</i>	<i>n,iy</i>

**Piezometers**

PZ-1	9<ZX	643.11	633*8?	ZII.cX	n.\$O
PZ-2	<i>fr&lt;?0</i>	642.39	<i>CZ3.W</i>	<i>zn.aS'</i>	<i>l\$.21</i>

**ECOR Solutions, Inc.**  
**Byron Barrel & Drum Site**  
**Pumping Well Field Chemistry Parameters**

Parameter Units	Time	Temp. °C	ORP mV	PH Std. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
PW-1/GW_3J	/J3*	<b><i>ns</i></b>	<b><i>3*</i></b>	7, £/	<b><i>O-f</i></b>	& *	<b><i>11/</i></b>
PW-2/GW«£5	<i>i3iy</i>	<b><i>Hi</i></b>	39	1.C3	<b><i>O.^</i></b>	<b><i>8**</i></b>	<b><i>7/Y</i></b>
PW-3/GWJ22	<b><i>iw*</i></b>	<b><i>US</i></b>	* /	7,7?	<b><i>O.f</i></b>	<i>g'°1</i>	V oj-

**Note:** Flow through cell was calibrated for all chemistry parameters prior to gauging.

Jb      &f\*t<\*i->      f-\* .i      &tc<      7^<^      JZsn&' -S

**APPENDIX B**  
**Data Validation Report**

**Project:** Byron Barrel and Drum Site  
**Laboratory:** Severn Trent Laboratories  
**Sample Delivery Group:** A07-A220/A07-A301  
**Fraction:** Organic  
**Matrix:** Aqueous  
**Report Date:** 11/27/2007

This analytical quality assurance report is based upon a review of analytical data generated for groundwater samples. The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1. All analyses were performed by Severn Trent Laboratories.

The samples were analyzed for volatile organic compounds and total suspended solids. The sample analyses were performed in accordance with the procedures outlined in the method referenced at the end of this report. The data deliverables provided by the laboratory were New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category B format.

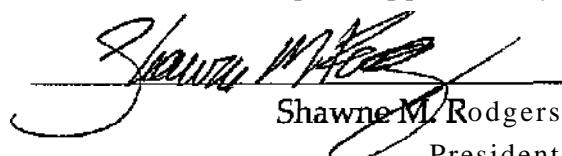
All sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. Results have been validated or qualified according to Region II "Validating Volatile Organic Compounds by SW-846 Method 8260B", SOP HW-24, Revision 1, June 1999. The parameters presented on the following page were evaluated.

- Data Completeness
  - Chain of Custody Documentation
  - Holding Times
  - Instrument Performance
  - Initial and Continuing Calibrations
  - Laboratory and Field Blank Analysis Results
  - Surrogate Compound Recoveries
  - Matrix Spike/Matrix Spike Duplicate Recoveries and Reproducibility
  - Field Duplicate Analysis Results
  - Laboratory Control Sample Results
  - Internal Standard Performance
  - Qualitative Identification
  - Quantitation/Reporting Limits
- 

X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By:



\_\_\_\_\_  
Shawne M. Rodgers  
President



\_\_\_\_\_  
11/27/2007

Date

## ***DATA COMPLETENESS***

The data package was complete.

## ***CHAIN OF CUSTODY DOCUMENTATION***

The chain of custody documentation was complete.

## ***HOLDING TIMES***

The holding times were met for all analyses.

## ***INSTRUMENT PERFORMANCE***

All criteria were met. No qualifiers were applied.

## ***INITIAL AND CONTINUING CALIBRATIONS***

All criteria were met. No qualifiers were applied.

## ***LABORATORY AND FIELD BLANK ANALYSIS RESULTS***

The positive methylene chloride result reported for sample INF-8/1GW is qualitatively invalid due to the presence of this compound in associated laboratory method blank. USEPA protocol requires positive results for common contaminants, such as methylene chloride, that are less than or equal to ten times the associated blank contamination level, to be considered qualitatively invalid. The result has been replaced by the quantitation limit.

**7.0**

**SURROGATE COMPOUNDS**

All criteria were met. No qualifiers were applied.

**8.0**

**MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND  
REPRODUCIBILITY**

All criteria were met. No qualifiers were applied.

**9.0**

**FIELD DUPLICATE RESULTS**

**Duplicate** samples MW-4-9/GW-23 and DUP-9/GW23 were submitted to the laboratory to evaluate sampling and analytical precision for those organic compounds determined to be present. Results for these duplicate samples are presented in Table 2. Precision is evaluated by calculating the relative percent difference (%RPD) between duplicate pair results. There are no USEPA-established acceptance criteria for field duplicate samples. EDQ uses an internal acceptance criteria of twenty percent for volatile detected compounds to evaluate field duplicate samples.

**10.0**

**LABORATORY CONTROL SAMPLE RESULTS**

All criteria were met. No qualifiers were applied.

**11.0**

**INTERNAL STANDARD PERFORMANCE**

All criteria were met. No qualifiers were applied.

**12.0**

**QUALITATIVE IDENTIFICATION**

All criteria were met. No qualifiers were applied.

The samples presented below were analyzed at dilutions. The dilution analyses were performed because of the suspected presence of high levels of target compounds and/or interferences. Quantitation limits are elevated by the dilution factor for these samples for target compounds that were not detected. The elevated quantitation limits should be noted when assessing the data for these samples.

Sample	Dilution Factor
INF-8/1GW	2.0
MW-1-9/GW-23	4.0
PW-1/GW-23	2.0
<u>PW-2/GW-23</u>	<u>2^0</u>

As required by USEPA protocol, all compounds, which were qualitatively identified at concentrations below their respective quantitation limits (QLs), have been marked with "J" qualifiers to indicate that they are quantitative estimates.

*METHODOLOGY REFERENCES*

Analysis	Reference
Volatile Organic Compounds	Method 8260B, "Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates II, IIA, and III, June 1997
Total Suspended Solids	Method 160.2, "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983, and revisions

**Table 1 Samples For Data Validation Review**  
**Byron Barrel and Drum Site**  
**Groundwater Samples Collected September 2007**  
**Severn Trent Laboratories Sample Delivery Group A07-A220**

SAMPLE I.D.	LABORATORY I.D.	DATE COLLECTED	MATRIX	ANALYSES PERFORMED	
				VOC	TSS
MW-1-9/GW-23	A7A22001	1	9/12/2007	Groundwater	X
MW-4-9/GW-23	A7A22002	2	9/12/2007	Groundwater	X
DUP-9/GW-23	A7A22003	3	9/12/2007	Groundwater	X
MW-10B/GW-23	A7A22004	4	9/12/2007	Groundwater	X
PW-1/GW-23	A7A22005	5	9/12/2007	Groundwater	X
PW-2/GW-23	A7A22006	6	9/12/2007	Groundwater	X
PW-3/GW-23	A7A22007	7	9/12/2007	Groundwater	X
Trip Blank	A7A22008	8	9/12/2007	Trip Blank	X

VOC Volatile Organic Compounds

TSS Total Suspended Solids

**Table 1 Samples For Data Validation Review**  
**Byron Barrel and Drum Site**  
**Groundwater Samples Collected September 2007**  
**Severn Trent Laboratories Sample Delivery Group A07-A301**

SAMPLE I.D.	LABORATORY I.D.	DATE COLLECTED	ANALYSES PERFORMED	
			MATRIX	VOC
INF-8/1GW	A7A30101	1	9/12/2007	Groundwater
EFF-47/GW	A7A30102	2	9/12/2007	Groundwater
Trip Blank	A7A30103	3	9/12/2007	Trip Blank

VOC: Volatile Organic Compounds

Table 2 Field Duplicate Sample Results for Organic Analyses  
Duplicate Samples MW-4-9/GW-23 and DUP-9/GW23

	MW-4-9/GW-23 (Kg/U)	DUP-9/GW23 (Mg/L)	RPD	Comments
1,1,1-Trichloroethane	14	1	j	173.3
Trichloroethene	2	ND		NC

## ECOR SOLUTIONS

ECOR SOLUTIONS - BXRON BARREL & DRUM SITE  
 AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
 ANALYSIS DATA SHEET

Client Kb.

DUP-9/GW-23

Lab Name: STL Buffalo

Contract:

Tab Code: RECNY Case No.: SAS No.:

SDGNo. : 091207Matrix: (soil/water) WATERLab Sample ID: A7A22003Sample wt/vol: 5.00 (g/ml) MLLab File ID: G9087.RR

Level.\* (low/med) LOT

Date Samp/Recv: 09/12/2007 09/12/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 09/19/2007GC Column: ZB-624 ID: 0.18 (mm)Dilution Factor: 1.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: &lt;uL)

## ODNCEffRATCN UNITS:

(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		
75-34-3	1,1-Dichloroethane	5	U
75-35-4	1,1-Dichloroethene	5	U
75-09-2	Methylene chloride	5	U
108-88-3	Toluene	5	U
71-55-6	1,1,1-Trichloroethane	1	J
79-01-6	Trichloroethene	5	U
75-01-4	Vinyl chloride	5	U
71-43-2	Benzene	5	u
1330-20-7	Total Xylenes	15	u
108-90-7	Chlorobenzene	5	u
79-00-5	1,1,2-Trichloroethane	5	u
107-06-2	1,2-Dichloroethane	5	u
127-18-4	Tetrachlorocethene	5	u
67-66-3	Chloroform	5	u
75-27-4	BromoDichloroTTiethane	5	u
124-48-1	Dibromoxylomethane	5	u
78-93-3	2-Butanone	10	u
56-23-5	Carbon Tetrachloride	5	u
95-50-1	1,2-Dichlorobenzene	5	u
106-46-7	1,4-Dichlorobenzene	5	u

EGCR SOLUTIONS  
EODR SOLUTIONS - BYRON BARREL & EKUM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
ANALYSIS DATA SHEET

Client No.

MW-1-9/GW-23

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.:SDGNb.: 091207Matrix: (soil/water) WATERLab Sample ID: A7A22001Sample wt/vol: 5.00 (g/mL) MLLab File ID: G9070.RR

Level: (low/med) LOT

Date Samp/Recv: 09/12/2007 09/12/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 09/19/2007GC Column: ZB-624 ID: 0.18 (nm)Dilution Factor: 4.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

## CX2K3NTRATION UNITS:

(ug/L or ug/Kg) IX3/LQ

75-34-3	1,1-Dichloroethane	7	J
75-35-4	1,1-Dichloroethene	3	J
75-09-2	Methylene chloride	20	U
108-88-3	Toluene	20	U
71-55-6	1,1,1-Trichloroethane	200	
79-01-6	Trichloroethene	20	U
75-01-4	Vinyl chloride	20	U
71-43-2	Benzene	20	U
1330-20-7	Total Xylenes	60	U
108-90-7	Chlorobenzene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
107-06-2	1,2-Dichloroethane	20	U
127-18-4	Tetrachlorcethene	20	U
67-66-3	Chloroform	20	U
75-27-4	Bromodichloroethane	20	U
124-48-1	Dibromochloromethane	20	U
78-93-3	2-Butanone	40	U
56-23-5	Carbon Tetrachloride	20	U
95-50-1	1,2-Dichlorobenzene	20	u
106-46-7	1,4-Dichlorobenzene	20	u

17/281

BOOR SOLUIKONS  
 BOOR SOUJTONS - BYRON BARREL & DKDM SITE  
 AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
 ANALYSIS DA3A SHEET

Client No.

MW-4-9/OJ-23

Lab Name: SIL Buffalo

Contract:

Lab Code: RBCNY Case No.:

SAS No.:

SDG No.: 091207Matrix: (soil/water) WATERLab Sample ID: A7A22002Sample wt/vol: 5.00 (g/100mL)Lab File ID: G9071.RR

Level: (low/med) LOT

Date Samp/Recv: 09/12/2007 09/12/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 09/19/2007GC Column: ZB-624 ID: 0,18 (itm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
75-34-3	1,1-Dichloroethane	5	U	
75-35-4	1,1-Dichloroethene	5	U	
75-09-2	Methylene chloride	5	U	
108-88-3	Toluene	5	U	
71-55-6	1,1,1-Trichloroethane	14		
79-01-6	Trichloroethene	2	J	
75-01-4	Vinyl chloride	5	U	
71-43-2	Benzene	5	U	
1330-20-7	Total Xylenes	15	U	
108-90-7	Chlorobenzene	5	U	
79-00-5	1,1,2-Trichloroethane	5	U	
107-06-2	1,2-Dichloroethane	5	U	
127-18-4	Tetrachloroethene	5	U	
67-66-3	Chloroform	5	u	
75-27-4	Bromodichloromethane	5	u	
124-48-1	Dibromoethane	5	u	
78-93-3	2-Butanone	10	u	
56-23-5	-Carbon Tetrachloride	5	u	
95-50-1	1,2-Dichlorobenzene	5	u	
106-46-7	1,4-Dichlorobenzene	5	u	

*SMW  
11/2005*

EOOR SOLUTIONS  
ECOR SOUJTICWS - BYRCN BARREL & DRUM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
ANALYSIS DA3A SHEET

Client No.

Mtf-10B/Gtf-23

Lab Name: STL Buffalo

Contract:

Lab Code: REQSTY Case No.

SAS No.:

SDGNo. : 091207Matrix: (soil/water) WATERLab Sample ID: A7A22004Sample wt/vol: 5.00 (g/mL) MLLab File ID: G9073.RR

Level: (low/med) LCW

Date Sarrp/Recv: 09/12/2007 09/12/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 09/19/2007GC Column: ZB-624 ID: 0.18 (im)Dilution Factor: 1.00

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

## O&amp;CENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kf)	UG/L	Q
75-34-3	1,1-Dichloroethane	5	U	
75-35-4	1,1-Dichloroethene	5	U	
75-09-2	Methylene chloride	5	U	
108-88-3	Toluene	5	U	
71-55-6	1,1,1-Trichloroethane	1	J	
79-01-6	Trichloroethene	5	U	
75-01-4	Vinyl chloride	5	U	
71-43-2	Benzene	5	U	
1330-20-7	Total Xylenes	15	u	
108-90-7	Chlorobenzene	5	u	
79-00-5	1,1,2-Trichloroethane	5	u	
107-06-2	1,2-Dichloroethane	5	u	
127-18-4	Tetrachloroethene	5	u	
67-66-3	Chloroform	5	u	
75-27-4	Baxmodichloromethane	5	u	
124-48-1	Dibromoc <sup>+</sup> oromethane	5	u	
78-93-3	2-Butanone	10	u	
56-23-5	Carbon Tetrachloride	5	u	
95-50-1	1,2-Dichlorobenzene	5	u	
106-46-7	1,4-Dichlorobenzene	5	u	

*Smt  
11/27/00*

EOOR SOLUTIONS  
ECDR SOLUTIONS - BYRON BARREL & DRLM SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST - 8 CMPDS  
ANALYSIS DATA SHEET

Client No.

PH-1/GW-23

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.:       

SAS No.:

SDG No.: 091207I<sup>+</sup>trix: (soil/water) WATERLab Sample ID: A7A22005Sample wt/vol: 5.00 (g/mL) MLLab File ID: G9088.RRLevel: (low/med) LOWDate Samp/Recv: 09/12/2007 09/12/2007% Moisture: not dec.        Heated Purge: NDate Analyzed: 09/19/2007GC Column: ZB-624 ID: 0.18 (nm)Dilution Factor: 2.00Soil Extract Volums:        (uL)Soil Aliquot Volume:        (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kf)	UG/L	Q
75-34-3	1,1-Dichloroethane	5	J	
75-35-4	1,1-Dichloroethene	10	U	
156-59-2	cis-1,2-Dichloroethene	10	u	
75-09-2	Methylene chloride	10	u	
108-88-3	-Toluene	10	u	
71-55-6	1,1,1-Trichloroethane	130		
79-01-6	Trichloroethene	10	u	
75-01-4	Vinyl chloride	10	u	

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19/281

BOOR SOLUITCNS  
 EOOR SOHJHCNS - BYRCN BARREL & DRUM SITE  
 AQUEDUS ASP 2000/8260 - SELECT LIST - 8 CMPDS  
 ANALYSIS DATA SHEET

Client No.

FW-2/GW-23

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_

SAS No.: \_\_\_\_\_

SPG No.: 091207Matrix: (soil/water) WATERLab Sample ID: A7A22006

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: G9089.RRLevel: (low/med) LWDate Samp/Recv: 09/12/2007 09/12/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 09/20/2007GC Coluitn: ZB-624 ID: 0.18 (mm)Dilution Factor: 2.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## 03CENTRATION IKCTS:

CAS NO.	COMPOUND	(ug/L or ug/Ka)	UG/L	Q
75-34-3	1,1-Dichloroethane	5	J	
75-35-4	1,1-Dichloroethene	1	J	
156-59-2	cis-1,2-Dichloroethene	10	U	
75-09-2	Methylene chloride	10	U	
108-88-3	Toluene	10	U	
71-55-6	1,1,1-Trichloroet $\pm$ ane	140		
79-01-6	Trichloroethene	10	U	
75-01-4	Vinyl chloride	10	U	

*SMT 11/2007*

ECOR SOLUTIONS  
 ECOR SOLUTIONS - BXRN BARREL & DRUM SITE  
 AQUEOUS ASP 2000/8260 - SELECT LIST - 8 CMPDS  
 ANALYSIS DATA SHEET

Client No.

PW-3/GW-23

Lab Narre: STL Buffalo

Contract:

Lab Code: RECNY	Case No. :	SAS No.:	SDGNb.: <u>091207</u>
Matrix: (soil/water) <u>WATER</u>		Lab Sample ID:	<u>A7A22007</u>
Sample wt/vol: <u>5.00</u> {g/ml} ML		Lab File ID:	<u>G9090.RR</u>
Level: (low/mad) <u>LOW</u>		Date Sample/Recv:	<u>09/12/2007 09/12/2007</u>
% Moisture: not dec.	<u>Heated Purge: N</u>	Date Analyzed:	<u>09/20/2007</u>
GC Column: <u>ZB-624</u>	ID: <u>0.18</u> (mti)	Dilution Factor:	<u>2.00</u>
Soil Extract Volume: _____ (uL)		Soil Aliquot Volume: _____ (uL)	

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/l <sup>1</sup> )	UG/L	Q
75-34-3	1,1-Dichloroethane	4	J	
75-35-4	1,1-Dichloroethene	1	J	
156-59-2	cis-1^-Dichloroethene	10	U	
75-09-2	Methylene chloride	10	U	
108-88-3	Toluene	10	U	
71-55-6	1,1,1-Trichloroethane	130		
79-01-6	Trichloroethene	10	U	
75-01-4	Vinyl chloride	10	U	

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B33R SOLUTIONS  
 BOOR SOLUTIONS - BYRCN BARREL & DRUM SITE  
 AQUB3US ASP 2000/8260 - SELECT LIST-TABLE 5  
 AK&LYSIS DATA SHEET

Client No.

Trip Blank

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.:

SAS No.:

SDGNo.: 09120?

Matrix: (soil/water) WfTER

Lab Sample 3D: A7A22008Sample wt/vol: 5.00 (g/mL) MLLab File ID: G9077.RR

Level: (low/msd) IfW

Date Samp/Recv: 09/12/2007 09/12/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 09/19/2007GC Column: ZB-624 ID: 0.18 (mm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	XJG/L.	Q
75-34-3	1,1-Dichloroethane	5	U	
75-35-4	1,1-Dichloroethene	5	U	
75-09-2	Methylene chloride	5	u	
108-88-3	Toluene	5	u	
71-55-6	1,1,1-Trichloroethane	5	u	
79-01-6	Trichloroethene	5	u	
75-01-4	Vinyl chloride	5	u	
71-43-2	Benzene	5	u	
1330-20-7	Total Xylenes	15	u	
108-90-7	Chlorobenzene	5	u	
79-00-5	1,1/2-Trichloroethane	5	u	
107-06-2	1,2-Dichloroethane	5	u	
127-18-4	Tetrachloroethene	5	u	
67-66-3	Chloroform	5	u	
75-27-4	BromDddchloromsthane	5	u	
124-48-1	Dibromochloromethane	5	u	
78-93-3	2-Butanone	10	u	
56-23-5	Carbon Tetrachloride	5	u	
95-50-1	1,2-Dichlorobenzene	5	u	
106-46-7	1,4-Dichlorobenzene	5	u	

22/281

Ecor Solutions  
 Ecor Solutions - Byron Barrel & Drum Site  
 Wet Chemistry Analysis

Client Sample No.

PW-l/GW-23

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY

Case No.:

SAS No.:

SDG No.: 091207Matrix (soil/vater): WATERLab Sample ID: A7A22005

% Solids: 0.0

Date Sartp/Recv: 09/12/2007 09/12/2007

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Total Suspended Solids	M3/L	4.0	U			160.2	09/13/2007

Comments:

*JAIMI*

Ecor Solutions  
Ecor Solutions - Byron Barrel & Drum Site  
Wet Chemistry Analysis

Client Sample Ifo.

EW-2/Grf-23

Lab Name: STL Buffalo

Ct tract:

Lab Code: RECNY

Case No.:

SAS No.:

SDG No.: 091207

Matrix (soil/water): MATER

Lab Sample ID: A7A22006

% Solids: \_\_\_\_\_ 0^0

Date Samp/Recv: 09/12/2007 09/12/2007

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Total Suspended Solids	M3/L	4.0	U			160.2	09/13/2007

Qarnnents:

*Spk  
10/10/07*

Ecor Solutions  
 Ecor Solutions - Byron Barrel & Drum Site  
 Wet Chemistry Analysis

Client Sample No.

FW-3/GA-23

Lab Name: STL Buffalo

Ctmtract:

Lab ODde: RECNY

Case No.:

SAS ND. :

SDGNo. : 091207

Matrix {soil/water}: WATER

Lab Sample ID: A7A22007

% Solids:

0.0

Date Samp/Recv: 09/12/2007 09/12/2007

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Total Suspended Solids	M3/L	20.8				160.2	09/13/2007

Comments:

*SPK 11/13/07*

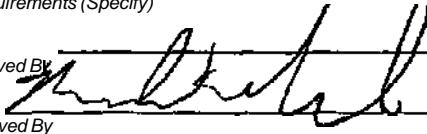
Chain of  
Custody Record

STL-4124 (0301)  
Client

Eco/I

Address

SEVERN  
TRENT  
Severn Trent Laboratories, Inc.

Project Manager J*J			Date 9-2-<n	Chain of Custody Number 343522												
Telephone Number (Area Code)/Fax Number			Lab Number	Page / of												
City		State Zip Code	Site Contact Lab Contact		Analysis (Attach list if more space is needed)											
Project Name and Location (State)			Carrier/Waybill Number													
Contract/Purchase Order/Quote No. <u>A/vz/10 7 JS. y</u>			Matrix		Containers S Preservatives		Special Instructions/ Conditions of Receipt									
Sample I.D. No. and Description (Containers for each sample may be combined on one line)			Data	Time 3	1 * 3	15   15									0 0 ?	
TA,f /fC/f^A			f-n-<n	Cg00	2k	X	X									
IW*-/-? /^A/-2.T				I/3C			1									
stwy-f/Sts-ZS				loVO			^									
Mt*s-Ef-i /6<~"23 "V^A			/	/a/0			1									
/U/-1 / f ^ z t				/3.T	" "		X									
			V	131^	ls'	»I	3.									
				t330		X	a /									
Pixt*A /Ev-*3				HSf	*		a /									
A ^ j * /SfZJ			4	I2H*	T	2 1_u	2 /									
Possible Hazard identification			Sample Disposal		(A fee may be assessed if samples are retained longer than 1 month)											
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison 8 <input type="checkbox"/> Unknown <input type="checkbox"/> Return To Client			U Disposal By Lab		D Archive For		. Months									
Turn Around Time Required			OC Requirements (Specify)													
D 21 Hours	D 18 Hours	O 7 Days	M Days	21 Days	Otlier,	Date	Time	t. Received By								
t. Relinquish			Date		Time		t. Received By		Date <u>1-tftD</u> Time <u>/5/0</u>							
c&czz:			Date		Time		2. Received By		Date <u>1-tftD</u> Time <u>/5/0</u>							
2. Relinquished By			Date		Time		3. Received By		Date <u>1-tftD</u> Time <u>00</u>							
Comments																

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

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EOOR SOLUTIONS  
EOOR SOLUTIONS - BYRON B&RREL & DRUM SITE  
UNISYS - METFCD 8260 - 8 COMPOUNDS  
ANALYSIS DATA SHEET

Client No.

INF-8/1GW

Lab Name: STL Buffalo

Contract:

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_

SD3NO.: \_\_\_\_\_

Matrix: (soil/water) WATERLab Sample ID: A7A30101Sample wt/vol: 5.00 (g/ml) MLLab File ID: Q3904.RR

Level: (low/msd) LOW

Date Sairp/Recv: 09/12/2007 09/13/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 09/25/2007GC Column: ZB-624 ID: 0.25 (mm)Dilution Factor: 2.00

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	{ug/L or ug/Kg}	UG/L	Q
75-34-3	1,1-Dichloroethane		7.1	J
75-35-4	1,1-Dichloroethene		10	U
156-59-2	cis-1^-Dichloroethene			u
75-09-2	Methylene chloride			u
71-55-6	1,1,1-Trichloroethane		160	
79-01-6	Trichloroethene		10	u
108-88-3	Toluene		10	u
75-01-4	Vinyl chloride		10	u

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12/106

BOOR scmncNS  
 ECQR SOLUTIONS - BYROJ BARREL & IMJM SITE  
 UNISYS - MEIHCD 8260 - 8 COMPOUNDS  
 ANALYSIS DATA SHEET

Client No.

EFF-47/GW

Lab Name: STL Buffalo

Gantract:

Lab Code: RECNY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDGNb.: \_\_\_\_\_Matrix: (soil/water) WATERLab Sample ID: A7A30102Sample wt/vol: 5.00 (g/mL) MLLab File ID: 03905.RR

Level: (low/med) LOT

Date Samp/Recv: 09/12/2007 09/13/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 09/25/2007GC Column: 2B-624 ID: 0.25 (nm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ &lt;uL)

## 03SICENIRATION UNITS:

(ug/L or ug/Kg) UG/L Q

<u>75-34-3</u>	<u>1,1-Dichloroethane</u>	<u>5.0</u>	<u>U</u>
<u>75-35-4</u>	<u>1,1-Dichloroethene</u>	<u>5.0</u>	<u>U</u>
<u>156-59-2</u>	<u>cis-1,2-Dichloroethene</u>	<u>5.0</u>	<u>U</u>
<u>75-09-2</u>	<u>Methylene chloride</u>	<u>5.0</u>	<u>U</u>
<u>71-55-6</u>	<u>1,1,1-Trichloroethane</u>	<u>5.0</u>	<u>U</u>
<u>79-01-6</u>	<u>Trichloroethene</u>	<u>5.0</u>	<u>U</u>
<u>108-88-3</u>	<u>Toluene</u>	<u>5.0</u>	<u>U</u>
<u>75-01-4</u>	<u>Vinyl chloride</u>	<u>5.0</u>	<u>U</u>

*SMF 11/12/001*

BOOR SOLUTIONS  
ECDR SOLUTIONS - BYRCN BARRED & DRUM SITE  
UNISYS - METER© 8260 - 8 COMPOUNDS  
ANALYSIS DATA SHEET

Client No.

## TRIP BLANK

Lab Name: STL Buffalo

Contract:

Lab Code: RHOSY CaseNb.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDGNo.: \_\_\_\_\_Matrix: (soil/vater) WATERLab Sample ID: A7A30103Sample wt/vol: 5.00 (g/ml) MLLab File ID: O3906.RRLevel: (lcw/ned) UMDate Samp/Recv: 09/12/2007 09/13/2007

% Moisture: not dec. \_\_\_\_\_ Heated Purge: N

Date Analyzed: 09/25/2007GC Column: ZB-624 ID: 0.25 (mmj)Dilution Factor: 1.00Soil Extract Volume: (uL)

Soil Aliquot Volurre: \_\_\_\_\_ (uL)

## CCIONRATICN UNITS:

GAS NO.	OCMPOUND	(ug/L or ug/Kg)	UG/L	Q
75-34-3	1,1-Dichloroethane	5.0	U	
75-35-4	1,1-Dichloroetnene	5.0	U	
156-59-2	cis-1,2-Dichloroethene	5.0	U	
75-09-2	Methylene chloride	5.0	U	
71-55-6	1,1,1-Trichloroethane	5.0	U	
79-01-6	Trichloroethene	5.0	U	
108-88-3	Toluene	5.0	U	
75-01-4	Vinyl chloride	5.0	U	

Environmental  
Construction  
Operations &  
Remediation

March 28, 2008

ECOR Solutions, Inc.  
1075 Andrew Drive, Suite 1  
West Chester, PA 19380  
Main (610)431-8731  
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Mr. George Jacob  
Remedial Project Manager  
Central New York Remediation Section  
Emergency & Remedial Response Division  
USEPA Region 2  
290 Broadway Avenue, 20th Floor  
New York, New York 10007-1866

Re: Fourth Quarter /Annual 2007Report  
Byron Barrel & Drum Site - Byron, New York

Dear Mr. Jacob,

Enclosed is the report for remedial activities at the Byron Barrel & Drum Area 2 Site for the Fourth Quarter of 2007. This report is submitted on behalf of the Potentially Responsible Parties, who are jointly fulfilling the requirements of the Administrative Order. The report also summarizes the remedial activities for the calendar year of 2007.

If you have any questions regarding this report, or any other questions regarding activities at the Site, please contact me at (484) 887-7510, extension 207.

Sincerely,  
ECOR Solutions, Inc.

A handwritten signature in black ink, appearing to read "JLapp".

Matthew Lapp  
Project Engineer

cc: Mr. John Grathwol -NYSDEC  
Mr. Chris Rockwell - Garlock Sealing Technologies  
Mr. Terry Etter, P.E. - Unisys Corporation  
Mr. R. William Stephens - Stephens & Stephens, LLP (General Railway Signal)  
Keith Rapp - ECOR Solutions  
Project File - ECOR Solutions

*Final*  
**BYRON BARREL & DRUM SITE**  
QUARTERLY/ANNUAL REPORT  
FOURTH QUARTER 2007

Byron Barrel & Drum Site  
Area 2  
Byron, New York

March 28, 2008

Prepared for:  
BYRON BARREL & DRUM PRP GROUP

Prepared by:

ECOR Solutions, Inc.  
1075 Andrew Drive, Suite I  
West Chester, PA 19380



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## **1.0 INTRODUCTION**

This report of remedial activities at the Byron Barrel & Drum, Area 2 Site (Site) presents data obtained through the fourth quarter 2007. The purpose of this report is to summarize and document ongoing remedial and monitoring activities at the Site conducted during the fourth quarter of 2007, as well as, an annual summary for the calendar year 2007. The report also includes a preliminary evaluation of the In-Situ Remediation Technology (ISRT) bio-injection (Injection) performed in September 2007. The preliminary evaluation is based on the analytical results of samples collected in December 2007 in addition to routine quarterly samples. A brief description of the background of the Site is included, as well as, information regarding remedial activities and monitoring activities planned for the next quarter.

## **1.1 SITE BACKGROUND**

The Byron Barrel and Drum Area 2 Site is located at 6065 Transit Road, in Byron Township, Genesee County, NY. The Site is set back approximately 1,000 feet from the east side of Transit Road. In 1982, two drum disposal locations were discovered at the Site. New York State Department of Environmental Conservation's (NYSDEC) subsequent investigation led to the Site's inclusion on the Superfund National Priorities List (April 1984). A Site plan is provided as Figure 1.

A remedial investigation and feasibility study (RI/FS) was conducted, which identified three areas of concern at the Site. Based on the findings of the RI, it was concluded that further action in two of the areas, Area 1 and Area 3, was not warranted. However, the RI detected volatile organic compounds (VOCs); including trichloroethene (TCE) and 1,1,1-trichloroethane (TCA) in groundwater samples collected from locations in Area 2.

The remedial activities discussed in this report include only activities for Area 2. The selected remedy for Area 2 was in-situ soil flushing and groundwater pumping, treatment, and discharge. The remedial action construction was performed during the summer of 2001. The implementation of the remedial design included excavation and characterization of potentially impacted soil, and installation of additional two groundwater pumping wells (PWs) to supplement the one previously installed (PW-1), a ground water treatment system, and an infiltration gallery.

## 1.2 CHRONOLOGY OF EVENTS

The chronology of events regarding the investigation and remediation of the Site are summarized below:

<b>Event or Document</b>	<b>Date</b>	<b>"Notes</b>
Record of Decision (ROD)	Sept. 29, 1989	EPA/ROD/R02-89-089
Consent Decree	January 5, 1995	89-CV-748A Unisys Corp. and Garlock, Inc., settling defendants
Draft Explanation of Significant Differences	February, 1999	
Pre-Remedial Design Investigation and Remedial Design Report	December, 1999	
100 Percent Remedial Design Submittal	December, 1999	
Remedial Action Work Plan	September, 2001	
Construction Health and Safety Plan	December, 2001	
Quality Assurance Project Plan	June, 2001	
RA Construction Mobilization	June 11, 2001	
RA Construction	June 11 -July 15,2001	
Initial UZ Soil Sampling Event	June 27,2001	
EPA RA Pre-Final Inspection	July 19,2001	
GWTS Performance Testing	July 29, 2001	
GWTS Startup Testing	August, 2001	Extended Startup & Testing
GWTS Continuous 0 & M	October 1,2001	Continuous Operation
EPA Interim Inspection	July 17,2002	
Second UZ Soil Sampling Event	August 14,2002	
RA Report	September, 2002	Final RA for Site Soils Interim RA for Site GW
EPA RA Approval	September, 2002	
Effluent Sampling reduced to Quarterly	September, 2002	
Discontinuation of SVOC Sampling	May 23, 2003	
EPA Site Inspection	May 2, 2007	5 year review
GWTS Shut down for In-situ Bioremediation	September 12,2007	
In-Situ Bioremediation Injection Event	September 18-20,2007	
Preliminary Injection monitoring samples collected in addition to groundwater VOC samples	December 19-21,2007	

## ***2.0 CONSTRUCTION OF REMEDIAL DESIGN***

Remediation system installation and activation was completed in July 2001. A Pre-Final inspection was performed on July 19, 2001. A few action items were itemized during the Pre-Final inspection as summarized in the First Quarter 2002 Quarterly Report (ECOR, May 2001) and the Remedial Action Report (ECOR, September 2002). The action items were completed during late 2001 and early 2002. An Interim Inspection was completed by the Environmental Protection Agency (EPA) on July 17, 2002. No major problems were discovered during the inspection.

The system operated intermittently until September 2001 due to initial system debugging during the start up phase. Since September 2001, the system has operated almost continuously. Use of the infiltration gallery was discontinued in August 2002 upon regulatory approval. During this reporting period (Fourth Quarter 2007), no significant activities occurred relative to the remedial design.

### ***3.0 OPERATION OF GROUNDWATER TREATMENT SYSTEM***

During routine operation, groundwater recovered from the three pumping wells (PW-1, PW-2, and PW-3) is treated through one bag filter and an air stripper prior to discharge. The bag filter removes suspended solids greater than 50 microns in diameter. The low-profile air stripper removes the VOCs from the groundwater. Following air stripping, the groundwater is discharged to surface water.

Figure 1 illustrates the PW locations and the Groundwater Treatment System (GWTS). A Flow Diagram of the GWTS equipment and process piping is presented in Figure 2.

#### ***3.1 ROUTINE OPERATION AND MAINTENANCE***

Scheduled Operation & Maintenance (O&M) activities include weekly Site visits by the local Chief Operator, Steve Rodland. The Chief Operator is the first responder to autodialer alarms from the Site. Weekly Site visits include performing an overall Site inspection, GWTP system inspection, including checking the bag filter for solids loading, gauging air flow through the stripper, and noting flow rates and totalized flow. Preventive maintenance items performed by the operator include monthly inspections of the air stripper blower, and air stripper trays are inspected for sediment and mineral deposits. The trays require cleaning on a quarterly basis as a preventative maintenance and system operation performance item.

#### ***3.2 SYSTEM OPERATIONS AND MONITORING HISTORY THROUGH FOURTH QUARTER 2007***

A total of 20,572,110 gallons of groundwater and approximately 38.0 pounds of dissolved-phase VOCs have been recovered via the pumping well network since system activation. All of this groundwater was treated in the GWTS. Of that total, 19,748,110 gallons, or 96.0% of the total flow, was discharged to the surface water, into the drainage ditch that flows adjacent to the Site. The remaining 824,000 gallons, or 4.0 % of the total, was directed to the Infiltration Gallery. Soil flushing through the Infiltration Gallery ceased in August of 2002. In September of 2002, EPA concurred with the conclusion presented in the Final RA Report stating that Site soil has been effectively remediated. Therefore, there are no plans to re-initiate operation the Infiltration Gallery.

At the beginning of 2002, Treatment System Influent and Effluent were sampled and analyzed on a twice-monthly basis, as per the initial DEC discharge approval document. The Treatment System sampling schedule was reduced to quarterly during the third quarter 2002 following approval of the

NYSDEC. Effluent samples have been collected and analyzed during subsequent quarterly sampling events. The analytical results of the effluent have consistently met the DEC's Effluent Limitations, and have generally had non-detectable concentrations of VOCs. **Tables 1** and **2** summarize influent and effluent analytical data for the system since startup. **Figure 3** presents a graph of the influent VOC concentrations over time. Cumulative dissolved-phase mass recovered is depicted on Figure 4. This data indicates that the influent VOC concentration has reached asymptotic levels. Quarterly effluent compliance sampling events coincide with the quarterly groundwater monitoring events.

On May 2, 2007 a Site inspection was performed by the EPA's George Jacob as part of the project's Five Year Review. Also in attendance were Richard Krauser (EPA), John Grathwol (DEC), Chris Rockwell (PRP Group), Matt Lapp and Will Torres (ECOR). No issues were identified during the inspection.

### **3.3    *OPERATIONAL PROBLEMS ENCOUNTERED***

Due to a partial closing of the effluent discharge pipe caused from scale buildup pumping well PW-1 has routinely maintained a steady flowrate while PW-2 and PW-3 have typically have been turned off and cycled intermittently during operation. The system was operated in this manner from January through September 2007 with maintaining a final influent flowrate of 1.2 gpm. The system had an operational runtime of approximately 100%. While pumping flowrates and operational time have decreased, VOC concentrations continue to remain low, approaching asymptotic levels.

### **3.4    *CURRENT SYSTEM STATUS***

The GWTS was temporarily shut down on September 12, 2007 to allow for the ISRT Injection to occur. The system will remain shut down awaiting the results and final evaluation of the Injection. A preliminary evaluation is presented in Section 4.4.

#### **4.0 QUARTERLY SITE MONITORING EVENT**

##### **4.1 MONITORING WELL SAMPLING EVENT**

The quarterly sampling event occurred on December 19 and 21, 2007 and was conducted in accordance with the agreed upon modifications to the QAPP (May 23,2003). Groundwater samples were collected from monitoring wells MW-1, MW-4, MW-10B, MW-21 and pumping wells PW-1 and PW-2 using EPA's low-flow sampling procedures, in accordance with the QAPP. PW-3 could not be sampled because there was no power to the pump. A summary of the field parameter measurements is presented in **Table 3**. A summary of Site groundwater elevations is provided in **Table 4**. A copy of field notes collected during the sampling event is included in **Appendix A**. The preserved groundwater samples were collected and analyzed by Test America, Inc, Buffalo, New York.

##### **4.2 LABORATORY ANALYSIS/GROUNDWATER SAMPLING RESULTS**

Recent and historical groundwater quality data for monitoring and pumping wells (2001 to present) for select compounds is summarized in **Table 5**. The sample specific analysis performed included VOC analysis in accordance with USEPA SW-846 Method 8260B. The groundwater samples (MW-1, MW-4, MW-10B and MW-21) were analyzed for the following twenty (20) project specific compounds: 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), methylene chloride (MeCl), toluene, 1,1,1-trichloroethane (TCA), trichloroethene (TCE), vinyl chloride (VC), benzene, total xylenes, chlorobenzene, 1,1,2-trichloroethane (1,1,2-TCA), 1,2-dichloroethane (1,2-DCA), tetrachloroethene, chloroform, bromodichloromethane, dibromochloromethane, 2-butanone, carbon tetrachloride, 1,2-dichlorobenzene and 1,4-dichlorobenzene. The pumping well samples (PW-1 and PW-2) were analyzed for the following eight (8) compounds: 1,1 -DCA, 1,1 -DCE, MeCl, TCA, TCE, toluene, VC and cis-1,2-dichloroethene. A review of the previous data indicates that the primary compounds of concern detected at the Site are: TCA and degradation products 1,1-DCA and 1,1-DCE. The concentrations of these VOCs range from non-detect to 1,300 micrograms per liter (ug/L) (TCA at monitoring well MW-10B). Currently, only TCA is present above the applicable clean up standards at the Site.

The groundwater cleanup standards are summarized below:

<b>Chemical</b>	<b>Groundwater Cleanup Level (ug/L)</b>
1,1 -Dichloroethane	5
1,1 -Dichloroethene	5
Toluene	5
Methylene chloride	5
1,1,1 -Trichloroethane	5
Trichloroethene	5
Vinyl Chloride	2

Groundwater quality data is depicted on Figure 5 with those constituents detected above the applicable clean-up standard are highlighted in yellow.

#### *4.3 DATA VALIDATION*

As per Section 4.0 of the QAPP, the data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the SAP, the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (October 1999), the USEPA Region II Data Review Standard Operating Procedure (SOP) Number HW-24, Revision 1, September 1999: Validating Volatile Organic Compounds by SW-846 Method 8260B, and the reviewer's professional judgment. The Data Validation Report is included in **Appendix B**.

#### *4.4 ISRT PRELIMINARY EVALUATION*

ECOR submitted an in-situ bioremediation applicability study to the PRP group for review. The PRP Group requested an independent assessment of the data and recommendation prior to implementation. The independent assessment was completed during June 2006. The findings indicate that an in-situ remediation technology known as Enhanced Reductive Dechlorination (ERD), may be effective at carrying out final remediation at the Site. A work plan was prepared and approved by the EPA. The Injection was performed on September 18-20,2007, and consisted of metering the carbon amendment from totes and pails containing the Newman's Zone, mixed with potable water and injection down each

well as a dilute solution. The Newman's Zone amendment is a concentrated source of electron donors, with an electron equivalent dose for the lactate, soybean oil, and food grade additives over 175 electron equivalents per kilogram. The Material Safety Data Sheet (MSDS) for the Newman's Zone is provided in Appendix F.



The sequence of injection is summarized below

<b>Injection Well</b>	<b>Date</b>	<b>Emulsion + Water (gallons)</b>	<b>Average Injection Rate (SP<sup>m</sup>)</b>
<b>MW-10B</b>	18-Sep	340	
	19-Sep	1,614	
	<b>Total</b>	<b>1,954</b>	<b>2.8</b>
<b>PW-2</b>	18-Sep	237	
	19-Sep	1,230	
	20-Sep	836	
	<b>Total</b>	<b>2,303</b>	<b>1.9</b>
<b>PW-1</b>	19-Sep	565	
	20-Sep	1,260	
	<b>Total</b>	<b>1,825</b>	<b>2.3</b>

total emulsion + water (gallons) =6,082

total weight of emulsion (lbs) =5,349

total gals of emulsion =654

Several parameters are sampled as part of the program to monitor progress of the Injection, including Iron (Total and Dissolved), Manganese (Total and Dissolved), Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Chloride, Nitrate-Nitrite, Sulfate and Sulfide, Total Kjeldahl Nitrogen, Total Organic Carbon (TOC), Total Phosphorous, and dissolved gasses Ethane, Ethene, Methane, and Carbon Dioxide. **Table 3** provides a summary of the field parameters measured during the December 2007 Quarterly Sampling Event. Analytical data is presented in **Appendix E**.

The December 2007, sampling event was the initial post-injection sampling and is the beginning of the monitoring. For example TOC is monitored in the groundwater environment to determine if anaerobic metabolism of VOCs is possible through the addition of a hydrocarbon substrate. Oxidation Reduction Potential (ORP) is monitored to confirm the prevailing groundwater environment (aerobic and oxidizing vs. anaerobic and reducing). Alkalinity is analyzed as an indicator of the aquifers ability to buffer against variations in pH, and as an additional indicator of enhanced microbial activity. The pH is monitored to keep the groundwater in optimal range for reductive dechlorination as some bacterial populations are sensitive to low pH conditions (e.g., *Dehalococcoides*). The presence of reduced electron acceptors provides another measure of the primary microbial respiration processes controlling the groundwater environment. The presence and relative concentrations of VOC degradation end-products provides confirmation that the ERD process is being driven to completion. Dissolved gasses (methane\ethane\ethene) are monitored as they measure breakdown of the VOCs in a strongly reducing (methanogenic) environment, particularly around the injection wells. Chloride is monitored as a relative indicator that VOCs have been destroyed, leaving innocuous end-products. This performance monitoring is a critical portion of the in-situ ERD.

The December 2007, sampling event shows limited development of the ERD zone, however, this sampling event was conducted only 3-months after the initial injection, and several positive indicators are developing, including the distribution of TOC, and the change in some areas of the groundwater environment to anaerobic conditions. The TOC concentrations were plotted on **Figure 13**, which indicates good distribution of the Newman's Zone amendment from the upgradient injection well MW-10B downgradient past injection wells PW-1 and PW-2. The overlap of the groundwater impacted with VOCs above the NYSDEC Groundwater Criteria and the TOC is shown on **Figure 15**. One primary objective of the ERD program is to keep the TOC concentrations elevated in this area.

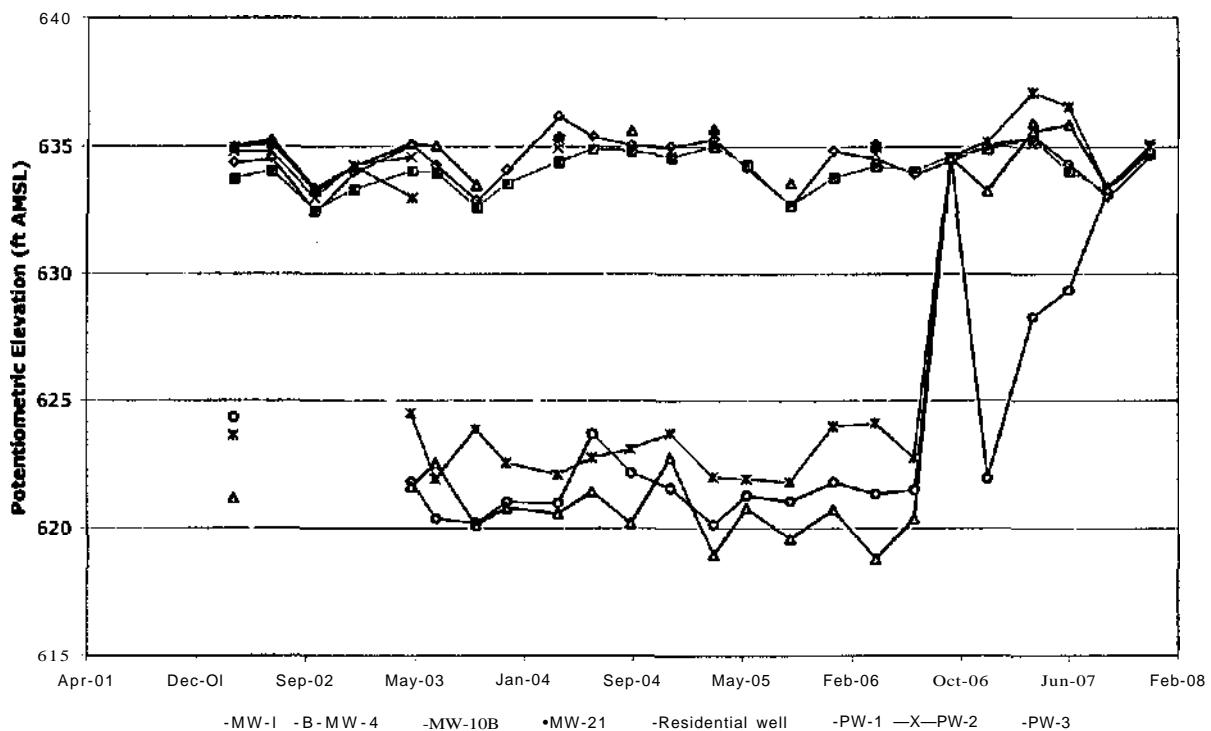
To date, the area near PW-1 began to shift toward strongly anaerobic conditions with the December 19, 2007, measurement of -258 mV ORP, accompanied by a reduction in dissolved oxygen (DO), as shown

on **Figure 14**. This shift is shown graphically on **Figure 16**, which depicts the DO and ORP change since the initial injection. In terms of dissolved gasses, ethane and ethene were detected at MW-1OB at a concentration of 5.3 and 8.7 mg/l, respectively, and methane was detected at MW-1 at a concentration of 37 mg/l (**Table 3**). Data generated previously from the BioTrap samplers confirmed that methanotrophs were detected at relatively high numbers ( $7 \times 10^{46}$  and  $1 \times 10^{+7}$  cells/bead). Methanotrophs are ubiquitous aerobic microorganisms that require methane as their sole source of carbon. The enzyme that initially oxidizes methane is also oxidized 1,1,1-TCA, 1,1-DCA, 1,1-DCE, TCE and other chlorinated VOCs. These microorganisms will degrade these compounds cometabolically under aerobic conditions in the presence of methane without the production of the lesser chlorinated daughter products (e.g. 1,1-DCA, chloroethane). These data indicate that methanotrophic degradation is still a major natural attenuation process at the Site. Further groundwater sampling will determine trends in these parameters, and suggest any modifications necessary to the ERD program. It is anticipated that with the addition of the hydrocarbon amendment the number and population of methanotrophs and solvent degraders will increase, further accelerating the rate of biodegradation, however, further biological sampling would be required to determine the rate and extent of indigenous biological populations.

## **5.0 ANNUAL PROJECT SUMMARY**

Groundwater monitoring for potentiometric levels were collected concurrent with water quality samples on March 22, June 14, September 12, and December 19, 2007. In 2007 the groundwater levels in monitoring wells MW-1, MW-4, MW-10B, the Residential well, and MW-21 remained consistent with historical trends. With the restrictions in the GWTP effluent piping resulting in a reduction of flow to the treatment system and thus pumping at PW-1, PW-2, and PW-3, the potentiometric levels rebounded to pre-pumping levels, as shown on the chart below.

Well Hydrographs - Byron Barrel & Drum Site



Groundwater levels started rebounding in PW-2 and PW-3 in the fall-2006, and with progressively less groundwater extraction throughout 2007, water levels in all pumping wells returned to static, resulting in low hydraulic gradients by the end of 2007. Early in 2007 groundwater extraction occurred at PW-2, but on January 24, 2007, the pumping changed from PW-2 to PW-1, which was the primary groundwater extraction well for the rest of 2007. As the groundwater extraction volume progressively declined the water levels in PW-1 increased to essentially equivalent with the other extraction wells. As the chart above shows, the horizontally hydraulic gradient at the site is extremely low.

Groundwater flowpaths over the course of 2007 changed from previous years, as the result of the collapse of the cone-of-depression created by the past pumping of the extraction wells. **Figure 5**, Potentiometric Elevation Contour Map - March 22,2007, shows a familiar capture zone centered around PW-1, but narrower than past monitoring events as PW-2 and PW-3 were not pumping, and the cone-of-depression does not extend laterally east-west around each well. As the groundwater pumping diminished by June 2007, the cone-of-depression migrated further inward toward PW-1, and the horizontal hydraulic gradient flattened further, as shown of **Figure 6**. The system was shutdown on September 12,2007, in preparation for the Injection, and by the time water levels were measured on the same day, the cone-of-depression completely collapsed. Groundwater flow reverted to pre-pumping static conditions with flow from the south across the site and off-site to the north-northeast, as shown on **Figure 7**. For 2007, September 12, was the last day of groundwater extraction. By the fourth quarter groundwater sampling event conducted December 19, 2007, the groundwater flowpath continues to be generally northward across the Site with a very low hydraulic gradient (0.0008125 ft/ft), as depicted on **Figure 8**. A summary of 2007 potentiometric levels are provided below, as well as **Table 4**.

**Summary Table of 2007 Potentiometric Levels**

Date	MW-1	MW-4	MW-10B	MW-21	Residential	PW-1	PW-2	PW-3
3/22/07	635.44	635.32	636.00	635.14	635.69	628.32	637.15	635.66
6/14/07	634.33	634.06	nm	nm	nm	629.39	636.62	635.93
9/12/07	633.07	633.26	633.46	nm	nm	633.39	633.37	633.38
12/19/07	634.68	634.77	634.90	635.14	nm	634.87	635.03	nm

*Elevations in ft AMSL*

## **5.1 GROUNDWATER QUALITY SAMPLING**

The 2007 groundwater sampling program was completed pursuant to the July 2002 QAPP. The first quarterly groundwater sampling event was conducted on March 22, 2007, and included wells MW-1, MW-4, MW-10B, MW-21, the Residential monitoring well, PW-1, PW-2, and PW-3. The second quarterly groundwater sampling event was conducted June 14, 2007, and included wells MW-1, MW-4, PW-1, PW-2, and PW-3. The third quarterly groundwater sampling event was conducted September 12, 2007, and included wells MW-1, MW-4, MW-10B, PW-1, PW-2, and PW-3. The fourth quarterly groundwater sampling event was conducted December 19, 2007, and included wells MW-1, MW-4, MW-10B, MW-21, PW-1, and PW-2.

Groundwater monitoring well samples were collected during each sampling event for VOC analysis in accordance with EPA SW-846 Method 8260B, specifically analyzed for the following twenty (20) project specific compounds: 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (c-DCE), methylene chloride (MEC), toluene, 1,1,1-trichloroethane (1,1,1-TCA), trichloroethene (TCE), vinyl chloride (VC), benzene, total xylenes, chlorobenzene, 1,1,2-trichloroethane (1,1,2-TCA), 1,2-dichloroethane (1,2-DCA), tetrachloroethene, chloroform, bromodichloromethane, dibromochloromethane, 2-butanone, carbon tetrachloride, 1,2-dichlorobenzene and 1,4-dichlorobenzene. The pumping well samples (PW-1, PW-2, and PW-3) were analyzed for the following eight (8) compounds: 11DCA, 11DCE, MEC, 111TCA, TCE, toluene, VC and cDCE.

A review of the historic data indicates that the primary compounds of concern detected at the Site have been 1,1,1-TCA and degradation products 1,1-DCA and 1,1-DCE. In 2007 these compounds were detected, along with minor detections of c-DCE and TCE. The concentrations of these VOCs in 2007 range from non-detect to 1,300 micrograms per liter (ug/L) for 1,1,1-TCA at monitoring well MW-10B.

In the first quarter groundwater sampling event the primary VOCs detected were 1,1,1-TCA and 1,1-DCA. There were no VOCs detected at or above the laboratory method detection limit (MDL) at MW-21 and the Residential well. 1,1,1-TCA was detected at MW-1 with a concentration of 100 ug/l, at MW-4 with a concentration of 10 ug/l, MW-10B with a concentration of 6 ug/l, PW-1 with a concentration of 170 ug/l, PW-2 with a concentration of 90 ug/l, and at PW-3 with a concentration of 210 ug/l. 1,1-DCA was detected at MW-1 with a concentration of 2 J ug/l, at PW-1 with a concentration of 6 ug/l, at PW-2 with a concentration of 8 ug/l, and PW-3 with a concentration of 7 ug/l. **Figure 9** provides the Groundwater Quality Map for the sampling event conducted March 22, 2007. As noted on **Figure 9**, the

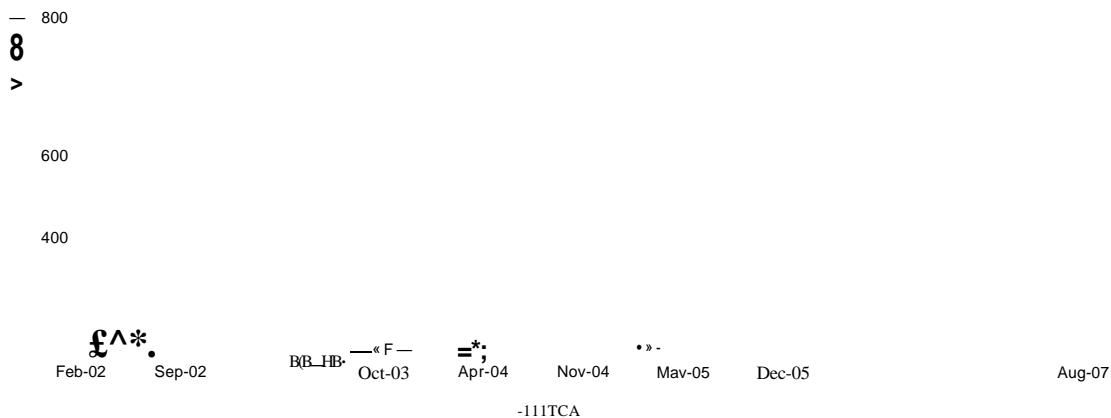
primary center of total VOCs is centered around the groundwater extraction wells (PW-1, PW-2, PW-3) and extending downgradient to MW-1.

The second quarter groundwater sampling event monitored five (5) wells, MW-1, MW-4, PW-1, PW-2, and PW-3. 1,1,1-TCA was detected at MW-1 with a concentration of 200 ug/l, at MW-4 with a concentration of 10 ug/l, at PW-1 with a concentration of 280 ug/l, at PW-2 with a concentration of 270 ug/l, and at PW-3 with a concentration of 260 ug/l. 1,1-DCA was detected at MW-1 with a concentration of 6 ug/l, at PW-1 with a concentration of 9 J ug/l, at PW-2 with a concentration of 8 J Ug/l, and at PW-3 with a concentration of 9 J ug/l. Estimated (J) values below the laboratory MDL of 5 Ug/l were detected for 1,1 -DCE at MW-1, PW-1, PW-2, and PW-3, and for TCE at MW-1, MW-4 and PW-1. **Figure 10** provides the Groundwater Quality Map for the sampling event conducted June 14, 2007.

The third quarter groundwater sampling event monitored six (6) wells, MW-1, MW-4, MW-10B, PW-1, PW-2, and PW-3. 1,1,1-TCA was detected at MW-1 with a concentration of 200 ug/l, at MW-4 with a concentration of 14 ug/l, at MW-10B with a concentration of 1 J ug/l, at PW-1 with a concentration of 130 ug/l, at PW-2 with a concentration of 140 ug/l, and at PW-3 with a concentration of 130 ug/l. 1,1-DCA was detected at MW-1 with a concentration of 7 J ug/l, at PW-1 with a concentration of 5 J jxg/l, at PW-2 with a concentration of 5 J ug/l, and at PW-3 with a concentration of 4 J ug/l. Estimated (J) values below the laboratory MDL of 5 ug/l were detected for 1,1 -DCE at MW-1, PW-2, and PW-3, and for TCE at MW-4. **Figure 11** provides the Groundwater Quality Map for the sampling event conducted September 12, 2007.

The fourth quarter groundwater sampling event monitored six (6) wells, MW-1, MW-4, MW-10B, MW-21, PW-1, and PW-2. 1,1,1-TCA was detected at MW-1 with a concentration of 200 ug/l, at MW-4 with a concentration of 16 ug/l, and at MW-10B with a concentration of 1,300 ug/l. 1,1-DCA was detected at MW-1 with a concentration of 10 ug/l, and at MW-10B with a concentration of 64 J ug/l. Estimated (J) values below the laboratory MDL of 5 ug/l were detected for 1,1 -DCE at MW-1, and for TCE at MW-1 and MW-4. **Figure 12** provides the Groundwater Quality Map for the sampling event conducted December 19, 2007. The principle difference in the fourth quarter groundwater sampling event is the significant increase in VOCs, primarily 1,1,1-TCA at MW-10B, after the initial injection from the ERD program, as noted in the chart below.

## Groundwater Monitoring Well MW-10B



Currently, 1,1 -DCA and 1,1,1 -TCA are present above the applicable clean up standards. In 2007, the 1,1,1-TCA groundwater standard of 5 ug/l was exceeded at MW-1, MW-4, MW-10B, PW-1, PW-2 and PW-3. The 1,1-DCA groundwater standard of 5 ug/l was exceeded at MW-1, MW-10B, PW-1, PW-2, and PW-3. A summary of the historical water quality data is provided on Table 5.

### 5.2 TREND ANALYSIS OF GROUNDWATER CONCENTRATIONS

A trend analysis of groundwater concentrations presented as natural log [In] of the concentration over time reduces concentration variations and provides easier trend determination. It should be noted that the slope of a linear trend line was used to provide a uniform assessment of trends in total VOC concentrations. Visual inspection of these graphs reveals that, although the slope may indicate an increasing or decreasing trend, the actual fluctuation of analyte concentrations over time may show that an overall increasing or decreasing trend cannot be correctly applied to the VOC in question. The use of a linear trend line represents one of many approaches that can be used to determine trends in concentrations. To analyze the validity of the trend line, taking the fluctuations in data into account, the  $R^2$  value was calculated for each linear model.  $R^2$  is a unit less fraction between 0 and 1 that quantifies the accuracy of fit of the data set to the linear trend line. A high  $R^2$  value (close to 1) indicates a more

accurate trend line, while a low value (close to zero) is a sign that the model may not be an accurate representation of the quarterly data. If influent groundwater concentrations continue to decrease over time, the trend analysis will indicate a higher level of reliability of the decreasing data (e.g. a  $R^2$  value greater than 0.9).

Trend analyses for total VOC concentrations are presented in Figures 17 through 20 for select monitoring wells (MW-1 and MW-4) and pumping wells (PW-1 and PW-2). After initial total VOC concentration fluctuations, the total VOC levels at monitoring well MW-1 (a downgradient well) are stabilizing with a slight decreasing trend. A high  $R^2$  value of 0.7069 indicates an accurate trend line. Concentrations of total VOCs at monitoring well MW-4 (also a downgradient well) are demonstrating an overall decreasing trend (2004-2006), but total VOC concentration variations are still observed. Prior to 2004, significant fluctuations in total VOC concentrations were observed. An  $R^2$  value of 0.5572 indicates a fairly accurate trend line. Monitoring well MW-10B (an upgradient well) is sampled semi-annually, and a total VOC concentration trend is not apparent at this time but appears to be decreasing. MW-21 (an upgradient well) is only sampled once per year and concentrations of VOCs have consistently been non detect.

Pumping well PW-1 has a low calculated  $R^2$  value (0.1946). Total VOC concentrations have fluctuated over time at pumping well PW-1, and a trend is not apparent from the data set. Pumping well PW-2 demonstrates a more predictable total VOC trend (calculated  $R^2$  value of 0.3234). Total VOC concentrations at pumping well PW-2 show an overall decrease followed by a slight increase in 2007 most likely due to the inactivity of this pumping well.

### **5.3 STATISTICAL EVALUATION OF GROUNDWATER TRENDS**

The VOC concentration trends over time for the last 10 sampling events were evaluated using the Mann-Kendall statistical test (**Appendix C**). The Mann-Kendall test is a non-parametric test that can be used to assess concentrations exhibiting either increasing or decreasing trends over time to a specified level of confidence. Unlike the  $R^2$  value in linear regression analysis, this test evaluates "trend" only, not linearity, and is independent of the order-of-magnitude changes in concentration.

The Mann-Kendall test was performed using a modified spreadsheet developed by the State of Wisconsin. The test requires a minimum of four (4) and a maximum often (10) sampling events. This analysis used the data for the most recent 10 sampling events. Values below the detection limits are entered as the detection limit; however, in order to prevent "trending of detection limits", all detection limits for a given trend series are entered as a single value. This test was not performed for wells or compounds for which the majority of results were reported below the detection limit. The results are provided as "Increasing", "Decreasing", or "No Trend" at an 80% confidence level. The results of this analysis are provided in **Appendix C**, and summarized below.

The groundwater monitoring wells were analyzed for the commonly detected compounds 1,1-DCA, 1,1-DCE, MEC, 1,1,1-TCA, TCE, and TVOCs. The pumping wells were analyzed for 1,1-DCA, 1,1-DCE, cDCE, 1,1,1-TCA, TCE, and TVOCs, and due to high MDLs the December 2007, sampling event is not included in this analysis.

- MW-1 depicts a stable or decreasing trend at 80% confidence level for 1,1-DCA, 1,1-DCE, MEC, 1,1,1-TCA, TCE, and TVOCs (all compounds).
- MW-4 depicts a stable or decreasing trend at 80% confidence level for all compounds.
- MW-10B depicts a stable or decreasing trend at 80% confidence level for 1,1-DCE, MEC, 1,1,1-TCA, TCE and TVOCs, and an undetermined non-stable trend (coefficient of variation >1) for 1,1-DCA.
- PW-1 depicts a stable or decreasing trend at 80% confidence level for 1,1-DCA, 1,1-DCE, and c-DCE, and an increasing trend at 80% confidence level for 1,1,1-TCA, TCE and TVOCs.
- PW-2 depicts a stable or decreasing trend at 80% confidence level for 1,1-DCE, c-DCE, and TCE, and an increasing trend at 80% confidence level for 1,1 -DCA, 1,1,1 -TCA and TVOCs.

- PW-3 depicts a stable or decreasing trend at 80% confidence level for 1,1-DCE, c-DCE, and TCE, and an increasing trend at 80% confidence level for 1,1 -DCA, 1,1,1 -TCA and TVOCs.

A summary of the statistical analysis shows generally increasing trends for 1,1,1 -TCA and 1,1 -DCA in the recovery wells, and stable or decreasing trends for the other compounds in the monitoring wells, as summarized in the table below.

Decreasing Trend (80% CI), all compounds		Stable or Decreasing Trend (80% CI)	Undetermined non-stable trend	Increasing Trend (80% CI)
MW-1	X	—	~	—
MW-4	X	—	-.	—
MW-10B		1,1-DCE, MEC, <b>1,1,1-TCA</b> , TCE	11 DCA	
PW-1	~	1,1-DCA, 11 DCE, c-DCE	—	1,1,1-TCA, TCE
PW-2	—	1,1-DCE, c-DCE, TCE	—	1,1-DC A, 1,1,1-TCA
PW-3	-	1,1-DCE, c-DCE, TCE	--	1,1-DC A, 1,1,1-TCA

The increase in 1,1,1-TCA corresponds to the decrease in pumping rate of each well. This is primarily caused by the collapse of the cone-of-depression and re-saturation in the soils and area surrounding the wells, coupled with a re-equilibrating of the groundwater flowfields upgradient and within the former capture zone. **Appendix C** contains the spreadsheets for each well.

## 6.0 PLANS FOR NEXT QUARTER

It is recommended the GWTP remain shut-down until after a second round of post-injection sampling is conducted and evaluated. This means the GWTP will not be operational for the 1st Quarter 2008. However, quarterly groundwater sampling will continue to be collected in accordance with the QAPP and described in **Table 6**. The first quarter 2008 sampling is scheduled for March 26, 2008. At this time the additional post-injection samples will also be collected. The first quarter report should provide additional analysis regarding the progress of the ERD and whether it will be necessary to resume GWTP operation.

Based on the results of the groundwater monitoring program, it is recommended that second round of BioTrap samplers could be installed in MW-1 and MW-10B in early-2008 to further demonstrate the progress of ERD through establishing the population of methanotrophs and genetic analysis of chlorinated solvent degraders, and shifts in the indigenous bacteria as the result of the hydrocarbon injection.

## TABLES

**Table 1**  
**Influent Analytical Results**  
**Groundwater Treatment System**  
**Byron Barrel and Drum Site**  
**Byron, NY**

Sampling Event Date	01/GW 7/28/2001	02/GW 8/8/2001	03/GW 8/18/2001	04/GW 9/18/2001	05/GW 9/27/2001	06/GW 10/5/2001
Field Influent pH, std pH units			7.87	7.57	7.55	7.5
Total Suspended Solids, mg/L	6.5	4.0 U	4.0 U	4.0 U	4.0 U	4
1,1-Dichloroethane, ug/L	23	47	60	19J	58 D	43 J
1,1-Dichloroethene, ug/L	5.1	12	16	12 J	16 DJ	50 U
Cis -1,2 - Dichloroethene, pg/L	1.0J	1.4J	1.0 J	50 U	50 U	50 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U
1,1,1 - Trichloroethane, pg/L	460 E	840 E	1200 E	1100	1100 D	780
Trichloroethene, pg/L	1.9J	3.0 J	4.7 J	50 U	50 U	50 U
Toluene, pg/L	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U
Total Confident VOCs, pg/L	499	899	1276	1124	1174	823
Sampling Event Date	07/GW 10/17/2001	08/GW 11/8/2001	09/GW 11/28/2001	10/GW 12/13/2001	11/GW 12/27/2001	12/GW 1/18/2002
Field Influent pH, std pH units	7.39	7.57	7.42	7.43	7.54	7.64
Total Suspended Solids, mg/L	4.0 U	7	15	4.0 U		4.0 U
1,1-Dichloroethane, pg/L	46 J	32 J	20 J	13	9.3	11
1,1-Dichloroethene, pg/L	13J	13 J	9.4 J	4.2 J	4.6 J	4.3 J
Cis -1,2 - Dichloroethene, pg/L	50 U	50 U	25 U	10 U	5.0 U	5.0 U
Methylene Chloride, pg/L	50 U	50 U	25 U	10 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, pg/L	1200	580	530	260	220 E	250 E
Trichloroethene, pg/L	50 U	50 U	25 U	3.3 J	4.2 J	4.9 J
Toluene, pg/L	50 U	50 U	25 U	10U	5.0 U	5.0 U
Vinyl Chloride, pg/L	50 U	50 U	25 U	10U	5.0 U	5.0 U
Total Confident VOCs, pg/L	1259	635	559	277	237	270
Sampling Event Date	13/GW 1/30/2002	14/GW 2/13/2002	15/GW 2/23/2002	16/GW 3/8/2002	17/GW 3/20/2002	18/GW 4/8/2002
Field Influent pH, std pH units	7.71	7.84	7.48	7.79	7.72	7.09
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	10	16	10	11	11	10
1,1-Dichloroethene, pg/L	4.0 J	5.2 J	3.5 J	3.7 J	4.1 J	2.5 J
Cis -1,2 - Dichloroethene, pg/L	10 U	10U	5.0 U	5.0 U	5.0 U	10 U
Methylene Chloride, pg/L	10U	10U	5.0 U	5.0 U	1.8 BJ	10U
1,1,1 - Trichloroethane, pg/L	220	320	240 E	320 E	330 E	240
Trichloroethene, pg/L	4.3 J	3.2 J	3.3 J	3.4 J	3.4 J	3.3 J
Toluene, pg/L	10U	10U	3.3 J	5.0 U	5.0 U	10U
Vinyl Chloride, pg/L	10U	10U	5.0 U	5.0 U	5.0 U	10 U
Total Confident VOCs, pg/L	238	339	256	337	348	253

**Table 1**  
**Influent Analytical Results**  
**Groundwater Treatment System**  
**Byron Barrel and Drum Site**  
**Byron, NY**

Sampling Event Date	19/GW 4/24/2002	20/GW 5/8/2002	21/GW 5/21/2002	22/GW 6/4/2002	23/GW 6/13/2002	24/GW 7/11/2002
Field Influent pH, std pH units	6.99	7.07	7.41	7.11	7.34	7.19
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, pg/L	10	12	20	19J	18D,J	20
1,1-Dichloroethene, pg/L	2.5 J	2.4 J	3.5 J	25 U	20 U	3.4 J
Cis -1,2 - Dichloroethene, ug/L	10U	10 U	10U	25 U	20 U	10 U
Methylene Chloride, ug/L	15B	10 U	3.1 BJ	16 J	12 B,D,J	8.5 B,J
1,1,1 - Trichloroethane, ug/L	230	260	350	390	360 D	380
Trichloroethene, ug/L	2.8 J	2.7 J	3.3 J	25 U	20 U	3.7 J
Toluene, pg/L	2.6 J	10U	10 U	25 U	20 U	10 U
Vinyl Chloride, pg/L	10 U	10 U	10U	25 U	20 U	10U
Total Confident VOCs, pg/L	246	276	376	425	390	407

Sampling Event Date	25/GW 7/23/2002	26/GW 8/29/2002	27/GW 9/18/2002	28/GW 10/29/2002	29/GW 11/25/2002	30/GW 12/18/2002
Field Influent pH, std pH units	6.45	6.97	7.74	7.91	6.8	7.25
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	NA	NA	4.0 U
1,1-Dichloroethane, pg/L	9.0 J	8.8	7.7	8.6	9.1 DJ	6.6
1,1-Dichloroethene, pg/L	2.6 J	1.3 J	1.8J	3.0 J	2.4 DJ	2.8 J
Cis-1,2- Dichloroethene, pg/L	10U	5.0 U	5.0 U	5.0 U	10 U	5.0 U
Methylene Chloride, pg/L	10 U	5.0 U	5.0 U	5.0 U	10U	5.0 U
1,1,1 -Trichloroethane, pg/L	210	150	190	170	160 D	150
Trichloroethene, pg/L	10 U	1.9 J	1.9J	2.5 J	10 U	1.9J
Toluene, pg/L	10 U	5.0 U	5.0 U	5.0 U	10 U	5.0 U
Vinyl Chloride, pg/L	10 U	5.0 U	5.0 U	5.0 U	10U	5.0 U
Total Confident VOCs, pg/L	222	162	202	184	172	161

Sampling Event Date	31/GW 1/17/2003	32/GW 2/19/2003	33/GW 4/30/2003	34/GW 6/23/2003	35/GW 7/30/2003	36/GW 8/27/2003
Field Influent pH, std pH units	7.6	6.93	7.06	7.03	7.12	NA
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	8.4	6.2	8.4 DJ	6.6 DJ	7.6	2.4 J
1,1-Dichloroethene, pg/L	5.0 U	2.4 J	10 U	10 U	5.0 U	5.0 U
Cis-1,2- Dichloroethene, pg/L	5.0 U	5.0 U	10 U	10 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	10U	10 U	5.0 U	5.0 U
1,1,1 -Trichloroethane, pg/L	160	140	190 D	140 D	150	66
Trichloroethene, pg/L	2.4 J	1.6 J	10 U	10U	1.2 J	5.0 U
Toluene, pg/L	5.0 U	5.0 U	10 U	10U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	10 U	10U	5.0 U	5.0 U
Total Confident VOCs, pg/L	171	150	198	147	159	68

**Table 1**  
**Influent Analytical Results**  
**Groundwater Treatment System**  
**Byron Barrel and Drum Site**  
**Byron, NY**

Sampling Event Date	37/GW 9/24/2003	38/GW 10/23/2003	39/GW 11/20/2003	40/GW 12/3/2003	41/GW 1/29/2004	42/GW 3/30/2004
Field Influent pH, std pH units	NA	NA	NA	7.18	NA	6.84
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	8.8 DJ	7.4 DJ	4.7 J	6.1	5.0 U	6.7
1,1-Dichloroethene, pg/L	10U	10 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, pg/L	10U	10 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	10U	10U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, ug/L	180 D	170 D	92	110	1.9 J	96
Trichloroethene, pg/L	2.0 DJ	10U	1.1 J	1.6J	5.0 U	1.0J
Toluene, pg/L	10 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	10 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U
Total Confident VOCs, pg/L	191	174	98	118	2	104

Sampling Event Date	43/GW 5/20/2004	44/GW 6/16/2004	45/GW 7/15/2004	46/GW 8/26/2004	47/GW 9/14/2004	48/GW 10/28/2004
Field Influent pH, std pH units	NA	7.32	NA	NA	NA	NA
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	5.5	10 D	7.5	3.3 J	9.1 DJ	4.1 J
1,1-Dichloroethene, pg/L	5.0 U	10 U	2.3 J	5.0 U	10 U	2.3 J
Cis -1,2 - Dichloroethene, pg/L	5.0 U	10 U	5.0 U	5.0 U	10 U	5.0 U
Methylene Chloride, pg/L	5.0 U	10 U	5.0 U	5.0 U	10 U	5.0 U
1,1,1 -Trichloroethane, pg/L	150	180 D	190	74	170 D	90
Trichloroethene, pg/L	5.0 U	10 U	1.6 J	5.0 U	10 U	1.1 J
Toluene, pg/L	5.0 U	10U	5.0 U	5.0 U	10U	5.0 U
Vinyl Chloride, pg/L	5.0 U	10U	5.0 U	5.0 U	10 U	5.0 U
Total Confident VOCs, pg/L	156	190	201	77	179	97

Sampling Event Date	49/GW 12/14/2004	50/GW 1/27/2005	51/GW 3/22/2005	52/GW 4/26/2005	53/GW 5/30/2005	54/GW 6/7/2005
Field Influent pH, std pH units	6.23	NA	7.04	NA	NA	7.50
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	7.4	9.8	2.9 J	2.5 J	6.3	2.5
1,1-Dichloroethene, pg/L	2.5 J	3.0 J	5.0 U	5.0 U	1.9	0.84 J
Cis -1,2 - Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U
1,1,1 -Trichloroethane, pg/L	130	180	65	67	230	65
Trichloroethene, pg/L	1.6J	2,2 J	5.0 U	5.0 U	1.2 J	0.68 J
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	1.0 u	1.0U
Total Confident VOCs, pg/L	141.5	195	67.9	69.5	239.4	69.0

**Table 1**  
**Influent Analytical Results**  
**Groundwater Treatment System**  
**Byron Barrel and Drum Site**  
**Byron, NY**

Sampling Event Date	55/GW 7/28/2005	56/GW 8/29/2005	57/GW 9/13/2005	58/GW 10/18/2005	59/GW 11/22/2005	60/GW 12/19/2005
Field Influent pH, std pH units	NA	NA	7.25	NA	NA	6.85
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	10	9.5 J	2.3 J	7.1J	5.2 J	2.7 J
1,1-Dichloroethene, ug/L	4.8	3.1J	0.64 J	1.5J	2.7 J	0.84 J
Cis -1,2 - Dichloroethene, ug/L	1.0 U	25 U	5.0 U	10 U	20 U	5.0 U
Methylene Chloride, ug/L	1.0 U	2.4 J	5.0 U	10 U	2.0 J	5.0 U
1,1,1 - Trichloroethane, ug/L	260	220	53	180	130	61
Trichloroethene, ug/L	1.7	25 U	0.49 J	2.9 BJ	20 U	0.64 J
Toluene, ug/L	1.0 U	25 U	5.0 U	10U	20 U	5.0 U
Vinyl Chloride, ug/L	1.0 U	25 U	5.0 U	10U	20 U	5.0 U
Total Confident VOCs, ug/L	276.5	235.0	56.4	191.5	139.9	65.2
Sampling Event Date	61/GW 1/19/2006	62/GW 2/24/2006	63/GW 3/27/2006	64/GW 4/20/2006	65/GW 5/25/2006	66/GW 6/20/2006
Field Influent pH, std pH units	NA	NA	6.99	NA	NA	NA
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	6	4.7 J	4.5 J	5.5 J	6.2 J	3.6 J
1,1-Dichloroethene, ug/L	1.7 J	1.3 J	1.1 J	1.3 J	1.5 J	0.94 J
Cis-1,2- Dichloroethene, ug/L	5.0 U	10 U	5.0 U	10U	10U	5.0 U
Methylene Chloride, ug/L	5.0 U	2.1 BJ	5.0 U	10 U	1.3J	5.0 U
1,1,1 -Trichloroethane, ug/L	170	100	110	140	160	80
Trichloroethene, ug/L	1.3J	0.87 J	0.95 J	1.0J	1.2 J	0.72 J
Toluene, ug/L	5.0 U	10 U	5.0 U	10U	10 U	5.0 U
Vinyl Chloride, ug/L	5.0 U	10 U	5.0 U	10U	10 U	5.0 U
Total Confident VOCs, ug/L	179.0	109.0	116.6	147.8	170.2	85.3
Sampling Event Date	67 7/18/2006	68 8/7/2006	69 9/14/2006	70 10/12/2006	71 11/22/2006	72 12/14/2006
Field Influent pH, std pH units	NA	7.46	7.5	7.7	7.38	7.56
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	6.3	5.7 J	4.0 J	5.5	9.5 J	2.8 J
1,1-Dichloroethene, pg/L	1.6 J	1.2 J	4.7 J	1.4 J	2.3 J	1.3J
Cis -1,2- Dichloroethene, pg/L	5.0 U	10 U	5.0 U	5.0 U	10.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	2.8 BJ	5.0 U	5.0 U	10.0 U	5.0 U
1,1,1 -Trichloroethane, pg/L	155 E	140	94	82 D	140 D	56
Trichloroethene, pg/L	1.1 J	2.2 J	0.83 J	1.0J	1.8J	0.64 J
Toluene, pg/L	5.0 U	10 U	5.0 U	5.0 U	10.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	10U	5.0 U	5.0 U	10.0 U	5.0 U
Total Confident VOCs, pg/L	162.4	151.9	103.53	89.9	153.6	60.74

**Table 1**  
**Influent Analytical Results**  
**Groundwater Treatment System**  
**Byron Barrel and Drum Site**  
**Byron, NY**

Sampling Event Date	73 1/18/2007	74 2/28/2007	75 3/21/2007	76 4/30/2007	77 5/23/2007	78 6/27/2007
Field Influent pH, std pH units	7.64	7.62	7.53	7.61	7.52	7.69
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	1.8J	5.6 DJ	6.2 J	8.2	8.7	5.0
1,1-Dichloroethene, ug/L	0.64 J	2.7 DJ	1.5J	2.8 J	2.0 J	0.88 J
Cis -1,2 - Dichloroethene, ug/L	5.0 U	10U	10 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, ug/L	5.0 U	1.0 DJ	10 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, ug/L	62	170 D	230	210 D	200 D	180 D
Trichloroethene, ug/L	0.78 J	1.3 DJ	10 U	1.1 J	1.2 J	0.67J
Toluene, ug/L	5.0 U	10 U	10 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, ug/L	5.0 U	10 U	10 U	5.0 U	5.0 U	5.0 U
<u>Total Confident VOCs, ug/L</u>	<u>65.22</u>	<u>180.6</u>	<u>245.5</u>	<u>222.1</u>	<u>211.9</u>	<u>186.55</u>

Sampling Event Date	79 7/24/2007	80 8/22/2007	81 9/12/2007	82 12/07
Field Influent pH, std pH units	7.57	7.85	7.65	NS
Total Suspended Solids, mg/L	NA	NA	NA	NS
1,1-Dichloroethane, ug/L	6.6	5.9	7.1	NS
1,1-Dichloroethene, ug/L	5.2	1.0 J	10 U	NS
Cis -1,2 - Dichloroethene, ug/L	5.0 U	5.0 U	10 U	NS
Methylene Chloride, ug/L	5.0 U	5.0 U	10 U	NS
1,1,1 - Trichloroethane, ug/L	230 D	140 D	160	NS
Trichloroethene, pg/L	0.82 J	0.81 J	10 U	NS
Toluene, ug/L	5.0 U	5.0 U	10 U	NS
Vinyl Chloride, ug/L	5.0 U	5.0 U	<u>10 U</u>	NS
<u>Total Confident VOCs, ug/L</u>	<u>242.62</u>	<u>147.71</u>	<u>167.1</u>	NS

NA= Not Applicable

NS = Not Sampled

Data Qualifiers: U - Undetectable at listed detection limit. J - Estimated value, less than the detection limit.

E - CC exceeds calibration range. D - Identified in the secondary dilution factor. B - Analyte found in blank as well as sample.

**Table 2**  
**Effluent Analytical Results**  
**Groundwater Treatment System**  
**Byron Barrel and Drum Site**  
**Byron, NY**

Sampling Event	01/GW	02/GW	03/GW	04/GW	05/GW	06/GW
Date	7/28/2001	8/8/2001	8/18/2001	9/18/2001	9/27/2001	10/5/2001
Field Effluent pH, std pH units	8.44	8.44	8.5	8.38	8.38	8.32
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis-1,2- Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, ug/L	1.5 J	5.0 U	1.5J	5.0 U	5.0 U	5.0 U
Trichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	07/GW	08/GW	09/GW	10/GW	11/GW	12/GW
Date	10/17/2001	11/8/2001	11/28/2001	12/13/2001	12/27/2001	1/18/2002
Field Effluent pH, std pH units	8.35	8.35	8.29	8.43	8.30	8.38
Total Suspended Solids, mg/L	4.0 U	4.0 U	8.0	4.0 U	4.0 U	4.0U
1,1-Dichloroethane, ug/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
1,1-Dichloroethene, ug/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Cis-1.2- Dichloroethene, ug/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Methylene Chloride, ug/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
1.1,1 -Trichloroethane, ug/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Trichloroethene, ug/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Toluene, ug/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Vinyl Chloride. ug/L	5.0 U	5.0 U	5.0U	5.0 U	5.0 U	5.0U
Sampling Event	13/GW	14/GW	15/GW	16/GW	17/GW	18/GW
Date	1/30/2002	2/13/2002	2/23/2002	3/8/2002	3/20/2002	4/8/2002
Field Effluent pH, std pH units	8.39	8.31	8.22	8.39	8.47	8.05
Total Suspended Solids, mg/L	4.0U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane. ug/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0U	5.0 U	5.0 U	5.0 U	1.3J	2.8 B,J
1,1,1 -Trichloroethane, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	5.0U	5.0 U	2.5J	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

**Table 2**  
**Effluent Analytical Results**  
**Groundwater Treatment System**  
**Byron Barrel and Drum Site**  
**Byron, NY**

Sampling Event	19/GW	20/GW	21/GW	22/GW	23/GW	24/GW
Date	4/24/2002	5/8/2002	5/21/2002	6/4/2002	6/13/2002	7/11/2002
Field Effluent pH, std pH units	8.0	8.08	8.23	8.23	8.16	8.06
Total Suspended Solids, mg/L	4.0 U	4.0	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis-1,2- Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	7.6 B	5.0 U	1.2 BJ	1.1 J	1.7 BJ	2.6 BJ
1,1,1 -Trichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, ug/L	1.2 J	5.0 U	5.0 U	5.0 U	1.5 J	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	25/GW	26/GW	27/GW	28/GW	29/GW	30/GW
Date	7/23/02	9/18/02	12/18/02	4/30/03	6/23/03	9/24/03
Field Effluent pH, std pH units	6.66	7.11	7.22	7.72	7.68	7.81
Total Suspended Solids, mg/L	4.0 U	4.0 U	4.0 U	NA	NA	NA
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis-1,2- Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 -Trichloroethane, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	31/GW	32/GW	33/GW	34/GW	35/GW	36/GW
Date	12/2/03	3/30/04	6/16/04	9/14/04	12/14/04	3/22/05
Field Effluent pH, std pH units	7.63	7.47	7.86	7.61	6.93	6.97
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis-1,2- Dichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 -Trichloroethane, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, pg/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Table 2  
 Effluent Analytical Results  
 Groundwater Treatment System  
 Byron Barrel and Drum Site  
 Byron, NY

Sampling Event	37/GW	38/GW	39/GW	40/GW	41/GW	42/GW
Date	6/7/2005	9/13/2005	12/19/2005	3/27/2006	6/20/2006	9/14/2006
Field Effluent pH, std pH units	8.01	7.95	7.64	7.74	7.71	8.4
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane, ug/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene, ug/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis -1,2 - Dichloroethene, ug/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride, ug/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane, ug/L	1.0 U	5.0 U	0.58 J	5.0 U	5.0 U	5.0 U
Trichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene, ug/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride, ug/L	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sampling Event	43/GW	44/GW	45/GW	47/GW	48/GW	
Date	12/14/2006	3/21/2007	6/27/2007	9/12/2007	12/07	
Field Effluent pH, std pH units	8.36	8.44	8.39	8.63	NS	
Total Suspended Solids, mg/L	NA	NA	NA	NA	NA	
1,1-Dichloroethane, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	NS	
1,1-Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	NS	
Cis-1,2- Dichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	NS	
Methylene Chloride, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	NS	
1,1,1 -Trichloroethane, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	NS	
Trichloroethene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	NS	
Toluene, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	NS	
Vinyl Chloride, ug/L	5.0 U	5.0 U	5.0 U	5.0 U	NS	

NA= Not Applicable

NS = Not Sampled

**Data Qualifiers:** U - Undetectable at listed detection limit. J - Estimated value, less than the detection limit.

E - CC exceeds calibration range. D • Identified in the secondary dilution factor. B - Analyte found in blank as well as sample.

Table 3  
 Field Parameters  
 Quarterly Sampling Event  
 December 19-21, 2007  
 Byron Barrel and Drum Site  
 Byron, NY

Parameter Units	Time	Temp. °C	ORP mV	pH Std. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
MW-1-9/GW24	1015	9.5	31	7.32	0.6	3.01	848
	1020	9.3	30	7.30	0.6	2.98	839
	1025	9.1	31	7.28	0.6	2.94	821
	1030	9.0	32	7.28	0.6	2.90	811
	1035	9.0	32	7.27	0.6	2.87	800
	1040	8.8	32	7.26	0.6	2.84	797
	1045	8.7	32	7.24	0.6	2.82	795
MW-4-9/GW24	1050	7.6	139	7.40	0.5	2.74	715
	1055	7.9	142	7.42	0.5	2.70	710
	1100	7.8	145	7.42	0.5	2.67	705
	1105	8.2	147	7.42	0.5	2.60	698
	1110	8.3	149	7.44	0.5	2.55	694
	1115	8.7	150	7.43	0.5	2.50	690
	1120	8.5	150	7.43	0.5	2.48	690
MW-10B-9/GW24	1250	8.0	13	7.10	0.5	3.16	1100
	1255	8.3	12	7.13	0.5	3.11	1098
	1300	8.1	10	7.15	0.5	3.07	1090
	1305	8.0	10	7.17	0.5	3.04	1089
	1310	8.0	8	7.20	0.5	3.00	1087
	1315	8.3	7	7.22	0.5	2.97	1084
	1320	8.1	7	7.24	0.5	2.95	1080

Table 3  
 Field Parameters  
 Quarterly Sampling Event  
 December 19-21, 2007  
 Byron Barrel and Drum Site  
 Byron, NY

Parameter Units	Time	Temp. °C	ORP mV	PH Std. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
MW-21-9/GW24	1340	8.9	10	7.36	1.1	3.39	1578
	1345	8.4	13	7.27	1.1	3.33	1567
	1350	9.6	14	7.22	1.1	3.30	1560
	1355	8.7	16	7.15	1.1	3.27	1557
	1400	8.7	17	7.18	1.1	3.24	1550
	1405	8.6	20	7.09	1.1	3.20	1547
PW-1/GW24	1150	8.7	-249	7.20	1.3	1.77	205
	1155	8.7	-250	7.23	1.3	1.70	205
	1200	8.7	-251	7.25	1.3	1.67	205
	1205	8.8	-255	7.30	1.3	1.60	205
	1210	8.8	-257	7.33	1.3	1.56	205
	1215	8.8	-258	7.35	1.3	1.53	205
	1220	8.7	-258	7.37	1.3	1.50	205
PW-2/GW24	1100	6.5	72	7.19	1.4	4.71	222
	1105	6.5	69	7.11	1.4	4.00	22
	1110	6.5	67	7.07	1.4	3.62	225
	1115	5.9	65	7.00	1.4	3.00	226
	1120	6.0	60	7.00	1.4	2.78	226
	1125	6.4	58	7.00	1.4	2.75	227
	1130	6.4	57	7.01	1.4	2.70	226
	1135	6.5	56	7.00	1.4	2.68	228
PW-3/GW24	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Note:** Flow through cell was calibrated for all chemistry parameters prior to gauging.

N/A = Not Available

Table 4  
 Groundwater Elevations  
 December 2007 Sampling Event  
 Byron Barrel and Drum Site  
 Byron, NY

**Operator:** P. Little

**Date:** 12/19/2007

Pumping Wells	DTW	Elevation	Elevation	TD	WC.ft.
PW-1	7.95	642.82	634.87	—	m
PW-2	6.31	641.34	635.03	—	m
PW-3	6.23	641.11	634.88	*	m

**Monitoring Wells**

MW-1	4.95	639.63	634.68	11.60	6.65
MW-2	11.42	646.36	634.94	15.06	3.64
MW-4	3.79	638.56	634.77	11.50	7.71
MW-10B	9.54	644.44	634.90	20.32	10.78
MW-21	7.81	642.52	634.71	27.86	20.05
Residential	15.94	650.78	634.84	35.17	19.23

**Piezometers**

PZ-1	7.72	643.11	635.39	27.02	19.30
PZ-2	7.56	642.39	634.83	27.25	19.69

Table 5  
 Historic Groundwater Quality - Select Analytes  
 Byron Barrel and Drum Site  
 Byron, NY

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	5	5	5	5	5	5	5	5	5	5
Groundwater Cleanup Levels (ug/L):					5	5	NA	5	5	5	5	5	5	2
MW-1	3/20/2002	639.63	5.24	634.39	86	49	NA	5 U	1700	2 J	5 U	2 J		
	6/12/2002	639.63	5.07	634.56	81	38	NA	5 U	1600	3 J	5 U	5 U		
	9/18/2002	639.63	7.15	632.48	13	13 J	NA	5 UJ	350	5 U	5 U	5 U		
	12/18/2002	639.63	5.62	634.01	42	37 J	NA	25 U	1200	5 J	25 U	25 U		
	4/29/2003	639.63	4.53	635.10	57	34	NA	25 U	1300 J	25 U	25 U	25 U		
	6/24/2003	639.63	5.36	634.27	32	24	NA	5 U	720	4 J	5 U	5 U		
	9/24/2003	639.63	6.72	632.91	24 J	17 J	NA	25 U	580	25 U	25 U	25 U		
	12/3/2003	639.63	5.53	632.91	33 J	28 J	NA	40 U	860 J	40 U	40 U	40 U		
	3/30/2004	639.63	3.40	636.23	30 J	31	NA	25 U	830 J	25 UJ	25 U	25 U		
	6/16/2004	639.63	4.20	635.43	26	22 J	NA	25 UJ	870	25 U	25 U	25 U		
	9/14/2004	639.63	4.56	635.07	28	26	NA	25 U	730	25 U	25 U	25 U		
	12/14/2004	639.63	4.61	635.02	31	26	NA	25 U	760	25 UJ	25 U	25 U		
	3/22/2005	639.63	4.32	635.31	41	110	NA	5 U	830	5	5 U	5 U		
	6/7/2005	639.63	5.45	634.18	10 J	14 J	NA	13 J	340	50 U	50 UJ	50 U		
	9/13/2005	639.63	6.89	632.74	14	16	NA	5 U	410	2 J	5 UJ	5 U		
	12/20/2005	639.63	4.78	634.85	24 J	24 J	NA	40 U	580	40 U	40 U	40 U		
	3/26/2006	639.63	5.07	634.56	29	24	NA	5 U	540	4 J	5 U	5 U		
	6/22/2006	639.63	5.68	633.95	7	9	NA	5 U	220	2 J	5 U	5 U		
	9/14/2006	639.63	5.15	634.48	5 J	6 J	NA	10 U	190	2 J	10 U	10 U		
	12/7/2006	639.63	4.54	635.09	6 J	9 J	NA	10 U	170	2 J	10 U	10 U		
	3/22/2007	639.63	4.19	635.44	2 J	4 J	NA	10 U	100	2 J	10 U	10 U		
	6/14/2007	639.63	5.30	634.33	6	3 J	NA	5 U	200	2 J	5 U	5 U		
	9/12/2007	639.63	6.56	633.07	7 J	3 J	NA	20 U	200	20 U	20 U	20 U		
	12/19/2007	639.63	4.95	634.68	10	2 J	NA	10 U	200	2 J	10 U	10 U		

Table 5  
 Historic Groundwater Quality - Select Analytes  
 Byron Barrel and Drum Site  
 Byron, NY

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	i	f	5	O	E	C	A	L	H	V
Groundwater Cleanup Levels (ug/L):					5	5	NA	5	5	5	5	5	5	2
MW-4	3/20/2002	638.56	4.79	633.77	17 J	14 J	NA	25 U	450	10 J	25 U	25 U		
	6/12/2002	638.56	4.48	634.08	3 J	2 J	NA	5 U	83	8	5 U	5 U		
	9/18/2002	638.56	6.04	632.52	5 U	5 UJ	NA	5 UJ	27	5	5 U	5 U		
	12/18/2002	638.56	5.22	633.34	40	24	NA	5 U	200	8	5 U	5 U		
	4/29/2003	638.56	4.50	634.06	31	13 J	NA	25 U	530	25 U	25 U	25 U		
	6/24/2003	638.56	4.58	633.98	5 UJ	5 UJ	NA	5 U	17 J	4 J	5 U	5 UJ		
	9/24/2003	638.56	5.91	632.65	35	9 J	NA	10 U	240	8 J	10 U	10 U		
	12/3/2003	638.56	4.98	633.58	65	17 J	NA	20 U	550	11 J	20 U	20 U		
	3/30/2004	638.56	4.15	634.41	12	5	NA	5 U	130	3 J	5 U	5 U		
	6/16/2004	638.56	3.64	634.92	15 J	25 UJ	NA	25 UJ	150	25 U	25 U	25 U		
	9/14/2004	638.56	3.71	634.85	11 J	25 U	NA	25 U	87	25 U	25 U	25 U		
	12/14/2004	638.56	3.97	634.59	11 J	25 U	NA	25 U	67	25 U	25 U	25 U		
	3/22/2005	638.56	3.55	635.01	50 U	50 U	NA	50 UJ	87	50 U	50 U	50 U		
	6/7/2005	638.56	4.25	634.31	5 U	5 U	NA	5 U	8	1 J	5 U	5 U		
	9/13/2005	638.56	5.84	632.72	5 U	5 U	NA	5 U	11	2 J	5 U	5 U		
	12/20/2005	638.56	4.75	633.81	4 J	25 U	NA	25 U	48	25 U	25 U	25 U		
	3/25/2006	638.56	4.32	634.24	5 U	5 U	NA	5 U	8	1 J	5 U	5 U		
	6/22/2006	638.56	4.50	634.06	5 U	5 U	NA	5 U	9	1 J	5 U	5 U		
	9/14/2006	638.56	3.92	634.64	5 U	5 U	NA	5 U	13	2 J	5 U	5 U		
	12/7/2006	638.56	3.64	634.92	25 U	25 U	NA	25 U	6 J	25 U	25 U	25 U		
	3/22/2007	638.56	3.24	635.32	5 U	5 U	NA	5 U	10	1 J	5 U	5 U		
	6/14/2007	638.56	4.50	634.06	5 U	5 U	NA	5 U	10	1 J	5 U	5 U		
	9/12/2007	638.56	5.30	633.26	5 U	5 U	NA	5 U	14	2 J	5 U	5 U		
	12/19/2007	638.56	3.79	634.77	5 U	5 U	NA	5 U	16	1 J	5 U	5 U		

Table 5  
 Historic Groundwater Quality - Select Analytes  
 Byron Barrel and Drum Site  
 Byron, NY

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	5	5	5	5	5	5	5	5	5	
Groundwater Cleanup Levels (ug/L):					5	5	NA	5	5	5	5	S	2	
MW-10B	3/21/2002	644.44	9.43	635.01	5 U	5 U	NA	5 U	42	5 U	5 U	5 U		
	6/12/2002	644.44	9.12	635.32	5 U	5 U	NA	5 U	11	5 U	5 U	5 U		
	9/18/2002	644.44	11.05	633.39	5 U	5 UJ	NA	5 UJ	7	5 U	5 U	5 U		
	12/18/2002	644.44	10.20	634.24	5 U	5 U	NA	5 U	52	5 U	5 U	5 U		
	4/30/2003	644.44	9.28	635.16	5 U	5 U	NA	5 U	8	5 U	5 U	5 U		
	6/23/2003	644.44	9.39	635.05	5 U	5 U	NA	5 U	3 J	5 U	5 U	5 U		
	9/24/2003	644.44	10.93	633.51	5 U	5 U	NA	5 U	7	5 U	5 U	5 U		
	3/30/2004	644.44	8.99	635.45	5 U	5 U	NA	5 U	17	5 U	5 U	5 U		
	9/14/2004	644.44	8.76	635.68	5 U	5 U	NA	5 U	14	5 U	5 U	5 U		
	3/22/2005	644.44	8.69	635.75	5 U	5 U	NA	5 U	11	5 U	5 U	5 U		
	9/13/2005	644.44	10.84	633.60	5 U	5 U	NA	5 U	5	5 U	5 U	5 U		
	3/25/2006	644.44	9.28	635.16	5 U	5 U	NA	5 U	6	5 U	5 U	5 U		
	9/14/2006	644.44	9.82	634.62	5 U	5 U	NA	5 U	6	5 U	5 U	5 U		
	3/22/2007	644.44	8.44	636.00	5 U	5 U	NA	5 U	6	5 U	5 U	5 U		
	9/12/2007	644.44	10.98	633.46	5 U	5 U	NA	5 U	1 J	5 U	5 U	5 U		
	12/19/2007	644.44	9.54	634.90	64 J	120 U	NA	31 J	1300	120 U	120 U	120 U		

Table 5  
 Historic Groundwater Quality - Select Analytes  
 Byron Barrel and Drum Site  
 Byron, NY

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	5	5	NA	5	5	5	5	5	5	2
Groundwater Cleanup Levels (ug/L):														
MW-21	3/26/1999	NA	NA	NA	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
	3/21/2002	642.52	7.70	634.82	25 U	25 U	NA	25 U						
	6/12/2002	642.52	7.69	634.83	25 U	25 U	NA	25 U	5 BJ	25 U				
	9/17/2002	642.52	9.50	633.02	5 U	5 UJ	NA	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
	12/17/2002	642.52	8.23	634.29	5 U	5 UJ	NA	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U
	4/30/2003	642.52	7.91	634.61	25 U	25 U	NA	25 U						
	3/30/2004	642.52	7.56	634.96	5 UJ	5 UJ	NA	5 UJ						
	3/22/2005	642.52	7.42	635.10	25 U									
	3/25/2006	642.52	7.78	634.74	25 U									
	3/22/2007	642.52	7.38	635.14	20 U									
	12/19/2007	642.52	7.81	635.14	50 U									
MW-Residential	3/21/2002	650.78	15.79	634.99	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	6/12/2002	650.78	15.62	635.16	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	9/17/2002	650.78	17.50	633.28	5 U	5 UJ	NA	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
	12/17/2002	650.78	16.52	634.26	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	4/30/2003	650.78	17.74	633.04	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	3/30/2004	650.78	15.47	635.31	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	3/22/2005	650.78	15.24	635.54	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	3/25/2006	650.78	15.75	635.03	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	3/22/2007	650.78	15.09	635.69	5 U	5 U	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U

Table 5  
 Historic Groundwater Quality - Select Analytes  
 Byron Barrel and Drum Site  
 Byron, NY

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	PCB	PCP	PCB	PCP	PCB	PCP	PCB	PCP	PCB	PCP	PCB	PCP
Groundwater Cleanup Levels (ug/L):																
PW-1	12/21/1998	NA	NA	NA	20 U	5 J	20 U	9 BJ	270	11 J	20 U	20 U				
	12/27/2001	NA	NA	NA	15	6.2	5 U	5 U	280	5.2	5 U	5 U				
	3/20/2002	642.82	NM	NM	11	5	5 U	5 U	320	3 J	5 U	5 U				
	6/12/2002	642.82	NM	NM	18	3 J	5 U	5 U	380	2 J	5 U	5 U				
	9/18/2002	642.82	NM	NM	12	2 J	5 U	5 UJ	270	2 J	5 U	5 U				
	12/18/2002	642.82	18.43	624.39	8	5	5 U	5 U	160	2 J	5 U	5 U				
	4/30/2003	642.82	20.96	621.86	11	2 J	5 U	5 U	180	2 J	5 U	5 U				
	6/23/2003	642.82	22.41	620.41	12	2 J	5 U	5 U	190	2 J	5 U	5 U				
	9/24/2003	642.82	22.59	620.23	8	5 U	5 U	5 U	120	5 U	5 U	5 U				
	12/3/2003	642.82	21.74	621.08	8	2 J	5 U	5 U	150	2 J	5 U	5 U				
	3/30/2004	642.82	21.80	621.02	6	2 J	5 U	5 U	150	5 U	5 U	5 U				
	6/16/2004	642.82	19.08	623.74	13	3 J	5 U	5 UJ	380	2 J	5 U	5 U				
	9/14/2004	642.82	20.62	622.20	10	2 J	5 U	5 U	210	5 U	5 U	5 U				
	12/14/2004	642.82	21.23	621.59	6	2 J	5 U	5 U	140	5 U	5 U	5 U				
	3/22/2005	642.82	22.65	620.17	15	23	5 U	5 U	200 J	2 J	5 U	.5 U				
	6/7/2005	642.82	21.50	621.32	10	2 J	10 U	2 U	59	1 J	10 U	10 U				
	9/13/2005	642.82	21.73	621.09	3 J	0.9 J	5 U	5 U	73	0.5 J	5 U	5 U				
	12/19/2005	642.82	20.98	621.84	9	2 J	5 U	5 U	140	2 J	5 U	5 U				
	3/26/2006	642.82	21.44	621.38	4 J	0.9 J	5 U	5 U	76	0.6 J	5 U	5 U				
	6/22/2006	642.82	21.28	621.54	4 J	1 J	5 U	5 U	77	0.8 J	5 U	5 U				
	9/14/2006	642.82	8.23	634.59	9 DJ	25 U	25 U	25 U	230	25 U	25 U	25 U				
	12/7/2006	642.82	20.82	622.00	6 J	2 J	10 U	10 U	160	1 J	10 U	10 U				
	3/22/2007	642.82	14.50	628.32	6 J	2 J	10 U	10 U	170	1 J	10 U	10 U				
	6/14/2007	642.82	13.43	629.39	9 J	2 J	10 U	10 U	280	2 J	10 U	10 U				
	9/12/2007	642.82	9.43	633.39	5 J	10 U	10 U	10 U	130	10 U	10 U	10 U				
	12/21/2007	642.82	7.95	634.87	2500 U											

Table 5  
 Historic Groundwater Quality - Select Analytes  
 Byron Barrel and Drum Site  
 Byron, NY

Sample Location ID	Date	Top of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	c	£ o	5	o c	e o	5	a o	u o	ac p a f	o e	c o	£ o	5	o D o
Groundwater Cleanup Levels (ug/L):					5	5	NA	5	5	5	5	5 UJ	160	5 u	5 U	5 U	5	2
PW-2	12/27/2001	NA	NA	NA	68	23	1.4 J	5 U	960	4 J	5 U	5 U	1.1 J					
	3/20/2002	641.34	NM	NM	24	13	5 U	5 U	720	2 J	5 U	5 U	5 U					
	6/12/2002	641.34	NM	NM	18	10	5 U	5 U	370	2 J	5 U	5 U	5 U					
	9/18/2002	641.34	NM	NM	5	4 J	5 U	5 U	160	5 u	5 U	5 U	5 U					
	12/18/2002	641.34	17.68	623.66	12	14	10 U	10 U	280	10 u	10 U	10 U	10 U					
	4/30/2003	641.34	16.82	624.52	11	6	5 U	5 U	200	2 J	5 U	5 U	5 U					
	6/23/2003	641.34	19.41	621.93	8	5	5 U	5 U	180	5 U	5 U	5 U	5 U					
	9/24/2003	641.34	17.45	623.89	6	2 J	5 U	5 U	120	5 U	5 U	5 U	5 U					
	12/3/2003	641.34	18.78	622.56	6	3 J	5 U	5 U	160	5 U	5 U	5 U	5 U					
	3/30/2004	641.34	19.24	622.10	4 J	3 J	5 U	5 U	140	5 U	5 U	5 U	5 U					
	6/16/2004	641.34	18.58	622.76	5	5 U	5 U	5 U	120	5 U	5 U	5 U	5 U					
	9/14/2004	641.34	18.25	623.09	S	4 J	5 U	5 U	160	5 U	5 U	5 U	5 U					
	12/14/2004	641.34	17.63	623.71	8	5	5 U	5 U	160	2 J	5 U	5 U	5 U					
	3/22/2005	641.34	19.33	622.01	S	11	5 U	5 U	140	5 U	5 U	5 U	5 U					
	6/7/2005	641.34	19.40	621.94	3 J	2 J	5 U	5 U	70	1 J	5 U	5 U	5 U					
	9/13/2005	641.34	19.52	621.82	3 J	3 J	5 U	5 U	94 J	2 J	5 U	5 U	5 U					
	12/19/2005	641.34	17.35	623.99	1 J	5 U	5 U	5 U	30	0.5 J	5 U	5 U	5 U					
	3/26/2006	641.34	17.22	624.12	5	1 J	5 U	5 U	54	0.8 J	5 U	5 U	5 U					
	6/22/2006	641.34	18.59	622.75	4 J	2 J	10 U	10 BL	170	1 J	10 U	10 U	10 U					
	9/14/2006	641.34	6.75	634.59	3 DJ	1 DJ	10 U	10 U	92	1 DJ	10 U	10 U	10 U					
	12/7/2006	641.34	6.11	635.23	9 DJ	3 DJ	10 U	10 U	230	2 J	10 U	10 U	10 U					
	3/22/2007	641.34	4.19	637.15	8 J	4 J	10 U	10 U	90	1 J	10 U	10 U	10 U					
	6/14/2007	641.34	4.72	636.62	8 J	2 J	20 U	20 U	270	20 U	20 U	20 U	20 U					
	9/12/2007	641.34	7.97	633.37	5 J	1 J	10 U	10 U	140	10 U	10 U	10 U	10 U					
	12/21/2007	641.34	6.31	635.03	2000 U													

Table 5  
 Historic Groundwater Quality - Select Analytes  
 Byron Barrel and Drum Site  
 Byron, NY

Sample Location ID	Date	Top Of Casing (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	<b>Chloride</b>	<b>Fluoride</b>	<b>pH</b>	<b>Sulfate</b>	<b>Total Dissolved Solids</b>	<b>Iron</b>	<b>Manganese</b>	<b>Lead</b>	<b>Thickened Sludge</b>	<b>Oil &amp; Grease</b>
<b>Groundwater Cleanup Levels (ug/L):</b>														
PW-3	12/27/2001	NA	NA	NA	5 U	5 U	5 U	5 U	5 U	16	1.7 J	5 U	5 U	
	3/20/2002	641.11	<b>NM</b>	<b>NM</b>	5 U	5 U	5 U	5 U	5 U	8	1 J	5 U	5 U	
	6/12/2002	641.11	<b>NM</b>	<b>NM</b>	5 U	5 U	5 U	5 U	5 U	6	5 U	5 U	5 U	
	9/18/2002	641.11	NM	NM	5 U	5 UJ	5 U	5 UJ	5 UJ	4 J	5 U	5 U	5 U	
	12/18/2002	641.11	19.90	621.21	5 U	5 U	5 U	5 U	5 U	4 J	5 U	5 U	5 U	
	4/30/2003	641.11	19.46	621.65	5 U	5 U	5 U	5 U	5 U	3 J	5 U	5 U	5 U	
	6/23/2003	641.11	18.55	622.56	5 U	5 U	5 U	5 U	5 U	3 J	5 U	5 U	5 U	
	9/24/2003	641.11	20.97	620.14	5 U	5 U	5 U	5 U	5 U	2 J	5 U	5 U	5 U	
	12/3/2003	641.11	20.28	620.83	5 U	5 U	5 U	5 U	5 U	3 J	5 U	5 U	5 U	
	3/30/2004	641.11	20.52	620.59	5 U	5 U	5 U	5 U	5 U	2 J	5 U	5 U	5 U	
	6/16/2004	641.11	19.65	621.46	5 U	5 U	5 U	5 UJ	5 UJ	2 J	5 U	5 U	5 U	
	9/14/2004	641.11	20.91	620.20	5 U	5 U	5 U	5 U	5 U	2 J	5 U	5 U	5 U	
	12/14/2004	641.11	18.33	622.78	5 U	5 U	5 U	5 U	5 U	2 J	5 U	5 U	5 U	
	3/22/2005	641.11	22.17	618.94	5 U	5 U	5 U	5 U	5 U	2 J	5 U	5 U	5 U	
	6/7/2005	641.11	20.30	620.81	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
	9/13/2005	641.11	21.52	619.59	5 U	5 U	5 U	5 U	5 U	1 J	5 U	5 U	5 U	
	12/19/2005	641.11	20.36	620.75	5 U	5 U	5 U	5 U	5 U	1 J	5 U	5 U	5 U	
	3/26/2006	641.11	22.31	618.80	5 U	5 U	5 U	5 U	5 U	1 J	5 U	5 U	5 U	
	6/22/2006	641.11	20.72	620.39	5 U	5 U	5 U	5 U	5 U	1 J	5 U	5 U	5 U	
	9/14/2006	641.11	6.53	634.58	5 U	5 U	5 U	5 U	5 U	2 J	5 U	5 U	5 U	
	12/7/2006	641.11	7.81	633.30	6 DJ	2 DJ	5 U	5 U	5 U	170	1 J	5 U	5 U	
	3/22/2007	641.11	5.45	635.66	7	4 J	5 U	5 U	5 U	210	1 J	5 U	5 U	
	6/14/2007	641.11	5.18	635.93	9 J	3 J	20 U	20 U	20 U	260	20 U	20 U	20 U	
	9/12/2007	641.11	7.73	633.38	4 J	1 J	10	10	10	130	10 U	10 U	10 U	
	12/21/2007	641.11	6.23	634.88	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Notes:

All concentrations in micrograms per liter (pg/L)

Exceedences of the groundwater cleanup standard are indicated in bold.

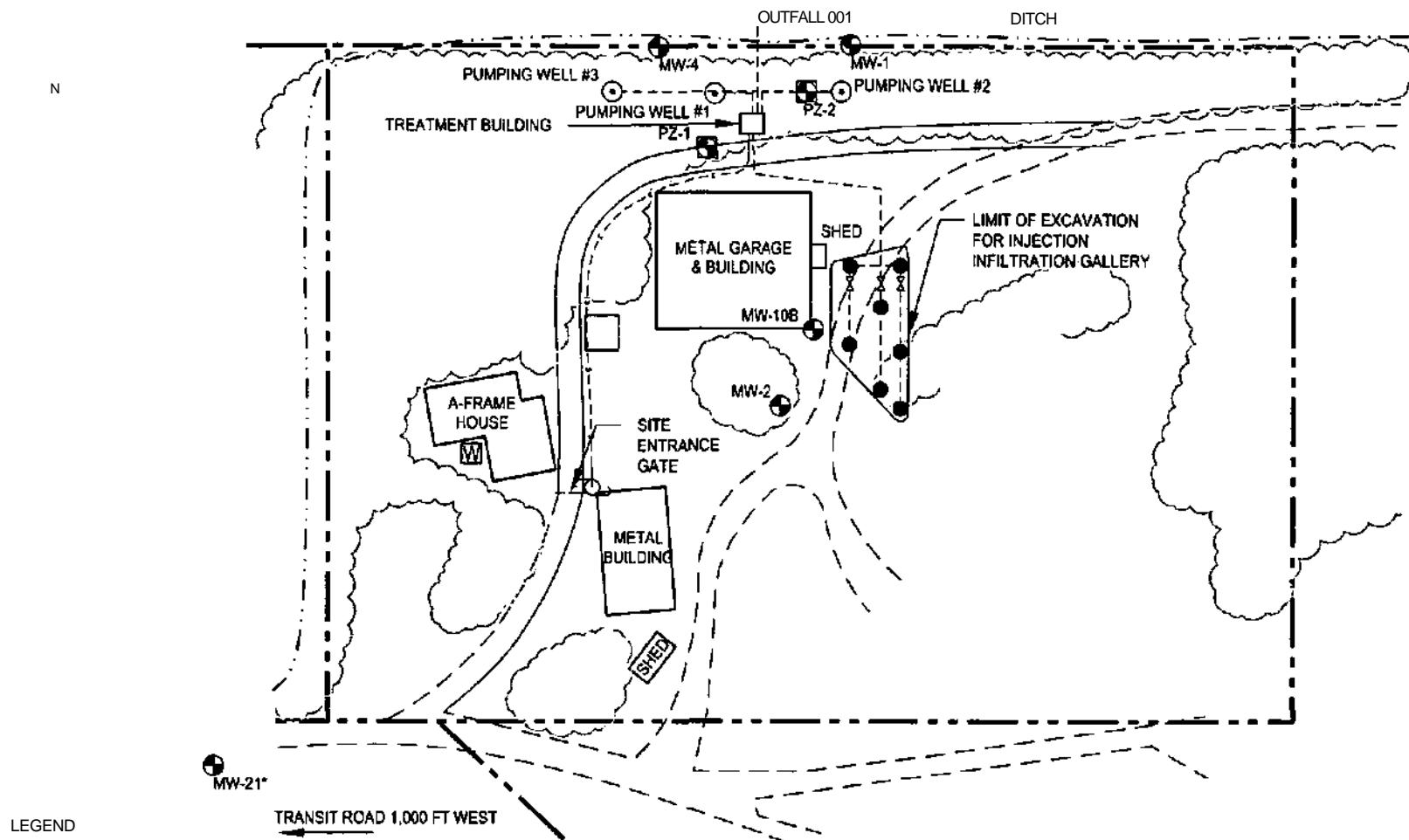
NM = Not Measured

NA = Not Available

**Table 6**  
**Schedule of Sampling and Analysis for 2008**  
**Bryon Barrel and Drum Site**  
**Byron, NY**

<b>Month</b>	<b>Event</b>	<b>Monitoring Well to be Sampled</b>	<b>Constituents to be Analyzed</b>
March 2008	First Quarter 2008 Monitoring Event	MW-1 MW-4 MW-10B MW-21 MW-Residential	Five VOCs: 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,1,1-Trichloroethane, Tnchloroethene, Vinyl Chloride
June 2008	Second Quarter 2008 Monitoring Event	MW-1 and MW-4	Five VOCs: 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,1,1-Trichloroethane, Tnchloroethene, Vinyl Chloride
September 2008	Third Quarter 2008 Monitoring Event	MW-1 and MW-4 MW-10B	Five VOCs: 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,1,1-Trichloroethane, Tnchloroethene, Vinyl Chloride
December 2008	Fourth Quarter 2008 Monitoring Event	MW-1 and MW-4	Five VOCs: 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,1,1-Trichloroethane, Tnchloroethene, Vinyl Chloride

## FIGURES



LEGEND

« MONITORING WELL

PROPERTY LINE

FORMER RESIDENTIAL WELL

FENCE

PIEZOMETER WELL

TREELINE

INJECTION GALLERY PIEZOMETER WELL

NEW GRAVEL ROAD

INJECTION GALLERY VALVE

PRE-EXISTING GRAVEL ROAD

© PUMPING WELL

DITCH

UTILITY POLE

ELECTRIC & PHONE LINE

SITE PLAN

BYRON BARREL AND DRUM  
AREA 2 SITE  
BYRON, NY

ECOR Solutions

1075 Andrew Drive, Suite I. West Chester, PA 19380

SCALE IN FEET

DATE

FIGURE

07-25-06

1



•NOTE: UW-I1 IS 200 FEET WEST OF PROPERTY LINE

SOURCE: ERM CSO SERVICES

80

**(C)**  
WELL NO. 1  
1/3 HP

**0**  
WELL NO. 2  
1/3 HP

**(C)**  
WELL NO. 3

-D «3-

BAG FILTER      TO ATMOSPHERE

AIR OUT



AIR  
STRIPPER

TO ATMOSPHERE

i

| rtf e

-C \* H >-

AIRIN - - - •

rC \* J-0-H »3-

150 CFM  
&  
BLOWER  
3 HP

TO REINJECTION (OR)  
SURFACE DISCHARGE

-E »0-

**10**  
REINJECTION  
PUMP  
2 HP

LEGEND

i-cAa      SAMPLING PORT

a      REDUCER

W      CHECK VALVE

II-      FLANGE FITTING

r^j      BUTTERFLY VALVE

D^3      BALL VALVE

AIR LINE

PROCESS PIPING

TO SURFACE DISCHARGE  
OUTFALL 001

GROUND WATER TREATMENT SYSTEM  
FLOW DIAGRAM  
BYRON BARREL AND DRUM  
AREA 2 SITE  
BYRON, NY

ECOR Solutions  
1075 Andrew Drive, Suite I, West Chester, PA 19380

SCALE IN FEET

DATE

FIGURE

09-02-05

2



Figure 3  
Influent VOC Concentration vs. Time  
July 2001 to Present  
Byron Barrel and Drum Site  
Byron, NY

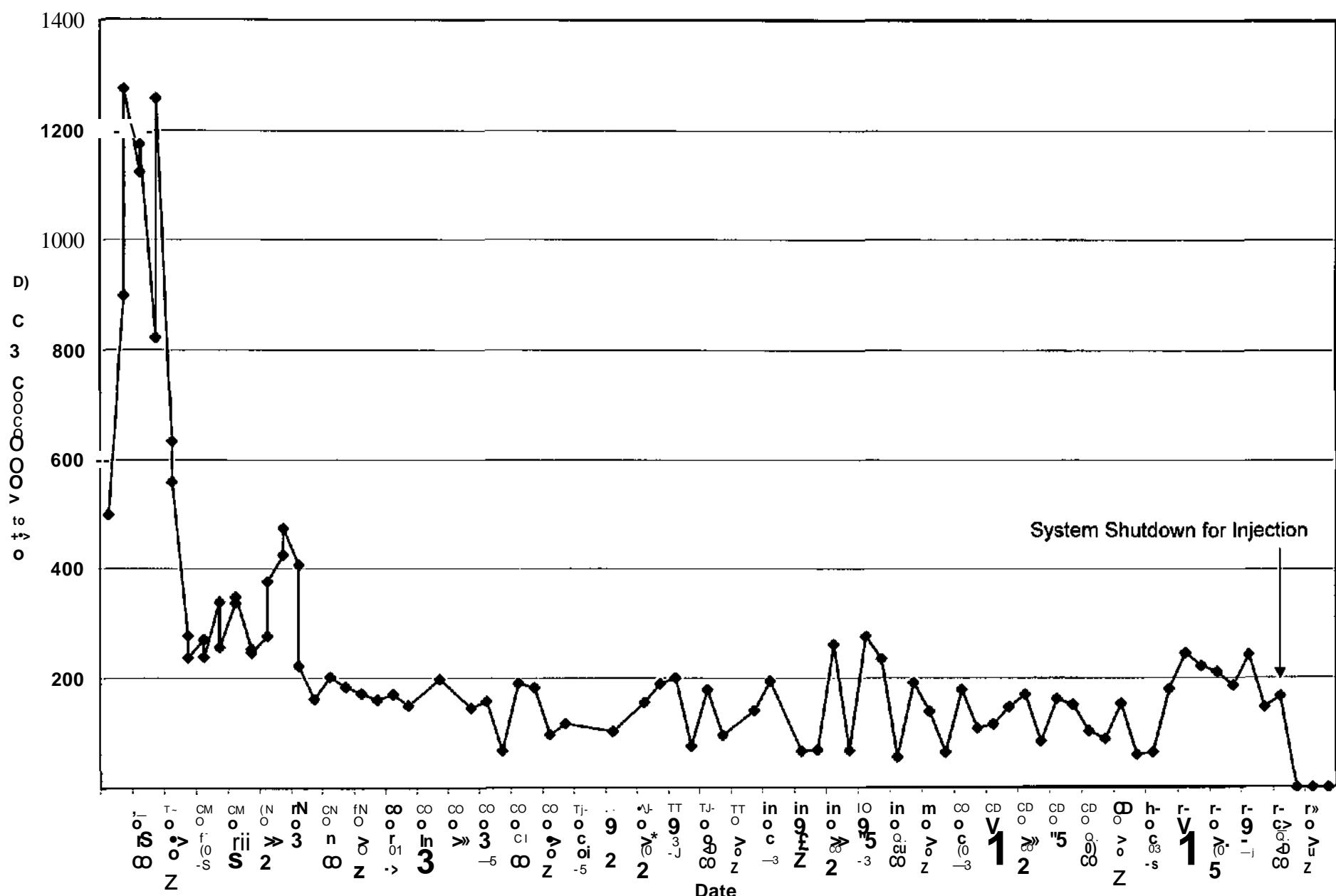
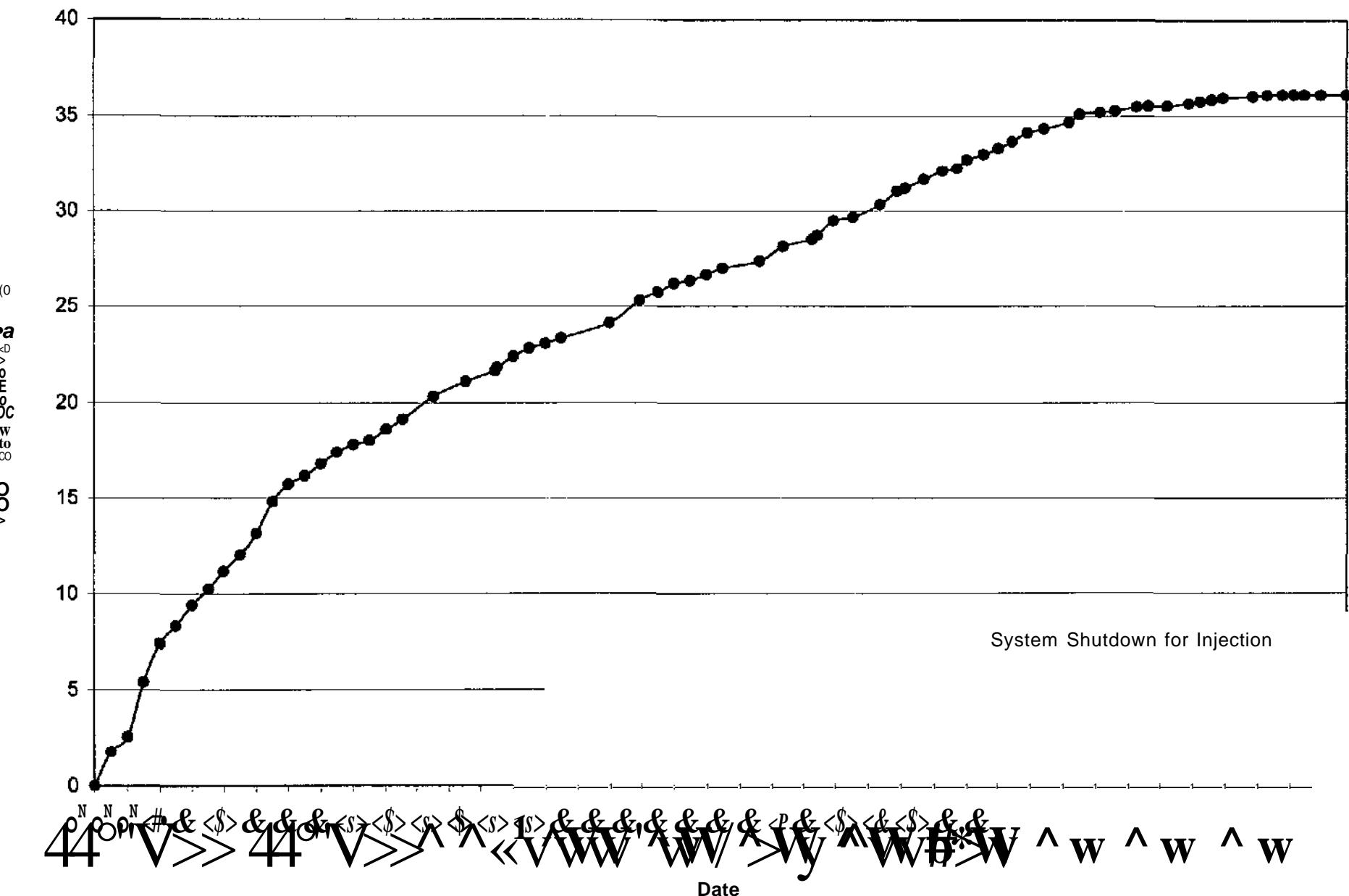
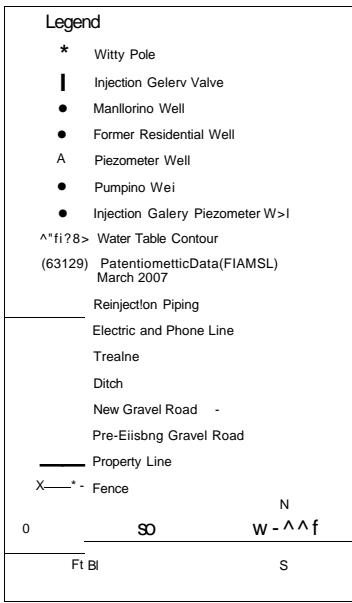


Figure 4  
Cumulative VOC Mass Removed  
July 2001 to Present  
Byron Barrel and Drum Site  
Byron, NY





MW-31  
• IS35.14)

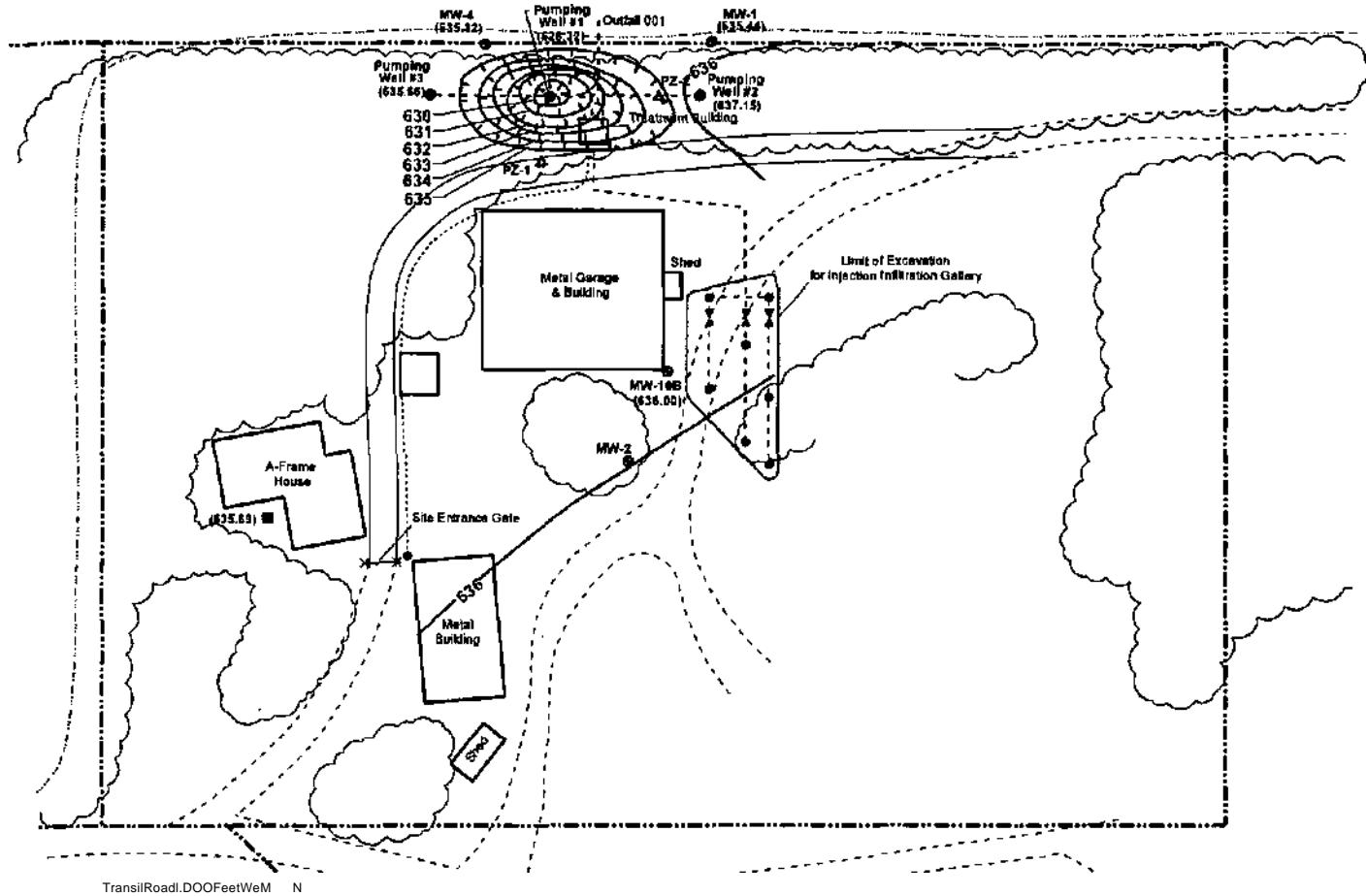
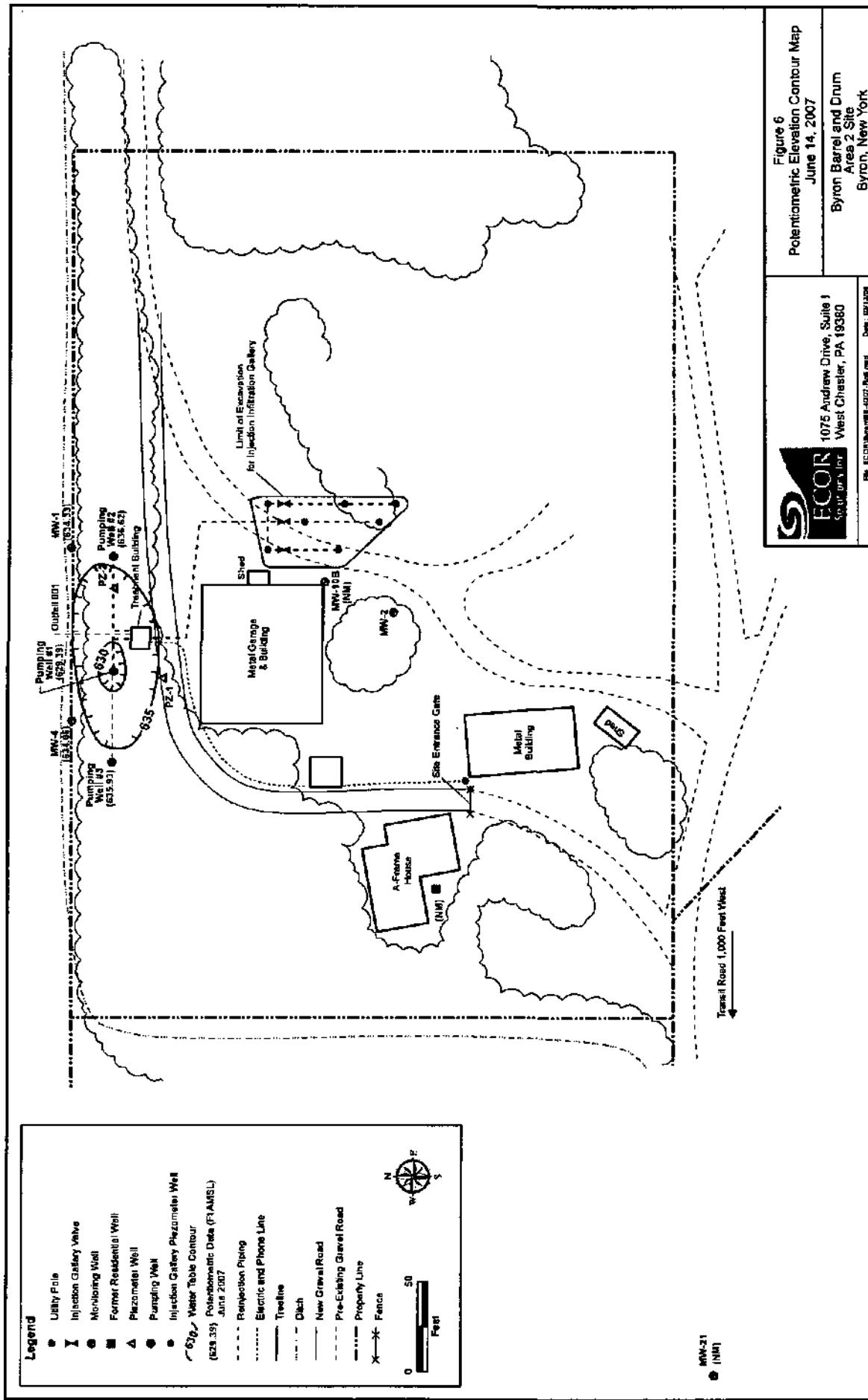


Figure 5  
Potentiometric Elevation Contour Map  
March 22, 2007  
Byron Barrel and Drum  
Area 2 Site  
Byron, New York



Legend

- Utility Pole
  - A Injection Gallery Valve
  - Monitoring Well
  - Former Residential Wall
  - A Piezometer Well
  - Pumping Well
  - Injection Gallery Piezometer Well
- <sup>^</sup>(633.07) Water Table Contour  
<sup>^</sup>(633.07) Potentiometric Data (ft AMSL)  
September 2007
- " Reinforced Piping
- Electric and Phone Line
- Treeline
- Ditch
- New Gravel Road
- Pre-Existing Gravel Road
- Property Line
- >---> fence

1 50

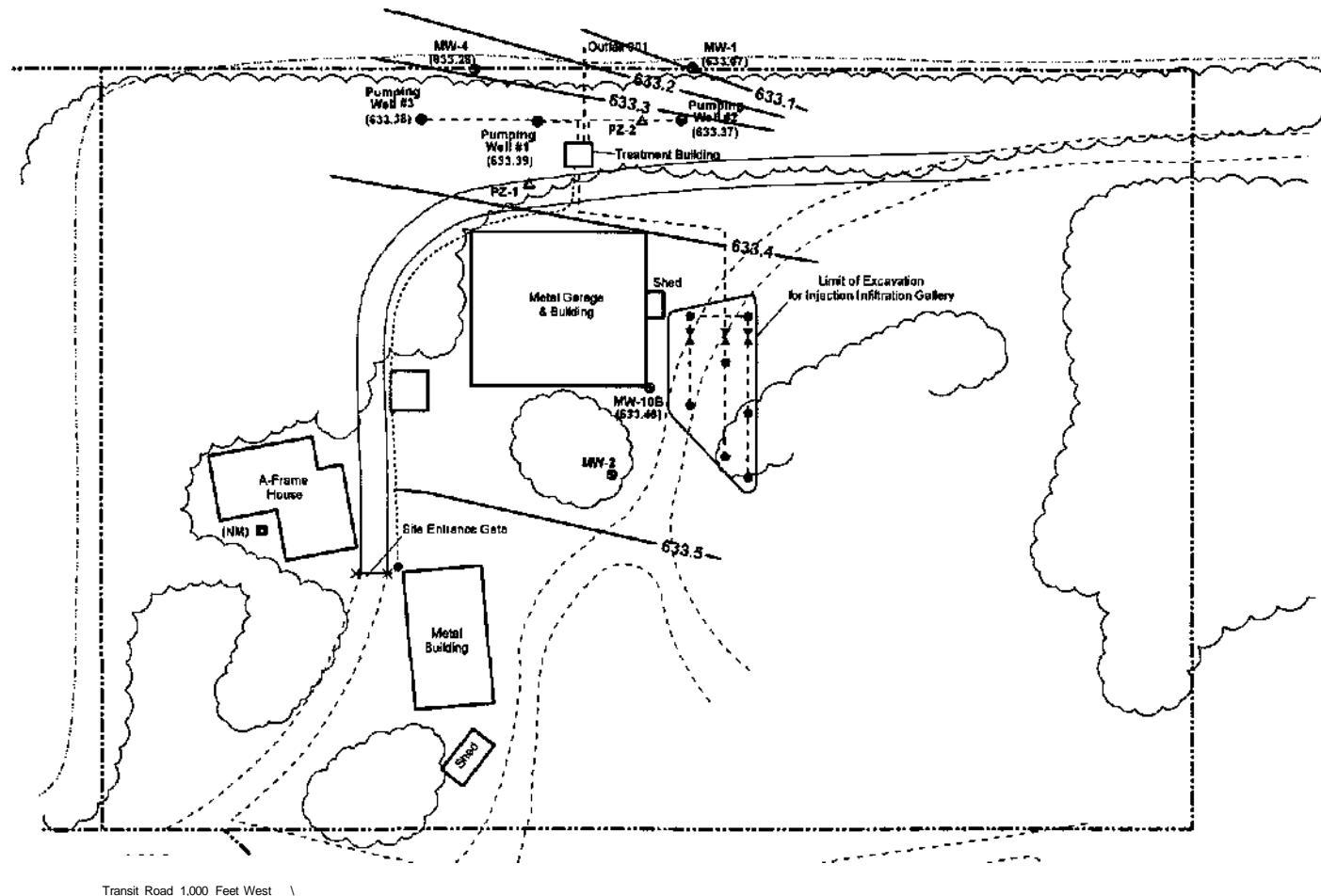


Figure 7  
Potentiometric Elevation Contour Map  
September 12, 2007  
Byron Barrel and Drum  
Area 2 Site  
Byron, New York

**Legend**

- Utility Pole
  - X Injection Gallery Valve
  - \* Monitoring Well
  - Formal Residential Well
  - ^ Piezometer Well
  - Pumping Well
  - Injection Gallery Piezometer Well
- 833 JS Water Table Contour  
(634.9) Potentiometric Data (FtAHSL)  
December 2007
- Reinjection Piping
- Electric and Phone Line
- Treeine
- Ditch
- Now Gravel Road
- Pre-Existing Gravel Road
- Property Line
- Fence

50



MW-21  
a (635.U)

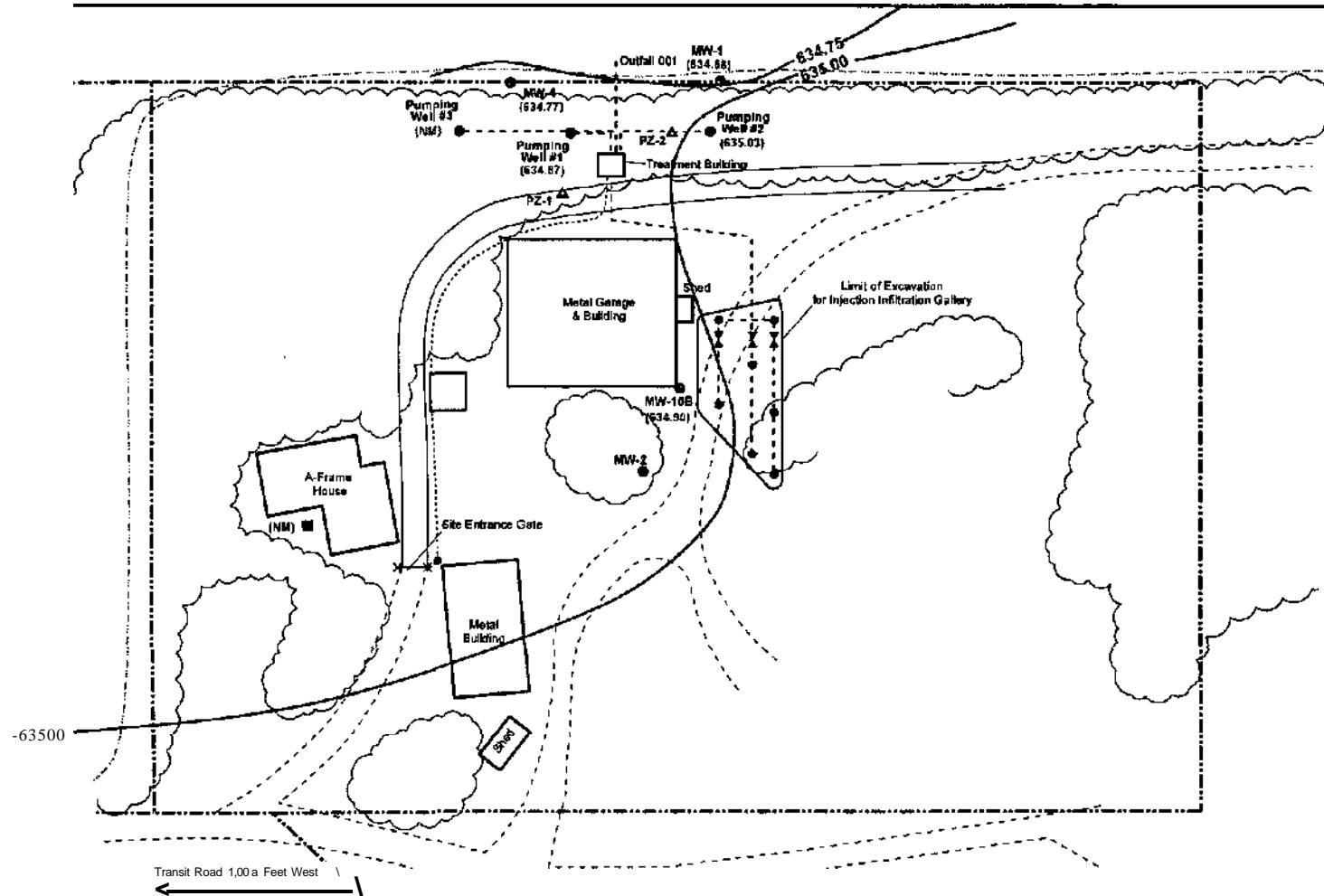


Figure 8  
Potentiometric Elevation Contour Map  
December 19, 2007



1075 Andrew Drive, Suite I  
Westchester, PA 19380

FH. ECC/KByro®BB-4Q07-Figar/Ttd P+I P3Ma0>

Byron Barrel and Drum  
Area 2 Site  
Byron, New York

**Salus**  
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5"



Transit Road 1, DRR Front West



22^1

NYSDDEC  
Standard

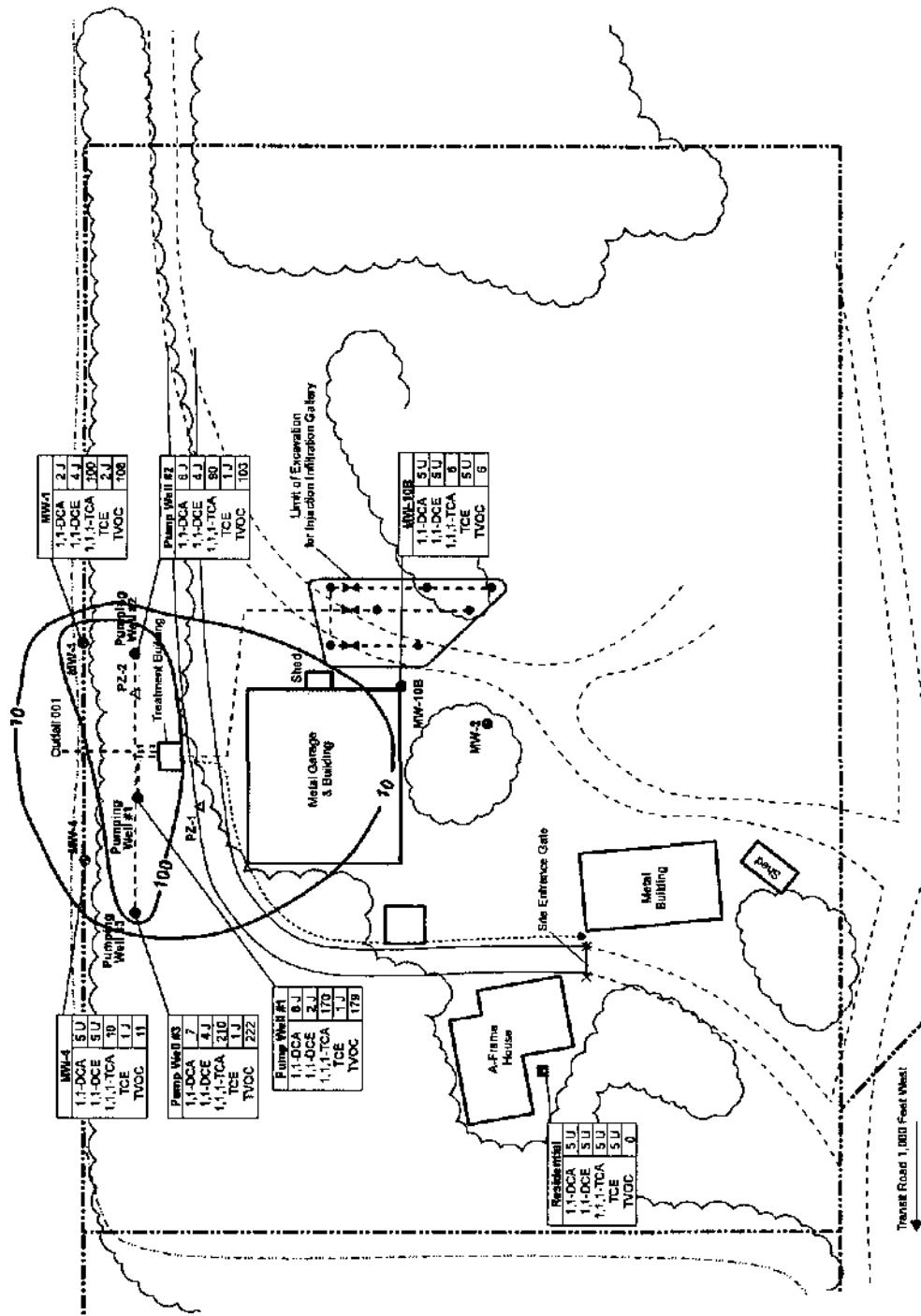
1,1-Dichloroethane  
1,1-Dichloroethene  
1,1,1-Trichloroethene  
Trichloroethylene  
Total VOCs

5 ug/l  
5 ug/l  
5 ug/l  
5 ug/l

ug/l  
The parameter was not  
for above reported limit.

20  
50  
100

5  
III  
IIISUIJSI  
lililli00



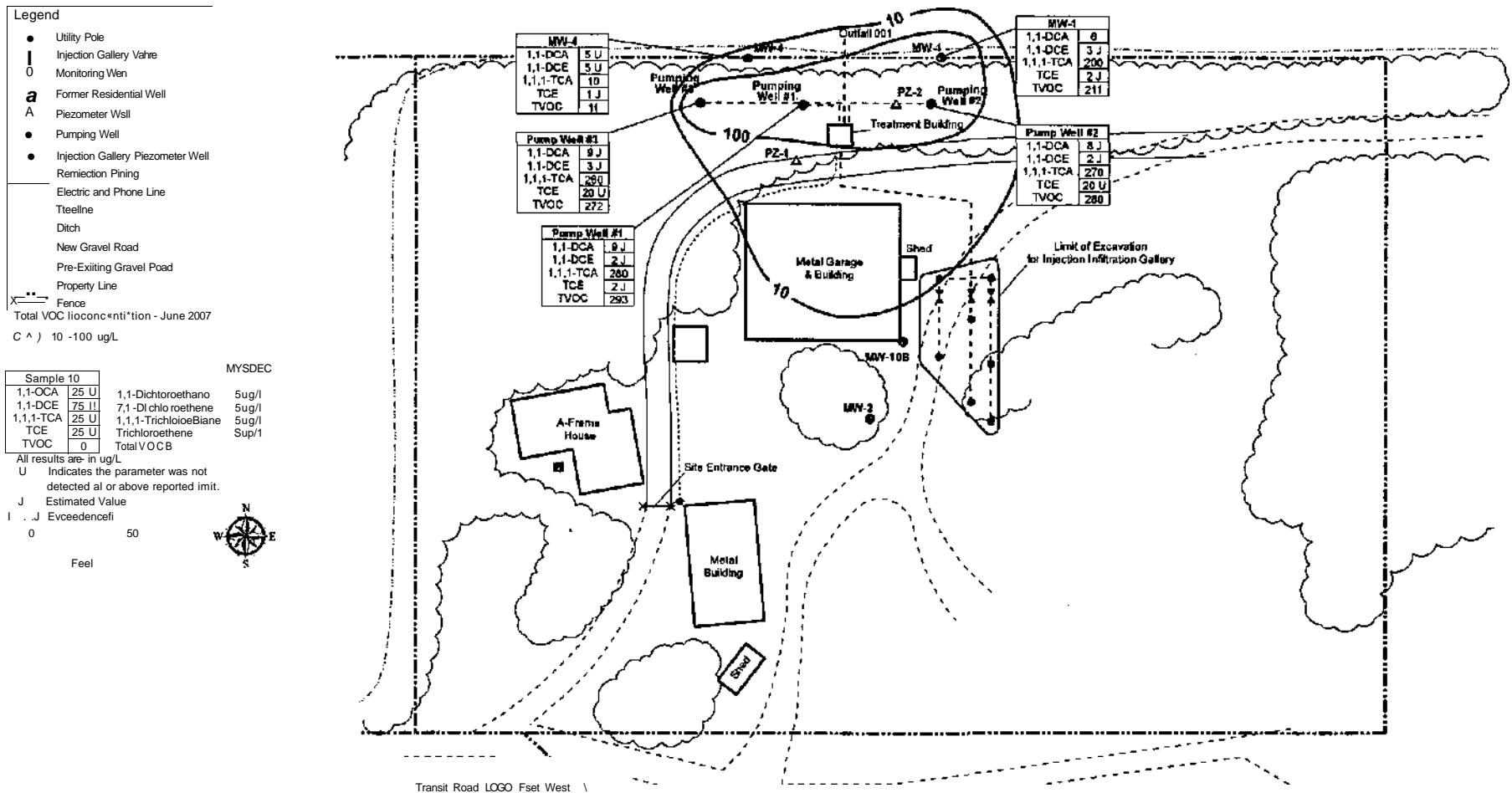
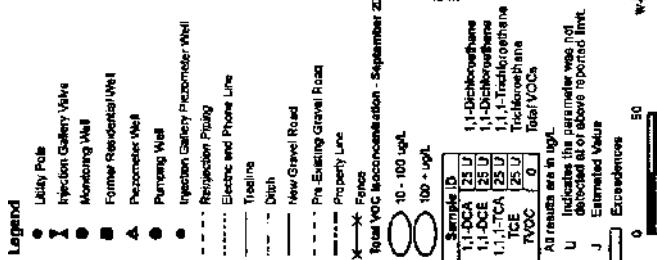
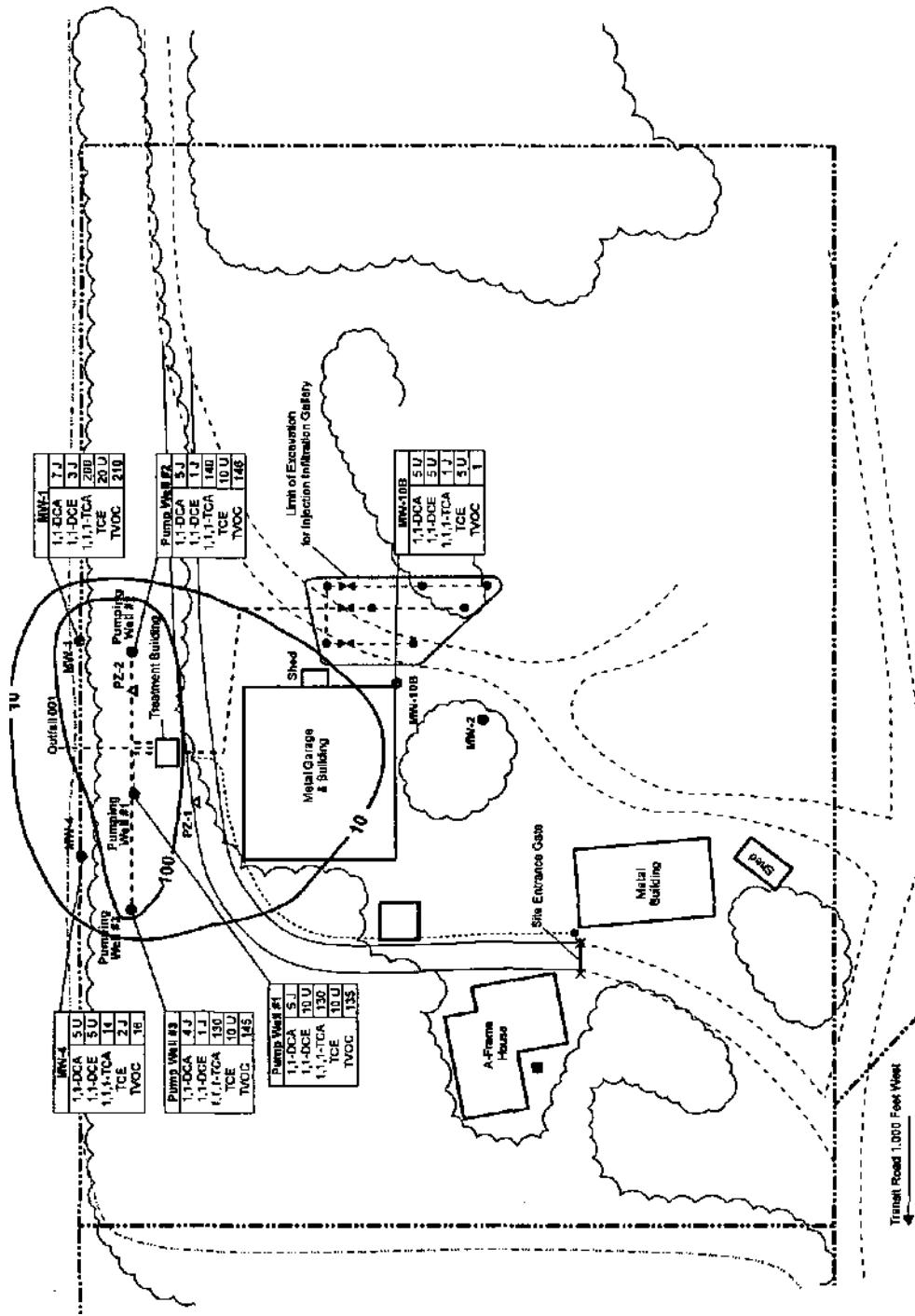


Figure 10  
Groundwater Quality Msp  
June 14, 2007  
Byron Barrel and Drum  
Area 2 Site  
Byron, New York

MI  
to  
5

><  
O 53-



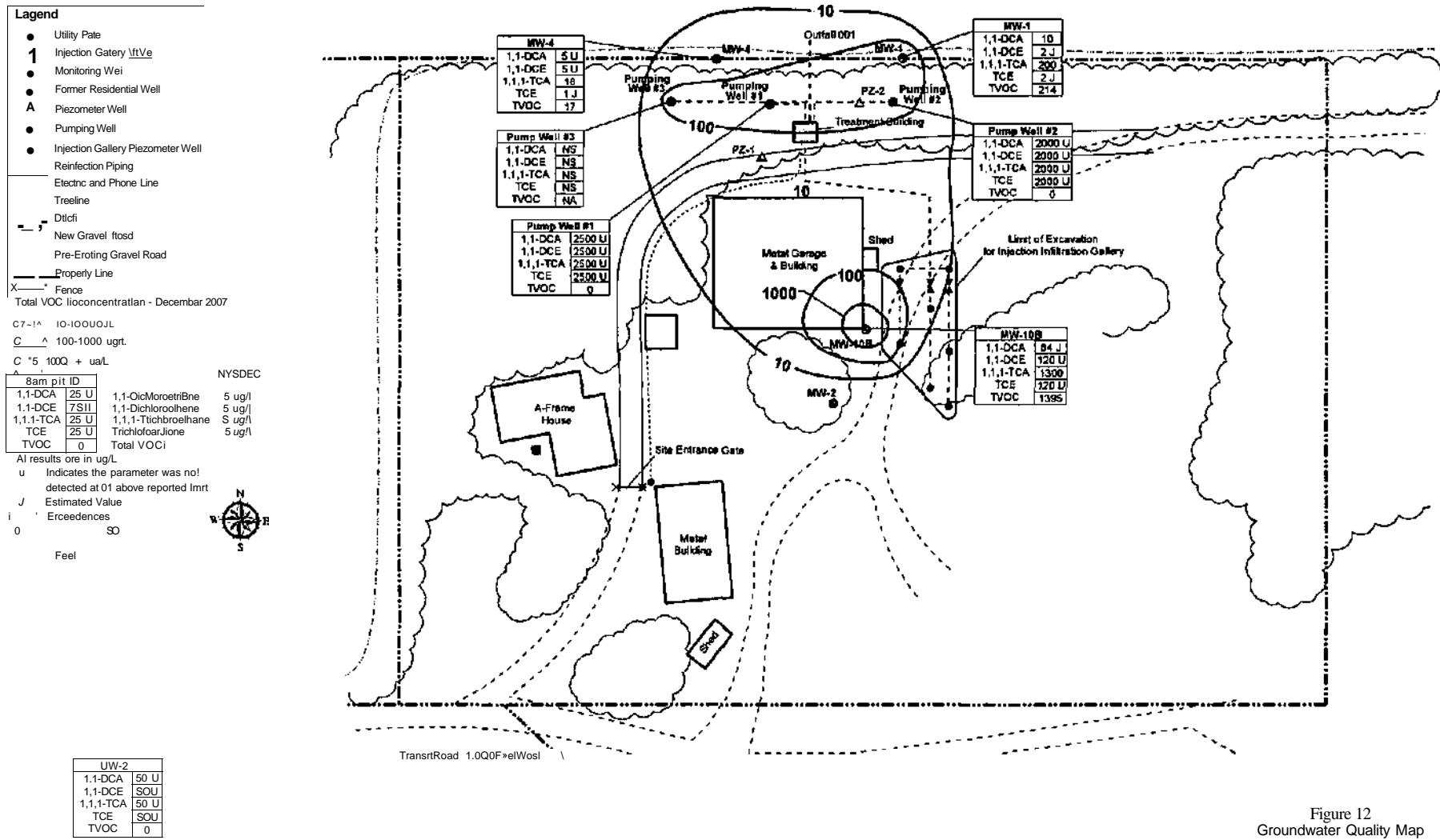


Figure 12  
Groundwater Quality Map  
December 19, 2007

ECOR 1075 Andrew Drive, Suite I  
Westchester, PA 19380

Fh ECOMeyr+nIBB+aa7-Figln

Byron Barrel and Drum  
Area 2 Site  
Byron, New York

**Legend**

- \* Utility Pole
- X Inject on GaUey Value
- Monitoring Well
- Former Residential well
- A Piezometer Well
- Pumping Well
- Injection Gallery Piezometer Well
- \* Reinjection Piping
- ..... Electric and Phone Line
- Treeline
- - Ditch
- New Gravel Road
- Pre-Eisitna Gravel Road
- Property Line
- \*\*\* Fence
- Total Organic Carbon (ug/L)
- (^—) 10,000 +
- ( ^ ^ ) 1000-10,000
- C ^ ) 100-1000
- (240) Total Organic Compound Concentration December 2007 (ug/L)

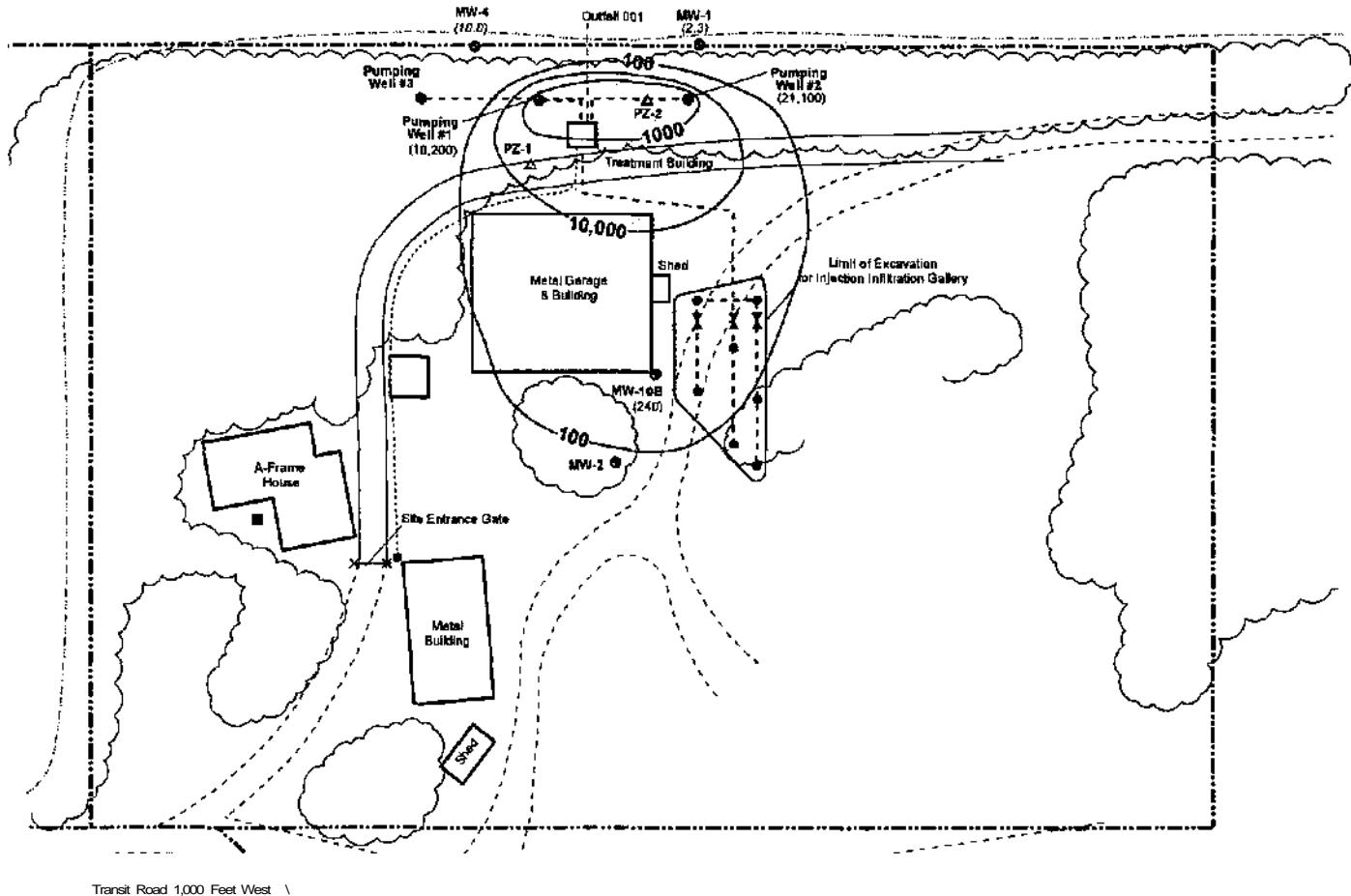


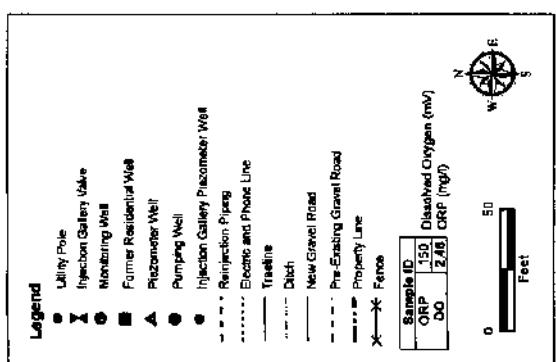
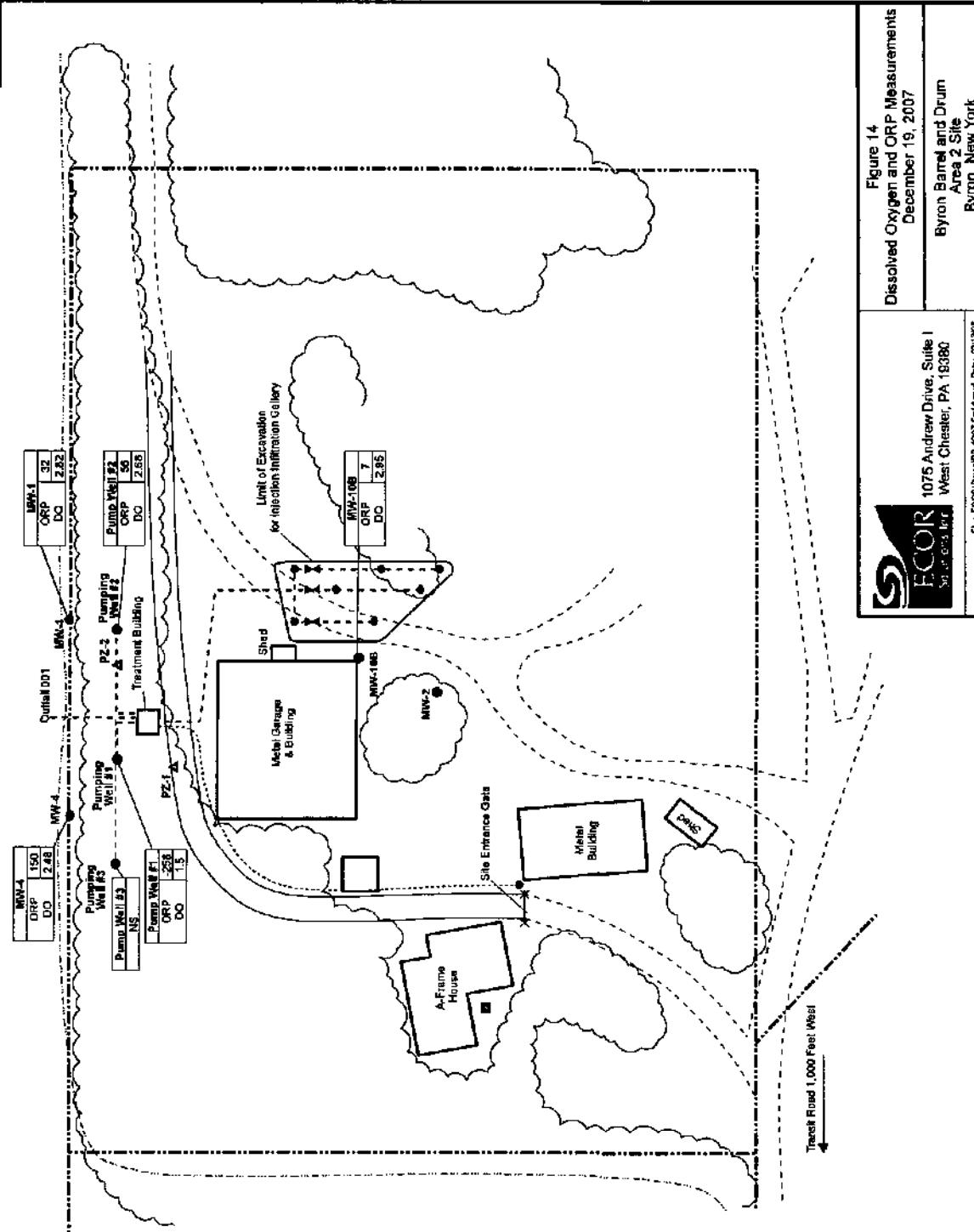
Figure 13  
Total Organic Carbon Concentrations  
in Groundwater - December 19, 2007



1075 Andrew Drive, Suite I  
Westchester, PA 19360

Fto. BB-4Q07 Fig1. D-2: EQJ17101

Byron Barrel and Drum  
Area 2 Site  
Byron, New York



MW-21

Legend

- Utility Pole
  - Injection Gallery Valve
  - Monitoring Well
  - Former Residential Well
  - A PieZometel Well
  - Pumping Well
  - Injection Gallery Piezometer Well
  - Reinjectan Piping
  - Electric and Phone Line
  - Tree tri
  - Ditch
  - New Gravel Road
  - Pre-Existing Gravel Road
  - Property Line
  - Fence
  - I Alea Exceeding NYSDEC
  - Groundwater Criteria
  - Total Organic Carbon Concentration ( $\mu\text{g/L}$ )
- C ~ ^ 100 -1000  $\mu\text{g/L}$   
 ^ ^ ) 100D-10,000  $\mu\text{g/L}$   
 (^ ^ > 10,000 •  $\mu\text{gA}$



MW-21  
 • (11.7)

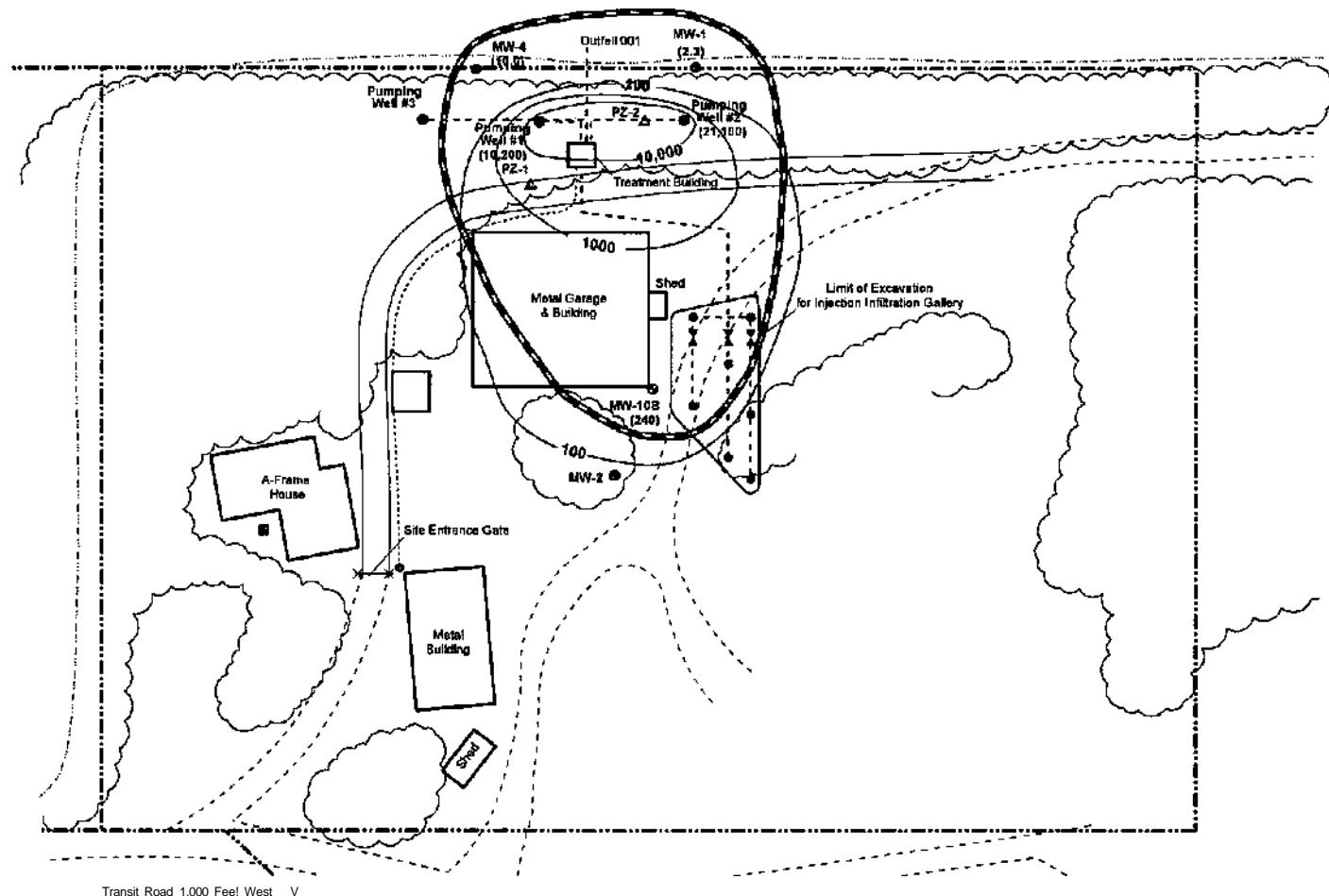


Figure 15

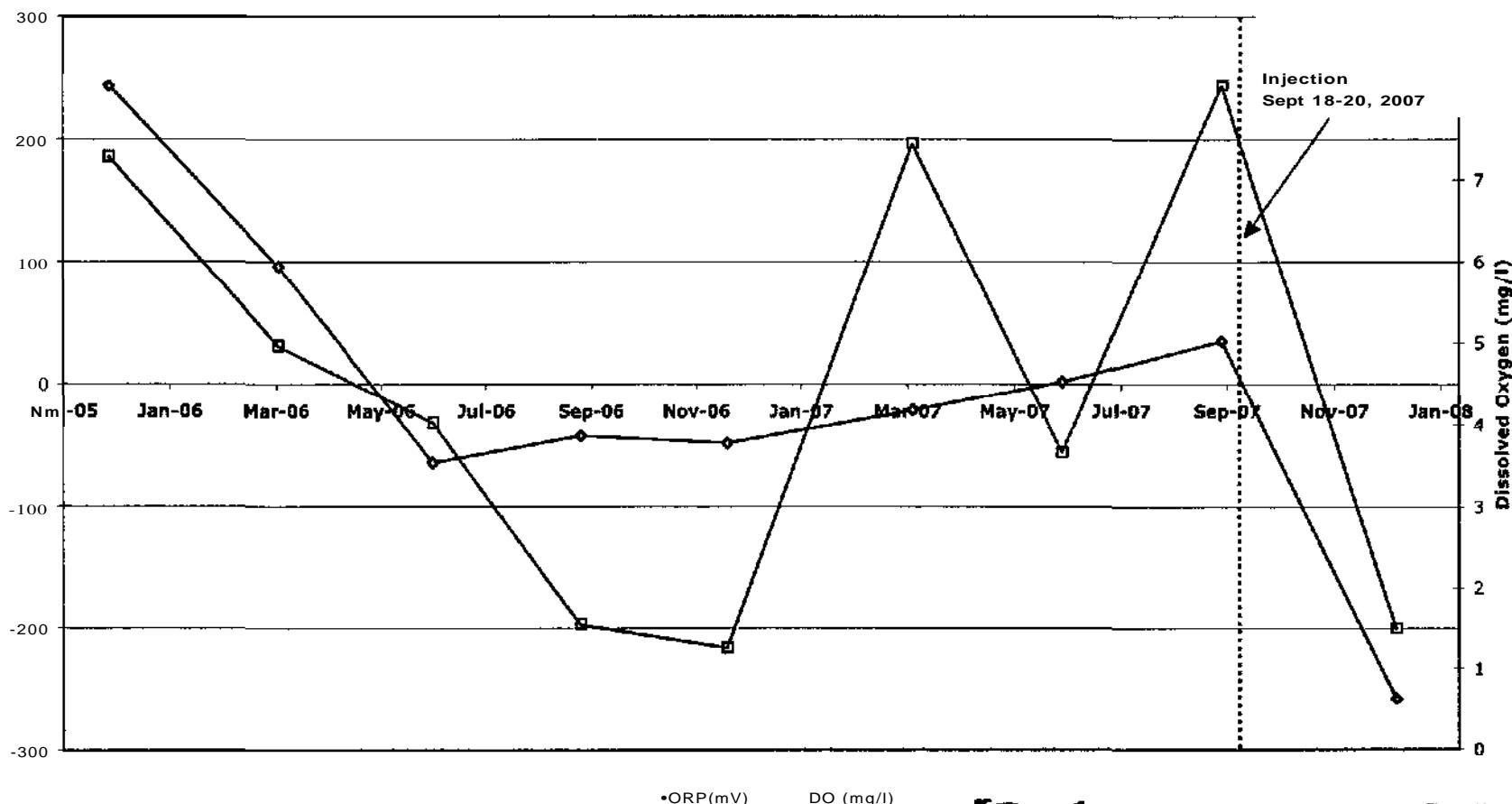
Area Exceeding DEC Groundwater Criteria  
 2007 with Total Organic Carbon Concentrations

ECOR 1075 Andrew Drive, Suite I  
 Sois: rjri Ir-r WestChester, PA 19380

FU: Ba-4QQ7-FigIS.indd Date: 10/17/08

Byron Barrel and Drum  
 Area 2 Site  
 Byron, New York

Figure 16  
Pumping Well PW-1 Field Parameters



•ORP(mV)      DO (mg/l)

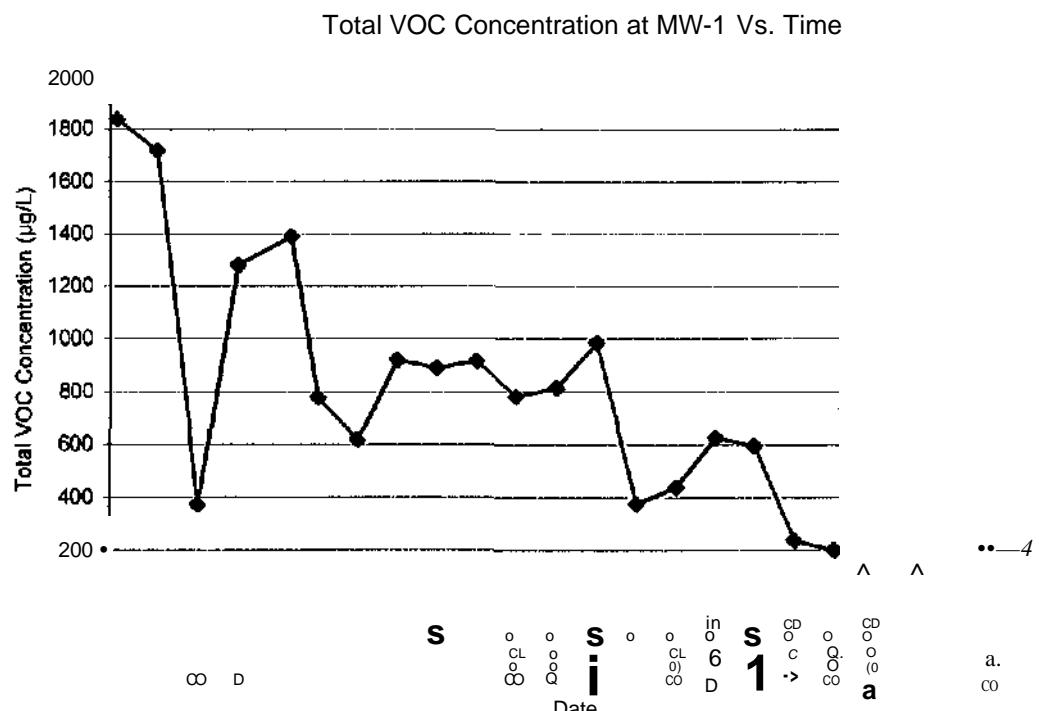


1075 Andrew Drive, Suite I  
Westchester, PA 19380

File: aB-4007-Fig16.mxd\_D\*\*; IBOftos

Figure 16  
Well PW-1 Dissolved Oxygen  
and ORP Measurements  
Byron Barrel and Drum  
Area 2 Site  
Byron, New York

Figure 17  
 Byron Barrel and Drum Site  
 Monitoring Well MW-1 Total VOC Trend Analysis



Natural Log Total VOC Concentration at MW-1 Vs. Time

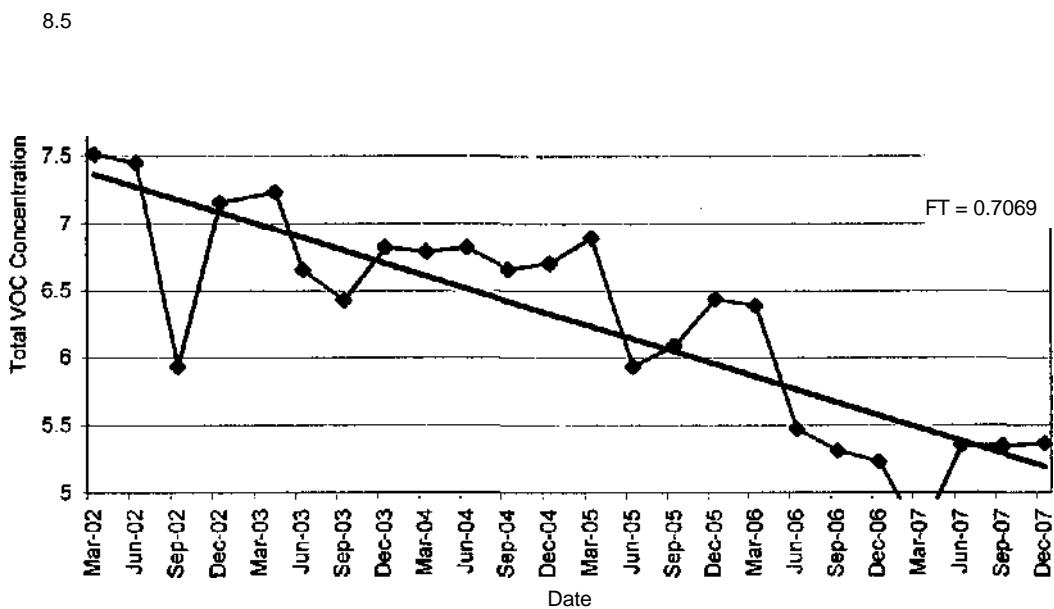
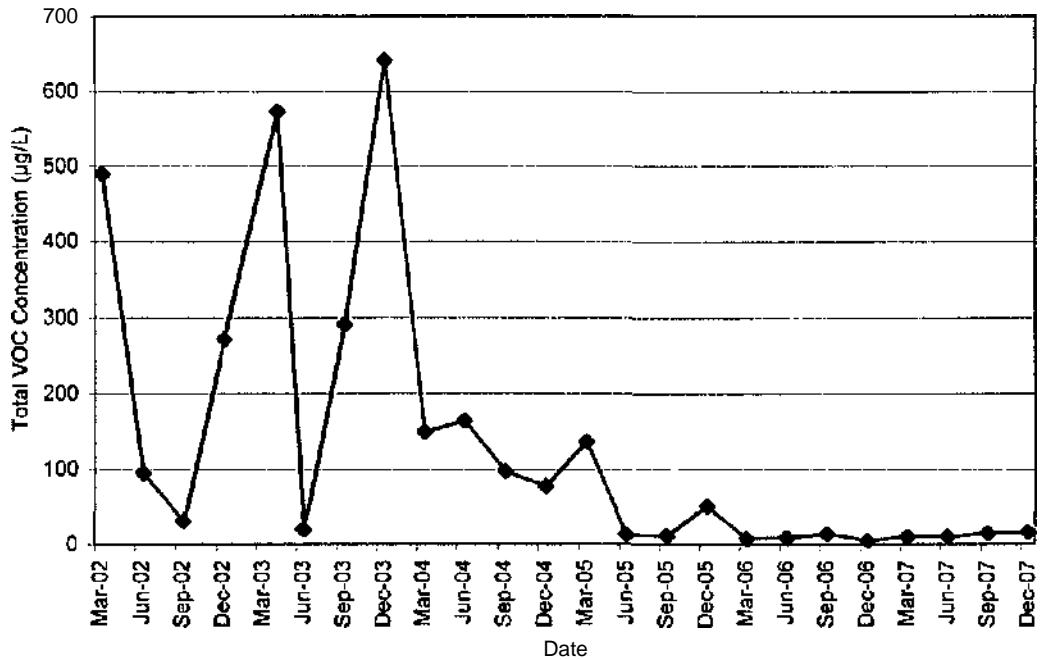


Figure 18  
 Byron Barrel and Drum Site  
 Monitoring Well MW-4 Total VOC Trend Analysis

Total VOC Concentration at MW-4 Vs. Time



Natural Log Total VOC Concentration at MW-4 Vs. Time

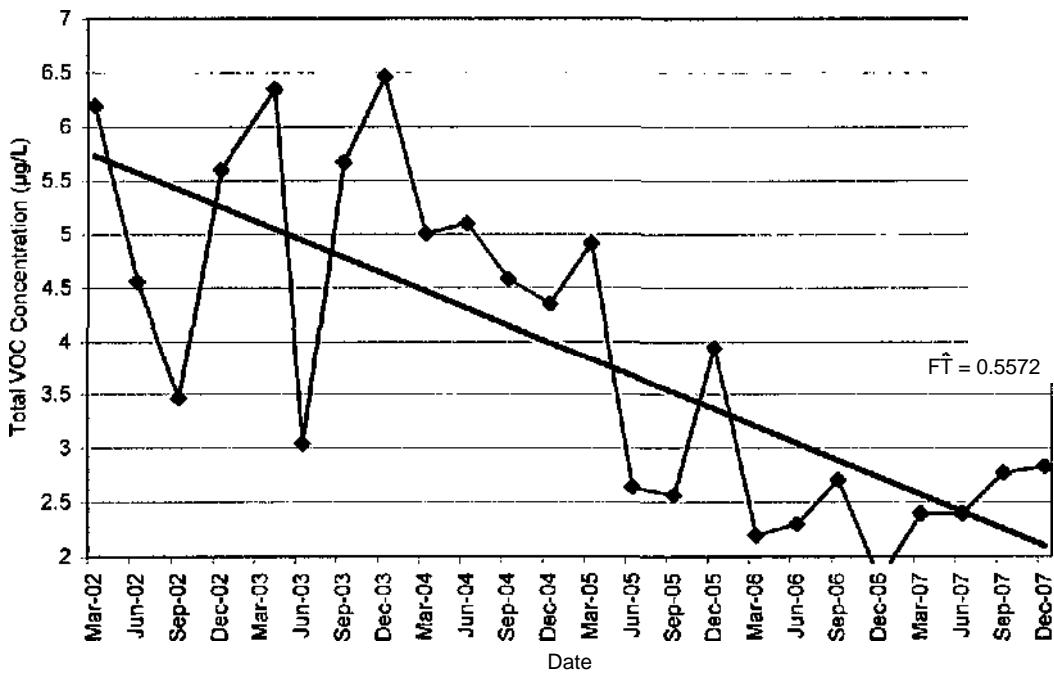
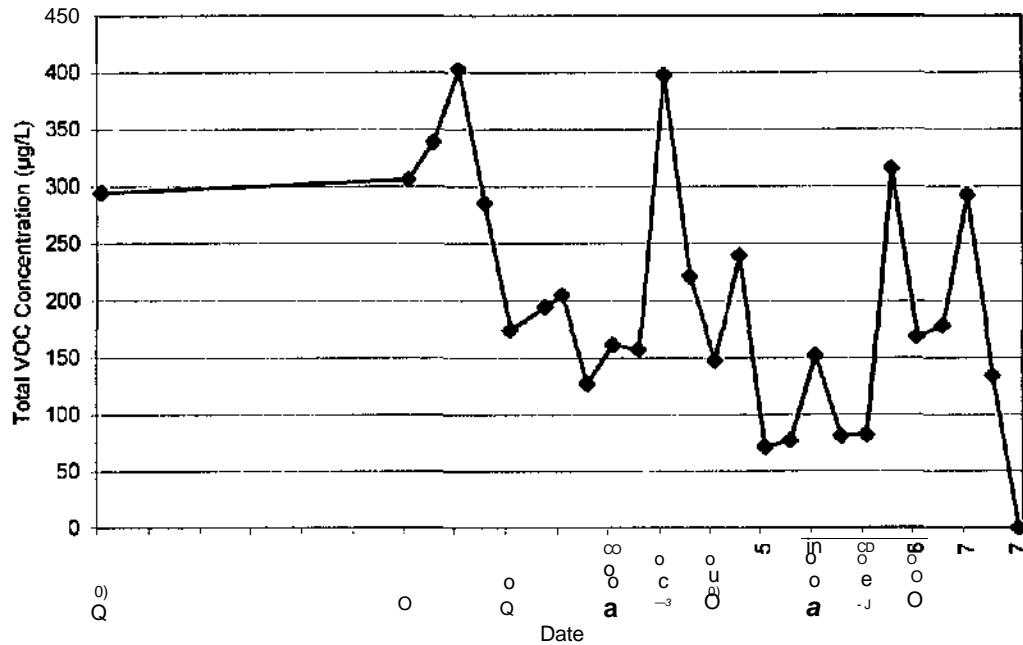


Figure 19  
 Byron Barrel and Drum Site  
 Pumping Well PW-1 Total VOC Trend Analysis

Total VOC Concentration at PW-1 Vs. Time



Natural Log Total VOC Concentration at PW-1 Vs. Time

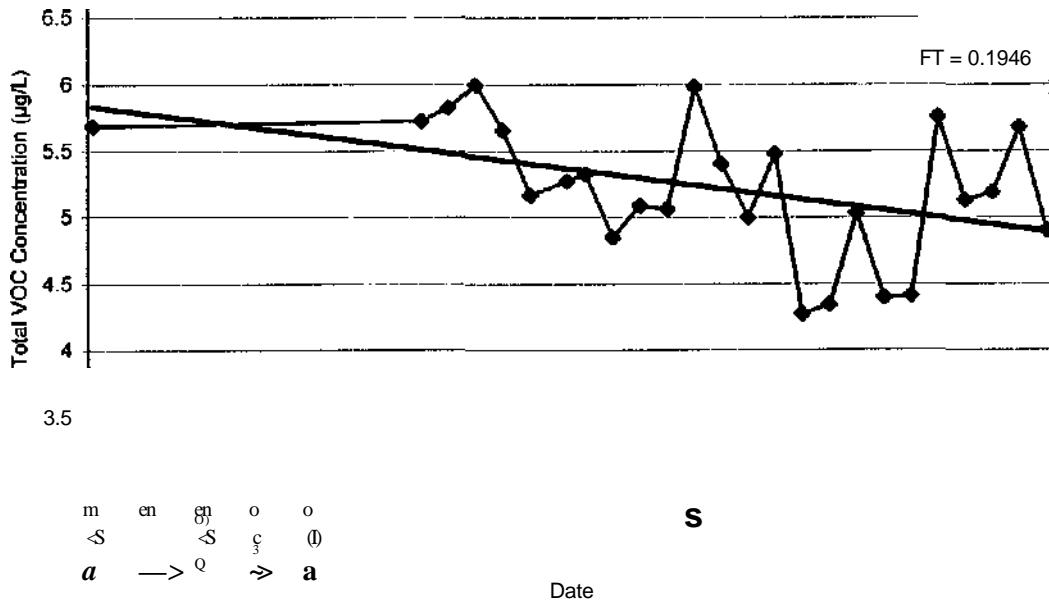
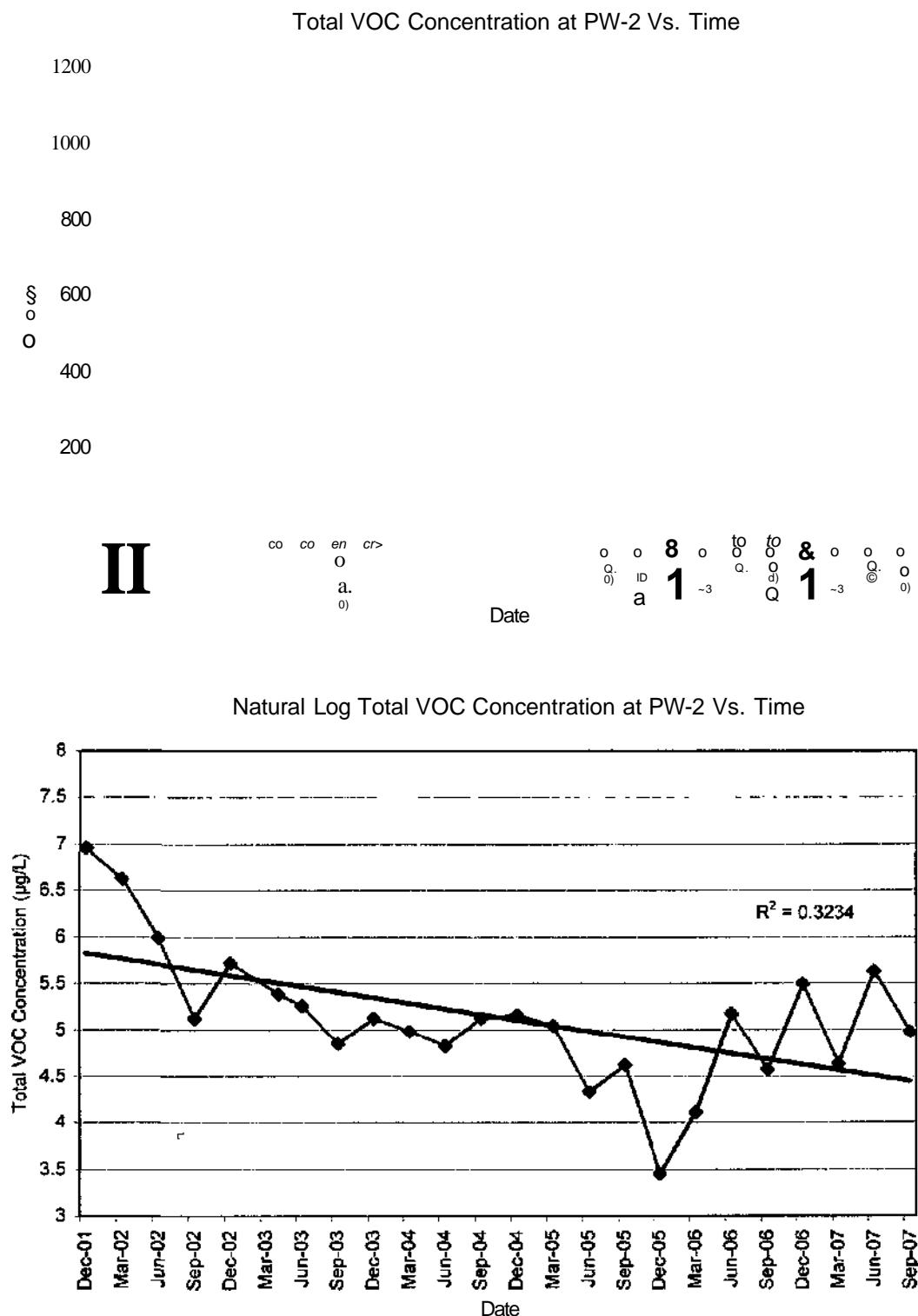


Figure 20  
 Byron Barrel and Drum Site  
 Pumping Well PW-2 Total VOC Trend Analysis



**APPENDIX A**  
**Field Notes**

**ECOR Solutions, Inc.  
Byron Barrel & Drum Site  
Groundwater Elevations**

**Operator**      ffo<sup>L</sup> /\*W<

**Date:**      & '/<f-0~7

TOC                  GW

Pumping Wells	P7W	Elevation	Elevation	ID	w.c> ft
PW-1	7 W	642.82	fW*ri	m'	m
PW-2	S.31	641.34	63fOl	—	m
PW-3	113	641.11	UH>86	—	-

**Monitoring Wells**

MW-1	* <sup>L</sup> i	639.63	6MJB	t*iv	6.1*
MW-2	l\.*i\	646.36	tWW	/s:of	3.&i
MW-4	Z71	638.56	62H-11	li.SO	7*7/
MW-1 OB	t.ri	644.44	6ZH10	ao^z.	/0.1&
MW-21	l<8I	642.52	£?v.11	-?7 8'£	30.0^
Residential	l&.W	650.78	ew<\$i	••ST,'**"	I%13

**Piezometers**

PZ-1	7 7 *	643.11	£3> <sup>r</sup> ,31	27.ol>	f*3d
PZ-2	70~6	642.39	tM. S3	-zi. *f	Sf.tf

ECOR Solutions, Inc.  
Byron Barrel & Drum Site  
Field Sampling Record Form

Site: Byron Barrel and Drum Date: / ? - ^ M ^

Job #: 01501.002

Sample ID: f1\*/? /Co»'2y

Well ID: ^ou - / Time onsite: Time Offsite:

Samplers: fit\*/fa. //yy yaa£

Depth of Well (from top of casing) -\* Time:

Static water level (from top of casing) ~7,f>"~ Time: jfff

Purging Method; ^ e&^w  
Qadicated UlaUtil pump; QED SamplePro MP-SP-4C

Field Tests:

Time	Flowrate (mUmin) / purge volume (mL)	Temp. °C	ORP mV	pH 3rd. Units	TDS	DO mg/L	Spec. Cond. mS/cm
<b>i r*</b>	<b>joo /*v(/M.»»</b>	<b>fin</b>	<b>-2Y1</b>	<b>1-2°</b>	<b>1.3</b>	<b>/ .77</b>	<b>&amp;oJ~</b>
<b>lit*</b>		<b>P-n</b>	<b>^7so</b>	<b>1-Xy</b>	<b>(?)</b>	<b>in*</b>	<b>z*r~</b>
<b>I2.00</b>		<b>8-t</b>	<b>-xs-i</b>	<b>7.3&gt;-</b>	<b>A3</b>	<b>Ui</b>	<b>2,0!&gt;'</b>
<b>fttf</b>		<b>8-8</b>	<b>~2\$~sr</b>	<b>1,70</b>	<b>hi</b>	<b>l.to</b>	<b>ZcS</b>
<b>ft'*</b>		<b>8-G</b>	<b>~m</b>	<b>1.J3</b>	<b>/•J</b>	<b>(•SS</b>	<b>2o-T</b>
<b>Utf</b>		<b>g,e</b>	<b>~zs9</b>	<b>7. IT</b>	<b>/•J</b>	<b>('S3</b>	<b>2^~~</b>
<b>f2 *o</b>	<b>v</b>	<b>en</b>	<b>*.?S0</b>	<b>-i.n</b>	<b>AJ</b>	<b>(.*&gt;</b>	<b>2o&gt;'</b>

**Sampling:**Time of Sample Collection LX^to

<i>Collection Method:</i>	<i>Analyses:</i>	<i>Analytical Method:</i>
X Dedicated pump	X VOCs	8260 X 503 Other

**Observations:**Weather/Temp/Pressure ./W 7'Sample Description: w <<4 r>f\*7

Free Product?	Yes	No	A	Descript.:
Sheen?	• Yes	No	X	Descript.:
Odor?	Yes	X	No	Descript.: <u>JU*4*T St&lt;&gt;f *&amp;*</u>

**Comments:**/n<(ty UA'k.

ECOR Solutions, Inc.  
**Byron Barrel & Drum Site**  
 Field Sampling Record Form

Site: Byron Barrel and Drum Date: A?-/j/\*;«0

Job #: 01501.002

Sample ID: ^ J / ^ ^ y

Well ID: fit^f^X. Time onsite: Time Offsite:

Samplers: P+I.UIL f\*fT JJ^T

Depth of Well (from top of casing) — Time: " "

Static water level (from top of casing) £.7 Time: (\*jo

Purging Method.: \*\*. fiahc\*r\*S \*\*\*\*\* \*\*

Dedicated bladder pump, QED SamplePro MP-SP-4C\_\_\_\_\_

Field Tests:

Time	Flowrate (mUmin) / purge volume (ml)	Temp. °C	ORP mV	pH 3rd. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
/ / »^	10o *<*/***	C.f	72	1.11	10v	v.n	^zz
lib ?		&r	Cl	I/I	1Y	£/#o	ZXf
///<>		£»	61	1,0 1	hi	7<6Z	2ZJ'
II If		£9	c«r	-),oO	IM	-5,00	Z2*
1\2°	6'0	Co	7.00	i.S	z<y	&4	
n*f	6, */	£9	1.0	I,f	7^	~21	
1130		£?	S"?	~?.of	Ar	2-76	Z?6
1Of	v r	C-r	S<-	y.ao	h~	2-t*	2X8

Sampling:

Time of Sample Collectio

**m>**

*Collection Method:*

Dedicated pump

*Analyses:*

VOCs

*Analytical Method:*

8260  503 Other:

Observations:

Weather/Temperature: Sosu %o\*

Sample Description: /va/Zt-y

Free Product? Yes \_\_\_\_\_ No ^ De script.:

Sheen? Yes \_\_\_\_\_ No ^ Descript:

Odor? Yes X No Descript.: Sir a0fA

Comments:

**ECOR Solutions, Inc.**  
**Byron Barrel & Drum Site**  
**Field Sampling Record Form**

**Site:** Byron Barrel and Drum      **Date:** /Z-/f-^>

**Job #:** 01501.002

**Sample ID:** /\*wj-t -9/tt\*\*-\*

**Well ID:** /Hu/ ~ / Time onsite: Time Offsite:

**Samplers:** p. I \*/J~^ /o/i      if to

Depth of Well (from top of casing) / / . | ^ Time: tWo

Static water level (from top of casing) V.?->" Time: /P/P

**Purging Method:**

Dedicated bladder pump, QED SamplePro MP-SP-4C

**Field Tests:**

Time	Flowrate (mL/min) / purge volume (ml)	Temp. °C	ORP mV	PH 3td. Units	TDS g/L	DO mg/L	Spec, Cond. mS/cm
<i>lotr</i>	<i>3cynfy4*^</i>	<i>1-*"</i>	<i>Jt</i>	<i>7.3Z</i>	<i>.f</i>	<i>Sot</i>	<i>SYS</i>
<i>(OAJ&gt;</i>		<b>&lt;P</b>	<i>2&amp;</i>	<i>71°</i>	<i>.6</i>	<i>2-W</i>	<i>6*f</i>
<i>/o2f</i>		<i>1,1</i>	<i>Jl</i>	<i>7,2\$</i>	<i>X</i>	<i>2,f/</i>	<i>8*''</i>
<i>/QJo</i>		<i>q,o</i>	<i>JA</i>	<i>7.2\$</i>	<i>.Q</i>	<i>2,fo</i>	<i>8/1</i>
<i>l&amp;3f</i>		<b>r•</b>	<i>?X</i>	<i>7s?7</i>	<i>X</i>	<i>1.SI</i>	<i>3*°</i>
<i>ioio</i>		<i>g.B</i>	<i>3 *</i>	<i>7zc</i>	<i>X</i>	<i>2-*i</i>	<i>7?7</i>
<i>toyf</i>	<i>\ /</i>	<i>9,1</i>	<i>3X</i>	<i>7*/</i>	<i>X</i>	<i>2.\$^</i>	<i>71 S</i>
							,

**Sampling:**Time of Sample Collectto le>^l/f*Collection Method:* Dedicated pump*Analyses:* VOCs*Analytical Method:*8260  503  Other:**Observations:**Weather/Temperature: irfl\*\*j/sr>w 33\*Sample Description: Cl'''Free Product? Yes No g^ Descript.: \_\_\_\_\_Sheen? Yes No A Descript.: \_\_\_\_\_Odor? Yes No \* • Descript.: \_\_\_\_\_

Comments:

ECOR Solutions, Inc.  
**Byron Barrel & Drum Site**  
Field Sampling Record Form

Site: Byron Barrel and Drum Date: tfr/f-eO

Job #: 01501,002

Sample ID: /t>>-\* y-

Well ID: \w^1/ Time onsite: Time Offsite:

Samplers: / ? / / M : ft>3r ?2%5~

Depth of Well (from top of casing) 11.2^ Time: \$2f

Static water level (from top of casing) g ^ ? Time: fay?

Purging Method:

Dedicated bladder pump, QED SamplePro MP-SP-4C

Field Tests:

Time	Flowrate (mU/min) / purge volume (mL)	Temp. "C	ORP mV	I fehd.	PH Units	TDS	DO mg/L	Spec. Cond. mS/cm
<i>fOSO</i>	<u>&amp;&lt;*/&lt;</u>	<u>lb</u>	<u>131</u>	<u>-?•¥*</u>	<u>&lt; ? . ^</u>			
<i>loSf</i>		<b>71</b>	<b>IA</b>	<del>h.vxx</del>	<b>0.S</b>			
<i>&lt;7</i>		<i>LB</i>	<i>lif</i>	<i>7-/2L</i>	<i>0.J"</i>			<i>-JOS'</i>
<i>110</i>			<b>m</b>	<b>7&lt;A</b>	<b>of.^</b>		<b>OB_</b>	
<i>111 "</i>			<i>iii</i>	<i>7.vY</i>	<b>0\$</b>	<u>ZSf</u>		
<i>Hi*</i>		<i>e.^n</i>	<i>is*</i>	<i>7.VJ</i>	<b>0\$</b>		<i>{10</i>	
<i>fillfi</i>		<b>0f</b>		<i>? y j</i>	<b>0\$&gt;</b>			

Sampling:

Time of Sample Collectio //20

<i>Collection Method:</i> <input checked="" type="checkbox"/> Dedicated pump	<i>Analyses:</i> <input checked="" type="checkbox"/> VOCs	<i>Analytical Method:</i> <u>8260</u> <input checked="" type="checkbox"/> <u>503</u> Other:
---	--	--

Observations:

Weathern'emperature: 33\*

Sample Description: \_\_\_\_\_

Free Product?	<input checked="" type="checkbox"/> Yea	No <input type="checkbox"/> K	Descript: _____
Sheen?	<input checked="" type="checkbox"/> Yes	No <input type="checkbox"/> K	Descript.: _____
Odor?	<input checked="" type="checkbox"/> Yes	No <input type="checkbox"/> ^ \	Descript.: _____

Comments:

*jnS/^tj<*      *O\**      *ISM*

ECOR Solutions, Inc.  
Byron Barret & Drum Site  
Field Sampling Record Form

Site: Byron Barrel and Drum

Date: /;?-\*9-c7

Job #: 01501.002

Sample ID: /\*\\*J- /og~? /&t~ v\*. Y

Well ID: /nwfr#

Time onsite: Time Offsite:

Samplers: f>l/f-f+

&vr t33Q

Depth of Well (from top of casing) £o>%%

Time: P&>

Static water level (from top of casing) %Sf

Time: ASy\*\*\*\*

Purging Method:

Dedicated bladder pump, QED SamplePro MP-SP-4C

Field Tests:

Time	Flowrate (mL/min) / purge volume (mL)	Temp. °C	ORP mV	pH 3rd. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
13LS°	yosfat/*^	0-0	13	~},10	. f	2>,6	fjoo
W*		S-3	IX	l.a	fS-	•3<"	1013
n<?*		8-1	1°	7.»'	,r	Z*7	/090
ii*r		0.0	Jo	l.n	-sT	1**9	/off
ftiO		0-0	e	~,20		3.00	10\$^
IV?		e?	7	7,22-	, i **	2*97	/^#V
I\$lo	Ji	\$ . ,	7	7-2/	q	xf	/6So

**Sampling:**

Time of Sample Collection m.

*Collection Method:* \_\_\_\_\_ *Analyses:* \_\_\_\_\_ *Analytical Method:* \_\_\_\_\_

Dedicated pump       VOCs      8260     503    Other: \_\_\_\_\_

**Observations:**

Weather/Temperature: eCloih 33\*

Sample Description: cl<-

Free Product?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> ^	Descript.:
Sheen?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> A	Descript.:
Odor?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> A	Descript.:

Comments:

ECOR Solutions, Inc.  
Byron Barrel & Drum Site  
Field Sampling Record Form

Site: Byron Barrel and Drum Date: /2-zf-\*^

Job #: D1501.0Q2

Sample ID: /»\w2I~

Well ID: / w ^ O / Time onsite: Time Offsite:

Samplers: /?,L/\*-\*-^<- /ja /W>

Depth of Well (from top of casing) 37.^6 Time: /t/o

Static water level (from top of casing) 7>8f Time: / j s

Purging Method:

Dedicated bladder pump, QED SamplePro MP-SP-4C

Field Tests:

Time	Flowrate(ml/min)/purge volume (mL)	Temp. °C	ORP mV	pH 3rd. Units	TDS g/L	DO mg/L	Spec. Cond. mS/cm
<u>13W</u>	<u>yo/*l/r.*j</u>	<u>8*</u>	<u>/o</u>	<u>7.3^</u>	<u>/, /</u>	<u>.*:??</u>	<u>/\$76</u>
<u>/3VJ"</u>		<u>8-Y</u>	<u>13</u>	<u>7.27</u>	<u>/..</u>	<u>3 - «</u>	<u>tSCI</u>
<u>/J-r°</u>		<u>tf&lt;</u>	<u>M</u>	<u>7**</u>	<u>M</u>	<u>3.?°</u>	<u>/\$£o</u>
<u>rjsr</u>		<u>m</u>	<u>K</u>	<u>7."</u>	<u>//</u>	<u>3'2?</u>	<u>/SS7</u>
<u>Woo</u>		<u>8.1</u>	<u>n</u>	<u>7/'</u>	<u>A&gt;</u>	<u>J.JV</u>	<u>/Sso</u>
<u>ft/oS</u>	<u>s'</u>	<u>n</u>	<u>2*</u>	<u>7.pf</u>	<u>IJ</u>	<u>3*X&gt;</u>	<u>'i**n</u>

**Sampling:**Time of Sample Collection I Hof*Collection Method:* Dedicated pump*Analyses:* VOCs*Analytical Method:*8260  503  Other**Observations:**Weather/Temperature: ct<sup>\*9</sup>A 1^Sample Description: £/\*"- - - -Free Product? Yes **No \*S** Descript.Sheen? Yes **No s\*I** Descript.Odor? Yes **No <\*<** Descript.:**Comments:**

#,/ cyo \_ V\*

**APPENDIX B**  
**Data Validation Report**

**Project**      Byron Barrel and Drum Site  
**Laboratory:** Test America  
**Sample Delivery Group:** A07-E752/A07-E885  
**Fraction:**      Organic  
**Matrix:**      Aqueous  
**Report Date:** 2/26/2008

This analytical quality assurance report is based upon a review of analytical data generated for groundwater samples. The sample locations, laboratory identification numbers, sample collection dates, sample matrix, and analyses performed are presented in Table 1. All analyses were performed by Test America.

The samples were analyzed for volatile organic compounds and total suspended solids. The sample analyses were performed in accordance with the procedures outlined in the method referenced at the end of this report. The data deliverables provided by the laboratory were New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category B format.

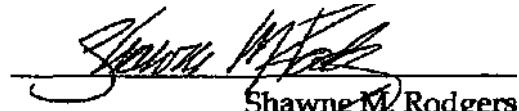
All sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. Results have been validated or qualified according to Region II "Validating Volatile Organic Compounds by SW-846 Method 8260B", SOP HW-24, Revision 1, June 1999. The parameters presented on the following page were evaluated.

X	• Data Completeness
X	» Chain of Custody Documentation
X	• Holding Times
X	> Instrument Performance
X	» Initial and Continuing Calibrations
X	» Laboratory and Field Blank Analysis Results
X	» Surrogate Compound Recoveries
X	«i Matrix Spike/Matrix Spike Duplicate Recoveries and Reproducibility
X	«• Field Duplicate Analysis Results
X	« Laboratory Control Sample Results
X	«» Internal Standard Performance
X	. Qualitative Identification
X	• Quantitation/Reporting Limits

X - Denotes parameter evaluated.

It is recommended that the data only be used according to the qualifiers presented, and discussed in this report. All other data should be considered qualitatively and quantitatively valid as reported by the laboratory, based on the items evaluated.

Report Approved By:

  
\_\_\_\_\_  
**Shawne M. Rodgers**  
President  
  
\_\_\_\_\_  
Date

*1.0      DATA COMPLETENESS*

The data package was complete.

*2.0      CHAIN OF CUSTODY DOCUMENTATION*

The chain of custody documentation was complete.

*3.0      HOLDING TIMES*

The holding times were met for all analyses.

*4.0      INSTRUMENT PERFORMANCE*

All criteria were met. No qualifiers were applied.

*5.0      INITIAL AND CONTINUING CALIBRATIONS*

All criteria were met. No qualifiers were applied.

*6.0      LABORATORY AND FIELD BLANK ANALYSIS RESULTS*

All criteria were met. No qualifiers were applied.

*7.0      SURROGATE COMPOUNDS*

All criteria were met. No qualifiers were applied.

*8.0 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES AND  
REPRODUCIBILITY*

All criteria were met. No qualifiers were applied.

*9.0 FIELD DUPLICATE RESULTS*

Duplicate samples MW21-9-GW-24 and DUP-9-GW24 were submitted to the laboratory to evaluate sampling and analytical precision for those organic compounds determined to be present. There were no positive results for the duplicate samples.

*10.0 LABORATORY CONTROL SAMPLE RESULTS*

All criteria were met. No qualifiers were applied.

*11.0 INTERNAL STANDARD PERFORMANCE*

All criteria were met. No qualifiers were applied.

*12.0 QUALITATIVE IDENTIFICATION*

All criteria were met. No qualifiers were applied.

*13.0 QUANITTATION/REPORTING LIMITS*

The samples presented below were analyzed at dilutions. The dilution analyses were performed because of the suspected presence of high levels of target compounds and/or interferences. Quantitation limits are elevated by the dilution factor for these samples for target compounds that were not detected. The elevated quantitation limits should be noted when assessing the data for these samples.

<u>Sample</u>	<u>Dilution Factor</u>
MW-10B/GW-24	10.0
DUP-9/GW-24	10.0
MW-21-9/GW-24	10.0
PW-1/GW-24	500
PW-2/GW-24	400

Sample MW-10B/GW-24 was re-analyzed at a 25-fold dilution for volatile organic compounds. The reanalysis was performed because the response for 1,1,1-trichloroethene exceeded the linear range of the GC/MS instrument for the initial analysis. The affected result was reported from the dilution analysis. All other results have been reported from the initial analysis.

As required by USEPA protocol, all compounds, which were qualitatively identified at concentrations below their respective quantitation limits (QLs)/ have been marked with "J" qualifiers to indicate that they are quantitative estimates.

## *METHODOLOGY REFERENCES*

Analysis	Reference
Volatile Organic Compounds	Method 8260B, Test Methods for Evaluating Solid Wastes", SW-846, third edition, Promulgated Updates H HA, and Iff, Jime 1997
Total Suspended Solids	Method 160.2, "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983, and revisions

**Table 1 Samples For Data Validation Review**  
**Byron Barrel and Drum Site**  
**Groundwater Samples Collected December 2007**  
**Test America Sample Delivery Group A07-E752/A07E885**

SAMPLE LD.	LABORATORY LD	DATE COLLECTED	MATRIX	ANALYSES PERFORMED	
				VOC	TSS
Trip Blank	A7E752	06	TRIP BLANK	X	
DUP9-GW-24	A7E752	05	GROUNDWATER	X	
MW1-9-GW-24	A7E752	01	GROUNDWATER	X	
MW10B-15-GW-24	A7E752	03	GROUNDWATER	X	
MW21-9-GW-24	A7E752	04	GROUNDWATER	X	
MW4-9-GW-24	A7E752	02	GROUNDWATER	X	
PW1/GW-24	A7E885	01	GROUNDWATER	X	X
PW2/GW-24	A7E885	02	GROUNDWATER	X	X
Trip Blank	A7E885	03	TRIP BLANK	X	

VOC: Volatile Organic Compounds

TSS: Total Suspended Solids

ECCR samncNS  
B33R SOLUTIONS - BYRCN SHE  
AQCOTIS ASP 2000/8260 - SELECT LIST - 8 CMKS  
ANALYSIS mm SHEET

Client No.

IW-1/G^24

Lab Name: ITestAmerica. Lalxiratories Inc. Contract:

•lab Codei" BCNY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SD5 No.: 122107Mat&ix: (soil/water) WKIER Lab.;Sanpie;Ip: -A7E8850J-VSaji&le wt/vol: . 5.00 <g/ml> MLLab File ID: • . S9967.I&>Level: (Icw/med) LOWDate Sairp/Recv.: 12/21/2007. iS&i'/^OOT^ .

% jfoistiniie: not dec. Heated Purge:; N

Date Analyzed: XL2/27/20Q7 .GC Colurna: ZB-624 ID: 0.18.. (rati)Dilution Eactoct 500.00;^> ..';;-.. • I

Soil Extract Volume: \_\_\_\_\_(uL) . .

Soil Aliquot Volume: ... .';..?.. b .. .(uL) , .;

CAS NO.	cayttOM?	cairanKATiGN UNITS: .			
		(ug/L or ug/%)	r	U3/L	:Q
75-34-3-----l/l-Dic+icax)etiiane			2500	.	
75-35-4---^---i#i-Dichlorcethene		...	25.00.	-•'	
156-59-2-----cis-1,2-DichlcQXethehe .			2500	'	U,"";-•
75-09-2-----Mathylene chloride		.	2500;		tr-,
108-88-3.^---Toluene " .'.*' ' . .V			2500.		•U:-;.
71^--55-6-^---l, x, i-Tri.chlorc)enhaTTTe ^ . !•.•"'''		;	250a		
79-01-6.-~-r-Xrichlor6ethene .,			• 2500		
75-01-4-----Vinyl chloride .		'..	2500		

ECDR SQLJrrCNS  
EOQR sa&cnaONS - BYRCN S HE  
AQUEOCE ASP'2000/8260 - SELECT LrST-TAELE 5.  
ANALYSIS DATA SHEET

Client. No.

TRIP HtANK

<sup>^</sup>Lab Name: TestAiriarHna Tahnrtatories Inc. Contract:

Lab Code: RBCNv Case No.:    SAS No.:    SDG No.: 12^ipj7

Matrix: (soil/water) WATER

Lab-SOTJE5le 03?.. "'''A7E75206;; ..

Sample wt/vaL: . .. 5.60 (g/mL) ML

- Lab Bile.-m:" ... ; S99J6VRR: ^- -^;

.Level: ' (Ittw/med) : . J0? • •

Bate Sanj\$Recv::.' i2/19/2007.-;i2/19/2007

% tfoisture: hot'dec. ':' \\_, Heated Purge: N

Date; Analyze*i*: 12/26/2007

GC Column: ZB-624 '... ' 3D.. 0.18 (ran)"

Dilution Factor: • 1.00

Soil Extract Volume: 100 (uL)

Soil Aliquot Vcflurre: - - \ N. •••••(uli) ;

CAS NO.: CCMPCOND

Cn^CINTRATICW^uitnSr. '• ;•  
(ug/L,or ug/Kfcr)-. -. U3/L !• • . , Q ;'

75-34-3	-ia-Dichloroethane.		
75-35-4	-!-, 1-Dichlorobethene	F <sup>m</sup>	• *".5. • /; .
75-09-2	--rf--Methylene chloride	"•••"	' .5 .. - " "
108-88-3	rr^T--Toluene...	"•••"	- .5 .. * ....
71-55-6	--r---1v1,1-Trichloroethane/		xj. ..
79^01-6	-----Trichloroethene'.	*>••.	Xt
75-01-4	r^-r-Vinyl chloride;	0"V:	tj. - .
71-43-2	--^Benzene ..	-	U *
1330-20-7	—r-Total Xylenes- . ."...	•	U.
108-90-7	^-Cfclarabenzehe .	•	u. •
79-00-5	^-1,1,2^Tric^an>5thane . . .	.	U; '
107-06-2	--1^-Dichloroethane	""- 5" "	u
127-18-4	--n-Tet^^chlrbethene	•, •! .	u\
67-66-3	--^T-^c^aroform... .	....-*	u -
75-27-4	T,-^Br trifriedichlaxmethane. """	F <sup>m</sup>	• . 15"V: . - .
124-48-1	-T---DiJb(rcnDchIcirc^ !	"•••	• - . 5 : " , "
7Br93-3	--.f--2-ButanonB.-i---	• ." .	• -io'; !'
.Sfi-^F	—QsT+m TPtrarhlride		U ..
95-5p-1	--^-.i_2-mchlcrdben2ene" ..	' \ r 5-	u
106-46-7	-----1#4-Dichlciircbehzene .	\ "'; . 5 . "	u ,

## Wet Chemistry Analysis

Client Sample No.

EW-2/GW-24

Lab Name: Testfimerica Laboratories Inc. Contract:Lab Code: REQJY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDGNo.: 122107Matrix (soil/vater): HA3ER Lab Sample ID: A7E88502% Solids: 0.0 Date Samp/Recv: 12/21/2007 12/21/2007

Parameter Name	Units of Measure	Result	C	Q	M	Jfetbod Number	Analyzed Date
Total Suspended Solids	M3/L	462				160.2	12/27/2007

Comments:

PCKM I - WC

A handwritten signature in black ink, appearing to read "SMT 2/21/07".

BOOR SQLtinCNS  
HCCR SaUUTtCNS ^ EKHCN SHE  
AQUEOUS ASP 2000/8260 - fIRTBCJ. LIST-TOBLE 5  
ANALYSIS DA3& SHEET

**Client No.**

MH-21-9/GftT-24 "

Lab Mama; IteistArtierica Labctratdries Inc. Gantract:

Lab Cbde: KBCNY • . Case.:Kp.; \_\_\_\_\_

SAS No.:

SDGNb.: 122107

Matrix: (soil/water) «a5ER

Lab SattjDle ID: . A7E752Q4 .

Sample - vt/v gl: 5.00 (g/friL) MD

L a b i l e . I D : " , S 9 9 4 J : R R ^ v \* ' .

-Lev^li (low/ttied). ' LCW.

Date-S^rtp/Recy": :" 12/19/2007 12/19/2607/

% Moisture:'riot dec.- •' - Heated Purge: N

Date Analyzed: 12/27/2007 v ^

GC 0>lumin: ZB-624. : . illD: ,0.18 (im)

Diluted Racfcdr: ... 10.00 • -"v. .

### Soil Extract Volumes: V<sub>soil</sub> (uL)

CAS NO.	CtWPOUNb	cxKEHsyacw^ UNITS::; (ug/L qr ug/fe).	BGL	***0
75-34-3---.r--1,1-I)icMdn^thane		. SO-;	U .	
75-35-4-----1,1-mchlrcethene		> s o . ....	tr .	
75-Q9-2-----r?feth7lene chlcadde.		;". 50 : ...	u	
108^88-3----Toluene - .		. 50 .		
71^55-6----lil^1-Trichloroethane : ..\.. •		. . . 50		
79-01r6.^r---^TricMc)rDethene		'..,50:	u-'V	
75-01rr4r---.rVlnyl chloride		. . . 50'..	u	
71-43-2----Benzene .		....;"//. 50	t3[. •	
1330-20-7---r^Ibtal Xylenes		v""."-150- . . .	U ' :	
108-90*7----Chlorobenzene		. V 50-	a..! :	
79-00-5-----1,1,2-Trichloroethane •		. 50 •	au! :	
107-06-2-----1,2-Ddcilorcethane		50 .	u	
127^18r4---"-TetracMoroethene		*50- <	TJ.. •	
67-66-3-----CMarofarm			U " ; .	
75-27r4-r^-'-^fBiOTbcUdhlrcimetAarie		;." -.-; -v -S 0 ." ^ '•	U - V	
124-48-V---7-Dibrare>c^		." 50 > ..-	U .	
78-93-3^--e---2-Butancine - .".:.. - . . * ' .			U .	
56-23-5-----?Carbcn.ltetraclihlari(fe. ' ." ! . . !		•v'ibo, "■-	u ; .	
95-50-1^-rl,2-I&chlorcbeiizene				
106-46-7^-TTl,4-Di(+acrdbenzene		•/•" " s o . . . "	u	
		...'" 50 . . . ..	u	

Km i - Gc/m vc&

ECCR SQLtmCKS - BXRCW SHE  
 AQUEOUS ASP 2000/8260 - SKTfCT LIST - 8 GMEDS  
 ANALYSIS DKEA SHEET

Client No.

TRIPELANK

lab Name: IfestArterica laboratories Inc. Contract:

lab Code: KBCNY Case No.: • . SAS No.: SDGNO.: 122107

Matrix: (soil/water) WRER Lab Saitple ED: .A7E885Q3.U

Sample wt/vol.: 5.00 (g/irrLj ML) Lab S1le ID: S3946.KR

% vel; (low/rfed) JEW Date Sarqpvtev: 12/21/2007 12/21/2007

% Moisture: not dec. •"• Heated Purge: N Date. AnaLyzedV • 12/27^007

GC dolumn: 2B^624 • ' : ID: -J(L4S fara) Dilution Factor: •V!-;l.-p0.-' •

Soil Extract Vclurre: ' ^ - \_ (uL) Soil Aliquot Volume: •>./: ;'•- (UL) "

CAS NO..	CCMPOUNb-	CnjKENjRATTN UNITS: <u>...';=</u> <u>(vg/L or vg/R9) ;;" • WCr_^. ,</u>
75-34-3---^--^1,1-Dichloroethane, "	• . • : / •	<u>u</u> <u>U;;</u>
75-35^4--^r-1#1-Dichloropethene.-.,	"-•'.-:	<u>U &gt;'. ,</u>
156-59^2---rrcds-l;2.-lHchloroetiiene	"-•'.-:	<u>u;•: ..</u>
75-09-2---r^r-fcfet+iylerie.; chloride	"-•'.-:	<u>UV'</u>
108-88~3-—Toluene••'.	"-•'.-:	<u>u-:- •</u>
71-55-6---rri;iA-Trichlaraethane. .	"-•'.-:	<u>u;•: ..</u>
79r-01-6r.--:-Trichlcircetaiene ,	"-•'.-:	
75-01-4—^---rVir^1 chloride .	••;./•	

BCOR sonunaNs  
 ECOR SCSUUCNS - BXRCK SHE  
 AQUEOUS ASP 2000/8260 - SELECT LIST-TfBLE 5  
 ANALYSIS DMA. SHEET

'Client No.

MW-JOB-9/G5i-24 • &lt;

Lab Name: Ttestfimerica Laboratories Inc. • CtanraqtLab Code: KBCNY Case No.: \_\_\_\_\_ SAS. NcJfetrix: (soil/wpiter) WRIER

Sample wt/yol: : .5.00 (g/nL);ML

Level: (lcw/med> " LCW .% Moisture: not dec. • Heated Purge.: NGO Cbluraa: ^624 .: ID: 0.18 (nrri)Soil Extract Volume: •to"-:Lab Sample' ID: A7fi7520y- •;>'> "Lab File-ID: .3996^--^ .j^l;- . \:iDate' S ^/R e c v: 12/1972007-12^L9/2b67-:Date Analyzed.: 12/27/2Q07".< :v V .;,:'

Dilution Factor: • 10.00'':!":!":!":.J

Soil AHqubt Volume: to

CAS NO.	CCMBOMX	OM3INIRATCN;^ (ug/L cr; ug/K£)	UG/L	m
75-34-3—_,,_!- i-Dichlprbethane		64		
75-35-4:-:-•r-1,1-Dichlarpethene		50		
75^09-a— —Ifethylene ;c^oride		50	U:	
108-88-3- ---loluene		50		
73,-55-6— ---1,1, 1~Trichlcrethane		17U0.	e-	
79-01^6^ - r -Irichlcroethene . .		<b>so-</b>	<b>u-</b> :	
75r-6i-4~ ---Vinyl chloride. •		<b>sd</b>	<b>u-</b>	
71-43-2— —Benzene:		50	u.	
1330-20-7----Ibtal ^lenes		150		
108^90-7---C^orbbenzene"		- 50	<b>t#</b>	
79-00^5— --1,1,2-Trichlproethane^		50 >	u	
1Q7-66-2- —1,2-DJtihlaroethane		50	u	
127^18-4- --letrachlbrqethene		50	u<	
67-66-3— •-Chlorbform ....		50.	u.	
75^27^4™ - —Bromjc^c^oratfetJTane.		50	tx	
124-48-1^ - -DihrcmDc^crcTOthaTie"		: 50	u	
78-93-3— --2-Butanone.-; ..		ltio	uv	
56-23-5^— ^arbori' ^trachloride.		50	u	
95-50-1— •-1/2-pichlcrpbenzene		50	XI	
106-46-7--- ~^- 1,4 -Dic&lorQbenzene		50	tj;	

**cf^OPR W,4l\tfcx^**

BOOR SOLUTICNS r BXKCN SHE  
 AQUEOUS ASP 2000/8260 - SELECT LIST - 8 CMHDS  
 ANALYSIS DR2A SHEET

Client No\*.

PW-2/GW-24

Lab Nams: TtestAmsrica Laboratories Inc. Contract:

Lab Cede: JRBCSIR Case No.: ^ SAS ND, : SDG Kb.: 122107

Ifetrix: (soli/water) miER.

Lab Sairple ID.: A7E88502f

Sarrple wfc/vol.: 5.00 (g/nL) ML. .-

Lab File ID: -S994;7.RR

Level: , (low/med) ICW

pate Sarrp/Recvi • W21/20bf^272J/2o6i^

V>bi^vice:'iiot dec. £ \_\_\_\_\_ Efeated Purge: <sup>1</sup> N

Date Analysed: ? 12/27/2007 • —

QC Collinirt.: ZB-624V. • .ID: 0.18 (tmnj

DigutioiiFactor: .4o6:Ob /'./. .-

Soil Extract.Volume- :^-\_- (uL)

Soii Aliquot;Volume: .-^-^--(uL). • # A

OCH^tHEKriCW tHTTS: !

(ug/L or. ug/K&): - LT3£ - ' ...Q

CAS NOV	CCMPOUND		
75-34-^-r1,l-Dicih16rbethane	"	- . .-..!'	' V-200(3
75-35-4T-----l^I^r^chldroetijene..."	"	;.;..-•"•;	*,"< 2000.. .
156T59r2--V--cis-1,2-Dichlrcetheiee	;•-.•..	••2000,;	••2'6oq - , : y U:
75-09-2---^-Methylene chloride ..		!" .200(3.	tr
•108-88-3---Toluene..		" -2btfo	U:"";
71-55-6--^-Tia/l-Trichlcacoaeiane	;•, . : , :	• •. 200.0: ".	U
79-01-6^-Trichlozoethehe ...	. , . : , :	• r 12odbc;	0
75-01-4---rVinyl chloride.	. . : .		

•MS  
9

ECOR SOLUTIONS  
BOOR SOLUTIONS - BXRON SHE  
AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
ANALYSIS DATA. SHEET -

Client No.

DUP-9/GW-24

Lab Name: Testfrrerica Laboratories Inc. Contract:Lab Code: RECNY Case No.: SAS Nb:SDG No.: 122107Matrix: (soil/nyater) WATERLab Sample ID: A7B75205Sample wt/vol: 5.00 (g/mL) MLLab File ID: S9942,KRLevel: (lcw/med) LOWDate Samp/Recv: 12/19/2007 12/19/2007

% Moisture: not dec. • Heated Purge: N

Date Analyzed: 12/27/2007GC Column: ZB-624 ID: 0.J8 (itm)Dilution Factor: 10.00'Soil Extract Volume: ^ (uL)Soil Aliquot Volume: ^ L ^ (uL)

OaiCairRfiTICN UNITS:  
(ug/L or iig/K&) : UG/L

CAS NO.	COMPOUND	50	U
75-34-3	1,1-Dichloroethane	50	0
75-35-4	1, 1-Dichloroethene	50	U
75-09-2	Methylene chloride"	50	u
108-88-3	Toluene	50	u
71-55-6	1,1, 1-Trichloroethane	50	u
79-01-6	-Trichloroethene	50	u
75-01-4	Vinyl chloride	50	u
71-43-2	-Benzene	50	u
1330-20-7	Total Xylenes^	150	u
108-90-7	Ctdorobenzene	50	u
79-00-5	--1,1,2-Trichloroethane	50	u
107-06-2	--1,2 -Dichloroethane	50	u
127-18-4	•^Tet^achloroethene	50-	u
67-66-3	•-Chloroform	50	u
75-27-4	Brairx^chlaxniethane	50	u
124-48-1	-Dibrcmacnlorcmsgthanej]	50	u
78-93-3	-2-Butanone	100	u
56-23-5	-Carbon. Tetrachloride,	50	u
95-50-1	-1,2-Dichlorobenzene_J	.50	u
106-46-7	--1,4-Di(±lorobenzerie	50	u

4»  
56

EOCR sauncws - BXRCN SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST-2ABLE 5  
ANALYSIS DATA. SHEET

Client No.

MKF-4-?/3?24 .

Lab Narre: Testfnerica laboratories Inc. Oontxact:

Lab Oode: 3^OTf Case. No.: \_\_\_\_\_ SASNo.: \_\_\_\_\_

SEGNO": 122167

Matrix: (soil/water) WfER

Lab SaripLe ID: : A7E75202

Sarrple wt/yol: ' . -5.00- (g/itL) ML

Lab" File ID.:;/' \$991^RR..;:::• •

Lsvel: (low/ired) .'-IQr •

Bite Sarrp/Recv: 12/19/007; j(2/isi/2007

& Moisture: riot-dec; \_\_^\_\_ Seated Purge: N

Date Analyzed: 12/26/2007

GC Column: i^-624 . • V 3D: 0:18 (ntn)

pniAicn.KK\*fe. /•. :i.06' .'.;

Soil Extract ^folume: ,,(uL) .

Soil Aliquot VbluriBfj iiii\_,\_^J' J?iO

CSS NO. •	OMPOUND	O^DEN^EATICW -UNITS i , ,/ or.uq/l^): ' W L .
75-34-3---1,1-mchloroethane .		
75-35-4-7----1/1-I^cMc^thene.		
75-09-2---^Pfeth/lene chloride		
1G8-88-3---y--Toluerie ..	• ;.\u00b7 ..	'&-
71T55r;6-----^1^1,1-lrichlaroethane ..,/-.,		16 .. : - • ;"
79-01-6---^TrichlDoetiire ..		• • • .. " • 'i'V-..v '•"
75-01^4-----oVinyl chloride		\ '...V7 5 - ..
71-43^2-^---Benzerie. *		u.' •
1330-20-7---Ibtal Xylenes -		< "•> 15'; .. -.. •
108-S0-7-T----Chloroben2ene :	..!..	u ..
79-00-5-----rl#1,2-Tri"c^arxethane		tx-'v •
107-06-2T----rl,2-Dicihlcax)ethane		u •
127-18-4---^Tetp^dhldrcethene		U/-
67-66^3->:~~^CKLoroforrti		xf;
75^27-4---^Bronodichlgroiriethane		IT---'
124r48-1^---DibixxrDc+a^		U ..
78-93-3r---r-^27Butancoa. .	"" -"r v ibvr... •	XI
56-23-K---r---OTbnn T^rachloride .... .	• .. V j-;5--"".	Xi
95-50rl---;----1^2-1Uchlorobenzene .	; /.... : 5	XI'. '
106-46-7T-7---l>4-Dichlaccbeiizene	.	

*SM  
2/26/2007*

156/339

ECCR SQUinQNS  
 ECOR SOLuriCNS - BIERCN SITE  
 AQUEOUS ASP 2000/8260 - SELECT LIST - 8 CMEDS  
 ANALYSIS DATA SHEET

Client No.

PW-2/GW-24

Lab Name: TestAroerica Laboratories Inc. Contract:Lab Code: KFCMY Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDGNb.: 122107Matrix: {soil/water) WRER Lab" Sample ID: A7E88502Sample wt/vol: 5.00 (g/mL) J4L Lab File ID: S9947^ERLevel: (low/med) LCW Date Sairp/Ecv: 12/21/2007 12/21/2007% Moisture: not dec. \_\_\_\_\_ Heated Purge: N Date Analyzed: 12/27/2007GC Column: ZB-624 3D: 0.18 (mm) Dilution Factor: 400.00

Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)

CAS NO.	CCMPOCKD	(XJKERKRRATICN UNITS: (ug/L or ug/K£) • US/L	Q
75-34-3	1,1-Dichlorcethane	2000	U
75-35-4	-r-1/1-Dichloroethene	2000	u
156-59-2	cis-1^-rtt Moroethene -	2000	u
75-09-2	Methylene chloride .	2000	u
108^88-3	^-Toluene .	2000	u
71-55-6	--1,1,1-Tricblorcetbane •	2000	u
79-01-6	.Iridhloroethene .	2000	u
75-01-4	^-Vinyl chloride	2000	u

## WTR satuncNS - EKRCN SITE

^ ^ MKLYSIS EBOA SHEET

Client No.

jW-l-9/GJHr2<sup>4</sup>:

Hb Name: ^ t m f f i ^ I ^ ^ o ^ e ^ c , Contract:

Lab dode: ^ ^ Case No.:

SfS No:-

SDGNo.: 1221Q7

Matrix: (soil/vater) W^

labSarnpleID: \$SE?p£4"

S^e &lt;t/voi: ' .^.^CgMtf •

^bFiiExD: S^i1ALi

Level: (low/tried) fOT

Ifete Sanip/Recv: 12/19/20ti7;:!t&amp;/16/26o7

\* itoiBt^e: n\* &lt;fec. \_ ^ \_ He \*\*\*\* \* N

pate Analysed: \* 12/26/2007 'fe' ;\*";

GC O D ^ s S f c S \* ^ \* &gt;: J±M\^ ,

Dilution Factor: 2.00 v;" v ;.

Soil Extiact Volume:- — - (uty '

Soil Micjyot Volume: .v&lt;-;:(uL)./"

CAS H). CCMEOB0

CONCENTRZCN UTETS:  
(ug/L prug/sag) • -AG/!\*!.;;"--;Q>.;" -

75-34-3—^-i;i-bichl6roathaine-	10 -
75-35-4p—r1A-Dichlorqethiae	.200
75T09-2—^—Methylene chloride . • r ;	• - UK id"-;..
108T88-3-.—toluene., ; <...-	.10 -
71-55-6----1:ia-Tr4chlordethane	.3b =
79-01-6—r<--^Tidchloroethene	10;
75-01-4—rVinyl chloride	10' -
71^43-2-r---Benzene . - • : . - . . . ; .	a' -
1330-20-7—^Total Xylenes \	' 10 ' .
108-90-7---aiorobsnzene . •	• 10 .
79-00T5-^-T--1,1;2-T^dWoroethane...	• 10 i;
107-06^2----^l12-Dichloroethane	• 10; .
127-18-4T---rltetrachlarc<t^hene. - .	• 10; .
67-66-3^---r^CMoroform	• 10; .
7S-27-4-----Bratedichlcaxictetliaie .	• 10; .
124-48-1—^-i:iDrexDe+ilCHxmetnane	• 10 .
78-93-3---T--2-Butariane "•	• 10 .
56-23-5---Carbon Tetradxlpride	• 10 .
95-50-1---T-l'^2-Dichldrobenzene	• 10 .
.106-46^7---r--l^4-Mc^6rcibenzene	• 10 .

*SMA  
12/26/07*

**BOOR SGUJTICNS - BYRCN SITE  
AQUEOUS ASP 2000/8260 - SELECT LIST-TABLE 5  
ANALYSIS DATA SHEET**

Client No.

WJ-10B-9/CW-24

Lab Name:  $T \wedge m \ m \wedge J \wedge \wedge \wedge \wedge \wedge J \ m \wedge$  Contract:  $\wedge$

Contract: ^

Lab Gpde: RBCNY • Case No.

SAS-Nq.

SDQNO.: 122107

Matrix: (.soil/w^er); ^^

Sattpie y);/vol: , -SM (g/W Vi

Lab^Fii eiP: \ ' ^ ^ ^ ; ^ : | ^ ; ;'

*l&xa: (low/med) -JtjSfl "*

' Date. Sa<sup>p</sup>/<sup>cv:</sup> ^ | ^ : p | ^ ^

% Moisture:, n\* dec. -- Bsated Purge: N

" JSB# j^M\*\*- -MJ^:^ ^ ; ^ ;

GG Column:  $m\text{-}G2A_r$ ; ID: P<sup>i</sup>§ & m>

TJilutiqi Factor: ..;  $y^g O / y - V^y$  i.

### Soil Extract Volume: 1.0 ml

• ^l;A\$lgagt Vblyne: Zllj, ^ -^ -^ -::! \

CAS NO. COMPOUND

CXNGENTEITCN U^TS:... ; ;  
v(ug/L or ug/Efc).'; JS & U -...I'-V. ;

75T34f3---r^-->lil-Dic^6roethanfi .	• - ,64....	DJ," "
75-35T4---r <sub>7</sub> --Li^Dichloctx>etherie.	• -120 '	u>./
75-09-2----Ifethylehe chloride	-••• 3 1 / v m -•;	U V-
108-88-3---^Toluene. , -.	* • ;v •	120- <';....
71f55-6~~~r-'l>1,1-Trichlbroetharie, *	.1306 •	"";,120; ••' "-<
79,-01-6--^~^Tdd.dhlai^y^srie .	;"•,120; ••' "-<	U '
75.^01-4.——Vinyl- chloride.	' 120' !-. •	• 120" ." -
71:-43-2"---r--Berazene- . ;-	• 120" ." -	tr.
1330-20-7---Total Xylenes.-.	. 38(f .	u
108-90-7---^C^ozobenzene' '	- "• 120' • ;"•' "	I 120
79-00-5---r-1,1,2-Trichlar6sthaije .	- I 120	120
107T06-2-----l <sub>2</sub> -I)c^coroethane .	- ; - 120 . ;	
127rl8T4-----Tetrachloxosthene	-•••••' i20 - . "\:	
67-66-3-----<hlcroform	"J •;•••" .	^ ; -
75-27-4-r,r^--rBi^no(^dhloroniethane	"••••• 120. ."	u,
124^48-1-rr-rrDito?OTtDdilcaa^ : ""	- ; - 120 . ;	U, .. .*
78-93-3----T--2-Butanone "-	-••• - i 2 0 . ..	• U, .. .*
56-23^~^--rV--<iixn Tetrachloride ,	-•••••' !-. -120., ' ..	U ''
95-50-r1TM!!--_!-, 2-Didilorcbenzene.	: 120 ; "	Us." !
106r-46-7----vl>4-rjicihlcaxa>em2ene	? .	1 U -

P3FM I " O^A© "VGR

**APPENDIX C**  
**Mann-Kendall Statistical Analysis of Select Wells**

**Appendix C**  
**Mann-Kendall Statistical Test - HW-1**  
**Byron Barrel Drum Site**  
**Byron Township, NY**

<b>State of Wisconsin</b> <b>Department of Natural Resources</b> <b>Remediation and Redevelopment Program</b>							<b>Mann-Kendall Statistical Test</b> <b>Form 4400-215 (5/2000)</b>						
<b>Notice:</b> This form is provided to consultants as an optional tool to be used to provide groundwater contaminant data required to support site closure requests under s. Comm 46.07 or s. NR 746.07, Wis. Adm. Code. Use this form or a manual method to calculate the Mann-Kendall statistic, as specified in Appendix A of ch. Comm 46 and ch. NR 746, Wis. Adm. Code.													
<b>Instructions:</b> To use the spreadsheet, provide at least four rounds and not more than 10 rounds of data. Use cells with yellow background for data entry. Use consistent units. The spreadsheet contains several error checks, and a data entry error may cause "DATA ERR" to be displayed. Dates that are not consecutive will show an error message and will not display the test results. The spreadsheet tests the data for both Increasing and decreasing trends at an 80% confidence level. If an increasing or decreasing trend is not present, use an additional coefficient of variation test is used for stable and non-stable conditions as proposed by Wledemeier et al, 1999. For additional information, refer to guidance in Interim Guidance on Natural Attenuation for Petroleum Releases, dated October 1999. Refer to the guidance for recommendations on data entry for non-detect values.													
Site Name =		Byron Barrel & Drum	Bvron Township	New York	BRRTS No. =	Well Number =	MW-1						
		Compound	110CA	11DCE	MEC	IIITCA	TCE						
Event Number  1 2 3 4 S 6 7 e 9 10	Sampling Date (most recent last)	Concentration (leave blank if no data)	TVOCs  442.00 609.00 597.00 238.00 203.00 187.00 108.00 211.00 210.00 214.00  -19 10 301.9 179.5429073 0.594709862										
								13-Seo-OS	14.00	16.00	5.00	410.00	5.00
								20-Dec-05	5.00	24.00	5.00	580.00	5.00
								26-Mar-Q6	29.00	24.00	5.00	540.00	5.00
								22-Jun-06	7.00	9.00	5.00	220.00	5.00
								I4-SeD-06	5.00	6.00	5.00	19D.00	5.00
								7-Dec-06	6.00	9.00	5.00	170.00	5.00
								22-Mar-07	2.00	4.00	5.00	100.00	5.00
								14-Jun-07	6.00	3.00	5.00	200.00	5.00
								12-Seo-07	7.00	3.00	5.00	200.00	5.00
19-Dec-O?	10.00	2.00	5.00	200.00	5.00	214.00							
S =	-2	-36	0	-20	0	-19							
n =	10	10	10	10	10	10							
Average =	9.1	10	5	281	S	301.9							
Standard Deviation =	7.69487S64	8.459051694	0	166.629996	0	179.5429073							
Coefficient of Variation(CV)=	0.84559073	0.845905169	0	0.S92989309	0	0.594709862							
Increasing Trend (80% Confidence)	NO	NO	NO	NO	NO	NO							
Decreasing Trend (80% Confidence)	NO	YES	NO	YES	NO	YE5							
Undetermined Stable Trend, CV<=1	YES	NO	YES	NO	YES	NO							
Undetermined Non-Stable Trend, CV>1	NO	NO	NO	NO	NO	NO							
Error Check. OK if Blank													
Stable or Decreasing Trend at 80% Confidence Level	YES	YES	YES	YES	YES	YES							
1	Data Entry By = KBR	Date =	13-Mar-08	Checked By =									

**Appendix C**  
**Mann-Kendall Statistical Test - MW-4**  
**Byron Barrel Drum Site**  
**Byron Township, NY**

<b>State of Wisconsin</b> <b>Department of Natural Resources</b> <b>Remediation and Redevelopment Program</b> <b>Notice:</b> This form is provided to consultants as an optional tool to be used to provide groundwater contaminant data required to support site closure requests under s. Comm 46.07 or s. NR 746.07, Wis. Adm. Code. Use this form or a manual method to calculate the Mann-Kendall statistic, as specified in Appendix A of ch. Comm 46 and ch. NR 746, Wis. Adm. Code, <b>Instructions:</b> To use the spreadsheet, provide at least four rounds and not more than 10 rounds of data. Use cells with yellow background for data entry. Use consistent units. The spreadsheet contains several error checks, and a data entry error may cause "DATA ERR" to be displayed. Dates that are not consecutive will show an error message and will not display the test results. The spreadsheet tests the data for both increasing and decreasing trends at an 80% confidence level. If an increasing or decreasing trend is not present, use an additional coefficient of variation test is used for stable and non-stable conditions as proposed by Wiedemeier et al, 1999. For additional information, refer to guidance in Interim Guidance on Natural Attenuation for Petroleum Releases, dated October 1999. Refer to the guidance for recommendations on data entry for non-detect values.							<b>Mann-Kendall Statistical Test</b> <b>Form 4400-215 (5/2000)</b>
Site Name = Byron Barrel & Drum							Site Number = MW-4
		Byron Township	New York	BRRTS No. =			
Compound		UDCA Concentration (leave blank if no data)	11DCE Concentration (leave blank if no data)	MEC Concentration (leave blank if no data)	U1TCA Concentration (leave blank if no data)	TCE Concentration (leave blank if no data)	TVOCS Concentration (leave blank if no data)
Event Number	Sampling Date (most recent last)						
1	13-Sen-0S	5.00	5.00	5.00	11.00	2.00	13.00
2	20-Dec-0S	5.00	5.00	5.00	48.00	1.00	52.00
3	26-Mar-06	5.00	5.00	5.00	8.00	1.00	8.00
4	22-Jun-06	5.00	5.00	5.00	9.00	1.00	9.00
5	14-Sep-06	5.00	5.00	5.00	13.00	2.00	15.00
6	7-Dec-06	5.00	5.00	5.00	6.00	1.00	6.00
7	22-Mar-07	5.00	5.00	5.00	10.00	1.00	11.00
8	14-Jun-07	5.00	5.00	5.00	10.00	1.00	11.00
9	12-Seo-07	5.00	5.00	5.00	14.00	2.00	16.00
10	19-Dec-07	5.00	5.00	5.00	15.00	1.00	17.00
S =		0	0	0	8	-3	a
n =		10	10	10	10	10	10
Average =		5	5	5	14.5	1.3	15.8
Standard Deviation =		0	0	0	12.13122692	0.483045892	13.20605922
Coefficient of Variation(CV)=		0	0	0	0.83663634	0.371573763	0.835826533
Increasing Trend (80% Confidence)		NO	NO	NO	NO	NO	NO
Decreasing Trend (80% Confidence)		NO	NO	NO	NO	NO	NO
Undetermined Stable Trend, CV<=1		YES	YES	YES	YES	YES	YES
Undetermined Non-Stable Trend, CV>1		NO	NO	NO	NO	NO	NO
Error Check. OK if Blank							
Stable or Decreasing Trend at 80% Confidence Level		YE5	YES	YES	YES	YES	YES
1	Data Entry By = KBR		Date = 13-Mar-08	Checked By =			

**Appendix C**  
**Mann-Kendall Statistical Test - MW-10B**  
**Byron Barrel Drum Site**  
**Byron Township, NY**

<p><b>State of Wisconsin</b>  <b>Department of Natural Resources</b>  <b>Remediation and Redevelopment Program</b></p> <p><b>Notice:</b> This form is provided to consultants as an optional tool to be used to provide groundwater contaminant data required to support site closure requests under s. Comm 46.07 or s. NR 746.07, Wis. Adm. Code. Use this form or a manual method to calculate the Mann-Kendall statistic, as specified in Appendix A of ch. Comm 46 and ch. NR 746, Wis. Adm. Code.</p> <p><b>Instructions:</b> To use the spreadsheet, provide at least four rounds and not more than 10 rounds of data. Use cells with yellow background for data entry. Use consistent units. The spreadsheet contains several error checks, and a data entry error may cause "DATA ERR" to be displayed. Dates that are not consecutive will show an error message and will not display the test results. The spreadsheet tests the data for both increasing and decreasing trends at an 80% confidence level. If an Increasing or decreasing trend is not present, use an additional coefficient of variation test is used for stable and non-stable conditions as proposed by Wledemeier et al, 1999. For additional information, refer to guidance In Interim Guidance on Natural Attenuation for Petroleum Releases, dated October 1999. Refer to the aurdance for recommendations on data entry for non-detect values.</p>								<b>Mann-Kendall Statistical Test</b> <b>Form 4400-215 (5/2000)</b>																																																																																																																																																																																																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Site Name =</th> <th>Bvron Barrel S Drum</th> <th>Bvron Township</th> <th>New York</th> <th>BRRTS No. =</th> <th>Well Number =</th> <th>MW-10B</th> </tr> <tr> <th colspan="2">Compound</th> <th>11DCA</th> <th>11DCE</th> <th>MEC</th> <th>IIITCA</th> <th>TCE</th> <th>TVOCs</th> </tr> <tr> <th>Event Number</th> <th>Sampling Date (most recent last)</th> <th>Concentration (leave blank if no data)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>24-Sep-03</td> <td>5.00</td> <td>5.00</td> <td>5.00</td> <td>7.00</td> <td>5.00</td> <td>7.00</td> </tr> <tr> <td>2</td> <td>30-Mar-04</td> <td>SOO</td> <td>5.00</td> <td>5.00</td> <td>17.00</td> <td>5.00</td> <td>17.00</td> </tr> <tr> <td>3</td> <td>14-Sep-04</td> <td>5.00</td> <td>5.00</td> <td>5.00</td> <td>14.00</td> <td>5.00</td> <td>14.00</td> </tr> <tr> <td>4</td> <td>22-Mar-OS</td> <td>5.00</td> <td>5.00</td> <td>5.00</td> <td>11.00</td> <td>SOO</td> <td>11.00</td> </tr> <tr> <td>5</td> <td>13-Sep-05</td> <td>5.00</td> <td>5.00</td> <td>5.00</td> <td>5.00</td> <td>5.00</td> <td>5.00</td> </tr> <tr> <td>6</td> <td>25-Mar-06</td> <td>SOO</td> <td>5.00</td> <td>5.00</td> <td>6.00</td> <td>5.00</td> <td>6.00</td> </tr> <tr> <td>7</td> <td>14-Sep-06</td> <td>5.00</td> <td>5.00</td> <td>5.00</td> <td>6.00</td> <td>5.00</td> <td>6.00</td> </tr> <tr> <td>8</td> <td>22-Mar-07</td> <td>5.00</td> <td>5.00</td> <td>5.00</td> <td>6.00</td> <td>5.00</td> <td>6.00</td> </tr> <tr> <td>9</td> <td>12-Sep-07</td> <td>5.00</td> <td>5.00</td> <td>5.00</td> <td>1.00</td> <td>5.00</td> <td>1.00</td> </tr> <tr> <td>10</td> <td>19-Dec-07</td> <td>64.00</td> <td>SOO</td> <td>5.00</td> <td>1.300.00</td> <td>SOO</td> <td>1.395.00</td> </tr> <tr> <td></td> <td>S =</td> <td>9</td> <td>0</td> <td>0</td> <td>-12</td> <td>0</td> <td>-12</td> </tr> <tr> <td></td> <td>n =</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td></td> <td>Average =</td> <td>10.9</td> <td>5</td> <td>5</td> <td>137.3</td> <td>5</td> <td>146.8</td> </tr> <tr> <td></td> <td>Standard Deviation =</td> <td>18.65743819</td> <td>0</td> <td>0</td> <td>408.557911</td> <td>0</td> <td>438.5977149</td> </tr> <tr> <td></td> <td>Coefficient of Variation (CV)=</td> <td>1.711691578</td> <td>0</td> <td>0</td> <td>2.975658493</td> <td>0</td> <td>2-987722854</td> </tr> <tr> <td colspan="2">Increasing Trend (80% Confidence)</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> </tr> <tr> <td colspan="2">Decreasing Trend (80% Confidence)</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>YES</td> <td>NO</td> <td>YES</td> </tr> <tr> <td colspan="2">Undetermined Stable Trend, CV&lt;=1</td> <td>NO</td> <td>YES</td> <td>YES</td> <td>NO</td> <td>YES</td> <td>NO</td> </tr> <tr> <td colspan="2">Undetermined Non-Stable Trendy CV&gt;1</td> <td>YES</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> <td>NO</td> </tr> <tr> <td colspan="8">Error Check. OK if Blank</td> </tr> <tr> <td colspan="2">Stable or Decreasing Trend at 80% Confidence Level</td> <td>NO</td> <td>YES</td> <td>YES</td> <td>YES</td> <td>YES</td> <td>YES</td> </tr> <tr> <td colspan="2">. 1 Data Entry By = KBR</td> <td>Date=</td> <td>13-Mar-08</td> <td>Checked By =</td> <td colspan="3"></td> </tr> </tbody> </table>								Site Name =		Bvron Barrel S Drum	Bvron Township	New York	BRRTS No. =	Well Number =	MW-10B	Compound		11DCA	11DCE	MEC	IIITCA	TCE	TVOCs	Event Number	Sampling Date (most recent last)	Concentration (leave blank if no data)	1	24-Sep-03	5.00	5.00	5.00	7.00	5.00	7.00	2	30-Mar-04	SOO	5.00	5.00	17.00	5.00	17.00	3	14-Sep-04	5.00	5.00	5.00	14.00	5.00	14.00	4	22-Mar-OS	5.00	5.00	5.00	11.00	SOO	11.00	5	13-Sep-05	5.00	5.00	5.00	5.00	5.00	5.00	6	25-Mar-06	SOO	5.00	5.00	6.00	5.00	6.00	7	14-Sep-06	5.00	5.00	5.00	6.00	5.00	6.00	8	22-Mar-07	5.00	5.00	5.00	6.00	5.00	6.00	9	12-Sep-07	5.00	5.00	5.00	1.00	5.00	1.00	10	19-Dec-07	64.00	SOO	5.00	1.300.00	SOO	1.395.00		S =	9	0	0	-12	0	-12		n =	10	10	10	10	10	10		Average =	10.9	5	5	137.3	5	146.8		Standard Deviation =	18.65743819	0	0	408.557911	0	438.5977149		Coefficient of Variation (CV)=	1.711691578	0	0	2.975658493	0	2-987722854	Increasing Trend (80% Confidence)		NO	NO	NO	NO	NO	NO	Decreasing Trend (80% Confidence)		NO	NO	NO	YES	NO	YES	Undetermined Stable Trend, CV<=1		NO	YES	YES	NO	YES	NO	Undetermined Non-Stable Trendy CV>1		YES	NO	NO	NO	NO	NO	Error Check. OK if Blank								Stable or Decreasing Trend at 80% Confidence Level		NO	YES	YES	YES	YES	YES	. 1 Data Entry By = KBR		Date=	13-Mar-08	Checked By =								
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**Appendix C**  
**Mann-Kendall Statistical Test - PW-1**  
**Byron Barrel Drum Site**  
**Byron Township, NY**

<b>State of Wisconsin</b> <b>Department of Natural Resources</b> <b>Remediation and Redevelopment Program</b>							<b>Mann-Kendall Statistical Test</b> <b>Form 4400-215 (5/2000)</b>					
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Site Name =		Byron Barrel & Drum		Byron Township		New York		BRRTS No. =		Well Number = PW-1		
Compound			UOCA Concentration (leave blank if no data)		11DCE Concentration (leave blank If no data)		cDCE Concentration (leave blank if no data)		UITCA Concentration (leave blank if no data)		TCE Concentration (leave blank If no data)	
Event Number		Sampling Date (most recent last)										
1		24-Sep-03		10.00		2.00		5.00		S9.00		
2		30-Mar-04		3.00		0.90		5.00		73.00		
3		14-Sep-04		9.00		2.00		5.00		140.00		
4		22-Mar-OS		4.00		0.90		5.00		76.00		
5		13-SeD-05		4.00		1.00		5.00		77.00		
6		25-Mar-06		9.00		1.00		5.00		230.00		
7		14-Sep-06		6.00		2.00		5.00		160.00		
8		22-Mar-07		6.00		2.00		5.00		170.00		
9		12-SeD-07		9.00		2.00		5.00		280.00		
10		19-Dec-07		5.00		1.00		5.00		130.00		
				S = 0		7		0		27		
				n = 10		10		10		10		
				Average = 6.5		1.48		5		139.5		
				Standard Deviation = 2.549509757		0.549343042		0		73.19115004		
				Coefficient of Variation(CV) = 0.39223227		0.371177731		0		0.524667742		
Increasing Trend (80% Confidence)				NO		NO		NO		YES		
Decreasing Trend (80% Confidence)				NO		NO		NO		NO		
Undetermined Stable Trend, CV<=1				YES		YES		YES		NO		
Undetermined Non-Stable Trend, CV>1				NO		NO		NO		NO		
Error Check, OK if Blank												
Stable or Decreasing Trend at 80% Confidence Level				YES		YES		YES		NO		
1 Data Entry Bv = K8R.						Date = 13-Mar-08				Checked Bv =		

**Appendix C**  
**Mann-Kendall Statistical Test - PW-2**  
**Byron Barrel Drum Site**  
**Byron Township, NY**

<b>State of Wisconsin</b> <b>Department of Natural Resources</b> <b>Remediation and Redevelopment Program</b>							<b>Mann-Kendall Statistical Test</b> <b>Form 4400-215 (5/2000)</b>		
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Site Name =		Bvron Barrel & Drum		Byron Township	New York	BRRT5 No. =	Well Number =	PW-2	
				11DCA	11DCE	cDCE	111TCA	TCE	
				Concentration (leave blank if no data)	TVOCS Concentration (leave blank if no data)				
Event Number	Sampling Date (most recent last)	Compound		3.00	2.00	5.00	70.00	1.00	76.00
1	24-Sep-03			3.00	3.00	5.00	94.00	2.00	102.00
2	30-Mar-04			1.00	5.00	5.00	30.00	0.50	31.50
3	14-Sep-04			5.00	1.00	5.00	54.00	0.80	60.80
4	22-Mar-05			4.00	2.00	5.00	170.00	1.00	177.00
5	13-Seo-05			3.00	1.00	5.00	92.00	1.00	97.00
6	25-Mar-06			9.00	3.00	5.00	230.00	2.00	244.00
7	14-Sep-06			8.00	4.00	5.00	90.00	1.00	103.00
8	22-Mar-07			8.00	2.00	5.00	270.00	1.00	280.00
9	12-Sep-07			5.00	1.00	5.00	140.00	1.00	146.00
10	19-Dec-07			20	-6	0	19	5	23
		n =		10	10	10	10	10	10
		Average =		4.9	2.4	5	124	1.13	131.73
		Standard Deviation =		2.6436S0675	1.349897115	0	77.92874238	0.485455113	80.2357367
		Coefficient of Variation(CV) =		0.539520546	0.562457131	0	0.6284576	0.429606295	0.609092361
		Increasing Trend (80% Confidence!)		YES	NO	NO	YES	NO	YES
		Decreasing Trend (80% Confidence)		NO	NO	NO	NO	NO	NO
		Undetermined Stable Trend, CV<=1		NO	YES	YES	NO	YES	NO
		Undetermined Non-Stable Trend, CV>1		NO	NO	NO	NO	NO	NO
		Error Check, OK if Blank							
		Stable or Decreasing Trend at 80% Confidence Level		NO	YES	YES	NO	YES	NO
1	Data Entry By =	KBR		Date =	13-Mar-08	Checked By =			

**Appendix C**  
**Mann-Kendall Statistical Test - PW-3**  
**Byron Barrel Drum Site**  
**Byron Township, NY**

<b>State of Wisconsin</b> <b>Department of Natural Resources</b> <b>Remediation and Redevelopment Program</b>							<b>Mann-Kendall Statistical Test</b> <b>Form 4400-215 (5/2000)</b>
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Site Name =	Byron Barrel S Drum	Byron Township	New York	BRRTS No. =			Well Number = PW-3
Compound		11DCA Concentration (leave blank if no data)	11DCE Concentration (leave blank if no data)	cDCE Concentration (leave blank if no data)	IIITCA Concentration (leave blank if no data)	TCE Concentration (leave blank if no data)	TVOCS Concentration (leave blank if no data)
Event Number	Sampling Date (most recent last)						
1	7-Jun-OS	5.00	5.00	5.00	5.00	5.00	0.00
2	13-Seo-OS	5.00	5.00	5.00	1.00	5.00	1.00
3	19-Dec-05	5.00	5.00	5.00	1.00	5.00	1.00
4	26-Mar-06	5.00	5.00	5.00	1.00	5.00	1.00
5	22-Jun-06	5.00	5.00	5.00	1.00	5.00	1.00
6	14-Sep-06	5.00	5.00	5.00	2.00	5.00	2.00
7	7-Dec-06	6.00	2.00	5.00	170.00	1.00	179.00
8	22-Mar-07	7.00	4.00	5.00	210.00	1.00	222.00
9	14-Jan-07	9.00	3.00	5.00	260.00	5.00	272.00
10	12-Sep-07	4.00	1.00	5.00	130.00	5.00	145.00
S =		12	-26	0	23	-8	33
n =		10	10	10	10	10	10
Average =		5.6	4	5	78.1	4.2	82.4
Standard Deviation =		1.429840706	1.490711985	0	103.5679594	1.686548085	109.7696578
Coefficient of Variation(CV)=		0.2S5328697	0.372677996	0	1.326094231	0.401559068	1.332156041
Increasing Trend (80% Confidence)		YES	NO	NO	YES	NO	YES
Decreasing Trend (80% Confidence)		NO	YES	NO	NO	NO	NO
Undetermined Stable Trend, CV<=1		NO	NO	YE5	NO	YES	NO
Undetermined Non-Stable Trend, CV>1		NO	NO	NO	NO	NO	NO
Error Check, OK if Blank							
Stable or Decreasing Trend at 80% Confidence Level		NO	YES	YES	NO	YES	NO
	Data Entry By = KBR	Date -	13-Mar-08	Checked By =			

**APPENDIX D**  
**ISRT Injection Log**

**Appendix D**  
**XSRT Injection Log**  
**Byron Barrel Drum**

**September 2007 Injection Log**

	date	time	meter reading	gpm
<b>MW-10B</b>	18-Sep	4:35 PM	2971	2.8
		5:35 PM	3141	2.6
		6:35 PM	3311	2.7 stopped for the night
	19-Sep	7:30 AM	3314	2.9
		8:30 AM	3490	2.9
		9:35 AM	3693	2.8
		10:35 AM	3852	2.8
		11:35 AM	4052	2.8
		12:35 PM	4233	2.7
		1:35 PM	4405	2.8 1st tote empty
		2:35 PM	4760	2.8
		3:35 PM	4925	2.7

**total gal = 1954 emulsion + water**

<b>PW-2</b>	18-Sep	4:35 PM	103843	2
		5:35 PM	103973	2.1
		6:35 PM	104050	2.1 stopped for the night
	19-Sep	7:30 AM	104093	2.1
		8:30 AM	104200	1.9
		9:35 AM	104338	1.9
		10:35 AM	104441	1.9
		11:35 AM	104571	2
		12:35 PM	104687	1.9
		1:35 PM	104801	1.9 1st tote empty
		2:35 PM	104895	1.9
		3:35 PM	105037	1.8
		4:30 PM	105144	1.7
		5:30 PM	105250	1.8
		6:00 PM	105310	1.8 stopped for the night
	20-Sep	7:35 AM	105310	1.8
		8:35 AM	105421	1.8
		9:35 AM	105536	1.9
		10:45 AM	105686	1.8
		11:40 AM	105780	2
		12:30 PM	105885	1.7 2nd tote empty, began

**total gal = 2042 emulsion + water**

1:30 PM	106000	2.2
2:30 PM	106143	2.3
3:30 PM	106261	

**total gal water 261**

**total gal of emulsion and water 2303**

<b>PW-1</b>	19-Sep	poured 14 pails of NZ into well poured 28 pails of water into well after adding NZ	560 lbs	70 gal
				140 gal
	19-Sep	4:30 PM 11824 5:30 PM 12065 6:00 PM 12179	4.1 3.6 3.6 stopped for the night	
	20-Sep	poured 12 pails of NZ into well poured 18 pails of water into well after adding NZ	480 lbs 90 gal	60 gal
	20-Sep	8:25 AM 12179 9:25 AM 12247 10:45 AM 12373 11:40 AM 12460 12:30 PM 12571	1 1 1.3 2.1 1.5 2nd tote empty, began flushing with water	
		1:30 PM 12693 2:30 PM 12837 3:30 PM 12991	2.1 2.3 done	

**water flush 298**

gal of NZ from pails	130
gal of water flush from pails	230

**total gal of emulsion and water 1825**

each pail weight = 40lbs (26 pails)  
each tote weight = 2100lbs  
total weight of emulsion = 5,240 lbs  
total gals of emulsion = 654 gal

**APPENDIX E**  
**ISRT Analytical Data**

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## **DATA QUALIFIER PAGE**

***These definitions are provided In the event the data in this report requires the use of one or more of the qualifiers, Not all qualifiers defined below are necessarily used in the accompanying data package.***

### **ORGANIC DATA QUALIFIERS**

- ND or U Indicates compound was analyzed for, but not detected.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B This flag is used when the analyte is found in the associated blank, as well as in the sample.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysts at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
- P This flag is used for CLP methodology only. For Pesticide/Aroclor target analytes, when a difference for detected concentrations between the two GC columns is greater than 25%, the lower of the two values is reported on the data page and flagged with a "P"
- A This flag indicates that a TIC Is a suspected aldol-condensation product.
- <sup>1</sup> Indicates coelution.
- \* Indicates analysis is not within the quality control limits.

### **INORGANIC DATA QUALIFIERS**

- ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.
- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- E Indicates a value estimated or not reported due to the presence of interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- G Indicates a value greater than or equal to the project reporting limit but less than the laboratory quantitation limit
- \* Indicates the spike or duplicate analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

Date: 01/17/2008  
Time: 20:02:33

Ecor Solutions - Byron site  
BYRON SITE - Aqueous  
DISSOLVED GASES - ETHANE, ETHENE, AND HETHANE

Rept: AN0326

Client ID Job No Sample Date	Lab ID	NW-1-9/GW-24 A07-E750 12/19/2007		HV-108-9/GW-24 A07-E750 12/19/2007		HW-4-9/GW-24 A07-E750 12/19/2007		PW-1/GU-24 A07-E880 12/21/2007		
Analyte	Units	sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	f	Reporting Limit	Sample Value	Reporting Limit
Ethane	UG/L	NO	7.5	5.3	1.5	NO		1.5	ND	150
Ethene	UG/L	ND	7.5	8.7	1.5	ND		1.5	ND	150
Rethane	US/L	37	5.0	ND	1.0	ND		1.0	NO	100

Client ID Job No Sample Date	Lab ID	PW-2/GW-24 A07-E880 12/21/2007							
Analyte	units	Sample value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Ethane	UG/L	ND	150	NA		NA		NA	
Ethene	UG/L	ND	150	NA		NA		NA	
Hethane	UG/L	ND	100	NA		NA		NA	

NA = Not Applicable ND = Not Detected

TestAmerica Lab

Date: 01/17/2008  
Time: 20:02:33

Ecor solutions - flyron site  
BYRON SITE - AQUEOUS  
DISSOLVED GASES - CARBON DIOXIDE ONLY(SUBCONTRACT)

Kept: AN0326

Client ID	Lab ID	HW-1-9/SH-2A A07-E771 12/19/2007	A7E77101	HW-4-9/6W-24 A07-E771 12/19/2007	A7E77102	PW-1/GW-24 A07-E883 12/21/2007	A7E88301	PH-2/SW-24 A07-E8S3 12/21/2007	A7E88302
Analyte	Units	sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Carbon Dioxide	UG/L	300000	50000	150000	50000	260000	50000	470000	50000

NA Not Applicable NP - Not Detected

TeStAmerica Lab

Date: 01/17/2008  
Time: 20:02:40

Ecor Solutions - Byron site  
BYRON SITE - Aqueous  
SYROH - SW8463-6010 TOTAL FE,HN - W

Rept: AN0326

Client ID Job No Sample Date	Lab 10	MW-1-9/6W-Z4 A07-E7S0 12/19/2007	A7E75001	HH-4-9/GU-24 A07-E750 12/19/2007	A7E75004	PW-1/6U-24 A07-E880 12/21/2007	A7E88001	PW-2/GW-24 A07-E880 12/21/2007	A7E88002
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample value	Reporting Liolt
Iron - Total nanganese - Total	HG/L HG/L	0.30 0.10	0.050 0.0030	0.46 0.011	0.050 0.0030	22.7 3.4	0.050 0.0030	1.4 0.76	0.050 0.0030

NA = Not Applicable ND - Not Detected

TestAmerica Lab

Date: 01/17/2008  
Time: 20:02:40

Ecor Solutions - Byron site  
BYRON SITE - Aqueous  
BYRON - 5W8463- 6010-DISSOLVED FE, PIN

Rept: AN0326

Client ID Job No Sample Dste	Lab ID	HH-1-9/6W-Z4 A07-E750 12/19/2007	A7E75001	HU-4-9/6W-24 A07-E750 12/19/2007	A7E75004	PW-1/GW-24 A07-E880 12/21/2007	A7E88001	PV-2/GW-24 AO7-E880 12/21/2007	A7E6S002
Analyte	Units	Sample Value	Reporting Limit	Sample value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Iron - Soluble Manganese - Soluble	MG/L NG/L	0.097 0.078	0-050 0.0030	ND ND	0.050 0.0030	15.6 3.0	0.050 0.0030	0.71 0.80	0.050 0.0030

NA = Not Applicable NO \*\* Not Detected

TestAmerica Lab

Date: 01/17/2008  
Time: 20:02:44

Ecor Solutions - Byron site  
BYRON SITE - Aqueous  
WET CHEMISTRY ANALYSIS

Rept: AK0326

Client ID Job No Sample Date	Lab ID	MH-1-9/GU-24 A07-E750 12/19/2007	A7E75001	MW-10B-9/GW-24 A07-E750 12/19/2007	A7E75002	HW-21-9/6W-24 A07-E750 12/19/2007	A7E75003	HW-4-9/GW-24 A07-E750 12/19/2007	A7E75004
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Biochemical Oxygen Demand	MG/L	ND	2.0	NA		NA		ND	2.0
Chemical Oxygen Demand	MG/L	ND	10	NA		NA		29.8	10
Chloride	MG/L	5.0	2.5	NA		NA		4.6	2.5
Nitrate-Nitrite	MG/L-N	0.29	0.050	NA		NA		2.1	0.050
Sulfate	MG/L	59.4	10	NA		NA		29.3	5.0
Sulfide	MG/L	ND	1.0	NA		NA		ND	1.0
Total Kjeldahl Nitrogen	MG/L-N	ND	0.20	NA		NA		0.48	0.20
Total Organic carbon	MG/L	2.3	1.0	240		10	1.0	10	1.0
Total Phosphorous	MG/L-P	0.022	0.010	NA		NA		0.024	0.010

Client ID Job No Sample Date	Lab ID	PH-1/GW-24 A07-E880 12/21/2007	A7E88001	PW-2/GW-24 A07-E880 12/21/2007	A7E88002				
Analyte	Units	Sample value	Reporting Limit	Sample value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Biochemical Oxygen Demand	MG/L	201000 E	2.0	16000 E	2.0	NA		NA	
Chemical Oxygen Demand	MG/L	151000	2000	79800	1000	NA		NA	
Chloride	MG/L	92.2	10	102	2.5	NA		NA	
Nitrate-Nitrite	MG/L-N	29.8	5.0	13.3	5.0	NA		NA	
Sulfate	MG/L	885	175	516	80.0	NA		NA	
Sulfide	MG/L	ND	4.0	ND	4.0	NA		NA	
Total Kjeldahl Nitrogen	HG/L-N	7.0	2.0	4.7	2.0	NA		NA	
Total Organic Carbon	MS/L	10200	200	21100	400	NA		NA	
Total Phosphorous	MG/L-P	0.37	0.010	0.39	0.010	NA		NA	

NA = Not Applicable ND = Not Detected

TestAmerica Lab

Chain of  
Custody Record

TAL-4142(0907)

Client

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Project Manager

/£TF

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Date

Chain of

Lab Number

Page. of

Address

Telephone Number (Area Code)/Fax Number

City

State Zip Code

Site Contact

Lab Contact

Analysis (Attach list if  
more space is needed)

Protect Name and Location (State)

Cat/erflnfaybH) Number

Contract/Purchase Order No.

Ac 1AS31

Sample ID. No. and Description  
(Containers for each sample may be combined on one line)

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Possible Hazard Identification

Q Non-Hazard

D Flammable

Q Skin Irritant

Q Poison 6

D Unknown

Sample Disposal

Q Return To Client

Q Disposal By Lab

Q Arctwe For

(A fee may be assessed if samples are retained  
longer than 1 month) \_\_\_\_\_  
Months \_\_\_\_\_

Z3 24Hours

UIHours

D 7Days

D UDays

D 21 Days

Q Other. \_\_\_\_\_

Date

Time

1. Relinquished By

12-15-07

1520

rever

Date

Time

12-15-07

1520

2. Relinquished By

Date

Time

2. Received By

Date

Time

3. Relinquished By

Date

Time

3. Received By

Date

Time

Comments

4.0 00

DISTRIBUTION: WHITE • Returned to Clmnt wim Report. CANARY - Slays wUh the Sample: PINK • Field Copy

*Chain of  
Custody Record*

TAL-4142 (0907)

Client

fCoA J-Q /v/r\*\*sj

Address

Project Manager

**fx^**

Date **-2M~>**  
UibNumber

Chain of CustodYNumber

Page. of

City State Zip Code

Site Contact

Lab Contact

Analysis (Attach list if  
more space is needed)

Project Name and Location (State)

Canier/Waybill Number

Contract/Purchase Order/Quote No.

Matrix

Containers &  
Preservatives

Special Instructions/  
Conditions of Receipt

AC 76X3/

Sample ID. No. and Description  
(Containers for each sample may be combined on one line)

Date

Time

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Possible Hazard Identification

D Non-Hazard D Flammable D Skm Irritant D Poison 8 D Unknown

Turn Around Time Required

D 24 Hous • 48 Hours O 7 Days D u Days D 21 Pays D Other.

f. Relinquished By

Sample Disposal

D Return To Client

• Disposal by Lab Q Archive For  
OC Requirements (Specify)

(A fee may be assessed if samples are retained  
Months longer than t month) \_\_\_\_\_

2. Refinished By **ZC\*\***

Date

Time

2. Received By

Date | Time

3. Relinquished By

Date

Time

3. Received By

Date Time

Comments

DISTRIBUTION: WHITE • Returned to Client with Report: CANARY • Stays with the Sample: PINK • Field Copy

**A <P 2.u**

**APPENDIX F**  
**Newman Zone Material Safety Data Sheet**

Remediation and Natural Attenuation Services Incorporated  
6712 West River Road  
Brooklyn Center, MN 55430

Product Information: 763-585-6191      Issue Date: March 28, 2002

#### **Section 1:/ IDENTIFICATION ./. ,**

- 1.1 Product Name: Newman Zone
- 1.2 Product Type: Inedible Industrial Nutrient for Microbial Organisms
- 1.3 Hazard Rating: Health: 1      Fire: 1      Reactivity: 1
- 1.4 Formula: Proprietary

Substances Subject to SARA 313 Reporting Are Indicated by "#"

It is our opinion that the above named product does not meet the definition of "hazardous Chemical" as defined in the OSHA "Hazard Communication Standard" regulation 29 CFR 1910.1200. This material Safety Data Sheet is provided as general information for health and safety guidelines.

#### **Section 2: INGREDIENTS/COMPOSITION**

	CAS No.	%	PEL	(mg/m <sup>3</sup> ) TWA
Soybean Oil (food grade)	8001-22-7	45	15(Mist)	10(Mist)
Sodium-L-Lactate	867-56-1		4	
Food Additives/Emulsifiers/Preservatives (Proprietary)		<10		
Water		<45		

**EMERGENCY ONLY, 24-HOUR SERVICE: CHEMTREC: 1-800-424-9300**

#### **Section 3: PHYSICAL AND CHEMICAL CHARACTERISTICS**

This section completed per formulation ingredient data unless stated.

- Solubility: Dispersible in water (product)
- PH: 6 (product)
- Specific Gravity: 0.98 (product)
- Boiling Point: NA
- Vapor Pressure: NA
- Vapor Density: NA
- Percent Volatile By Volume (%): NA
- Evaporation Rate: NA
- Viscosity: 23.6 cps @ 68°F (Brookfield)(product)
- Product Appearance and Odor: Light yellow-cream colored liquid, vegetable oil odor.

**Section 4: FIRE AND EXPLOSION HAZARDS**

This section completed per formulation ingredient data unless stated.

- 4.1 Special Fire Hazards: Product - none, does not support combustion.

Flash Point: >540 degrees F (Pure Soybean Oil Closed Cup).

Flammable Limits

LEL ND

UEL ND

- 4.2 Fire Fighting Methods: Use method appropriate for surrounding fire.

- 4.3 Extinguishing Media: Dry Chemical or CO<sub>2</sub> Preferable; water may cause spattering or spreading.

**Section 5: HEALTH HAZARD DATA**

- 5.1 THIS PRODUCT IS NEITHER INTENDED NOR MANUFACTURED FOR HUMAN OR ANIMAL CONSUMPTION AND SHOULD NOT BE USED FOR FOOD OR FEEDSTUFFS.

- 5.2 Effects of Overexposure: NA

- 5.3 Emergency and First Aid Procedures: If inhaled, remove from contaminated atmosphere. For eye contact immediately flush eyes with large amounts of water. Ensure rinsing entire surface of eye & under lid. For skin contact wash affected areas thoroughly with soap and water. Seek medical help for persistent irritation.

- 5.4 Hydrolyzed soy protein has been identified by the United States Food and Drug Administration as a food allergen. Symptoms include swelling of the lips, stomach cramps, vomiting, diarrhea, skin hives, rashes, eczema and breathing problems.

- 5.5 Occupational Exposure Limits [8-hour time weighted averages (TWA)]:

		mg/m <sup>3</sup>
	CAS No.	OSHA PEL/ACGIH TLV
Soybean Oil (food grade)	8001-22-7	15(Mist)/10(Mist)

**Section 6: REACTIVITY DATA**

This section completed per formulation ingredient data unless stated.

- 6.1 Stability: Stable under normal conditions.

- 6.2 Conditions to Avoid: NA

- 6.3 Incompatibilities: None known

- 6.4 Hazardous Decomposition Products: Product - None identified. Ingredients - Carbon oxides. Biological decomposition (spoilage) may result in offensive odors.

- 6.5 Hazardous Polymerization: None known

**Section 7: SPILL OR LEAK PROCEDURES**

This section completed per formulation ingredient data unless stated.

- 7.1 Spill Response: Water dispersible. Same as for vegetable oil spills: isolate spill, prevent from entering waterways, and sewer systems. Sorb or remove spilled materials as soon as possible. Oils and specific quantities of oils may be reportable under federal, state, or local regulations.
- 7.2 Waste Disposal Method: This product is not hazardous, however, wastes must be disposed in accordance with local, state or federal regulations. Consult with local sewer authority, or solid waste facility prior to disposition.

**Section 8: SPECIAL PRECAUTIONS**

No protective equipment is necessary under normal use conditions.

- 8.1 Eyes: If splashing may occur, eye protection recommended.
- 8.3 Skin: Wear impervious gloves for prolonged or repeated exposure.
- 8.4 Respiratory: Avoid breathing mists of this product

**Section 9: TRANSPORTATION PRECAUTIONS**

This section completed per formulation ingredient data unless stated.

- 9.1 Transportation Considerations: This product is not classified as dangerous in the meaning of transport regulations. Shippers and transporters may need to meet packaging and transportation requirements for certain oils and respective quantities under CFR 49 Part 130.

The above information is believed to be correct with respect to the formula used to manufacture the product in the country of origin. As data, standards, and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.

**END**

**OF**