BYRON BARREL & DRUM AREA 2 SITE

REMEDIAL ACTION COMPLETION REPORT

FINAL RA REPORT FOR SOILS

INTERIM RA REPORT FOR GROUNDWATER

Byron Barrel & Drum Site
Area 2
Byron, N.Y.

September 2002

Prepared for:

Byron Barrel & Drum PRP Group

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Approval Sheet

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Approving EPA Official:

Name: _____

Title:_____

Signature:_____

Table Of Contents

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1.0 INTRODUCTION

This document is the Remedial Action (RA) Report for the Byron Barrel & Drum, Area 2 Site (Site). This report describes remedial actions related to the remediation of the area of the site designated as Area 2. No discussion of the previously designated Areas 1 or 3 are in included in this report. These areas have been formerly addressed previously, and as such, only some historical information regarding Areas 1 and 3 are included as part of the overall history of the Site in this report.

The purpose of this report is to summarize the background of the Site, the chronology of events related to the Site, and to document the construction of the RA and the completion of the remediation of the site soils. This report is intended to serve two specific functions:

1. This report is an Interim RA Report for the remediation of Site groundwater; and
2. This report is a Final RA Report for the remediation of Site soils.

The construction of the Site Groundwater Recovery Treatment and Soil Flushing System (GWTS) was completed in July of 2001. The GWTS has been demonstrated to be Operational and Functional (O&F), and requires only Operation & Maintenance (O&M) efforts in order to complete the remediation of Site Groundwater. No major difficulties were encountered during the execution of the RA, and there were no deviations from the RD.

The Site soil remediation has been completed. The construction of the soil remedy was completed in July of 2001, and the soil-flushing system has been operated for from September 2001, through February 2002. A valve failure in the system prohibited operation of the soil-flushing system from March through July

2002. Analytical data of soil samples from the Site have demonstrated that the site soil has been remediated to below the goals specified in the Record of Decision (ROD). Site soil remediation efforts are therefore completed. Site groundwater remediation efforts are continuing by O & M and monitoring of the Site groundwater remediation system.

1.1 PROJECT LOCATION AND HISTORY

The Byron Barrel and Drum Site is located on Transit Road in Byron Township, Genesee County, NY. It occupies approximately 2 acres of an 8-acre parcel that was used as a salvage yard for heavy construction equipment. Heavily wooded areas and farmland border this Site. The closest body of water is Oak Orchard Creek, which is located within a one-half mile of the Site. A small storm water drainage ditch, which flows to the Creek, runs along the northern property boundary of the site. Neighboring properties include residential areas located approximately 2 miles from the Site. Drinking water wells are situated within 1 mile of the Site, and approximately 20 residents use these wells. The major roadways in this area include Route 98 and Route 24. A Site Location Map is provided as Figure 1. A Site Map is provided as Figure 2. This Site Map is an as-built drawing of the constructed remedy for the Site.

In 1982, two drum disposal locations were discovered at the Byron Barrel and Drum site. Approximately 200 drums of solid and liquid chemical wastes were abandoned at three locations on the site without any spill control or containment provisions. The New York State Department of Environmental Conservation 's (DEC) subsequent investigation led to the site's inclusion on the Superfund National Priorities List in April 1984. The abandoned drums and about 40 cubic yards of soil were removed from the site in August of 1984.

Since the Consent Decree was executed (January, 1995), the Site investigation and remediation efforts have been performed by the Byron Barrel & Drum Potentially Responsible Parties Group (PRP Group). The EPA has assumed the lead regulatory role for the RA. DEC has remained intimately involved in the remediation and has been the lead agency regarding the discharge of treated water from the Site. EPA has contracted with United States Army Corps of Engineers (USAGE) for on-site construction supervision and support services during the execution of the RA. ECOR Solutions, Inc. (ECOR) (formerly know as ERM C & O Services, Inc.), was contracted by the PRP Group to perform the RA for the Site and is currently under contract with the PRP Group to perform O & M of the GWTS.

A remedial investigation and feasibility study (RI/FS) conducted by Ebasco Services, Inc., (1989) identified three areas of concern at the site. Those areas include: Area 1 - former drum storage and waste disposal; Area 2 - a solvent disposal area located in the vicinity of a maintenance building; and Area 3 - a shallow ravine containing construction debris and fill material. The RI detected volatile organic compounds (VOCs); including trichloroethene (TCE) and 1,1,1 trichloroethane (TCA) in groundwater samples collected from locations below Areas 1 and 2.

The selected remedy for the Area 2 Site dictated by the ROD was in-situ soil flushing and groundwater pumping, treatment, and recharge. The RI/FS report detailed the extent of constituents of concern in Area 2, and, along with the Pre-Remedial Design and Investigation Report (Blaseland Bouck, & Lee (BB&L), December, 1999), formed the basis for the final RD.

Major documents regarding the Site include the following:

- Record of Decision (ROD), September, 1989;
- Consent Decree (CA No. 86-CV-748A) between USEPA and Unisys Corporation and Garlock, Inc. as the settling defendants, January, 1995;
- Final Remedial investigation/Feasibility Study, Ebasco Services, 1989;
- Pre-Remedial Design Investigation and Remedial Design Report, BBL, December, 1999;
- 100 Percent Remedial Design Report, BBL, December, 1999;
- Explanation of Significant Differences, EPA, August, 2000;
- Quality Assurance Project Plan (QAPP), ERM C & O Services, June 2001;
- Remedial Action Work Plan, (RAWP), ERM C & O Services, May 2001; and
- Health and Safety Plan (HASP), ERM C & O Services, May 2001.

2.0 BACKGROUND

This section summarizes the ROD, the changes made to the ROD by the Explanation of Significant Differences (ESD), and the RD.

2.1 *SUMMARY OF RECORD OF DECISION*

The ROD specified two sets of cleanup criteria for the Site. Cleanup criteria were established for Site soils and cleanup criteria were established for Site groundwater. The soil cleanup criteria were sununarized in the ROD, in a table titled "Source Control (Soil) Cleanup Levels". The groundwater cleanup levels were summarized in the ROD, in a table titled "Management of Migration (Groundwater) Cleanup Levels". Copies of these two tables are included as Appendix A. The soil cleanup criteria are summarized below:

Byron Barrel & Drum, Area 2
Soil Cleanup Criteria

Chemical	Soil Cleanup Level (ug/kg)
Ethylbenzene	52,000
Toluene	36,000
Xylenes	8,200
1,1,1-Trichloroethane	2,300
Tetrachloroethene	8.4
Trichloroethene	4.9

In order to accomplish the remediation of the groundwater at the site, the ROD included the pumping of groundwater and treatment of the recovered

groundwater by filtration and air stripping to remove VOCs. In order to accomplish the remediation of the potentially impacted soil at the site, the ROD specified that a soil flushing system be used.

2.2 *EXPLANATION OF SIGNIFICANT DIFFERENCES (ESD)*

In August of 2000, and Explanation of Significant Differences (ESD) was issued. The purpose of an ESD is to explain differences in the RD, if any, from the ROD.

The ESD explained that no further remedial efforts were required for Areas 1 and 3. Data collected during the pre-remedial design had indicated that the groundwater VOC concentrations in these two areas were either below or marginally above the cleanup criteria, and that metals concentrations were similar to background concentrations. Therefore, it was determined that no further action was required for Areas 1 and 3.

Regarding Area 2, the ESD indicated that the VOC concentrations remained above the cleanup criteria, so remedial efforts were still required for Area 2. There was one minor, but significant difference in the RD for Area 2. The ESD explained that due to the soil characteristics at the Site, the treated water that was planned to be used for soil-flushing would not be able to percolate through the soil well. The ESD explained that the soil remedy for Area 2 would be slightly modified from the ROD, to include an infiltration gallery (IG) as part of the soil-flushing remedy. The IG was described as perforated pipe and gravel that was to be put into place after excavating a few feet of soil in the area where soil-flushing was to be performed. The IG would be used to flush the underlying soil. The reason for this minor change to the RD is described in more detail below, in Section 2.3, Remedial Design.

A public meeting regarding the ESD was held on August 24, 2000 at the Byron Fire Department Recreation Hall, on East Main Street, in Byron.

2.3 *REMEDIAL DESIGN (RD)*

This section summarizes the RD, and how the RD expected to accomplish the requirements set forth in the ROD. The RD is a detailed set of design documents and set of drawings, which specified the size and locations of Pumping Wells, Treatment Equipment, and the construction of the groundwater IG. The design was based on information about the site hydrogeology and soil recharge rates obtained during the RI/FS and additional Site remedial investigation efforts. The RD consisted of two separate documents, and the associated design drawings. The two documents were "Pre-Remedial Design and Investigation and Remedial Design Report" BB&L, December, 1999, and " 100 Percent Remedial Design Report Submittal" BB&L, December, 1999.

The main construction tasks to be performed specified by the RD were:

- Excavation and temporary staging of soil required for the installation of the Infiltration Gallery;
- Post-Excavation side-wall soil sampling and analysis, to confirm horizontal limits of excavation;
- Characterization of stockpiled soil to determine if the excavated soil was useable as fill for the excavation or required off-site disposal;
- Installation of Infiltration Gallery to be used for soil flushing of Site soil;
- Installation of two pumping wells, PW-2 and PW-3, to augment existing PW-1 for recovery of ground water;
- Installation of equipment building, site access road and electric and phone utility services;

- Installation of GWTS, consisting of bag filter, air stripper, and associated piping, flow meters, and controls;
- Installation of system above and below-ground piping;
- Startup of groundwater Pumping Wells, Treatment System, Infiltration Gallery, and discharge to surface water; and
- Site seeding & restoration

The O & M section of the RD documents also specified the Site groundwater Monitoring Wells to be used for monitoring the progress of cleanup of the Site groundwater. The Monitoring Wells specified by the RD and the frequency of monitoring suggested by the RD were later included into the project QAPP, along with the groundwater cleanup criteria dictated by the ROD.

2.3.1 GROUNDWATER RECOVERY AND TREATMENT SYSTEM

The Pre-Remedial Design Investigation and Remedial Design Report included the results of additional investigation into the Site groundwater recovery, treatment and recharge. One groundwater pumping well, designated as Pumping Well 1, and two piezometers, designated as PZ-1 and PZ-2, were installed as part of the pre-remedial design investigation. A step drawdown test and a 48-hour pump test was performed to determine the well's yield and water quality, and Site groumdwater flow characteristics. The data from PW-1, the piezometers, and site monitoring wells collected during the pump test was used to model the Site groundwater. Based on the data from the groundwater modeling, the RD concluded that the groundwater recovery system should include the existing PW-1 and two additional pumping wells, to be located along the northern edge of the Site. The RD chose filtration and air stripping as the treatment unit processes for the recovered ground water.

2.3.2 SOIL-FLUSHING SYSTEM

The Pre-Remedial Design Investigation and Remedial Design Report included the results of an investigation into the Site groundwater recharge rates that was performed in order to provide information for the design of the required soil-flushing system. Results of the investigation indicated that the surface soil had very low permeability, and that a slightly more permeable layer of soil existed at a depth of about 2 feet above the normal water table elevation. The RD therefore included the requirement to excavate the top few feet of soil in the area of the site requiring soil-flushing, so that the IG pipes would recharge into the more permeable layer.

The vertical limits for the excavation were clearly specified by the RD to be 636 feet Mean Sea Level (MSL), in order to place the IG at a specific elevation. The initial horizontal limits of the excavation were specified by the RD drawings, with the requirement that soil samples of the side walls of the excavation be collected and analyzed for contaminants of concern at the site. The RD specified that if analytical results of the sidewall samples complied with New York State guidance values for soil (TAGM 4046) for TCA and TCE, that no expansion of the initial horizontal limits of excavation would be required. If analytical results indicated that the excavation side wall concentrations of either one of these two compounds exceeded the TAGM values, the RD specified that the horizontal limits would be expanded until side wall sample analytical results indicated that the TAGM values were met.

In the event that the horizontal limits of the excavation expanded towards the garage that is adjacent to the planned excavation, the RD contained a contingency plan for the demolition of the garage. This plan would allow for the excavation of soil below the garage if it was needed to complete the remediation of Site soil.

The design of the IG described above provided the details necessary to ensure that the soil flushing required by the ROD would be accomplished. Even with the requirement to excavate to the more permeable layer, the recharge flow rate was anticipated to be only approximately 1 gallon per minute (gpm). Since the design groundwater pumping rate was approximately 15 gpm, and the anticipated recharge rate was only 1 gpm, approximately 14 gpm was anticipated to be discharged to surface water via the storm water drainage ditch adjacent to the site. The RD specified that the discharge of treated groundwater to surface water would be required to comply with the New York State Pollutant Discharge Elimination System (SPDES) operating, monitoring and reporting requirements.

3.0 CONSTRUCTION OF REMEDIAL ACTION (RA)

A contract was awarded by the PRP Group to ECOR (ERM C & O Services at that time) for the construction of the RD in July of 2000. Pre-construction activities were performed between August of 2000 and May of 2001.

3.1 PRE-CONSTRUCTION ACTIVITIES

During the pre-construction phase of the implementation of the RA, equipment was procured and work plans were prepared. The following work plans related to the RA were prepared and approved by EPA:

- Site Health and Safety Plan (HASP);
- Site Remedial Action Work Plan (RAWP); and
- Site Quality Assurance Project Plan (QAPP)

The HASP detailed the health and safety precautions that were required to be taken during the construction of the RA. The RAWP provided the overall plan for the construction of the RA. It provided details on how the RD would be accomplished by the RA.

The QAPP provided a plan for quality control of the project, especially regarding the environmental sampling and analysis that are required during the construction of the RA. Where laboratory analytical results are used to make decisions regarding the remediation of the Site, the QAPP details Decision Rules (DRs) to be followed in order to make those decisions. The QAPP also detailed the sampling and analysis requirements and DRs for the long-term monitoring of the Site, and for determining when the Site soils and groundwater have met the cleanup criteria as specified by the ROD. The QAPP is intended to be the final

document dictating procedures to be followed to complete the remediation of soil and groundwater at the Site.

3.2 CONSTRUCTION ACTIVITIES OF THE REMEDIAL ACTION

Construction of the RA began on June 11, 2001. Equipment and persomel were mobilized to the site on that day, and construction activities commenced the following day. During the months of June and July 2001 the majority of the RA construction activities were completed. The site was cleared, the access road was constructed, the treatment system enclosure building was installed, the air stripper was installed, additional Pumping Wells PW-2 and PW-3 were constructed, the IG excavation was performed, and the IG piping was installed. Electrical and telephone utility services were conveyed to the Site equipment enclosure building. During the construction activities ECOR persomel and subcontractors performed the work under direct supervision of ECOR persomel, and a USAGE representative performed site supervision on behalf of EPA. The relatively small excavation of potentially elevated VOC concentrations in soil was performed following all health & safety requirements of the HASP.

3.2.1 SOIL EXCAVATION AND SOIL PILE REUSE

The soil excavation was performed to the initial horizontal limits and the final vertical limits as specified by the RD. The resulting excavation had an area of 2,550 square feet, and an average depth of five (5) feet. The total volume of soil removed was approximately 500 cubic yards.

The analytical results of the soil samples collected from the sidewall of the excavation met the Decision Rule (DR) for the excavation as determined in the RD and QAPP. This resulted in the decision that no further horizontal excavation of soil was required. Validated analytical results of the post-excavation samples were previously submitted to EPA and will not be included here.

The IG was installed as per the RD. A one-foot thick layer of gravel pipe bed was installed in the bottom of the excavation. Approximately 200 linear feet of 2-inch slotted PVC pipe was wrapped in geomembrane, and installed in the gravel bed.

The soil that had been excavated for the IG excavations was stockpiled on-site as per the RD and RAWP. Analytical results of the Soil Pile samples met the DR for reuse as fill as per the RD and QAPP, so the soil was reused as fill in the excavation after the IG pipe had been installed. Validated analytical results of the Soil Pile samples were previously submitted to EPA and will not be included here.

3.2.2 PUMPING WELL INSTALLATION

During the performance of additional Site investigation during 1999, one groundwater recovery well had been constructed and used for a pump test. The well had been designated as Pumping Well 1 (PW-1). The RD included the installation of two additional pumping wells to operate in addition to existing PW-1. As part of the RA, two pumping wells were installed and designated as PW-2 and PW-3, at the locations specified by the RD. The two PWs were consfructed identically to PW-1. They were drilled using a 10 ¼-inch Hollow Stem Auger to a depth of 25 feet below grade. The top 10 feet of well riser

installed was 6-inch PVC pipe. Stainless steel 0.030-inch slot well screen was installed from 10 feet to 22 feet below grade. A sump was installed from 22 feet to the bottom of the wells at 25 feet below grade. Pitless adaptors were installed into all three PWs at a dept of 3 feet below grade. Underground piping and electrical service was installed to all three PWs from the treatment system building. Submersible well pumps rated at 3 – 10 gpm at 210 to 70 feet of head, and specified well level control probes were installed in all three PWs. Pump power and level control wires were comected to the main control panel of the GWTS.

3.2.3 GROUND WATER TREATMENT SYSTEM INSTALLATION

The GWTS was installed from July 5-18, 2001 concurrent with the completion of the soil excavation and IG piping installation. The foundation for the building was constructed, and underground piping and electrical wiring was installed from the Treatment Building to the PWs, the infiltration gallery, and the surface water discharge. The precast concrete equipment enclosure building was installed atop the foundation, and the air stripper, bag filter, flow meters, and associated electrical and piping connections were completed. The main control panel, autodialer, and circuit breaker box were installed in the building. Electric and telephone utility services were brought to the site, and conveyed into the treatment building.

The GWTS consists of first passing the extracted groumdwater from PW-1, PW-2, and PW-3 through a bag filter. The bag filter removes solids greater than 50 microns. After the bag filter, the groundwater is routed through a low-profile air stripping unit. The air stripping operation removes the VOCs from the groumdwater. Following air stripping, the groumdwater is directed either to the

discharge to surface water, or in part to the IG for in-situ flushing of the unsaturated soils. Site Map Figure 2 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 3.

3.2.4 INITIAL PERFORMANCE TESTING

The GWTS construction was essentially complete on July 15, 2001. After completion of construction and dry testing of system controls, the initial performance testing was planned to confirm the systems basic operation, and effluent water quality. An attempt was made to initiate operation of the PWs and GWTS during the performance of the Pre-Final Inspection on July 19, 2001. Difficulties were encountered with the pitless adaptors in the PWs during that initial attempt. The pitless adaptors were modified the following week, and system startup activities continued that week.

The PWs yields were established during drawdown testing on July 28, 2001. The GWTS was designed for a continuous flow rate of 20 gallons per minute (gpm) through the air stripper. Total flow rates from the three PWs during startup varied from a minimum of 8 gpm to a maximum of 15 gpm. PW-1 recharged continually at a pumping rate of 8 gpm, thus has a 100% duty cycle. PW-2 and PW-3 have lower yields; 30% duty cycles at 3 gpm. These rates strike a balance between minimizing pump cycling and maintaining cones of depression. Flow was observed throughout the system and regulated for optimal performance. Little sediment was detected in the influent groundwater, as witnessed by the lack of bag filter loading as well as total suspended solids (TSS) analytical results. The air stripper blower provided the requisite 150 scfm across the shallow trays necessary to remove VOCs from the influent groundwater stream. Autodialer callout upon alarm faults was confirmed.

As stated above, initial system operational testing was performed at the end of July 2001. The first phase of operation was the initial performance testing. After some initial difficulty in operating the PWs, the PWs and the GWTP went through a basic operations test. The PWs and the GWTP were operated for several hours, and initial operating samples were collected at the influent and effluent sampling points. The GWTP was then shut down pending the analytical results of the initial samples. The initial sample analytical results confirmed that the influent water quality was similar to what was expected with respect to TSS and VOCs, and the effluent had non-detectable concentration of VOCs. The analytical results of the influent and effluent sample events are summarized, along with all influent and effluent analytical results for the project to date, in Tables 1 and 2, respectively.

3.2.5 STARTUP TESTING

After the analytical results of the initial samples confirmed proper operation of the GWTS, the system was restarted. The next planned phase of operation was the startup testing. The system was operated continuously for several days in order to test the system's operation, determine continuously sustainable ground water pumping rates and Infiltration Gallery soil flushing recharge rate, and to sample the influent and effluent during continuous operation of the system. The first monthly routine compliance samples were collected on August 8, 2001 and a spht sample was collected by USACE, representing EPA. The analytical results of the effluent were again non-detectable.

During the first few weeks of operation, a small but time consuming difficulty was encountered, which kept the system from operating continuously, and thereby extended the startup period. Apparently, the air stripper manufacturer

had received a bad batch of level switches. Multiple stripper sump high level alarms were encountered by the GWTP. The air stripper sump float switch apparently was defective. Three replacement level switches were provided by the stripper manufacturer and installed by ECOR before a properly functioning level switch was found. Due to the sump level switch difficulty, the GWTP did not operate continuously during the months of August and September 2001. Continuous reliable operation of the PWs and the GWTP was established near the end of September.

4.0 CHRONOLOGY OF EVENTS

The chronology of events regarding the discovery, investigation, and remediation of the Site is summarized in Table 3. This table summarizes the chronology of major events and documents finalized relating to the remediation of the Site since the ROD.

5.0 PERFORMANCE STANDARDS AND CONSTRUCTION QUALITY CONTROL

Quahty control measures regarding the remediation of the site during the RA generally involved quality control of the construction procedures, health and safety procedures, compliance with the RD and RAWP, and the collection and analysis of samples of environmental media. Quality control of the construction activities was performed by continuous on-site supervision of representatives of ECOR and EPA. ECOR personnel and USACE (on behalf of EPA) were on-site nearly continuously during construction of the RA.

The procedures to be followed for quality control of the collection, documentation, handling, analysis, and data validation are detailed in the project QAPP. Some of the quality control methods detailed in the QAPP and employed during the execution of the RA include field screening of soil samples with portable screening insfruments, and the collection and analysis of blank and blind duplicate samples. These procedures are detailed in the project QAPP.

During the execution of the RA, approximately 500 cubic yards of potentially contaminated soil was excavated and stockpiled on-site. As mentioned previously, all of this soil was reused as fill on-site. No soil was removed from the site during the execution of the RA. However, approximately 1,000 pounds of investigation-derived waste was removed from the site as part of this RA. The investigation-derived waste consisted of 5 drums of activated carbon that was generated during the pump test that was performed during the pre-remedial design investigation, as well as approximately 6,500 pounds of waste paint material and 165 gallons of waste paint solvent.

5.1 *DATA VALIDATION*

As per section 4.0 of the QAPP, all analytical data has been validated according to the protocols and quality control (QC) requirements of the analytical methods, the ASP, the United States Environmental Protection Agency (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, June 1999: Validating Volatile Organic Compounds by SW-846 Method 8260B, the USEPA Region II Data Review SOP Number HW-22, Revision 2, June 2001: Validating Semivolatile Organic Compounds by SW-846 Method 8270C and the reviewer's professional judgment. The Data Validation Report is included in Appendix B.

6.0 INSPECTIONS AND CERTIFICATION

6.1 PRE-FINAL INSPECTION

A Pre-Final Inspection was performed on July 19, 2001. At the time of the inspection, the construction of the RA was essentially complete, with only system startup and site seeding and remaining to be completed.

The inspection was performed by EPA's Mr. George Jacob. Also in attendance on-site during the inspection were John Grathwol (DEC), Mike Hrywnak (USAGE), Terry Etter (PRP Group), Mark Gouch (ECOR) and John Maddox (ECOR). No major problems were discovered during the inspection. The following minor action items were discussed and agreed upon by all in attendance:

1. It was decided by the PRP Group that the mechanics pit in the garage would be filled and covered in order to reduce the attractive nuisance of the garage.

2. Two drums that apparently contained site soil were discovered during the inspection. It was decided that the contents of the two drums would be removed trom the site for proper treatment and/or disposal.

3. One drum containing a suspected solvent liquid was also discovered on the site. It was agreed that the PRP Group would arrange for removal and proper treatment and disposal of the liquid in this drum.

4. Arrangements were made for ECOR to meet with Mr. Hrywnak on-site at the time of the next scheduled GWTP sampling event, so that he may

observe the sampling event, and collect split samples for analysis by EPA's laboratory.

5. During the inspection the question of site legal ownership was discussed. None of the parties present had any knowledge regarding who currently owns the property. EPA and DEC requested that ECOR research the current ownership of the site.

Pre-Final Inspection Action Item Execution

The following summarized the execution of the action items agreed upon during the Pre-Final Inspection:

1. ECOR, on behalf of the PRP Group, filled and covered the mechanic's pit on November 9, 2001.

2. The contents of the two drums of soil were transported off-site for treatment and disposal in November 2001. Prior to transportation off-site, the soil had been field-screened via photoionization detector by ECOR. No VOCs were detected. Samples of the soil had also been collected by DEC and analyzed for TCLP. The analytical results were non-detectable.

3. The drum of suspected solvent was transported off site for treatment and disposal.

4. Arrangements were made for ECOR to meet with Mr. Hrywnak on-site on August 8, 2001. Treatment System influent and Effluent samples were split with Mr. Hrywnak during that site visit.

5. ECOR contacted the Town of Byron Tax Assessor's office regarding Site ownership. The property's last known owner was a Mrs. Virginia Wolcott, who's last known address was in Florida. County taxes have not been paid on the property for years, so possession of the property could be assumed by the county. This is not likely however, due to the condition of the property. It is likely the property ownership will remain undetermined indefinitely.

Since the Pre-Final Inspection, the final site restoration and seeding was performed November 7, 2001 and the GWTP system was started up and tested. This is described in Section 3. In addition, a gate was erected across the access road to the property on December 7, 2001 to restrict nuisance trespass.

In addition, ECOR, on behalf of the PRP Group, arranged for removal, treatment, and disposal of numerous containers of consumer and commercial paint, as well as several containers of solvents that had been inside the garage. The property owner had apparently abandoned these materials in the garage. These materials, while clearly not the responsibility of the PRP Group, were removed by the PRP Group to reduce the risk of accidents at the site, and reduce the attractive nuisance of the garage.

6.2 INTERIM INSPECTION

An Interim Inspection was completed on July 17, 2002. The Interim Inspection was performed by Mr. George Jacob of EPA. Also in attendance on-site during the inspection were John Grathwol (DEC), Mike Hrywnak (USAGE), Terry Etter (PRP Group), Chris Rockwell (PRP Group), Mark Gouch (ECOR) and John

Maddox (ECOR). No major problems were discovered during the inspection. The following items were discussed and agreed upon by all in attendance:

1. EPA agreed with DEC's determination that GWTS effluent compliance sampling may be reduced from the current twice monthly, to quarterly, and that quarterly compliance sampling may be scheduled to coincide with the quarterly Site monitoring events.
2. It was agreed that some additional site seeding should be performed in fhe fall of 2002.
3. Some waste automobile oil was recently discovered in one of the Site buildings. The PRP Group has agreed to have the oil recycled and/or disposed of.
4. It was agreed that the Site structures would be inspected routinely for signs of trespass or inhabitance by squatters.

It was decided that a second set of UZ soil samples should be collected and analyzed some time in early August. ECOR agreed to coordinate the sample with DEC and/or USAGE so that split samples may be collected by USAGE and analyzed by DEC.

6.3 CERTIFICATION OF COMPLETION OF CONSTRUCTIONAND OPERATIONAL AND FUNCTIONAL STATUS

A certification stating that the Remedial Action has been completed, and that the Remedial System is operational and functional is included as Appendix C.

7.0 OPERATION & MAINTENANCE AND MONITORING ACTIVITIES

7.1 OPERATION & MAINTENANCE

After the extended startup period was completed at the end of September 2001, routine continuous operation of the GWTS began on October 1, 2001. The GWTS has operated continuously since that time, with minor shutdowns, primarily due to power outages.

Scheduled O&M activities include weekly site visits by the local Operator, Steve Rodland, an experienced water treatment plant operator. Mr. Rodland was instructed in site-specific sampling methods and operating parameters. The Operator is the first responder to autodialer alarms trom the site. The autodialer also contacts John Maddox at the ECOR office in Woodbury, NY. Site status may be checked remotely by telephoning the autodialer.

Weekly site visits include performing an overall site inspection, GWTS system inspection, including checking the bag filter for 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. To date the trays have not required cleaning. It is anticipated that the trays will be cleaned on an amual basis as a preventative maintenance and system operation performance item.

The PWs have recovered a total of 4,662,130 gallons of Site groundwater through August 2002. All of this ground water was treated in the GWTS. Of the total, 3,016,650 gallons, or 78% of the total flow, was discharged to the surface water

discharge, into the creek that flows adjacent to the site. The remaining 822,740 gallons, or 22% of the total, flowed to the IG. The Treatment System Influent and Effluent groundwater has been sampled and analyzed on a twice-monthly basis, as per DEC's Site-specific Effluent Limitations and Monitoring Requirements. The analytical results of the effluent have consistently met the DEC's Effluent Limitations, and have generally had non-detectable concentrations of the VOCs. Tables 1 and 2 summarize influent and effluent analytical data for the system since startup. Figure 4 presents a graphical representation of the Influent VOC concentration, which represents the total VOCs recovered trom the Site's groundwater remediation. The influent VOC concentrations demonstrate a clear downward trend since the initial operation of the system. DEC approved ECOR's request for a reduction in the trequency of effluent sampling in August of 2002. Effluent sampling will be performed quarterly as of September 2002.

7.2 SITE MONITORING

Site monitoring is performed to monitor the effectiveness of the remedies for soil and groundwater, and for the purpose of determining when each of the two remediation systems meet their respective cleanup criteria.

7.2.1 GROUNDWATER MONITORING

Quarterly Monitoring Well sampling has been performed as per the project QAPP since the first quarter of calendar year 2002. The Monitoring Wells (MWs) to be used for the groundwater monitoring program were originally specified in the RD and later included into the project QAPP. A total of five Monitoring Wells are sampled during each monitoring event, and analyzed for the chemical constituents identified as cleanup criteria in the ROD. As detailed in the project

QAPP, the frequency of sampling, the constituents to be analyzed, and the wells to be sampled will be reevaluated on an annual basis. When analytical data from the Site MWs Monitoring program indicate that the Site groundwater meets the cleanup criteria, the groundwater remediation will be complete. As of this writing, MW analytical results have demonstrated a downward trend in two of the five monitoring wells. Analytical results of three of the monitoring wells demonstrate that they meet groundwater cleanup criteria.

7.2.2 UZ ZONE SOIL MONITORING

During the performance of the construction on the RA, while the excavation for the IG was open, and before the IG piping had been installed, background soil samples were collected from the UZ, located immediately beneath the excavation. Figure 5 presents a site plan showing the sample locations and detected VOCs for the June 2001 sampling event. The analytical results of these samples are Included in Table 4. These data provided the first complete set of data for the UZ soil. The analytical results indicated of the six chemicals listed as criteria for soil cleanup, only one chemical was detected. TCA was detected in 4 of 10 samples, and at concentrations two orders of magnitude less than the cleanup criteria

In August of 2002 a second set of UZ soil samples were collected in the presence of USAGE representative. The analytical results of these samples are also included in Table 4, along with results from the June 2001 analytical results. The soil cleanup criteria are also included in for comparison. The analytical results for this set of samples produced results very similar to the initial sampling event. Of the six chemicals listed as criteria for soil cleanup, orlly TCA was detected. It

was detected in 4 of 10 samples, at concentrations generally two orders of magnitude less than the cleanup criteria. One sample's analytical result was one order of magnitude below the cleanup criteria for this compound.

Split samples of UZ soil samples were collected by USAGE representative, and analyzed by DEC's laboratory. The analytical results of the split samples are consistent with the results described above.

The analytical results of the UZ soil sampling events indicate that the Site soils meet the cleanup criteria established by the ROD and the project QAPP. Based on these analytical results, as well as the analytical results of post-excavation and soil pile samples collected during the completion of the RA, it has been determined that the Site soil RA has been completed. Operation of the Soil-Flushing part of the GWTS is planned to be terminated, and Site UZ soil monitoring is planned to be terminated, pending EPA approval. The remainder of the site GWTS will remain in operation to continue the remediation of site groundwater, and Site groundwater monitoring will continue as per the project QAPP. Site GWTS performance monitoring and effluent compliance monitoring will continue as per DEC's modified Effluent Limitations.

8.0 SUMMARY OF PROJECT COSTS

The following section provides a summary of costs associated with the RA only. Pre-construction tasks were performed, and work plans written between August 2000 and June 2001The RA was performed between June 11 and July 28, 2001, with some startup activities being performed in August 2001. So costs incurred between August 2000 and September 2001 are included in the cost of execution of the RA.

8.1 COSTS OF RA

The basic construction costs for the implementation of the RA was estimated by the RD to be $ 142,000, in 1999 dollars. This estimate assumed that the excavated soil would be determined to be suitable for reuse as fill on-site, and that the garage building did not require demolition. These two assumptions proved to be correct. The RD cost estimate did not, however, include costs for preparation of RAWP, QAPP, HASP, or other required tasks related to the execution of the RA, such as for the disposal of waste paint-related material from the Site garage, and disposal of investigation-derived wastes.

Actual costs for the completion of the RA, including the work plans mentioned above was approximately $ 260,000 in 2001 dollars. Costs paid by the PRP Group for EPA oversight was $ 35,500 during this period.

9.0 OBSERVATIONS AND LESSONS LEARNED

The execution of the RA for this Site was fairly straightforward. There was no new technologies, techniques, or procedures incorporated into the RD or the RA. The project involved excavation of a relatively small volume of soil, construction of a fairly small groundwater treatment and soil flushing remediation system. The overall construction project went well, with no major problems being encountered. As a result there are no significant observations or lessons learned during the execution of this RA.

However, an important observation is that the remediation of the site is progressing very well. The Site soil has been remediated to well below the soil cleanup criteria, and the Site groundwater has demonstrated a trend towards the groundwater cleanup criteria.

The groundwater recovery and treatment system specified in the RD has performed very well, and is appropriately sized for the Site-specific conditions. The concentration of VOCs in the groundwater recovered by the three PW's was initially slightly below that predicted by the RD, and the removal efficiency of the specified Air Stripper has been excellent. The system operates reliably, and operates 24 hours per day, 7 days a week. The Site groundwater is therefore, being actively remediated continuously. Site monitoring data trom the quarterly monitoring well sampling events indicate that three of the five monitoring wells appear to meet the groundwater cleanup criteria, and the remaining two monitoring wells have shown a downward trend with respect to VOCs. The VOC concentration of recovered groundwater also has demonstrated a downward trend. These data demonstrate that the Site groundwater remediation is progressing very well.

10.0 CONTACT LIST

The Contact Information for personnel involved in the RA and ongoing activities at the site is provided in Table 5. The List includes mailing addresses, telephone and fax phone numbers, and email addresses of the contact persons for EPA, DEC, PRP Group, and the Remediation Contractor, ECOR Solutions.

Table 1
Byron Barrel and Dnun Site Ground Water Treatment System
Historical Influent VOC Analytical Results
ECOR Solutions, Inc.

Sampling Event	01/GW	02/GW	03/GW	04/GW	05/GW	06/GW	07/GW	08/GW
Date	7/28/01	8/8/01	8/18/01	9/18/01	9/27/01	10/5/01	10/17/01	11/8/01
Field Influent pH, std pH units			7.87	7.57	7.55	7.5	7.39	7.57
Total Suspended Solids, mg/i	6.5	4.0 U	4.0 U	4.0 U	4.0 U	4.0	4.0 U	7.0
1,1-Dichloroethane	23	47	60	19 J	58 D	43 J	46 J	32 J
1,1-Dichloroethene	5.1	12	16	12 J	16 DJ	50 U	13 J	13 J
Cis - 1,2 - Dichloroethene	1.0 J	1.4 J	1.0 J	50 U	50 U	50 U	50 U	50 U
Methylene Chloride	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U	50 U	50 U
1,1,1 - Trichloroethane	460 E	840 E	1200 E	1100	1100 D	780	1200	580
Trichloroethene	1.9 J	3.0 J	4.7 J	50 U	50 U	50 U	50 U	50 U
Toluene	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U	50 U	50 U
Vinyl Chloride	5.0 U	5.0 U	5.0 U	50 U	50 U	50 U	50 U	50 U
Total Confident VOCs	499	899	1276	1124	1174	823	1259	635

Sampling Event	09/GW	10/GW	11/GW	12/GW	13/GW	14/GW	15/GW	16/GW
Date	11/28/01	12/13/01	12/27/01	1/18/02	1/30/02	2/13/02	2/23/02	3/8/02
Field Influent pH, std pH units	7.42	7.43	7.54	7.64	7.71	7.84	7.48	7.79
Total Suspended Solids, mg/l	15.0	4.0 U		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane	20 J	13	9.3	11	10	16	10	11
1,1-Dichloroethene	9.4 J	4.2 J	4.6 J	4.3 J	4.0 J	5.2 J	3.5 J	3.7 J
Cis - 1,2 - Dichloroethene	25 U	10 U	5.0 U	5.0 U	10 U	10 U	5.0 U	5.0 U
Methylene Chloride	25 U	10 U	5.0 U	5.0 U	10 U	10 U	5.0 U	5.0 U
1,1,1 - Trichloroethane	530	260	220 E	250 E	220	320	240 E	320 E
Trichloroethene	25 U	3.3 J	4.2 J	4.9 J	4.3 J	3.2 J	3.3 J	3.4 J
Toluene	25 U	10 U	5.0 U	5.0 U	10 U	10 U	3.3 J	5.0 U
Vinyl Chloride	25 U	10 U	5.0 U	5.0 U	10 U	10 U	5.0 U	5.0 U
Total Confident VOCs	559	277	237	270	238	339	256	337

Sampling Event	17/GW	18/GW	19/GW	20/GW	21/GW	22/GW	23/GW	24/GW	25/GW	26/GW
Date	3/20/02	4/8/02	4/24/02	5/8/02	5/21/02	6/4/02	6/13/02	7/11/02	7/23/02	8/29/02
Field Influent pH, std pH units	7.72	7.09	6.99	7.07	7.41	7.11	7.34	7.19	6.45	6.97
Total Suspended Solids, mg/l	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane	11	10	10	12	20	19 J	18 D,J	20	9.0 J	8.8
1,1-Dichloroethene	4.1 J	2.5 J	2.5 J	2.4 J	3.5 J	25 U	20 U	3.4 J	2.6 J	1.3 J
Cis - 1,2 - Dichloroethene	5.0 U	10 U	10 U	10 U	10 U	25 U	20 U	10 U	10 U	5.0 U
Methylene Chloride	1.8 BJ	10 U	15 B	10 U	3.1 BJ	16 J	12 B,D,J	8.5 B,J	10 U	5.0 U
1,1,1 - Trichloroethane	330 E	240	230	260	350	390	360 D	380	210	150
Trichloroethene	3.4 J	3.3 J	2.8 J	2.7 J	3.3 J	25 U	20 U	3.7 J	10 U	1.9 J
Toluene	5.0 U	10 U	2.6 J	10 U	10 U	25 U	20 U	10 U	10 U	5.0 U
Vinyl Chloride	5.0 U	10 U	10 U	10 U	10 U	25 U	20 U	10 U	10 U	5.0 U
Total Confident VOCs	348	253	246	276	376	425	390	407	222	162

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

Byron Barrel and Drum Site Ground Water Treatment System
Hisorical Effluent VOC Analytical Results
ECOR Solutions, Inc.

Sampling Event	01/GW	02/GW	03/GW	04/GW	05/GW	06/GW	07/GW	08/GW
Date	7/28/01	8/8/01	8/18/01	9/18/01	9/27/01	10/5/01	10/17/01	11/8/01
Field Effluent pH, std pH units	8.44	8.44	8.5	8.38	8.38	8.32	8.35	8.35
Total Suspended Solids, mg/l	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis - 1,2 - Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane	1.5 J	5.0 U	1.5 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Chloride	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

Sampling Event	09/GW	10/GW	11/GW	12/GW	13/GW	14/GW	15/GW	16/GW
Date	11/28/01	12/13/01	12/27/01	1/18/02	1/30/02	2/13/02	2/23/02	3/8/02
Field Influent pH, std pH units	8.29	8.43	8.30	8.38	8.39	8.31	8.22	8.39
Total Suspended Solids, mg/l	8.0	4.0 U	4.0 U	4.0U	4.0U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane	5.0U	5.0 U	5.0 U	5.0U	5.0U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	5.0U	5.0 U	5.0 U	5.0U	5.0U	5.0 U	5.0 U	5.0 U
Cis - 1,2 - Dichloroethene	5.0U	5.0 U	5.0 U	5.0U	5.0U	5.0 U	5.0 U	5.0 U
Methylene Chloride	5.0U	5.0 U	5.0 U	5.0U	5.0U	5.0 U	5.0 U	5.0 U
1,1,1 - Trichloroethane	5.0U	5.0 U	5.0 U	5.0U	5.0U	5.0 U	5.0 U	5.0 U
Trichloroethene	5.0U	5.0 U	5.0 U	5.0U	5.0U	5.0 U	5.0 U	5.0 U
Toluene	5.0U	5.0 U	5.0 U	5.0U	5.0U	5.0 U	2.5J	5.0 U
Vinyl Chloride	5.0U	5.0 U	5.0 U	5.0U	5.0U	5.0 U	5.0 U	5.0 U

Sampling Event	17/GW	18/GW	19/GW	20/GW	21/GW	22/GW	23/GW	24/GW	25/GW
Date	3/20/02	4/8/02	4/24/02	5/8/02	5/21/02	6/4/02	6/13/02	7/11/02	7/23/2002
Field Influent pH, std pH units	8.47	8.05	8.0	8.08	8.23	8.23	8.16	8.06	6.66
Total Suspended Solids, mg/l	4.0 U	4.0 U	4.0 U	4.0	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
1,1-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cis - 1,2 - Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride	1.3 J	2.8 B,J	7.6 B	5.0 U	1.2 BJ	1.1 J	1.7 B,J	2.6 B,J	5.0 U
1,1,1 - Trichloroethane	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	5.0 U	5.0 U	1.2 J	5.0 U	5.0 U	5.0 U	1.5 J	5.0 U	5.0 U
Vinyl Chloride	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	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 excedes calibration range. D - Identified in the secondary dilution factor. B - Analyte found in blank as well as sample.

Table 3 Chronology of Events

Event or Document	Date	Notes
Record of Decision (ROD)	Sept. 29, 1989	EPA/ROD/R02-89-089
Unilateral Administrative Order (UAO)	1990	EPA
Consent Decree	January 5, 1995	89-CV-748A Unisys Corp. and Garlock, Inc., settling defendants
Pre-Remedial Design Investigation and Remedial Design Report	December, 1999	
100 Percent Remedial Design Submittal	December, 1999	
Explanation of Significant Differences	August, 2000	
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 10,2001	
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	
UZ Soil Sampling Event	August 14,2002	
Preliminary Close-Out Report	September, 2002	
RA Report (this report)	September, 2002	Final RA for Site Soils Interim RA for Site Groundwater

Table 4
Unsaturated Zone Results
8/16/2002
Byron Barrel and Drum Site

		Client ID	UZ-08-2/SS-6-8E	UZ-09-2/SS-6-8E	UZ-10-2/SS-6-8E
		Lab Sample ID	A2820508	A2820509	A2820510
		Date Sampled	8/14/2002	8/14/2002	8/14/2002
		Time Sampled	13:50	14:10	14:30
	Soil	Date Analyzed	8/16/2002	8/16/2002	8/16/2002
	Cleanup	Units	ug/kg	ug/kg	ug/kg
	Criteria	Moisture	7.5	8.7	5.5
Compound	ug/kg				
1,1,1-Trichloroethane	2300		1 J	2 J	7
Trichloroethene	4.9		5 U	5 U	5 U
Toluene	36000		5 U	5 U	5 U
Total Xylenes	8200		9 U	9 U	10 U
Tetrachloroethene	8.4		5 U	5 U	5 U
Ethylbenzene	52000		5 U	5 U	5 U

Table 4
Unsaturated Zone Results
8/16/2002
Byron Barrel and Drum Site

		Client ID	UZ-01-2/SS-5-7E	UZ-02-2/SS-6-8E	UZ-03-2/SS-6-8E	UZ-04-2/SS-5-7E
		Lab Sample ID	A2820501	A2820502	A2820503	A2820504
		Date Sampled	8/14/2002	8/14/2002	8/14/2002	8/14/2002
		Time Sampled	10:00	10:25	10:55	11:15
	Soil	Date Analyzed	8/16/2002	8/16/2002	8/16/2002	8/16/2002
	Cleanup	Units	ug/kg	ug/kg	ug/kg	ug/kg
	Criteria	Moisture	11.3	5.9	14.6	9.7
Compound	ug/kg					
1,1,1-Trichloroethane	2300		5 U	14	330	5 U
Trichloroethene	4.9		5 U	5 U	5 U	5 U
Toluene	36000		5 U	5 U	5 U	5 U
Total Xylenes	8200		10 U	10 U	11 U	10 U
Tetrachloroethene	8.4		5 U	5 U	5 U	5 U
Ethylbenzene	52000		5 U	5 U	5 U	5 U

Table 4
Unsaturated Zone Results
8/16/2002
Byron Barrel and Drum Site

		Client ID	UZ-05-2/SS-6-8E	UZ-DUP-2/SS	UZ-06-2/SS-6-8E	UZ-07-2/SS-5-7E
		Lab Sample ID	A2820505	A2820511	A2820506	A2820507
		Date Sampled	8/14/2002	8/14/2002	8/14/2002	8/14/2002
		Time Sampled	11:40	11:40	13:15	13:35
	Soil	Date Analyzed	8/16/2002	8/16/2002	8/16/2002	8/16/2002
	Cleanup	Units	ug/kg	ug/kg	ug/kg	ug/kg
	Criteria	Moisture	9.1	10.3	14.5	10.2
Compound	**ug/kg**		duplicate of UZ-05-2/SS-6-8E			
1,1,1-Trichloroethane	2300		5	3 J	54	5 U
Trichloroethene	4.9		5 U	5 U	5 U	5 U
Toluene	36000		5 U	5 U	5 U	5 U
Total Xylenes	8200		10 U	9 U	11 U	10 U
Tetrachloroethene	8.4		5 U	5 U	5 U	5 U
Ethylbenzene	52000		5 U	5 U	5 U	5 U

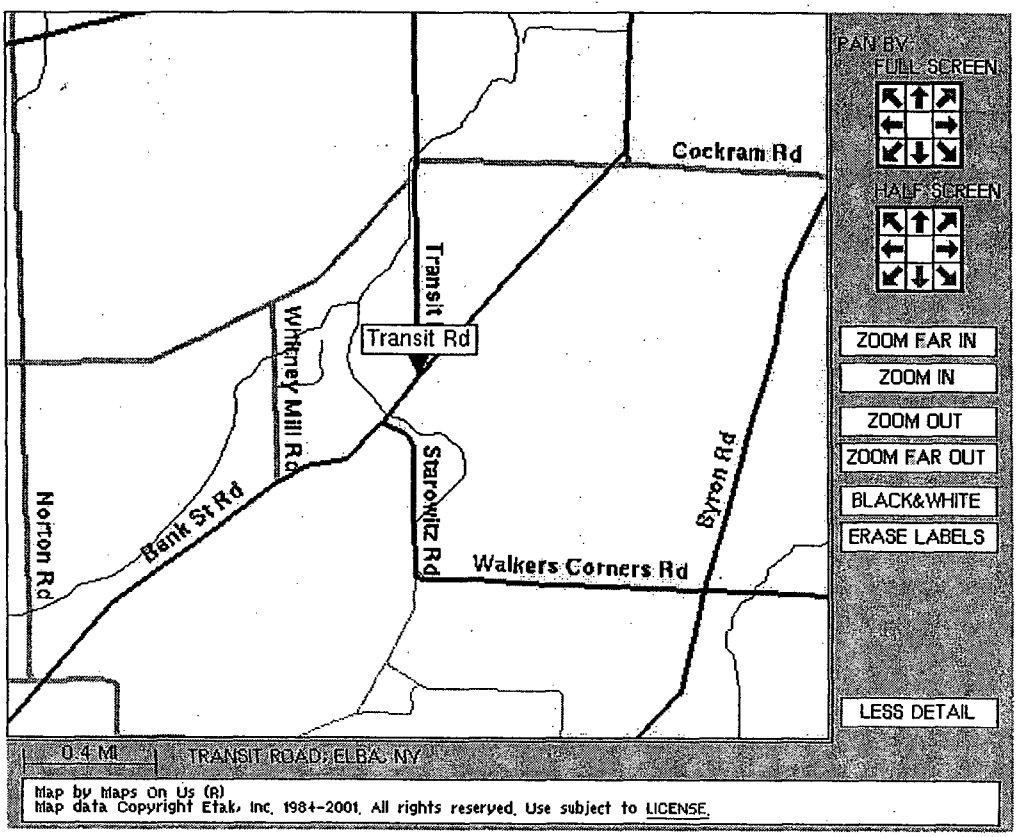
TABLE 5

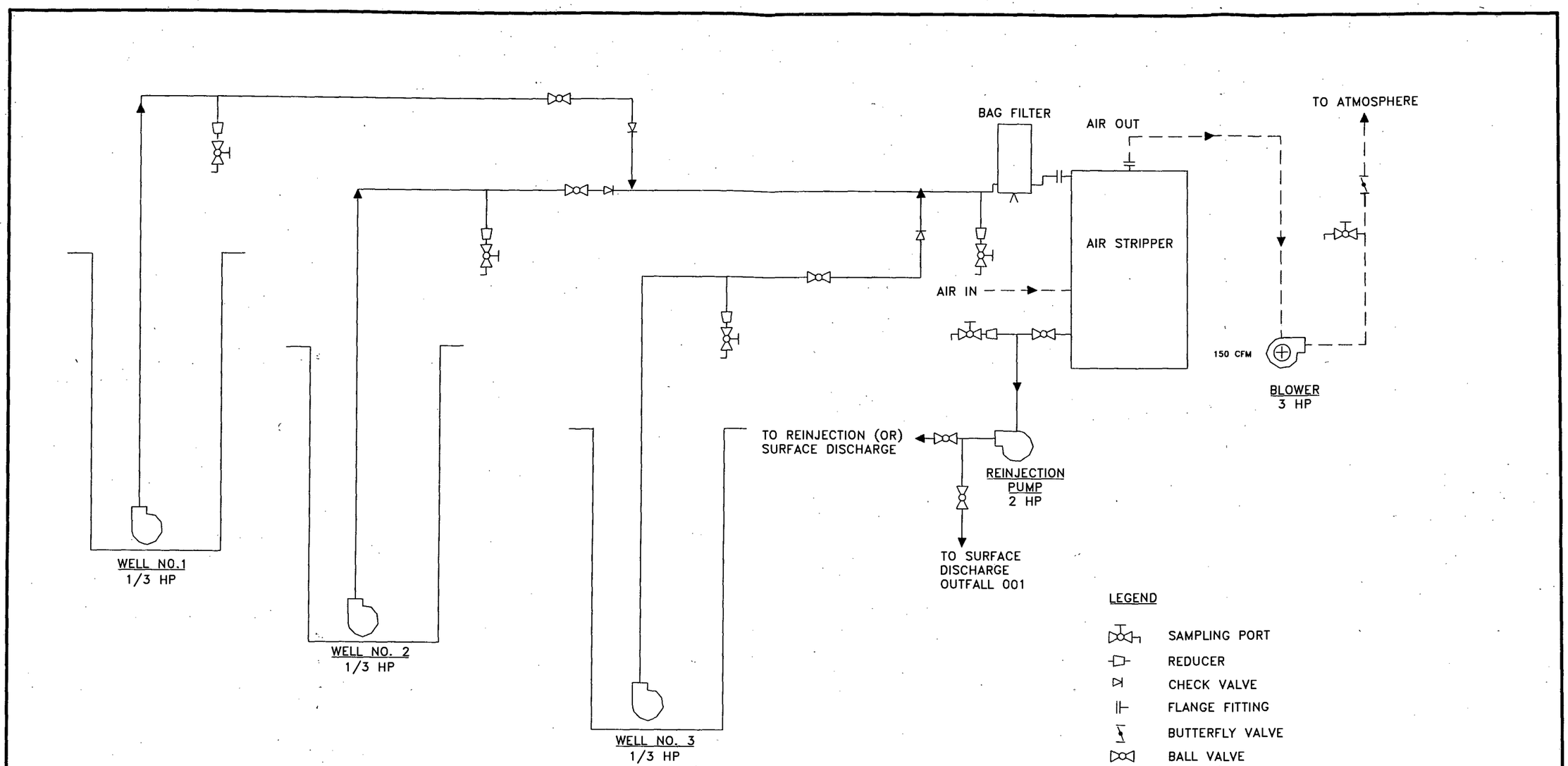
CONTACT LIST FOR BYRON BARREL & DRUM SITE

Mr. George Jacob USEPA - Region 2 290 Broadway - 20th Floor New York, New York 10007-1866 Jacob.George@epamail.epa.gov	973 921 0118 or 212 637 4266
Terry R. Etter, P.E. Unisys Corporation 3199 Pilot Knob Road, MS F1B05 Eagan, Minnesota 55121-1328 terry.etter@unisys.com	651-687-2881
Mr. Christopher Rockwell Garlock Sealing Technologies 1666 Division Street Palmyra, NY 14522 Chris.rockwell@Goodrich.com	315 597 3101
Mr. John Grathwol New York State DEC Bureau of Construction Services Division of Environunental Remediation 625 South Broadway, 12th Floor Albany, NY 1223-7013 jcgrathw@gw.dec.state.ny.us	518 402 9812
Mark Gouch, ECOR Solutions, Inc. 260 Crossways Park Drive Woodbury, NY 11797 gouch@ecor-solutions.com	516 802 5748

Figure 1

Site Location Map





TITLE

GROUND WATER TREATMENT SYSTEM FLOW DIAGRAM

PREPARED FOR

BYRON BARREL & DRUM PRP GROUP

Environmental Resources Management

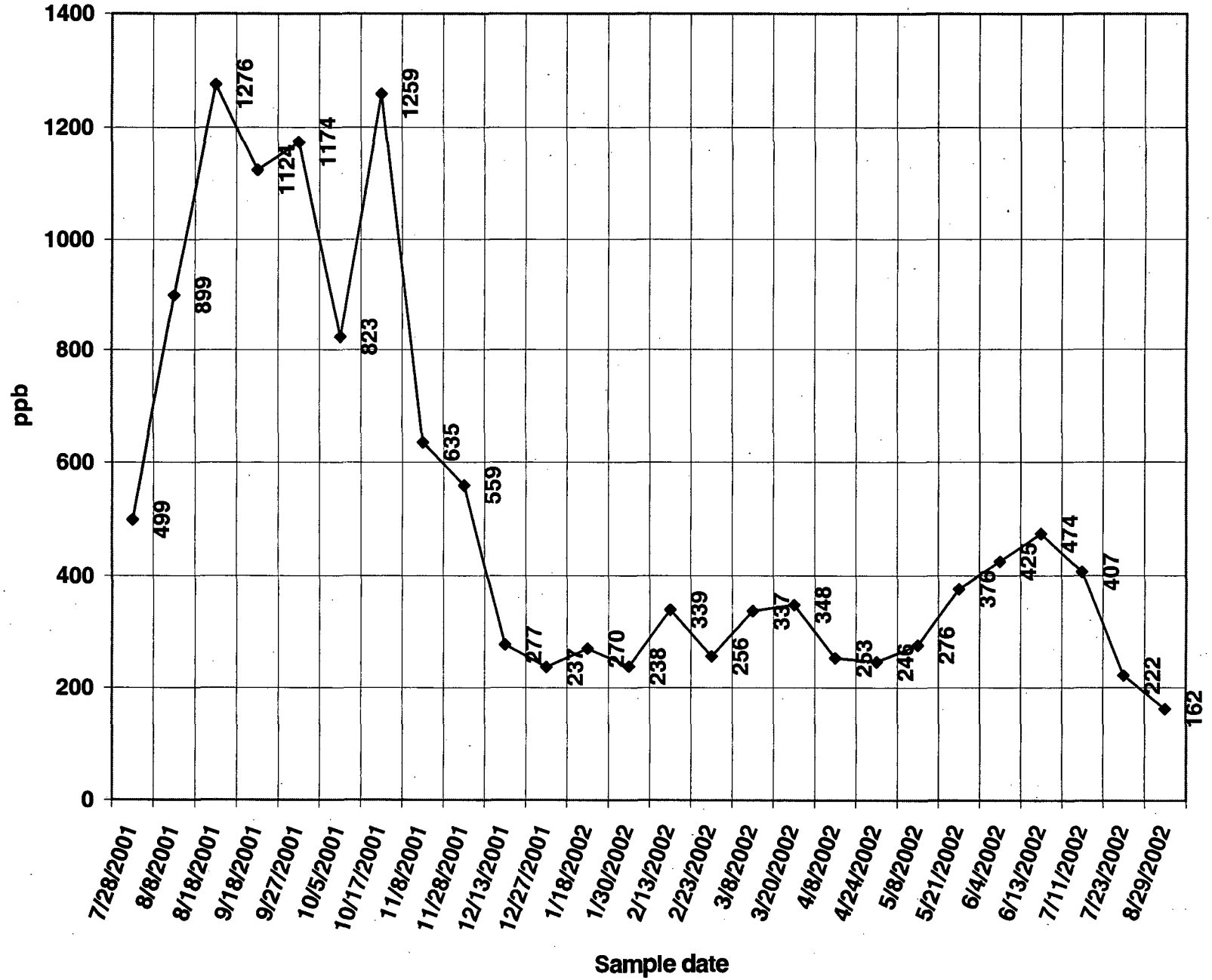
ERM

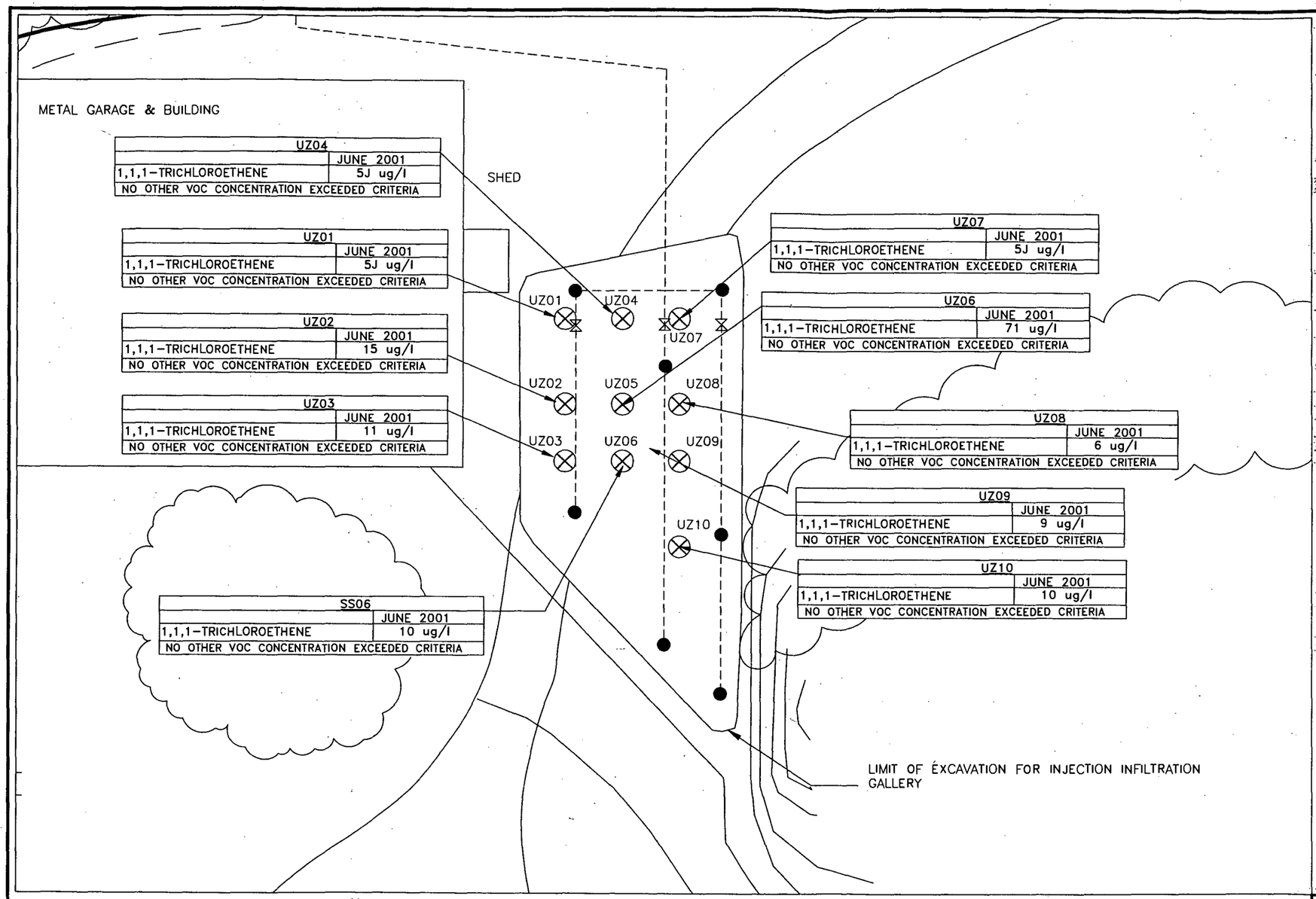
SCALE	FIGURE
NONE	3

DRAWN:	JOB NO.:	FILE NAME:	DATE
MKR	ECW00	FLOW	9/18/02

Figure 4

Byron Ground Water Treatment Sytem Influent VOC Concentration (ppb)





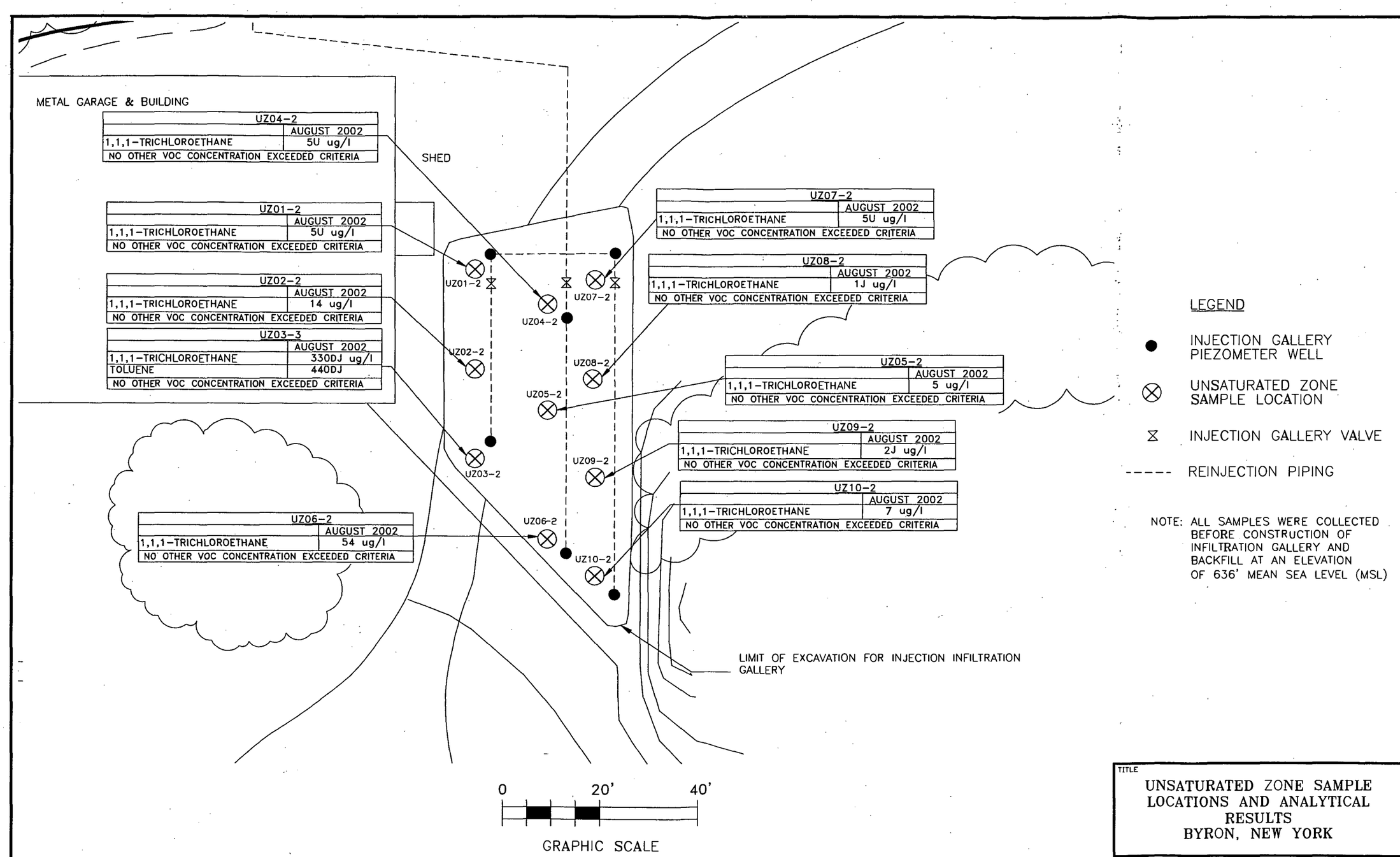
TITLE

UNSATURATED ZONE SAMPLE LOCATIONS AND ANALYTICAL RESULTS BYRON, NEW YORK

PREPARED FOR

BYRON BARREL & DRUM PRP GROUP

ERM Environmental Resources Management			SCALE: GRAPHIC	FIGURE: 5
DRAWN: Y.S./M.R.	JOB NO.: ECW00.00.01	FILE NAME: ECW00BYRONREV2	DATE: 9/18/02	



NOTE: ALL SAMPLES WERE COLLECTED BEFORE CONSTRUCTION OF INFILTRATION GALLERY AND BACKFILL AT AN ELEVATION OF 636' MEAN SEA LEVEL (MSL)

TITLE

UNSATURATED ZONE SAMPLE LOCATIONS AND ANALYTICAL RESULTS BYRON, NEW YORK

PREPARED FOR

BYRON BARREL & DRUM PRP GROUP

ERM Environmental Resources Management			SCALE: GRAPHIC	FIGURE: 6
DRAWN: M.R./E.M.F.	JOB NO.: EC293.01.02	FILE NAME: EC29301001	DATE: 9/18/02	

APPENDIX A

Soil and Groundwater Cleanup Criteria from ROD

TABLE 12

SOURCE CONTROL (SOIL) CLEANUP LEVELS
BYRON BARREL AND DRUM SITE
BYRON, NEW YORK

Chemical	Soil Cleanup Level (µg/kg)		
	ARAR-Based(1)	Risk-Based (10^{-6})(2)	Risk-Based (10^{-4})(3)
ethylbenzene	56,000	52,000 (5)	52,000 (5)
toluene	45,000	36,000 (5)	36,000 (5)
xylenes	8,200	58,000 (5)	58,000 (5)
1,1,1-trichloroethane	2,300	5,500 (5)	5,500 (5)
tetrachloroethene	140 (4)	8.4	840
trichloroethene	47	4.9	490

(1) Cleanup level based on groundwater cleanup level corresponding to the MCL or MCLG unless otherwise noted.
(2) Cleanup level based on a cumulative incremental cancer risk of 10^{-6} (groundwater use) unless noted otherwise.
(3) Cleanup level based on a cumulative incremental cancer risk of 10^{-4} (groundwater use) unless noted otherwise.
(4) Cleanup level based on an assumed groundwater cleanup level of 5 µg/l (similarity to other chlorinated aliphatics)
(5) Cleanup level based on a Hazard Index below 1 (i.e., 0.9).

TABLE 13

MANAGEMENT OF MIGRATION (GROUNDWATER) CLEANUP LEVELS
BYRON BARREL AND DRUM SITE
BYRON, NEW YORK

Chemical	ARAR-Based[1] (ug/l)
benzene	5/ND[2]
toluene	2,000(50)[3]
xylenes	440(50)
chlorobenzene	488(20)[4]
1,2-dichlorobenzene	620/4.7
1,4-dichlorobenzene	75/4.7
1,1,2-trichloroethane	5(0.6)[5]
1,1,1-trichloroethane	200(50)
1,2-dichloroethane	5(0.8)
1,1-dichloroethane	5(50)[5]
tetrachloroethene	5(0.7)[6]
trichloroethene	5/10
1,1-dichloroethene	7(0.07)
vinyl chloride	2/5
chloroform	100/100
methylene chloride	100(50)
bromodichloromethane	100(50)
chlorodibromomethane	100(50)
N-nitrosodiphenylamine	4.9(50)[4]
2-butanone	172[7]
carbon tetrachloride	5

(1) ARAR-based cleanup levels based on MCLs/MCLGs unless noted otherwise.
(2) The first value is the Federal ARAR-based value. The second is the State Ambient Water Quality Standard for Class GA groundwater (ND - not detectable).
(3) Value in parentheses is the State Ambient Water Quality guideline.
(4) AWQC for the protection of public health through drinking water exposure.
(5) Based on MCL/MCLG for 1,2-dichloroethane.
(6) Based on MCL/MCLG for trichloroethene.
(7) EPA Lifetime Drinking Water Health Advisory.

APPENDIX B

Unsaturated Zone Data Validation Reports

DATA VALIDATION REVIEW
SOIL SAMPLE ANALYSES
UNSATURATED ZONE SAMPLES
BYRON BARREL & DRUM SITE
BYRON, NEW YORK
ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)
PROJECT NUMBER EC293.01
SEVERN TRENT LABORATORIES (STL), BUFFALO, NEW YORK
SAMPLE DELIVERY GROUP (SDG) NUMBER 081402
ID NUMBERS A02-8205

Deliverables

The above referenced data summary packages and sample data packages for ten (10) soil samples, one (1) blind field duplicate, one (1) trip blank and one (1) set of matrix spike/matrix spike duplicate (MS/MSD) samples contains all required deliverables as stipulated under the 2000 New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) Superfumd Category for Target Compoumd List (TCL) Volatile Organic Compounds (VOCs) with the following project specific compounds: 1,1,1-trichloroethane, trichloroethene, toluene, xylenes (total), tetrachloroethene and ethylbenzene. All samples were collected in accordance with SW-846 Method 5035. The data have been validated according to the protocols and quality control (QC) requirements of the ASP, the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Fumctional Guidelines for Organic Data Review (October 1999), the USEPA Region II CLP Data Review SOP HW-6, Revision 12, March 2001: CLP Organics Data Review and Preliminary Review, and the reviewer's professional judgment.

The validation report pertains to the following samples:

Samples		QC Samples
UZ-01-2/SS-5-7E	UZ-06-2/SS-6-8E	UZ-DUP-2/SS (blind field duplicate)
UZ-02-2/SS-6-8E	UZ-07-2/SS-5-7E	UZ-08-2/SS 6-8E MS/MSD
UZ-03-2/SS-6-8E	UZ-08-2/SS-6-8E	TRIP BLANK
UZ-04-2/SS-5-7E	UZ-09-2/SS-6-8E	
UZ-05-2/SS-6-8E	UZ-10-2/SS-6-8E	

The following items/criteria were reviewed for this report:

- Case narrative and deliverables compliance
- Holding times both technical and procedural and sample preservation

- System Monitoring Compound recoveries, summary and data
- MS/MSD results, recoveries, summary and data
- Matrix Spike Blank (MSB) recoveries, summary and data
- Method blank summary and data
- Gas Chromatography (GC)/Mass Spectroscopy (MS) tuning and performance
- Initial and continuing calibration summaries and data
- Internal standard areas, retention times, summary and data
- Blind Field Duplicate results
- Trip Blank results
- Organic analysis data sheets (Form I)
- GC/MS chromatograms, mass spectra and quantitation reports
- Quantitation/detection limits
- Qualitative and quantitative compound identification

The items listed above were technically and contractually in compliance with USEPA CLP and NYSDEC ASP protocols with exceptions discussed in the text below. The data have been validated according to the procedures outlined above and qualified accordingly.

Volatiles

- The incorrect spiking solution was utilized for the initial MSB applicable to the trip blank. The laboratory reanalyzed an MSB with the correct spiking solution and reanalyzed the trip blank and the holding blank. Toluene was detected in the reanalysis of both the trip blank and the holding blank. This can be attributed to laboratory contamination. Toluene was not detected in any sample except the diluted analysis of sample UZ-03-2/SS-6-8E. Toluene has therefore been negated and flagged "U" in this analysis.

- The following table lists samples that were reanalyzed at dilutions (indicated by a "DL" suffix) due to target compounds concentrations exceeding the linear calibration range of the instrument in the initial analysis. The laboratory has indicated those compounds with an "E" qualifier on the organic analysis data sheets (Form I). The dilution analysis results should be used only for those compounds flagged with an "E" qualifier on the initial analysis Form I. All other results should be used from the initial analyses.

Sample	Dilution Factor
UZ-03-2/SS 6-8E DL	125x (medium level)

Package Summary

The sample data are valid and useable without qualification.

Signed: _____ Dated: 16 September 2002

Andrew J. Coenen
Project Scientist

UNISYS CORPORATION
UNYSIS - BYRON BARREL & DRUM SITE
UNISYS - SOIL-ASP 2000-VOA (ENCORE) - SELECT LIST
ANALYSIS DATA SHEET

000007

Client No: UZ-01-2/SS-5-7E

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) SOIL Lab Sample ID: A2820501

Sample wt/vol: 5.42 (g/mL) G Lab File ID: F5047.RR

Level: (low/med) LOW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. 11.3 Heated Purge: Y Date Analyzed: 08/16/2002

GC Column: DB-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) UG/KG	Q
71-55-6	1,1,1-Trichloroethane	5	U
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	5	U
1330-20-7	Total Xylenes	10	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

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UNYSIS - BYRON BARREL & BRUM SITE
UNISYS - SOIL-ASP 2000-VOA (ENCORE)--SELECT LIST
ANALYSIS DATA SHEET

000008

Client No

UZ-02-2/SS-6-8E

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) SOIL Lab Sample ID: A2820502

Sample wt/vol: 5.17 (g/mL) G Lab File ID: F5048.RR

Level: (low/med) LOW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. 5.9 Heated Purge: Y Date Analyzed: 08/16/2002

GC Column: DB-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) UG/KG	Q
71-55-6	1,1,1-Trichloroethane	14	
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	5	U
1330-20-7	Total Xylenes	10	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

UNISYS CORPORATION
UNYSIS - BYRON BARREL & DRUM SITE
UNISYS - SOIL-ASP 2000-VOA (ENCORE) - SELECT LIST
ANALYSIS DATA SHEET

000009

Client No.

UZ-03-2/SS-6-8E

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) SOIL Lab Sample ID: A2820503

Sample wt/vol: 5.42 (g/mL) G Lab File ID: F5049.RR

Level: (low/med) LOW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. 14.6 Heated Purge: Y Date Analyzed: 08/16/2002

GC Column: DB-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) UG/KG	Q
71-55-6	1,1,1-Trichloroethane	250	E
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	5	U
1330-20-7	Total Xylenes	11	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

Use result for circled compound from diluted analysis

UNISYS CORPORATION
UNYSIS - BYRON BARREL & DRUM SITE
UNISYS - SOIL-ASP 2000-VOA (ENCORE) - SELECT LIST
ANALYSIS DATA SHEET

00001

Client I

UZ-03-2/SS-6-8E DL

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) SOIL Lab Sample ID: A2820503DL

Sample wt/vol: 5.09 (g/mL) G Lab File ID: F5063.RR

Level: (low/med) MED Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. 14.6 Heated Purge: Y Date Analyzed: 08/16/2002

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

Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100.00 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-55-6	1,1,1-Trichloroethane	330	~~DJ~~
79-01-6	Trichloroethene	720	U
108-88-3	Toluene	720 ~~440~~	~~DJ~~ U
1330-20-7	Total Xylenes	1400	U
127-18-4	Tetrachloroethene	720	U
100-41-4	Ethylbenzene	720	U

Use circled result only

A

UNISYS CORPCRATION
UNYSIS - BYRON BARREL & DRUM SITE
UNISYS - SOIL-ASP 2000-VOA (ENCORE) - SELECT LIST
ANALYSIS DATA SHEET

000011

Client No

UZ-04-2/SS-5-7E

Lab Name: STL Buffalo Contract: _____

Iab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) SOIL lab Sample ID: A2820504

Sample wt/vol: 5.46 (g/mL) G Lab File ID: F5050.RR

Level: (low/med) LCW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. 9.7 Heated Purge: Y Date Analyzed: 08/16/2002

GC Column: DB-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) UG/KG	Q
71-55-6	1,1,1-Trichloroethane	5	U
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	5	U
1330-20-7	Total Xylenes	10	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

UNISYS CORPORATION
UNYSIS - BYRON BARREL & DRUM SITE
UNISYS - SOIL-ASP 2000-VOA (ENCCRE)- SELECT LIST
ANALYSIS DAIA SHEET

000012

Client No.

UZ-05-2/SS-6-8E

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) SOIL Lab Sample ID: A2820505

Sample wt/vol: 5.30 (g/mL) G Lab File ID: F5051.RR

Level: (low/med) LOW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. 9.1 Heated Purge: Y Date Analyzed: 08/16/2002

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

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

CAS NO.	CCMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
71-55-6	1,1,1-Trichloroethane	5	
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	5	U
1330-20-7	Total Xylenes	10	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

UNISYS CORPORATION
UNYSIS - BYRON BARREL & DRUM SITE
UNISYS - SOIL-ASP 2000-VOA (ENCORE) - SELECT LIST
ANALYSIS DATA SHEET

000013

Client No

UZ-06-2/SS-6-8E

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) SOIL Lab Sample ID: A2820506

Sample wt/vol: 5.40 (g/mL) G Lab File ID: F5052.RR

Level: (low/med) LOW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. 14.5 Heated Purge: Y Date Analyzed: 08/16/2002

GC Column: DB-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) U3/KG	Q
71-55-6	1,1,1-Trichloroethane	54	
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	5	U
1330-20-7	Total Xylenes	11	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

UNISYS CORPORATION
UNYSIS - BYRON BARREL & DRUM SITE
UNISYS - SOIL-ASP 2000-VOA (ENCORE) -- SELECT LIST
ANALYSIS DATA SHEET

000014

Client N

UZ-07-2/SS-5-7E

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) SOIL Lab Sample ID: A2820507

Sample wt/vol: 5.71 (g/mL) G Iab File ID: F5053.RR

Level: (low/med) IOW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. 10.2 Heated Purge: Y Date Analyzed: 08/16/2002

GC Column: DB-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) UG/KG	Q
71-55-6	1,1,1-Trichloroethane	5	U
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	5	U
1330-20-7	Total Xylenes	10	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

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UNYSIS - BYRON BARREL & DRUM SITE
UNISYS - SOIL-ASP 2000-VOA (ENCORE) - SELECT LIST
ANALYSIS DATA SHEET

000015

Client No.

UZ-08-2/SS-6-8E

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) SOIL Lab Sample ID: A2820508

Sample wt/vol: 5.86 (g/mL) G Lab File ID: F5054.RR

Level: (low/med) LOW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. 7.5 Heated Purge: Y Date Analyzed: 08/16/2002

GC Column: DB-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) UG/KG	Q
71-55-6	1,1,1-Trichloroethane	1	J
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	5	U
1330-20-7	Total Xylenes	9	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

UNISYS CORPORATION
UNYSIS - BYRON BARREL & DRUM SITE
UNISYS - SOIL-ASP 2000-VOA (ENCORE) - SELECT LIST
ANALYSIS DATA SHEET

000016

Client No.

UZ-09-2/SS-6-8E

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) SOIL Lab Sample ID: A2820509

Sample wt/vol: 5.91 (g/mL) G Lab File ID: F5055.RR

Level: (low/med) DOW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. 8.7 Heated Purge: Y Date Analyzed: 08/16/2002

GC Column: DB-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) UG/KG	Q
71-55-6	1,1,1-Trichloroethane	2	J
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	5	U
1330-20-7	Total Xylenes	9	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

UNISYS CORPORATION
UNYSIS - BYRON BARREL & DRUM SITE
UNISYS - SOIL-ASP 2000-VOA (ENCORE) - SELECT LIST
ANALYSIS DATA SHEET

000017

Client Nc: UZ-10-2/SS-6-8E

Iab Name: STL Buffalo Contract: _____

Iab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) SOIL Lab Sample ID: A2820510

Sample wt/vol: 5.31 (g/mL) G Lab File ID: F5056.RR

Level: (low/med) LOW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. 5.5 Heated Purge: Y Date Analyzed: 08/16/2002

GC Column: DB-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) UG/KG	Q
71-55-6	1,1,1-Trichloroethane	7	
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	5	U
1330-20-7	Total Xylenes	10	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

UNISYS CORPORATION
UNYSIS - BYRON BARREL & DRUM SITE
UNISYS - SOIL-ASP 2000-VOA (ENCORE) - SELECT LIST
ANALYSIS DATA SHEET

000018

Client N

UZ-DUP-2/SS

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) SOIL Lab Sample ID: A2820511

Sample wt/vol: 5.92 (g/mL) G lab File ID: F5057.RR

Level: (low/med) LOW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. 10.3 Heated Purge: Y Date Analyzed: 08/16/2002

GC Column: DB-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) UG/KG	Q
71-55-6	1,1,1-Trichloroethane	3	J
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	5	U
1330-20-7	Total Xylenes	9	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

UNISYS CORPORATION
UNYSIS - BYRON BARREL & DRUM SITE
EPA ASP 2000 - VOLATILES (SELECT LIST)
ANALYSIS DATA SHEET

000019

Client No.

TRIP BLANK

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) WATER Lab Sample ID: A2820512

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: F5024.RR

Level: (low/med) LOW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. _____ Heated Purge: Y Date Analyzed: 08/15/2002

GC Column: DB-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) UG/L	Q
71-55-6	1,1,1-Trichloroethane	5	U
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	5	U
1330-20-7	Total Xylenes	10	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

UNISYS CORPORATION
UNYSIS - BYRON BARREL & DRUM SITE
EPA ASP 2000 - VOLATILES (SELECT LIST)
ANALYSIS DATA SHEET

000020

Client Nc

TRIP BLANK RI

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: 081402

Matrix: (soil/water) WATER lab Sample ID: A2820512RI

Sample wt/vol: 5.00 (g/mL) ML lab File ID: F5061.RR

Level: (low/med) LOW Date Samp/Recv: 08/14/2002 08/14/2002

% Moisture: not dec. _____ Heated Purge: Y Date Analyzed: 08/16/2002

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

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

CAS NO.	GCMPOUND	GCNCENIRATION UNITS: (ug/L or ug/Kg) UG/L	Q
71-55-6	1,1,1-Trichloroethane	5	U
79-01-6	Trichloroethene	5	U
108-88-3	Toluene	9	
1330-20-7	Total Xylenes	10	U
127-18-4	Tetrachloroethene	5	U
100-41-4	Ethylbenzene	5	U

APPENDIX C

Certification of Completion of Construction And Operational and Functional Status

Certification of Completion of Construction,
And Operational and Functional Status of Remedial Action
Byron Barrel & Drum Area 2 Site

I hereby certify that the construction of the Remedial Action of the Byron Barrel & Drum Area 2 Site was completed as per the Remedial Design Plans and Specifications as of July 15, 2001, and that the Remedial Action Groundwater Treatment and Soil Flushing Equipment was Operational and Functional as of October 1, 2001.

Mark A. Gouch, Project Manager, ECOR Solutions, Inc.

September 26, 2002
Date