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FINAL SEMI-ANNUAL PROGRESS REPORT NUMBER 18

(Operating Period January 1 through June 30, 2004)

Prepared For:

Non-City Remedial Design/Remedial Action Settlors
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ACRONYMS AND ABBREVIATIONS

AST	Aboveground Storage Tank
CLP	Contract Laboratory Program
1,2-DCE	1,2-dichloroethene
gpd	gallons per day
gpm	gallons per minute
HDPE	high-density polyethylene
IDEM	Indiana Department of Environmental Management
InSite	InSite, Incorporated
ISC-LT	Industrial Source Complex – Long-Term
Lb.	pound
MWH	MWH Americas, Inc.
NFG	National Functional Guidelines
O&M	operation and maintenance
OM&M	operation, maintenance, and monitoring
Pace	Pace Analytical Services, Inc.
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
POTW	publicly owned treatment works
ppb	parts per billion
PRG	Preliminary Remediation Goal
QAPjP	Quality Assurance Project Plan
QC	quality control
RD/RA	Remedial Design/Remedial Action
scfm	standard cubic feet per minute
SE	Southeast
SVE	soil vapor extraction
U.S. EPA	United States Environmental Protection Agency
TCE	trichloroethene
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
v/v	volume per volume basis
VOC	volatile organic compound
VC	vinyl chloride
Weston	Roy F. Weston
WRR	Wayne Reclamation & Recycling

1.0 INTRODUCTION

This document is submitted on behalf of the Non-City Remedial Design/Remedial Action (RD/RA) Settlors. It is intended to summarize operations of the remediation system constructed by the Non-City RD/RA Settlors at the Wayne Reclamation & Recycling (WRR) Site (also known as the Wayne Waste Oil Site) located in Columbia City, Indiana for the reporting period of January 1 through June 30, 2004. Included in this document is a description of the system optimization, assessment, and testing activities that have occurred during the reporting period, as well as the on-going evaluation of the remediation system performance. This document is organized as follows:

- *Section 2* *Monitoring, Data Validation, and Field Work*
- *Section 3* *Soil Vapor Extraction System*
- *Section 4* *Air Sparging System*
- *Section 5* *Groundwater Extraction System*
- *Section 6* *Groundwater Pre-Treatment System*
- *Section 7* *Off-Gas Treatment System*
- *Section 8* *Conclusions and Recommendations*

This document is intended to supplement information presented in previous Semi-Annual Progress Reports.

1.1 BACKGROUND

Construction of the remediation system at the WRR Site took place between 1994 and January 1995. The remediation system was constructed to remove volatile organic compounds (VOCs) from soil and groundwater. The system includes:

- A 150-gallons per minute (gpm) design capacity groundwater extraction system, including a 1,600-foot-long soil-bentonite cut-off wall (i.e., slurry wall).
- A groundwater treatment system consisting of an influent storage tank, an air stripping tower, and a 5,800-foot-long force main that delivers treated groundwater to the Columbia City publicly owned treatment works (POTW).
- A 2,400-standard cubic feet per minute (scfm) soil vapor extraction (SVE) system and a 100-scfm air sparging system (nominal rates).
- A 3,200-scfm off-gas treatment system, which was removed from service effective June 24, 1999.

A layout for the three primary components of the remediation system, including the groundwater recovery, SVE, and air sparging systems, are indicated on Figures 1, 2, and 3, respectively.

A Prefinal Inspection of the remediation system was held with the United States Environmental Protection Agency (U.S. EPA) on January 27, 1995. The Final Inspection with the U.S. EPA was conducted on May 18, 1995. The system was operated in startup/shakedown mode from January 1995 through September 1995, pending approval of the *Final Operation, Maintenance, and Monitoring Plan* (*Final OM&M Plan*; Montgomery Watson, September 1995). U.S. EPA approval of the *Final OM&M Plan* was granted on September 27, 1995. In addition, U.S. EPA approval of the *Interim Remedial Action Report* (Montgomery Watson, August 1995) was granted on September 29, 1995.

Roy F. Weston (Weston) of Vernon Hills, Illinois (remediation system general contractor) acted as system operator after the completion of system construction activities, from September 1995 to January 31, 1998. Weston subcontracted the majority

of the OM&M activities to InSite, Incorporated (InSite) of Fort Wayne, Indiana. Montgomery Watson (system designer) was responsible for collecting air and water samples in accordance with the approved *Final OM&M Plan* during Weston's operation of the system. From February 1, 1998 until March 31, 2004, Montgomery Watson replaced Weston as the system operator and retained InSite to perform the day-to-day system operation. As of April 1, 2004, InSite was contracted directly to operate, maintain, and monitor the WRR Site remediation system. MWH Americas, Inc. (MWH) continues to assist with the monitoring and optimization of system performance. Note that as of June 21, 2001, Montgomery Watson became Montgomery Watson Harza, and as of January 1, 2003, Montgomery Watson Harza became MWH.

Additional information on the remediation system can be found in the following reports:

- *Final Design Evaluation* (Warzyn, November 19, 1993).
- *Interim Remedial Action Report* (Montgomery Watson, August 1995).
- *Final Operation, Maintenance, and Monitoring (OM&M) Plan* (Montgomery Watson, September 1995) and *Addendum* (Montgomery Watson, July 1999).
- *Final Operations and Maintenance Quality Assurance Project Plan (O&M QAPjP)* (Montgomery Watson, September 1995) and *Addendum* (Montgomery Watson, July 1999).
- *Technical Memorandum Number One* (Montgomery Watson, February 12, 1996).
- *Technical Memorandum Number Two* (Montgomery Watson, November 1996).
- *Semi-Annual Progress Report Number 3* (Montgomery Watson, August 1997).
- *Semi-Annual Progress Report Number 4* (Montgomery Watson, November 1997).
- *Semi-Annual Progress Report Number 5* (Montgomery Watson, April 1998).

- *Semi-Annual Progress Report Number 6* (Montgomery Watson, September 1998).
- *Semi-Annual Progress Report Number 7* (Montgomery Watson, March 1999).
- *Semi-Annual Progress Report Number 8* (Montgomery Watson, August 1999).
- *Semi-Annual Progress Report Number 9* (Montgomery Watson, March 2000).
- *Semi-Annual Progress Report Number 10* (Montgomery Watson, October 2000).
- *Semi-Annual Progress Report Number 11* (Montgomery Watson, March 2001).
- *Semi-Annual Progress Report Number 12* (Montgomery Watson Harza, September 2001).
- *Semi-Annual Progress Report Number 13* (MWH, April 2002).
- *Semi-Annual Progress Report Number 14* (MWH, September 2002).
- *Semi-Annual Progress Report Number 15* (MWH, July 2003).
- *Hydrological Assessment Letter Report, January through July 2003* (MWH, August 2003).
- *Semi-Annual Progress Report Number 16* (MWH, September 2003).
- *Hydrological Assessment Letter Report, July through December 2003* (MWH, January 2004).
- *Semi-Annual Progress Report Number 17* (MWH, March 2004).

2.0 MONITORING, DATA VALIDATION, AND FIELD WORK

Initial monitoring and optimization testing of the WRR remediation system commenced in early 1995, during the startup/shakedown mode of system operations. Additional monitoring and system optimization has continued through the first half of 2004. Monitoring and testing was conducted primarily to evaluate the performance of the remediation system in removing VOCs from soils and groundwater, as well as to address the monitoring and testing requirements set forth in the *Final OM&M Plan*. The hydrological assessment activities were continued at the WRR Site during this reporting period. A summary of the monitoring activities conducted, of the data validation report, and of significant field events and activities are presented in the following sections.

2.1 SITE-SPECIFIC PRELIMINARY REMEDIATION GOALS

Development of the groundwater and soil site-specific PRGs are detailed in Appendix C of the *Final OM&M Plan* (Montgomery Watson, September 1995) and *Final O&M QAPjP* (Montgomery Watson, September 1995). Soil PRGs are specified based on the thickness of soil column and area. Soil compliance monitoring will begin when it is determined that an area likely meets the soil site-specific PRGs, as indicated by groundwater detections less than the groundwater site-specific PRGs. The five constituents listed below were noted in the *Final OM&M Plan* to be the principal contaminants of concern necessitating groundwater and soil remediation at the WRR Site. The most conservative groundwater PRGs and soil PRGs for the entire soil column for the principal contaminants of concern are provided in the following table.

Principal Contaminants of Concern	Groundwater PRGs, µg/L	Soil PRGs for Entire Soil Column[1], µg/kg			
		SE Area-North	SE Area-South	AST Area	MW7S
Vinyl chloride (VC)	0.0283	37.1	25.2	2.6	1,987.0
Tetrachloroethene (PCE)	1.43	67.1	1.811.6	44.2	4,796.0
Trichloroethene (TCE)	2.54	19.7	804.6	17.6	664
cis-1,2-Dichloroethene (cis-1,2-DCE)	70	--	--	--	--
trans-1,2-Dichloroethene (trans-1,2-DCE)	100	--	--	--	--
1,2-Dichloroethene (DCE)	--	186.3	8,578.4	184.7	4,219.0

Notes:
µg/L = micrograms per liter
µg/kg = micrograms per kilogram
-- = No PRG developed for this constituent.
[1] = PRGs were also developed for a one foot soil column. The appropriate PRG should be used.

2.2 MONITORING

The primary monitoring activities conducted for the WRR remediation system include:

- The SVE system effluent (equivalent to the former air treatment system influent) samples are collected and analyzed for VOCs on a monthly basis. Laboratory analytical results of the SVE effluent sampling are used in air dispersion calculations as part of the on-going assessment of cumulative risks for exposure to carcinogens.

- Samples of both the influent to and effluent from the groundwater treatment system are collected monthly and analyzed for VOCs. These effluent samples are also analyzed for total metals, inorganics, and polychlorinated biphenyls (PCBs) during the expanded sampling event in October of each year. Laboratory analytical results from the groundwater treatment system sampling are used to monitor groundwater treatment system efficiency, and to provide effluent water quality information to the Columbia City POTW.

- Groundwater samples from recovery wells are collected and analyzed on a periodic basis. In an agreement with the U.S. EPA and Indiana Department of

Environmental Management (IDEM) on October 31, 2003, recovery wells RW-1, RW-3, RW-4, and RW-5 are to be sampled for VOCs annually for three years, during or near the time of the expanded October sampling event. Laboratory analytical results from recovery well sampling are used to monitor changes in aquifer groundwater concentrations and to assess VOC mass removal rates from the aquifer.

- Semi-annual groundwater sampling and analyses are conducted using the WRR Site monitoring well network. Laboratory analytical results from groundwater sampling are used to assess effectiveness of the remediation system operations and evaluate the progress toward attainment of remedial goals. During April, samples were collected from five WRR Site monitoring wells and analyzed for VOCs and metals.

- Semi-annual groundwater elevation measurements are collected from 28 of the WRR Site's groundwater monitoring wells and piezometers, not including the landfill wells monitored by Columbia City and the WRR Site recovery wells. These data are used to evaluate groundwater flow patterns across the site. During April, groundwater elevation readings were collected from the designated monitoring wells and piezometers.

- Monthly groundwater elevation measurements are collected from eight groundwater monitoring wells to evaluate the zone of hydraulic influence created by the groundwater remediation system and to assess horizontal and vertical hydraulic gradients within the Southeast (SE) Area.

- A monthly assessment of hydrologic conditions in the areas of wells RW-3, RW-5, MW-13S, and MW-83DS is currently being conducted in 2003 and 2004, as described in the *Final Hydrological Assessment Work Plan* (MWH,

November 2002), and is designed to evaluate the effect of the recovery wells on groundwater flow. It includes monthly measurement of groundwater elevations from designated wells and piezometers (beyond those that are part of the usual monthly elevation determinations) and Blue River surface water elevations. Data from 2003 was summarized in the *Hydrological Assessment Letter Report, January through July 2003* (MWH, August 2003) and the *Hydrological Assessment Letter Report, July through December 2003* (MWH, January 2004). Data for January through June 2004 is included in this report.

- Annually Columbia City municipal drinking water wells (Municipal Well Numbers 7 and 8 [referred to as PW-7 and PW-8, respectively]) are sampled during the expanded October sampling event; therefore, they were not sampled during this reporting period.

- During this reporting period, groundwater wells located on or adjacent to the landfill (GM-1 through GM-4) were sampled by Burgess & Niple, Incorporated of Columbus, Ohio. Their report (Appendix A) provides useful data for comparison to groundwater monitoring results from closely associated wells on the WRR Site.

The results from the above monitoring activities are discussed in the following sections of this report.

2.3 DATA VALIDATION SUMMARY

Groundwater, air, and associated quality control (QC) samples were collected from the WRR Site between January and June 2004. The water samples were analyzed by TestAmerica Laboratories, Inc. of Indianapolis, Indiana from January through March, and by Pace Analytical Services, Inc. (Pace), of Minneapolis, Minnesota from April through

June. The water samples were analyzed for one or more of the following parameters: VOCs by U.S. EPA Method SW 846 8260; total cyanide by U.S. EPA Method 335.3; and dissolved (filtered in the field) metals (arsenic, barium, cadmium, chromium, lead, nickel, and zinc) by U.S. EPA Method 6010B. Air samples were analyzed for VOCs by Pace via U.S. EPA Method TO-14. Laboratory analytical results were evaluated in accordance with the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic Data Review (October 1999), the U.S. EPA CLP NFG for Inorganic Data Review (July 2002), and the analytical methods.

The analytical data were validated and qualified based on the results of the data evaluation parameters and/or the QC sample results provided by the laboratories. The complete data validation report is included as Appendix B. The analytical data that did not meet the QC criteria are flagged by a "J" as estimated for those compounds or "R" as rejected. It should be noted that no data used in the calculations in this progress report were flagged as rejected. Based on the results of this data validation, all data are considered valid and complete as qualified.

2.4 FIELD WORK

The major field activities conducted at the WRR Site during the reporting period are summarized in Appendix C. Activities during this reporting period included various equipment repairs and maintenance tasks.

3.0 SOIL VAPOR EXTRACTION SYSTEM

3.1 SYSTEM DESCRIPTION

The SVE system was constructed to remove VOCs from the vadose (unsaturated) zone. The horizontal configuration of the SVE well system is presented on Figure 2. The system consists of 41 SVE wells in the SE Area and 18 SVE wells in the Aboveground Storage Tank (AST) Area. In the SE Area of the WRR Site, the SVE wells are grouped together into one of six branch lines, with six to eight SVE wells attached to each line. As shown on Figure 2, the six branch lines are designated as Branches A, B, C, D, E, and F. The six branch lines connect to one main trunk line that conveys extracted vapors to the on-site treatment building via vacuum blowers housed within the building. Operation of groups of SVE wells is currently controlled manually by a valve at the head of each branch line. In the AST Area, each SVE well is connected via underground piping to one of two branch lines (Branches G and H; Figure 2) that convey extracted vapors to the treatment building. Automatic control valves located in the treatment building control operation of the two AST Area branches. Additionally, the operation of individual SVE wells can be controlled manually by a shut-off valve located at each well.

In the SE and AST Areas, cycling of the SVE branch lines began on May 1, 1998. The cycling applies vacuum to certain branch lines while others are dormant. After a specified period of time, the dormant lines are placed under vacuum while those that were active are turned off. During current cycling procedures, effective as of September 17, 2001, two of the six branch lines are operated simultaneously in the SE Area. The set of two branch lines operating is rotated approximately once per week. In the AST Area, operations of Branch Lines G and H were rotated approximately once per week. In the beginning of October 2002, the operation of Branch H was suspended, and Branch G is now run continuously. In December 2002, three additional SVE wells (56, 57, and 58) were installed on Branch G.

3.2 MONITORING RESULTS

Results of the SVE system monitoring conducted during this reporting period indicate:

- During the period of January through June 2004, the SVE system was operational for approximately 96 percent of the time (i.e., percent of total hours available). Downtime events were related to standard, regularly scheduled OM&M activities and special maintenance and repairs.

- Area air flow rates were collected each month from January through June 2004. The SE Area flow rate averaged approximately 905 scfm (total average of six branch line measurements made in SE Area) and the AST Area flow rate averaged approximately 333 scfm (Branch Line G). Flow rate measurements collected during this reporting period are summarized in Table 1.

- Laboratory analytical data from Summa canister samples collected in April 2004, as well as historical data, are summarized in Table 2. Vapor samples are collected with and without air delivery to the sparge wells as a means of measuring the contribution of the air sparge system to VOC removal.

3.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

The primary objective of the SVE system operation is to remove VOCs from soil in order to attain vadose zone soil site-specific PRGs, as indicated in the *Final OM&M Plan* and *Final O&M QAPjP*. Soil compliance monitoring will begin when it is determined that an area likely meets the soil site-specific PRGs, as indicated by groundwater detections less than the groundwater site-specific PRGs.

Based on laboratory analytical results from SVE system effluent air samples collected during the reporting period, it is estimated that approximately 11,609 pounds (lbs.) of VOCs have been removed via the SVE system from vadose zone soils to date. The main VOC constituents being removed in the SE and AST Areas are TCE and cis-1,2-DCE. Initial mass removal rates observed at the commencement of SVE system operations were approximately 83 lbs. of total VOCs per day. As of June 2004, removal rates for the SVE system were approximately 0.16 lbs. of total VOCs per day, which equates to an estimated 6 percent of the current VOC removal from the treatment system, or approximately 0.2 percent of initial removal rates. This decrease in VOC concentrations can be seen on Figure 4, which represents a summary of the SVE and Groundwater Treatment Systems' combined air effluent data. Groundwater results are presented in Table 3 and briefly described below:

For the wells that monitor the SE Area:

- VOCs are non-detect in MW-1D, MW-13D, and MW-83DD.
- VC greater than PRG, but generally decreasing, in MW-83AD.
- Two or more VOCs (including cis-1,2-DCE, trans-1,2-DCE, TCE, and VC) greater than PRGs, but decreasing overall, in MW-3S, MW-10S (with some fluctuations), MW-13S, and MW-83AS.
- Two or more VOCs (cis-1,2-DCE and VC) greater than PRGs, with varying trends, in MW-83DS and MW-11S.

For the wells that monitor the AST Area:

- Generally, VOCs less than site-specific PRGs in MW-14S (with a slight exceedence of TCE) and MW-18S (last sampled in 2001 with a slight exceedence of VC).
- TCE greater than PRG with no apparent trend, but no detectable concentration of VC, in MW-15S.

- cis-1,2-DCE greater than PRG with no apparent trend, but slight detections of VC, in MW-16S.
- Eight VOCs (including DCE, VC, TCE, and PCE) greater than PRGs, with no apparent trends, in MW-9S.

Operation of SVE system should continue as constituents in groundwater are still present at concentrations greater than the site-specific PRGs.

4.0 AIR SPARGING SYSTEM

4.1 SYSTEM DESCRIPTION

The air sparging system was constructed to facilitate removal of VOCs from soils and groundwater. The air sparging system is intended to work in combination with the SVE and groundwater collection systems to remove VOCs from the subsurface. The system consists of 40 sparge well clusters located in the SE Area of the WRR Site (Figure 3). A sparge well cluster is positioned adjacent to each SVE well. Compressed air is delivered from the treatment building to each sparge well through 2-inch diameter subgrade high-density polyethylene (HDPE) piping. As shown on Figure 3, Branch Lines A, B, C, D, E, and F leave the trunk line to feed the sparge wells. Operation of each branch line is controlled by a valve at the junction of the line with the primary air flow pipe.

Each sparge well cluster consists of one shallow and one deep well. The shallow/deep cluster was installed to provide treatment of soils above and below a thin clay layer located approximately 20 to 25 feet below the ground surface. The screen interval for each shallow sparge well is positioned immediately above the thin clay layer. The deep sparge wells are screened at the base of the upper aquifer. Each well is instrumented with an air flow rotometer, ball valve, and pressure gauge.

Effective September 17, 2001, delivery of compressed air to the deep sparge wells was discontinued. It is believed that the deep area is experiencing anaerobic degradation of VOC impacts; therefore, discontinuing the deep air sparging may increase VOC degradation.

Currently, two of the six sparge branch lines are operated at a time, corresponding to the two operating SVE branch lines. The lines are rotated approximately once per week, consistent with the rotation of the SVE lines, with two lines undergoing sparging while

four lines are dormant. During operation, air is delivered to the sparging system for four hours, followed by a four-hour period of inoperation.

4.2 MONITORING RESULTS

Results of the air sparging system monitoring conducted during this reporting period indicate:

- During the period of January through June 2004, the air sparging system was operational for approximately 96 percent of the total hours available. Downtime events were primarily related to standard, regularly scheduled OM&M activities and special maintenance and repairs.

- As a means of measuring the contribution of VOC removal by air sparging, vapor samples have been collected from the effluent of the SVE system both with and without air delivery to the sparge wells. Vapor samples were collected using Summa canisters during the April semi-annual sampling event. The results associated with this sampling effort are summarized in Table 2.

- Operation of the sparge system will continue without air sparging to the deep wells, to enable additional data to be gathered regarding anaerobic VOC degradation.

4.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

The primary remedial objective of the air sparging system is the removal of dissolved-phase VOCs from the saturated zone in the SE Area of the WRR Site, located within the confines of the slurry wall. VOC analytical results for the air samples collected via Summa canisters are presented in Table 2 and groundwater sampling results

are presented in Table 3. Testing results collected to date suggest that the air sparging system is supporting the remedial objective, as discussed below.

A historical representation of the concentration of total VOCs in the SE Area, as recorded during vapor sampling, is provided in Figure 5. The graph depicts the effect of the air sparge system on VOC removal in this area. Review of the laboratory analytical results indicate that the air sparge system's impact on VOC removal in the SE Area has varied throughout system operations, but that the air sparge system continues to enhance VOC removal. The overall trend for the concentration of VOCs removed is decreasing.

For the wells that monitor the SE Area, the groundwater data is briefly summarized as follows:

- VOCs are non-detect in MW-1D, MW-13D, and MW-83DD.
- VC greater than PRG, but generally decreasing, in MW-83AD.
- Two or more VOCs (including cis-1,2-DCE, trans-1,2-DCE, TCE, and VC) greater than PRGs, but decreasing overall, in MW-3S, MW-10S (with some fluctuations), MW-13S, and MW-83AS.
- Two or more VOCs (cis-1,2-DCE and VC) greater than PRGs, with varying trends, in MW-83DS and MW-11S.

Based on the information to date, operation of air sparging will continue until groundwater site-specific PRGs, developed for common VOCs detected at the WRR Site, have been attained.

5.0 GROUNDWATER EXTRACTION SYSTEM

5.1 SYSTEM DESCRIPTION

The groundwater extraction system was constructed to capture and control groundwater impacted with VOCs. The groundwater extraction system consists of ten groundwater recovery wells installed in three areas of the WRR Site as follows: three recovery wells in the AST Area (RW-1 through RW-3), one recovery well in the monitoring well MW-7S area (RW-4), and six recovery wells in the SE Area (RW-5 through RW-10) (Figure 1). The extraction system also employs the use of a soil bentonite cut-off wall (i.e., slurry wall), constructed to reduce the pumping rate necessary to control groundwater flow in the SE Area. Extracted groundwater is pumped to the on-site treatment building through underground HDPE piping.

Four piezometers (PZ-1 through PZ-4) were installed in December 2002 to assist in evaluating the effect of the recovery wells on groundwater flow. Gauge points (G-1 through G-4) are located in the Blue River near piezometers PZ-1, PZ-2, PZ-3, and PZ-4, to measure the river surface water elevation. These piezometer and gauge point locations are shown on Figure 1.

5.2 MONITORING RESULTS

Results of the groundwater extraction system monitoring conducted during this reporting period indicate:

- During the period of January through June 2004, the groundwater extraction system was operational for approximately 96 percent of the time (i.e., percent of total hours available). Primary downtime events were related to routine cleaning of recovery pumps and underground

collection piping, routine maintenance, removal of sediment from recovery wells, and special maintenance and repairs.

- A summary of system flow rates is included in Table 4. The maximum sustained groundwater recovery rate during the reporting period was approximately 86 gpm in June 2004. During the reporting period, a total of 17,195,000 gallons of groundwater were recovered and treated. The largest total monthly flow was reported at 3,500,000 gallons, for the month of May 2004. The highest average daily recovery rate during the reporting period was 112,903 gallons per day (gpd), which was also reported during the month of May 2004. This average was calculated by dividing the total monthly flow by the total number of operational days for the month. Figure 6 is a comparison of cumulative versus the average daily groundwater recovery rates. As of June 2004, a cumulative total of 212,416,521 gallons of groundwater had been recovered, treated, and discharged to the Columbia City POTW.

- Average groundwater extraction rates from January through June were much higher than those noted during the previous reporting period (Table 4). The groundwater treatment system flow to the Columbia City POTW averaged slightly less than 45 gpm during actual plant run time for the period of July through December 2003 (the previous reporting period), but during the current reporting period (January through June 2004), the average groundwater treatment system flow was slightly less than 69 gpm. Decreased extraction rates during the previous reporting period were due to an obstruction in the force main to the POTW. The force main was cleaned out in December 2003 by

filling it with water and forcing air into it at high pressure to blow out the solids that were clogging it. The procedure was successful, and the groundwater treatment system flow to the POTW has increased significantly since the cleaning was completed.

- Temporary flow meters were installed in October 2003 at RW-3 and RW-5 to assist in the hydrological assessment. The average flow rate recorded at RW-3 ranged from 14 to 28 gpm, and the average flow rate at RW-5 ranged from 4 to 14 gpm, during this reporting period.

- On-going, routine operation and maintenance activities are focusing on recovery well pump cleaning and/or repair, and recovery pipe cleaning as necessary to optimize groundwater extraction system performance.

- Water level elevation data collected during the reporting period is used to evaluate the groundwater table drawdown. These data are included in Table 5 (monitoring well construction details) and Table 6 (groundwater elevation information). Groundwater contour maps are presented as Figures 8-1 through 8-4, 8-6, and 8-7. Figure 8-4 illustrates a representation of the groundwater elevations observed across the entire WRR Site during April 2004, and the apparent horizontal groundwater flow patterns. Comparison of the April groundwater elevations illustrated in Figure 8-4 with the April groundwater elevations of the landfill wells in the Burgess & Niple, Incorporated report (see Table 2 of this report, included as Appendix A) shows that they are similar.

- Water level elevation data collected during the reporting period also demonstrates that the groundwater extraction system has maintained inward and upward hydraulic gradients in the SE Area.

- Figure 8-5 summarizes recent groundwater sampling analytical results from monitoring wells, recovery wells, and the treatment system influent.

- Based on January through December 2003 data, the groundwater extraction system is maintaining an inward gradient from the Blue River to the WRR Site. However, to confirm the observed hydraulic trends as well as the long-term effect of the cleaning of the force main pipeline, the water level measurements and extraction rates of RW-3 and RW-5 will be collected through December 2004. The hydrological assessment results conducted during this reporting period are discussed in detail in Section 5.3.

- Historical laboratory analytical results from the annual sampling of the Columbia City municipal drinking water wells located to the north of the WRR Site can be found in Tables 7 and 8. No sampling of the municipal drinking water wells was conducted during this reporting period. The historical data indicates that no detectable concentrations of constituents attributable to the WRR Site have been identified in samples from the municipal wells.

5.3 HYDROLOGICAL ASSESSMENT

An assessment of hydrologic conditions is being conducted in the following areas:

- Recovery well RW-3 near the Aboveground Storage Tank (AST) Area

- Monitoring wells MW-13S and MW-83DS in the Southeast (SE) Area
- Recovery well RW-5 southeast of the landfill

Figure 9 illustrates the WRR Site layout and location of monitoring and recovery wells, piezometers, and river gauge points used for the January through June 2004 assessment activities. Table 9 provides the January through June 2004 Blue River surface water levels, riverbed elevations, and the groundwater elevations in monitoring wells, recovery wells, and piezometers, as applicable, in the vicinity of each assessment area. Descriptions of the assessment activities conducted in each area are provided below.

AST Area – RW-3 Area

Figures 10-1 through 10-6 are plots of the groundwater elevations in the RW-3/MW-9S/PZ-1 assessment area (cross-section A-A'). During January, February, April, and May 2004, water table elevations clearly slope from the Blue River toward recovery well RW-3, with no hydraulic discontinuities between the two points. In March and June, a hydraulic mound (localized accumulation of groundwater that is slightly higher in elevation than the local water table) appears in the vicinity of monitoring well MW-9S and/or piezometer PZ-1. However, groundwater in the vicinity of MW-9S was still controlled by RW-3. The hydraulic mounds may have been associated with periodic dry conditions, during which flow in the Blue River was decreased, and/or changes in the pumping rate at RW-3. These assumptions are supported by the return to the more common groundwater table configuration of sloping from the Blue River toward RW-3 each of the two months after hydraulic mounding was noted in March

SE Area – MW-13S Area and MW-83DS Area

Figures 11-1 through 11-6 are plots of the groundwater elevations in the PZ-2/MW-13S assessment area (cross-section B-B'). These data reveal a general trend of groundwater flow from the Blue River toward piezometer PZ-2. The exceptions are the months of March and June, when a small hydraulic mound appears near piezometer PZ-2 and

monitoring well MW-13. This may be related to periodic dry conditions, during which flow in the Blue River was decreased. This is a likely explanation, as this pattern is the same as that seen in the RW-3/MW-9S/PZ-1 assessment area.

Figures 12-1 through 12-6 are plots of the groundwater in the MW-83DS/PZ-3 assessment area (cross-section C-C'). Water level elevations in piezometer PZ-3 were consistently below those measured on the Blue River, with the exception of June when a small hydraulic mound appears near piezometer PZ-3. Again, this may be related to periodic dry conditions when flow in the Blue River was decreased, as this pattern is similar to that seen in the RW-3/MW-9S/PZ-1 and PZ-2/MW-13 assessment areas.

Southeast of Landfill – RW-5 Area

Figures 13-1 through 13-6 are plots of the groundwater elevations in the GM-4/RW-5/PZ-4/GM-3 assessment area (cross-section D-D'). Consistent with the patterns seen in the other three assessment areas, the water table elevations consistently sloped from the Blue River toward RW-5, with one exception. During June, a slight hydraulic mound appears near piezometer PZ-4. This mound was likely related to periodic dry conditions, during which flow in the Blue River was decreased, as this reversal of slope toward the Blue River during June was observed at all four assessment areas. Changes in the pumping rate at RW-5 also may have affected the groundwater elevations.

5.4 PROGRESS TOWARD REMEDIAL OBJECTIVES

The primary remedial objectives of the groundwater extraction system are to remove dissolved-phase contamination from the upper aquifer on site, thereby restricting the potential off-site migration of dissolved-phase constituents to the Blue River or Columbia City municipal well field. Mass removal rates from the groundwater extraction system

have ranged from approximately 0.5 to 2.4 lbs. of total VOCs removed per day during this reporting period.

Groundwater elevation data indicates that the slurry wall/groundwater extraction system is effectively maintaining an inward horizontal gradient in the SE Area. Monthly water elevations collected during the reporting period indicate the hydraulic head levels are consistently lower inside the slurry wall as compared to the head levels outside the wall. For example, the March 2004 elevations within the confines of the slurry wall are approximately 2.6 feet lower than water elevations immediately outside the slurry wall (monitoring wells MW-11S and MW-13S in Table 7 and Figure 8-2).

OM&M activities, including on-going recovery pump and groundwater collection pipe cleaning, are conducted to increase groundwater system recovery rates to maintain an upward gradient in the SE Area. Based on the historical observations of groundwater extraction system performance, maintenance of the groundwater extraction system will be conducted frequently (i.e., approximately once per quarter) in order to maintain hydraulic control. Review of the groundwater elevation data indicates that an upward gradient was maintained in the SE Area during this reporting period.

The monitoring wells currently included in the semi-annual or annual sampling program, per the requirements of the *Final OM&M Plan*, are MW-1D, MW-3S, MW-4S, MW-7S, MW-9S, MW-10S, MW-11S, MW-14S, MW-15S, MW-16S, MW-83AS, MW-83AD, and MW-83B. Monitoring wells MW-13S and MW-83DS were added to the annual OM&M monitoring program per the July 11, 2002 Site Progress Meeting. During the reporting period, monitoring wells MW-4S, MW-9S, MW-10S, MW-14S, and MW-83AS were sampled. A summary of monitoring well VOC and metals analytical data collected to date is included in Table 3. Recent monitoring well VOC analytical results are also included in Figure 8-5. Copies of laboratory analytical reports are available upon request. Results for the monitoring wells in the SE and AST Areas are

discussed in Section 3.3 and 4.3, as part of the assessment of the SVE and air sparge systems. For the remaining wells, for which the remedy is only groundwater treatment, the results are summarized below:

Recovery Well RW-4 Area:

- cis-1,2-DCE greater than PRG, with no apparent trend, in MW-7S.
- TCE and VC greater than PRG, with no apparent trends, in MW-4S.

A summary of historic recovery well VOC analytical data is included in Table 10 (recovery well construction details are included as Table 11), with the most recent analytical data for each recovery well included on Figure 8-5. The most highly impacted groundwater is removed from recovery wells located within the confines of the slurry wall (RW-8, RW-9, and RW-10).

Review of the January through June 2004 cross-sections show that the Blue River surface elevation is higher than the groundwater in adjacent wells/piezometers, with the exceptions of March in the vicinity of RW-3/MW-9S/PZ-1 and PZ-2/MW-13 assessment areas (Figures 10-3 and 11-3), and June in the vicinity of all four assessment areas (Figures 10-6, 11-6, 12-6, and 13-6). The data indicates that in general, the groundwater extraction system is maintaining an inward gradient from the river to the WRR Site.

The force main that leads to the Columbia City wastewater treatment plant was cleaned in December 2003, and since that time it has become possible to increase extraction rates in the recovery wells. The increased extraction rates will further enhance the inward gradient to the WRR Site. To confirm the observed hydraulic trends and the long-term effect of the force main cleaning, water level measurements and extraction rates will be collected through December 2004. This data will be incorporated into the next progress report.

6.0 GROUNDWATER PRE-TREATMENT SYSTEM

6.1 SYSTEM DESCRIPTION

The groundwater pre-treatment system is designed to remove VOCs from extracted groundwater, prior to discharge to the Columbia City POTW. Groundwater extracted from the WRR Site's ten groundwater recovery wells is initially pumped to an influent storage tank for solids settling and equalization. The equalized water is transferred through a bag filter to the top of an air stripping tower via electric transfer pumps. Water cascades downward through the tower packing, while air flows upward from near the tower base, inducing liquid to gas mass transfer of VOCs from the groundwater. The treated water drains from the tower into an effluent sump, which is pumped via a dedicated force main to the Columbia City POTW.

6.2 MONITORING RESULTS

During the period of January through June 2004, the groundwater pretreatment system was operational 96 percent of the time (i.e., percent of total hours of available). Primary downtime events were related to on-going routine cleaning activities and maintenance, and special maintenance and repairs.

Monthly analytical results of groundwater influent and treated effluent are summarized in Tables 12 and 13 and Figure 7. The air stripping tower has consistently removed VOCs prior to discharge to the Columbia City POTW. Total VOC concentrations in air stripping tower influent have fluctuated from 416 to 3,274 µg/L (in December 1995 and February 1996, respectively), since commencement of treatment system operations. Influent groundwater VOC concentrations can vary over time, based on a variety of factors including recovery well cycling, rainfall events, and water levels. The influent groundwater total VOC concentrations during this reporting period began at 584.6 µg/L in January 2004 and ended at 2,607.7 µg/L in June 2004 (shown in Table 12 and

summarized on Figures 7 and 8-5). The average total VOC concentration for the influent during the reporting period was approximately 1,580 µg/L. Average groundwater contaminant mass removal rates since the commencement of remediation system operations have ranged from approximately 0.13 to 13.2 lbs. per day of total VOCs. The most recent system data, collected in June 2004, indicates that the groundwater contaminant mass removal rate is 2.41 lbs. of total VOCs per day, based on an average flow rate of 110,900 gpd and a total VOC concentration in the plant influent of 2,607.7 µg/L for June 2004.

6.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

Laboratory analytical results of the groundwater treatment system monthly effluent sampling, conducted in accordance with the discharge agreement (i.e., the agreement in place prior to February 1, 1998) with the Columbia City POTW, are included in Tables 12 and 13. Analytical results have indicated that low levels of both VOCs and inorganic compounds are present in the treated groundwater discharged to the Columbia City POTW. Monthly groundwater treatment system sampling consists of influent and effluent sampling for VOCs. Additional non-VOC parameters are analyzed in samples collected during the annual sampling event conducted in October of each year (Table 13).

7.0 OFF-GAS TREATMENT SYSTEM

7.1 SYSTEM DESCRIPTION

The off-gas treatment system was constructed and operated to remove VOCs from the off-gases of the air stripping tower and the SVE system prior to discharge to the atmosphere. On June 24, 1999, air treatment was discontinued; however, monthly air sampling continues to be conducted on the effluent air stream as a means of monitoring potential risk levels associated with the untreated air stream.

Upon entering the treatment building, the combined air stream of the air stripping tower and the SVE system is drawn through an air filter and moisture separator by two blowers connected in parallel. After exiting the blowers, the air stream passes through a heat exchanger prior to discharge to the atmosphere.

7.2 MONITORING RESULTS

Monitoring conducted to date, including the monthly SVE system effluent sampling (which includes air stripping system off-gases), indicate:

- Monthly effluent vapor concentrations have decreased by more than one order of magnitude from the beginning of system operations in early 1995 to June 2004. Total VOCs in the air stream have dropped from approximately 83,300 parts per billion (ppb) on a volume per volume basis (v/v) in March 1995 to 2,411 ppb (v/v) in June 2004. During the same time period, VC concentrations have decreased from approximately 1,900 to 300 ppb (v/v), TCE concentrations have decreased from 28,000 to 260 ppb (v/v), and cis-1,2-DCE concentrations have decreased from approximately 40,000 to 1,800 ppb (v/v). The historic monthly air treatment system influent

and effluent laboratory analytical results are summarized on Table 14 and on Figure 4. Table 14 also includes the monthly effluent-only sample results collected since the air treatment system was discontinued on June 24, 1999.

- Calculations have been conducted using the VOC concentrations of off-gas vapor concentrations to assess hypothetical risk levels. Results of the effluent sample analyses indicate hypothetical risk levels to be less than the cumulative risk action level of $1x10^{-6}$ (representing a risk of one in one million exposed) during this reporting period. Current and historical air risk calculations are provided in Table 15.

7.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

The primary objective of the continued on-going off-gas air monitoring is to ensure that the cumulative life-time cancer risk at the WRR Site boundary remains less than the cumulative risk action level of $1x10^{-6}$. To verify compliance with this objective, air dispersion calculations were completed to determine the maximum concentrations at receptor locations outside the site boundary. The Industrial Source Complex - Long-Term (ISC-LT) model was used for the purpose of modeling the dispersion of the effluent from the soil remediation system (Appendix D). The maximum concentrations determined by the air modeling study were multiplied by unit risk factors to estimate the excess carcinogenic risk posed by the hypothetical emissions through the inhalation route. The unit risk factors used in this study were developed from toxicity values included in U.S. EPA's *Integrated Risk Information System*, U.S. EPA's *Health Assessment Summary Tables* (Annual FY-1995), and information provided by the U.S. EPA Environmental Criteria Assessment Office. The unit risk factors conservatively assume a chronic exposure to the chemicals for 24 hours a day, 365 days a year, for a 70-year lifetime. In this Progress Report, references to cancer risk and

cancer risk estimates refer to the estimated potential risks as indicated by the use of ISC-LT air dispersion modeling and are not meant to represent or suggest actual risks.

Air dispersion calculations using the off-gas air data indicate that no exceedances of the $1x10^{-6}$ action level occurred during this reporting period. Though active air treatment was discontinued on June 24, 1999, monthly effluent air sampling and risk calculations will continue. Air treatment will be reactivated should the results from two consecutive monthly air samples indicate cumulative risks in excess of $1x10^{-6}$.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Overall remediation system mass removal calculations indicate that, since inception of treatment system operations, approximately 13,433 lbs. of total VOCs have been removed by the SVE and groundwater treatment systems. Of this, approximately 86.4 percent (or 11,609 lbs.) is attributed to operation of the SVE and air sparge systems, and approximately 13.6 percent (or approximately 1,827 lbs.) is attributed to the groundwater extraction system. Additionally, initial contaminant mass removal rates from the entire remediation system were approximately 88 lbs. of total VOCs per day during the startup phase of system operations. This removal rate has decreased to approximately 2.6 lbs. of total VOCs per day, as of June 2004. Figure 14 represents a summary of overall VOC removal rates. Figure 15 represents a summary of total VOCs removed from the WRR Site. Table 16 provides the VOC removal rates for the SVE and air stripper systems, taking into account the average air flow rates collected during this reporting period.

The following recommendations, unless otherwise indicated by the U.S. EPA, will be implemented to improve treatment system performance:

- Continue with the on-going standard OM&M of the remediation system components to continue progress toward achieving the remedial action objectives.

- Continue monthly groundwater treatment system influent and effluent sampling for VOCs, per the discharge agreement with the Columbia City POTW.

- Continue with the on-going recovery well cleaning, pump repair and/or replacement, and groundwater recovery pipe cleaning as needed

to optimize groundwater recovery efficiency and maintain effective hydraulic control. Also, perform annual cleaning of the discharge line.

- Continue cycling SE Area SVE system branch lines. Continue system operation schedule, such that two of the SE Area's six SVE system branch lines are operated simultaneously (two lines on, four lines off), with cycling of operation occurring approximately every week.

- Continue to sample the off-gas vapor stream to evaluate the potential cumulative excess cancer risks associated with the untreated vapor stream. Should the vapor stream continue to exhibit a cumulative excess cancer risk less than the $1x10^{-6}$ action level, the off-gas treatment system will remain off-line. Should two consecutive monthly SVE effluent vapor samples indicate a cumulative excess cancer risk of greater than $1x10^{-6}$, the air treatment system will be restarted.

- Continue air sparging system operation cycling procedures such that two of the SE Area's six air sparging system branch lines are operated at one time (two lines on, four lines off), in conjunction with the corresponding SVE lines. Cycle the operation approximately every week. Continue operation of the shallow air sparging wells only.

- Continue data collection, per the *Final Hydrological Assessment Work Plan*, through December 2004 to further assess the hydraulic influences of the force main cleaning and recovery wells RW-3 and RW-5.

TABLES

Table 1
Summary of Soil Vapor Extraction Air Flow Rates from the SE and AST Areas, January through June 2004
Wayne Reclamation & Recycling

DATE TESTED	AIR FLOW (scfm)	
	SE AREA	AST Area
1/29/2004	850	320
2/20/2004	940	250
3/16/2004	830	400
4/19/2004	1,000	470
5/18/2004	710	440
6/23/2004	1,100	120
AVERAGE FLOW:	905	333
MAXIMUM FLOW:	1,100	470
MINIMUM FLOW:	710	120

Notes:

SE = Southeast.

AST = Aboveground Storage Tank.

Flow measurement reported in standard cubic feet per minute (scfm).

All flow measurements are approximate.

Vacuum and flow measurements at the individual soil vapor extraction wells were suspended as of October 2002.

The operation of Branch Line H in the AST Area was suspended in October 2002.

Table 2
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

	SOUTHEAST AREA											
	BRANCHES A-F											
CONSTITUENT (ppb[v/v])	(AS-ON) 1/9/1996	(AS-ON) 2/15/1996	(AS-ON) 2/16/1996	(AS-ON) 2/18/1996	(AS-ON) 11/25/1996	(AS-OFF) 11/27/1996	(AS-ON) 9/3/1997	(AS-OFF) 9/5/1997	(AS-ON) 11/18/1997	(AS-OFF) 11/21/1997	(AS-ON) 4/21/1998*	(AS-OFF) 4/28/1998
Tetrachloroethene	670	470	470	470	450	370	370	370	240	220	56	100
Trichloroethene	9,100	8,600	7,200	7,100	4,000	3,000	2,800	2,800	3,800	3,500	330	540
cis 1,2-Dichloroethene	9,600	6,800	6,600	6,400	5,300	3,700	2,900	3,000	4,400	4,300	830	1,000
trans 1,2-Dichloroethene	850	460	540	480	490	340	370	380	460	460	71	74
Vinyl Chloride	<84	<72	240	230	61	<34	130	200	89	56	85	<12
1,1,1-Trichloroethane	1,300	810	770	700	520	340	280	290	270	290	47	51
1,1-Dichloroethane	230	230	300	180	120	81	88	82	98	92	20	19
Xylenes (total)	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	23	14
4-Ethyltoluene	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	<12	<12
1,3,5-Trimethylbenzene	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	<12	<12
1,2,4-Trimethylbenzene	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	13	<12
Soil Vapor Extraction Wells (SVE)	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D

Notes:

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

AS = Air sparging system (on or off).

Bold = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided.

*=As of May 1, 1998, began to cycle operation of SVE branches.

Table 2
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

	SOUTHEAST AREA											
	BRANCHES A-F											
CONSTITUENT (ppb[v/v])	(AS-ON) 10/14/1998	(AS-OFF) 10/16/1998	(AS-ON) 4/26/1999	(AS-OFF) 4/13/1999	(AS-ON) 12/14/1999	(AS-OFF) 12/21/1999	(AS-ON) 4/18/2000	(AS-OFF) 4/29/2000	(AS-ON) 10/6/2000	(AS-OFF) 10/10/2000	(AS-ON) 4/27/2001	(AS-OFF) 4/23/2001
Tetrachloroethene	**450**	**270**	**53**	**5**	**54**	**58**	**52**	**79**	**52**	**95**	**20**	<140
Trichloroethene	**2,500**	**2,900**	**250**	**94**	**650**	**540**	**400**	**710**	**920**	**750**	**150**	**140**
cis 1,2-Dichloroethene	**3,300**	**3,500**	**410**	**210**	**1,500**	**1,300**	**580**	**1,400**	**2,200**	**1,300**	**270**	**150**
trans 1,2-Dichloroethene	**280**	**360**	**40**	**22**	**180**	**160**	**59**	**130**	**160**	**130**	NA	NA
Vinyl Chloride	<25	<25	**12**	**15**	**180**	**29**	**12**	<13	**130**	<8.2	**60**	<140
1,1,1-Trichloroethane	**280**	**190**	**90**	**6**	**100**	**87**	**56**	**74**	**93**	**75**	**29**	<140
1,1-Dichloroethane	**70**	**73**	**14**	**5**	**47**	**38**	**17**	**29**	**49**	**32**	<6.9	<140
Xylenes (total)	<25	<25	**29**	**5**	<9.7	<7.8	<6.7	<13	<18	<8.2	<5.7	<140
4-Ethyltoluene	<25	<25	**7**	<2	<9.7	<7.8	<6.7	<13	<18	<8.2	NA	NA
1,3,5-Trimethylbenzene	<25	<25	<2	<2	<9.7	<7.8	<6.7	<13	<18	<8.2	<6.9	<140
1,2,4-Trimethylbenzene	<25	<25	**14**	**2**	<9.7	<7.8	<6.7	<13	<18	<8.2	<6.9	<140
Soil Vapor Extraction Wells (SVE)	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D

Notes:

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

AS = Air sparging system (on or off).

Bold = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided

NA = Not analyzed.

Table 2
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

	SOUTHEAST AREA											
	BRANCHES A-F											
CONSTITUENT (ppb[v/v])	(AS-ON) 9/29/2001*	(AS-OFF) 10/31/2001	(AS-ON) 4/23/2002	(AS-OFF) 4/26/2002	(AS-ON) 10/23/2002	(AS-OFF) 10/28/2002	(AS-ON) 4/15/2003	(AS-OFF) 4/21/2003	(AS-ON) 10/15/2003	(AS-OFF) 10/18/2003	(AS-ON) 4/19/2004	(AS-OFF) 4/23/2004
Tetrachloroethene	<140	<130	**47**	**42**	<140	<130	<130	<130	<150	<150	**29**	<140
Trichloroethene	**280**	**410**	**300**	**330**	**720**	**430**	<130	**270**	**260**	**240**	**390**	<140
cis 1,2-Dichloroethene	**680**	**1,500**	**510**	**370**	**1,300**	**790**	**190**	**470**	**390**	**340**	**790**	**160**
trans 1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	<140	<260	**61**	**18**	<140	<130	<130	<130	<150	<150	**30**	<140
1,1,1-Trichloroethane	<140	<130	**27**	**19**	<140	<130	<130	<130	<150	<150	**21**	<140
1,1-Dichloroethane	<140	<130	**14**	**10**	<140	<130	<130	<130	<150	<150	<13	<140
Xylenes (total)	<280	<260	<2.2	<1.1	<280	<270	<270	<270	<460	<450	**30**	<140
4-Ethyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	<140	<130	<1.3	<0.64	<140	<130	<130	<130	<150	<150	<13	<140
1,2,4-Trimethylbenzene	<140	<130	<1.3	<0.64	<140	<130	<130	<130	<150	<150	<13	<140
Soil Vapor Extraction Wells (SVE)	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D	1 - 40D

Notes: Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14

AS = Air sparging (on or off).

Bold = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided

NA = Not analyzed.

October 2002 data was validated to Level IV; no flags were required for the data in this table collected on that date.

April and October 2003 and April 2004 data was validated to Level II; no flags were required for the data in this table collected on those dates.

*=As of September 15, 2001, began cycling of two SVE branches with weekly rotation of branches.

Table 2
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

	ABOVEGROUND STORAGE TANK AREA									
	BRANCHES G & H[1]									
CONSTITUENT (ppb[v/v])	1/11/1996	11/25/1996	9/3/1997	11/18/1997	4/21/1998	10/16/1998	4/21/1999	11/22/1999	4/18/2000	10/2/2000
Tetrachloroethene	**1,600**	<22	**460**	**67**	**21**	**6**	**2.8**	<2.0	**58**	**75**
Trichloroethene	**1,700**	**140**	**1,500**	**420**	**57**	**48**	**8.1**	**9**	**590**	**710**
cis 1,2-Dichloroethene	**1,800**	**660**	**820**	**310**	**110**	**50**	**21**	**24**	**330**	**300**
trans 1,2-Dichloroethene	**120**	**63**	**59**	**24**	**4.8**	**2.2**	<2.0	<2.0	**28**	**27**
Vinyl Chloride	**130**	<22	<8.4	**22**	**7**	<2.0	**2.3**	**3.6**	<7.3	<6.1
1,1,1-Trichloroethane	**790**	**2,700**	**180**	**65**	**3.4**	**2**	<2.0	<2.0	**55**	**61**
1,1-Dichloroethane	**39**	**270**	**11**	**6**	<2	<2.0	<2.0	<2.0	**9.1**	**10**
Xylenes (total)	**55**	<22	**25**	**46**	**57**	<2.0	**18**	**2.1**	<7.3	**31**
4-Ethyltoluene	**190**	<22	**10**	**3**	**16**	<2.0	**4**	**2.1**	<7.3	<6.1
1,3,5-Trimethylbenzene	**120**	<22	**20**	**4**	**6.3**	<2.0	**2.2**	<2.0	<7.3	<6.1
1,2,4-Trimethylbenzene	**230**	<22	**12**	**4**	**22**	<2.0	**7.5**	**2.8**	<7.3	<6.1
Soil Vapor Extraction Wells (SVE)	41 - 55	41-43,50,53-55	41-43,50,53-55	41-43,50,53-55	41-43,50,53-55	41-43,50,53-55	41-43,50,53-55	41-43,50,53-55	41-43,50,53-55	41-43,50,53-55

Notes:

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

Bold = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided.

[1] Branch H operations suspended as of the beginning of October 2003.

Table 2
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

	ABOVEGROUND STORAGE TANK AREA							
	BRANCHES G & H[1]			BRANCH G (EAST BRANCH)				
CONSTITUENT (ppb[v/v])	4/23/2001	11/2/2001	4/23/2002	10/23/2002	12/18/2002 *	4/17/2003	10/15/2003	4/19/2004
Tetrachloroethene	**15**	**71**	**6.6**	<140	<140	<130	<150	**23**
Trichloroethene	**57**	**150**	**22**	**180**	**440**	**280**	**260**	**360**
cis 1,2-Dichloroethene	**21**	**130**	**27**	<140	**580**	**190**	<150	**160**
trans 1,2-Dichloroethene	NA	<0.57	NA	NA	NA	NA	NA	NA
Vinyl Chloride	<0.74	**2.5**	**0.92**	<140	<140	<130	<150	<14
1,1,1-Trichloroethane	**9.9**	**33**	**3.6**	<140	<140	<130	<150	<12
1,1-Dichloroethane	**1.3**	**4.6**	**0.77**	<140	<140	<130	<150	<13
Xylenes (total)	**3.49**	**41**	**2.79**	<290	<290	<270	<450	**47**
4-Ethyltoluene	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	<0.71	<0.69	<0.69	<140	<140	<130	<150	<13
1,2,4-Trimethylbenzene	<0.71	<0.69	<0.69	<140	<140	<130	<150	<13
Soil Vapor Extraction Wells (SVE)	41-43,50,53-55	41-43,50,53-55	41-43,50,53-55	41-43,50,53-55	41-43,50,53-58	41-43,50,53-58	41-43,50,53-58	41-43,50,53-58

Notes: Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

Bold = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided.

October 2002 data was validated to Level IV; no flags were required for the data in this table collected on that date.

April and October 2003 and April 2004 data was validated to Level II; no flags were required for the data in this table collected on those dates

The operation of Branch Line H was suspended as of October 2002.

* = Additional sampling following the completion and connection of new Soil Vapor Extraction Wells 56, 57, and 58.

NA = Not analyzed

[1] *Branch H operations suspended as of the beginning of October 2003*

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT	Date Sampled	MONITORING WELL MW-1D (Southeast Area)										PRG
		8/1988	6/7/1996	11/6/1996	6/12/1997	10/14/1998	10/13/1999	10/2/2000	10/31/2001	10/25/2002	10/15/2003	(µg/L)
VOCs (µg/L)												
Acetone		ND	ND	NA	NA	NA	ND	ND	ND	ND	<20.0	3,650
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	--
n-Butylbenzene		ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
2-Butanone (MEK)		ND	ND	NA	NA	NA	NA	NA	NA	NA	<12.5	--
Carbon Disulfide		ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	768
Chloroethane		ND	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	--
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	973
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.0167
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	70
trans-1,2-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	100
1,2-Dichloroethene, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.25
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)		ND	ND	NA	NA	NA	ND	ND	ND	ND	<12.5	487
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.314
Dibromomethane		ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.43
Trichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	2.54
1,2,4-Trimethylbenzene		ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.0283
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.617
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	700
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1,000
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	828
TOTAL VOCs		ND	ND	ND	ND	ND	ND	ND	ND	ND	0	--
Metals (mg/L)												
Arsenic, Dissolved		**0.0059**	**0.005**	ND	ND	ND	ND	ND	ND	ND	<0.100	--
Barium, Dissolved		**0.132**	**0.13**	**0.13**	**0.12**	**0.16**	**0.68**	**0.14**	**0.18**	**0.226**	**0.147**	--
Cadmium, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	--
Chromium, Dissolved total		ND	ND	ND	ND	**0.013**	ND	ND	ND	ND	<0.040	--
Cyanide, Total		**0.009**	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	--
Lead, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	--
Nickel, Dissolved		ND	ND	ND	**0.051**	ND	ND	ND	ND	**0.012**	**0.013**	--
Zinc, Dissolved		**0.013**	**0.06**	ND	**0.025**	**0.031**	**0.13**	ND	**0.068**	**0.072**	**0.220**	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
Metals reported in milligrams per liter (mg/L).
October 2002 data validated to Level IV, and October 2003 data validated to Level II; no flags were required for the data in this table collected on those dates.

-- = No PRG assigned.
< = Not detected greater than the reporting limit provided.
Bold = Analyte detected greater than the laboratory reporting limit.
Italics = Reporting limit greater than the corresponding PRG.
NA = Not analyzed.
ND = Not detected greater than the method detection limit.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT / Date Sampled	MONITORING WELL MW-3S (Southeast Area) 3/1988	8/1988	11/29/1995	8/27/1996	11/06/1996	6/13/1997	10/14/1998	10/13/1999	10/02/2000	10/31/2001	10/15/2003	PRG (µg/L)
VOCs (µg/L)												
Acetone	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	<20.0	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	--
n-Butylbenzene	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	<1.0	--
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	--
Carbon Disulfide	ND	2.3	NA	NA	NA	NA	NA	ND	ND	ND	<1.0	768
Chloroethane	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	<5.0	--
1,1-Dichloroethane	ND	23	ND	ND	1.5	ND	ND	ND	ND	ND	<1.0	973
1,1-Dichloroethene	ND	[illegible]	ND	ND	[illegible]	ND	ND	ND	ND	ND	*<1.0*	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene	NA	NA	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	70
trans-1,2-Dichloroethene	NA	NA	NA	[illegible]	92	45	54	33	38	42.6	22.2	100
1,2-Dichloroethene, Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	(170)
1,2-Dichloropropane	ND	[illegible]	ND	ND	[illegible]	ND	ND	ND	ND	[illegible]	<1.0	1.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	<12.5	487
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.314
Dibromomethane	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	<1.0	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.43
Trichloroethene	ND	1.1	ND	ND	ND	ND	ND	ND	ND	[illegible]	1.9	2.54
1,2,4-Trimethylbenzene	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	<1.0	--
Vinyl Chloride	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0283
Benzene	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	700
Toluene	ND	3.4	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	828
TOTAL VOCs	25,300.0	7,385.3	2,580	4,010	2,959.1	1,335	1,274	1,743	945	786.0	295.2	--
Metals (mg/L)												
Arsenic, Dissolved	0.015	0.0234	0.005	ND	ND	ND	ND	0.011	ND	ND	<0.100	--
Barium, Dissolved	0.306	0.32	0.08	0.04	ND	ND	0.048	0.28	0.032	0.041	<0.020	--
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	--
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<0.040*	--
Cyanide, Total	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	--
Lead, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	--
Nickel, Dissolved	ND	0.0151	ND	ND	ND	ND	ND	ND	0.013	ND	0.020	--
Zinc, Dissolved	ND	0.0126	ND	ND	ND	ND	ND	0.27	ND	ND	<0.050	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
Metals reported in milligrams per liter (mg/L).
October 2003 data validated to Level II; no flags were required for the data in this table collected on that date.
This monitoring well was scheduled for sampling in October 2002, but due to extremely dry conditions at the site, there was inadequate groundwater volume.

-- = No PRG assigned.
< = Not detected greater than the reporting limit provided.
Bold = Analyte detected greater than the laboratory reporting limit.
Italics = Reporting limit greater than the corresponding PRG.
NA = Not analyzed.
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT	MONITORING WELL MW-4S (Recovery Well RW-4 Area)																			PRG
Date Sampled	8/1988	7/23/1992	11/28/1995	8/27/1996	6/12/1997	11/18/1997	4/21/1998	10/15/1998	4/12/1999	10/13/1999	5/4/2000	10/2/2000	4/19/2001	10/31/2001	4/23/2002	10/23/2002	4/16/2003	10/15/2003	4/20/2004	(µg/L)
VOCs (µg/L)																				
Acetone	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0	<20	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA	<2.0	--
n-Butylbenzene	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5	<20	--
Carbon Disulfide	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<20	768
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<5.0	<2.0 (J)	--
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	973
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	*<1.0*	*<1.0*	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
cis-1,2-Dichloroethene	ND	ND	ND	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	68	70
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	100
1,2-Dichloroethene, Total	ND	ND	ND	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	68	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	1.25
Chloroform	[redacted]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<12.5	<12.5	<20	487
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*<1.0*	0.314
Dibromomethane	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	1.43
Trichloroethene	ND	ND	ND	[redacted]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	[redacted]	2.54
1,2,4-Trimethylbenzene	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	NA	--
Vinyl Chloride	[redacted]	[redacted]	ND	ND	ND	ND	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	0.0283
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	*<1.0*	*<1.0*	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	700
Toluene	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	828
TOTAL VOCs	2.7	1	ND	16.6	ND	ND	12	15	17	29	33	23	13	7.4	6.1	15.1	18.4	24.8	167.0	--
Metals (mg/L)																				
Arsenic, Dissolved	NA	ND	0.006	ND	ND	ND	ND	ND	ND	0.0082	ND	0.0081	ND	ND	ND	ND	<0.10	<0.100	0.0201	--
Barium, Dissolved	NA	0.159	0.13	0.11	0.67	0.28	0.48	0.3	0.49	0.58	0.79	1.1	1.1	0.26	0.26	0.35	0.219	0.230	0.228	--
Cadmium, Dissolved	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.030	<0.005	--
Chromium, Dissolved total	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.040	<0.005	--
Cyanide, Total	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	0.0071	<0.005	--
Lead, Dissolved	NA	ND	ND	0.0032	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16	ND	<0.080	<0.080	0.00597	--
Nickel, Dissolved	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.011	ND	ND	ND	<0.010	<0.010	<0.010	--
Zinc, Dissolved	NA	0.035	0.02	ND	0.036	ND	ND	0.023	0.025	ND	ND	ND	0.022	ND	ND	0.056	<0.050	<0.050	0.0233	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
Metals reported in milligrams per liter (mg/L)
October 2002 data validated to Level IV, and April 2003 and October 2003 data validated to Level II; no flags were required for the data in this table collected on those dates
April 2004 data validated to Level II
(J) = Estimated.

-- = No PRG assigned.
< = Not detected greater than the reporting limit provided
Bold = Analyte detected greater than the laboratory reporting limit
italics = Reporting limit greater than the corresponding PRG.
NA = Not analyzed
ND = Not detected greater than the method detection limit
Shaded = Analyte detected greater than the corresponding PRG.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT / Date Sampled	MONITORING WELL MW-7S (Recovery Well RW-4 Area)												PRG
	3/1988	8/1988	11/29/1995	8/27/1996	11/6/1996	6/12/1997	10/15/1998	10/13/1999	10/2/2000	10/30/2001	10/23/2002	10/15/2003	(µg/L)
VOCs (µg/L)													
Acetone	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<20.0	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	--
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	--
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	--
Carbon Disulfide	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	768
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	--
1,1-Dichloroethane	ND	23	7.4	10	7.4	5.1	ND	ND	ND	2.9	3.4	4.8	973
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene	NA	NA	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	70
trans-1,2-Dichloroethene	NA	NA	59	74	55	48	23	10	12	21.2	20.6	33.0	100
1,2-Dichloroethene, Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	487
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.314
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.43
Trichloroethene	ND	ND	[redacted]	[redacted]	ND	ND	ND	ND	ND	ND	ND	<1.0	2.54
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	--
Vinyl Chloride	ND	[redacted]	ND	ND	ND	ND	ND	[redacted]	ND	ND	ND	*<1.0*	0.0283
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	700
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	828
TOTAL VOCs	2,600	1,924.3	1,169.6	1,156	862.4	693.1	110	112.1	132	211.1	261.0	381.8	--
Metals (mg/L)													
Arsenic, Dissolved	0.005	0.003	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.100	--
Barium, Dissolved	0.286	0.191	0.17	0.12	0.16	0.16	0.2	0.77	0.22	0.17	0.202	0.135	--
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	--
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	--
Cyanide, Total	ND	*0.016*	*0.095*	ND	ND	ND	ND	ND	ND	ND	ND	*0.0060*	--
Lead, Dissolved	ND	ND	ND	0.0099	ND	ND	ND	ND	ND	ND	ND	<0.080	--
Nickel, Dissolved	ND	ND	ND	0.06	ND	ND	ND	ND	0.006	ND	ND	<0.010	--
Zinc, Dissolved	ND	0.0263	ND	0.02	ND	ND	ND	0.22	ND	ND	ND	<0.050	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
Metals reported in milligrams per liter (mg/L).
October 2002 data validated to Level IV, and October 2003 data validated to Level II; no flags were required for the data in this table collected on those dates.

-- = No PRG assigned.
< = Not detected greater than the reporting limit provided.
Bold = Analyte detected greater than the laboratory reporting limit.
Italics = Reporting limit greater than the corresponding PRG.
NA = Not analyzed.
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT	MONITORING WELL MW-9S (Aboveground Storage Tank Area)																				PRG
Date Sampled	3/1988	8/1988	7/24/1992	11/7/1995	8/27/1996	6/12/1997	11/18/1997	4/21/1998	10/15/1998	4/12/1999	10/20/1999	5/4/2000	10/2/2000	4/19/2001	10/30/2001	4/23/2002	10/23/2002	4/16/2003	10/15/2003	4/20/2004	(µg/L)
VOCs (µg/L)																					
Acetone	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0	<20	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA	<2.0	--
n-Butylbenzene	ND	ND	ND	4.2	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
2-Butanone (MEK)	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5	<20	--
Carbon Disulfide	ND	0.59	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<20	768
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<5.0	<2.0 (J)	--
1,1-Dichloroethane	ND	8.3	ND	18	ND	13	ND	16	17	12	5.5	59	13	ND	1.5	1.7	3.9	4.2	<1.0	16	973
1,1-Dichloroethene	ND	92	ND	[illegible]	ND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ND	[illegible]	[illegible]	[illegible]	[illegible]	*<1.0*	[illegible]	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
cis-1,2-Dichloroethene	NA	NA	NA	[illegible]	[illegible]	[illegible]	NA	[illegible]	[illegible]	[illegible]	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	70
trans-1,2-Dichloroethene	NA	NA	NA	[illegible]	ND	[illegible]	NA	[illegible]	[illegible]	95	NA	[illegible]	[illegible]	ND	74.9	63.3	[illegible]	[illegible]	[illegible]	[illegible]	100
1,2-Dichloroethene, Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	[illegible]	<1.0	1.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)	ND	2.2	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<12.5	<12.5	<20	487
1,1,1-Trichloroethane	ND	9.9	ND	ND	ND	ND	ND	13	21	13	ND	5.6	6.8	ND	1.3	2.5	5.0	3.2	9.6	11	200
1,1,2-Trichloroethane	ND	ND	ND	[illegible]	ND	ND	ND	[illegible]	[illegible]	ND	ND	[illegible]	ND	ND	ND	ND	ND	[illegible]	[illegible]	[illegible]	0.314
Dibromomethane	ND	ND	NA	1.8	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
Tetrachloroethene	ND	[illegible]	ND	[illegible]	ND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.43
Trichloroethene	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.54
1,2,4-Trimethylbenzene	ND	ND	NA	4.3	ND	ND	NA	ND	ND	6.2	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	NA	--
Vinyl Chloride	ND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ND	[illegible]	[illegible]	[illegible]	[illegible]	ND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0283
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	*<1.0*	[illegible]	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	700
Toluene	ND	21	ND	ND	ND	ND	ND	8.5	9.7	22	ND	ND	ND	ND	ND	ND	ND	<1.0	2.1	4.0	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.3	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	2.9	828
TOTAL VOCs	51,000	50,641.0	33,040	48,363.1	52,680	42,506	110,066	35,591.5	31,530.7	25,773.5	14,033.5	49,585.0	58,529.8	21,400	8,064.0	13,025.1	25,124.8	25,038.2	62,373.0	74,844.6	--
Metals (mg/L)																					
Arsenic, Dissolved	0.008	0.0106	0.011	0.01	0.006	ND	ND	ND	ND	ND	0.026	ND	0.0051	ND	ND	ND	ND	<0.10	<0.100	<0.100	--
Barium, Dissolved	0.181	0.139	0.144	0.11	0.04	ND	ND	0.035	0.079	0.04	0.059	0.08	0.055	0.027	0.053	0.027	0.121	0.089	0.048	0.0749	--
Cadmium, Dissolved	ND	ND	271	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.030	<0.005	--
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0052	ND	ND	ND	ND	ND	ND	<0.040	<0.040	<0.005	--
Cyanide, Total	0.03	0.014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	<0.005	<0.005	--
Lead, Dissolved	ND	ND	ND	ND	0.0031	ND	ND	0.042	ND	ND	0.0026	ND	ND	ND	ND	0.15	ND	<0.080	<0.080	<0.005	--
Nickel, Dissolved	ND	0.0106	ND	ND	ND	ND	ND	ND	ND	ND	0.027	ND	0.032	0.0073	0.01	0.013	0.022	0.018	0.020	0.0169	--
Zinc, Dissolved	ND	0.0212	0.015	ND	ND	0.023	0.03	ND	ND	ND	0.062	ND	ND	ND	ND	ND	ND	<0.050	<0.050	<0.020	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L)
Metals reported in milligrams per liter (mg/L)
October 2002 data validated to Level IV, and April 2003 and October 2003 data validated to Level II; no flags were required for the data in this table collected on those dates
April 2004 data validated to Level II
(J) = Estimated.

-- = No PRG assigned
< = Not detected greater than the reporting limit provided
Bold = Analyte detected greater than the laboratory reporting limit
Italics = Reporting limit greater than the corresponding PRG
NA = Not analyzed
ND = Not detected greater than the method detection limit
Shaded = Analyte detected greater than the corresponding PRG

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT Date Sampled	MONITORING WELL MW-10S (Southeast Area)																			PRG
	3/1988	8/1988	7/23/1992	11/08/1995	8/27/1996	11/18/1997	4/21/1998	10/15/1998	4/12/1999	10/13/1999	5/04/2000	10/02/2000	4/19/2001	10/31/2001	4/23/2002	10/25/2002	4/16/2003	10/15/2003	4/20/2004	(µg/L)
VOCs (µg/L)																				
Acetone	ND	ND	ND	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0	<20	3,650
Bromomethane	ND	ND	ND	4.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA	<2.0	--
n-Butylbenzene	ND	ND	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	4.5	<1.0	--
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5	<20	--
Carbon Disulfide	ND	ND	ND	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<20	768
Chloroethane	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<5.0	<2.0 (J)	--
1,1-Dichloroethane	630	140	91	ND	ND	ND	ND	28	6.3	7.9	ND	5.7	ND	ND	1.9	5.1	1.1	<1.0	<1.0	973
1,1-Dichloroethene	ND	[illegible]	ND	ND	ND	ND	ND	ND	ND	[illegible]	ND	ND	ND	ND	[illegible]	[illegible]	<1.0	*<1.0*	*<1.0*	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
cis-1,2-Dichloroethene	NA	NA	NA	[illegible]	[illegible]	NA	[illegible]	[illegible]	[illegible]	6.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	43.8	[illegible]	[illegible]	70
trans-1,2-Dichloroethene	NA	NA	NA	[illegible]	[illegible]	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.2	[illegible]	[illegible]	47	80.6	[illegible]	100
1,2-Dichloroethene, Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	124.2	[illegible]	[illegible]	90.8	[illegible]	[illegible]	(170)
1,2-Dichloropropane	ND	ND	ND	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	<1.0	<1.0	<1.0	1.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<12.5	<12.5	<20	487
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*<1.0*	0.314
Dibromomethane	ND	ND	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	1.43
Trichloroethene	ND	2	ND	[illegible]	[illegible]	ND	ND	[illegible]	ND	ND	ND	ND	ND	ND	[illegible]	[illegible]	1.3	1.9	[illegible]	2.54
1,2,4-Trimethylbenzene	ND	ND	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	NA	--
Vinyl Chloride	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ND	[illegible]	ND	ND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0283
Benzene	ND	[illegible]	ND	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	*<1.0*	*<1.0*	0.617
Ethylbenzene	ND	4	ND	5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	700
Toluene	ND	[illegible]	[illegible]	270	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	1,000
Xylenes, Total	ND	28	96	21.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	828
TOTAL VOCs	62,130	32,501	20,987	40,456.0	16,120	8,510	5,530	4,509	8,426.3	12,721.5	3,770	3,625.7	2,030	124.2	3,195.3	5,540.2	215.2	1,292.8	1,250.5	--
Metals (mg/L)																				
Arsenic, Dissolved	0.009	ND	ND	0.006	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<0.10	<0.100	0.0242	--
Barium, Dissolved	0.239	0.0537	0.137	0.04	0.04	0.062	ND	0.032	0.023	0.36	0.068	0.033	0.047	0.064	0.061	NA	0.035	<0.020	0.0324	--
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<0.030	<0.030	<0.005	--
Chromium, Dissolved total	0.017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<0.040	<0.040	0.00849	--
Cyanide, Total	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0094	ND	0.037	NA	<0.005	0.011	0.0381	--
Lead, Dissolved	ND	ND	ND	ND	0.0028	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	NA	<0.080	<0.080	<0.005	--
Nickel, Dissolved	ND	ND	0.021	ND	ND	0.021	ND	ND	ND	ND	ND	0.009	0.0052	0.012	ND	NA	0.035	0.017	0.0218	--
Zinc, Dissolved	ND	0.0089	ND	ND	ND	ND	ND	ND	ND	0.34	ND	ND	ND	ND	ND	NA	<0.050	<0.050	0.0295	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L)
Metals reported in milligrams per liter (mg/L).
October 2002 data validated to Level IV, and April 2003 and October 2003 data validated to Level II; no flags were required for the data in this table collected on those dates.
Due to dry conditions at the site, there was inadequate groundwater volume for analysis of the complete sample set in October 2002, thus samples for submitted for VOC analysis only
April 2004 data validated to Level II.
(J) = Estimated

-- = No PRG assigned
< = Not detected greater than the reporting limit provided
Bold = Analyte detected greater than the laboratory reporting limit.
Italics = Reporting limit greater than the corresponding PRG
NA = Not analyzed
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT / Date Sampled	MONITORING WELL MW-11S (Southeast Area)													PRG
	3/1988	8/1988	7/24/1992	11/08/1995	8/27/1996	11/06/1996	6/13/1997	10/15/1998	10/13/1999	10/02/2000	10/31/2001	10/24/2002	10/15/2003	(µg/L)
VOCs (µg/L)														
Acetone	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<20.0	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	--
n-Butylbenzene	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
2-Butanone (MEK)	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	--
Carbon Disulfide	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	768
Chloroethane	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	--
1,1-Dichloroethane	ND	ND	ND	19	5.3	8.3	6.6	ND	5.4	5.7	8.6	5.9	5.9	973
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene	NA	NA	ND	180	150	200	170	160	440	460	669	694	746	70
trans-1,2-Dichloroethene	NA	NA	ND	15	6.5	10	10	ND	ND	12	15.7	8.7	<1.0	100
1,2-Dichloroethene, Total	44	19	ND	195	156	210	180	160	440	472	684.7	702.7	746	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	487
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.314
Dibromomethane	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.43
Trichloroethene	ND	ND	ND	4.1	3.7	5.1	4.5	3.8	ND	6.5	10.5	4.0	4.4	2.54
1,2,4-Trimethylbenzene	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
Vinyl Chloride	4.6	3	0	11	42	14	51	24	160	160	112	120	136	0.0283
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	700
Toluene	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	<1.0	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	828
TOTAL VOCs	48	22	20	336.1	192.3	236.1	208.9	232	635.4	643.9	815.8	832.6	894.3	--
Metals (mg/L)														
Arsenic, Dissolved	ND	ND	ND	0.001	ND	ND	ND	ND	ND	ND	ND	ND	<0.100	--
Barium, Dissolved	0.418	0.285	0.17	0.11	0.05	ND	ND	0.042	0.082	0.059	0.085	0.122	0.106	--
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	--
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	--
Cyanide, Total	ND	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	--
Lead, Dissolved	ND	ND	ND	ND	0.0028	ND	ND	0.015	ND	ND	ND	ND	*<0.080*	--
Nickel, Dissolved	ND	ND	ND	ND	0.03	ND	ND	ND	ND	0.006	ND	ND	<0.010	--
Zinc, Dissolved	0.026	0.0145	0.122	ND	ND	ND	0.021	ND	0.025	ND	ND	0.052	<0.050	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L)
Metals reported in milligrams per liter (mg/L).
October 2002 data validated to Level IV, and October 2003 data validated to Level II; no flags were required for the data in this table collected on those dates

-- = No PRG assigned.
< = Not detected greater than the reporting limit provided.
Bold = Analyte detected greater than the laboratory reporting limit.
Italics = Reporting limit greater than the corresponding PRG.
NA = Not analyzed.
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT	Date Sampled	MONITORING WELL MW-13S (Southeast Area)					PRG
		8/1988	11/1/2001	4/23/2002	10/24/2002	10/17/2003	(µg/L)
VOCs (µg/L)							
Acetone		ND	ND	ND	ND	<20.0	3,650
Bromomethane		ND	ND	ND	ND	NA	--
n-Butylbenzene		ND	ND	ND	ND	<1.0	--
2-Butanone (MEK)		ND	NA	NA	NA	<12.5	--
Carbon Disulfide		ND	ND	ND	ND	<1.0	768
Chloroethane		ND	ND	ND	ND	<5.0	--
1,1-Dichloroethane		ND	ND	ND	ND	<1.0	973
1,1-Dichloroethene		ND	ND	ND	ND	*<1.0*	0.0167
1,2-Dichloroethane		ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene		NA	**350**	**200**	**314**	**[illegible]**	70
trans-1,2-Dichloroethene		NA	11.7	6.4	6.1	3.3	100
1,2-Dichloroethene, Total		**28**	**[illegible]**	**[illegible]**	**[illegible]**	**131.3**	(170)
1,2-Dichloropropane		ND	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	1.25
Chloroform		ND	ND	ND	ND	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)		ND	ND	ND	ND	<12.5	487
1,1,1-Trichloroethane		ND	ND	ND	ND	<1.0	200
1,1,2-Trichloroethane		ND	ND	ND	ND	*<1.0*	0.314
Dibromomethane		ND	ND	ND	ND	<1.0	--
Tetrachloroethene		ND	ND	ND	ND	<1.0	1.43
Trichloroethene		ND	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	2.54
1,2,4-Trimethylbenzene		ND	ND	ND	ND	<1.0	--
Vinyl Chloride		ND	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	0.0283
Benzene		ND	ND	ND	ND	*<1.0*	0.617
Ethylbenzene		ND	ND	ND	ND	<1.0	700
Toluene		ND	ND	ND	ND	<1.0	1,000
Xylenes, Total		ND	ND	ND	ND	<1.0	828
Total VOCs		**28**	**540.1**	**367.1**	**422.5**	**255.3**	--
Metals (mg/L)							
Arsenic, Dissolved		**0.0036**	ND	ND	ND	<0.100	--
Barium, Dissolved		**0.0705**	**0.19**	**0.12**	**0.218 (J)**	**0.177**	--
Cadmium, Dissolved		ND	ND	ND	ND	<0.030	--
Chromium, Dissolved total		ND	ND	ND	ND	<0.040	--
Cyanide, Total		**0.048**	NA	NA	NA	NA	--
Lead, Dissolved		ND	ND	**0.16**	ND	<0.080	--
Nickel, Dissolved		**0.0167**	ND	ND	ND	<0.010	--
Zinc, Dissolved		**0.0542**	ND	ND	**0.054 (J)**	<0.050	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
Metals reported in milligrams per liter (mg/L).
October 2002 data was validated to Level IV, and October 2003 data was validated to Level II.
(J) = Estimated.

-- = No PRG assigned.
< = Not detected greater than the reporting limit provided.
Bold = Analyte detected greater than the laboratory reporting limit.
Italics = Reporting limit greater than the corresponding PRG.
NA = Not analyzed.
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT / Date Sampled	MONITORING WELL MW-13D (Southeast Area) 1/28/2002[1]	PRG (µg/L)
VOCs (µg/L)		
Acetone	ND	3,650
Bromomethane	ND	--
n-Butylbenzene	ND	--
2-Butanone (MEK)	ND	--
Carbon Disulfide	ND	768
Chloroethane	ND	--
1,1-Dichloroethane	ND	973
1,1-Dichloroethene	ND	0.0167
1,2-Dichloroethane	ND	--
cis-1,2-Dichloroethene	ND	70
trans-1,2-Dichloroethene	ND	100
1,2-Dichloroethene, Total	ND	(170)
1,2-Dichloropropane	ND	1.25
Chloroform	ND	0.274
4-Methyl-2-pentanone (MIBK)	ND	487
1,1,1-Trichloroethane	ND	200
1,1,2-Trichloroethane	ND	0.314
Dibromomethane	ND	--
Tetrachloroethene	ND	1.43
Trichloroethene	ND	2.54
1,2,4-Trimethylbenzene	ND	--
Vinyl Chloride	ND	0.0283
Benzene	ND	0.617
Ethylbenzene	ND	700
Toluene	ND	1,000
Xylenes, Total	ND	828
TOTAL VOCs	ND	--
Metals (mg/L)		
Arsenic, Dissolved	<0.005	--
Barium, Dissolved	**0.10**	--
Cadmium, Dissolved	<0.03	--
Chromium, Dissolved total	<0.04	--
Cyanide, Total	NA	--
Lead, Dissolved	<0.08	--
Nickel, Dissolved	<0.02	--
Zinc, Dissolved	<0.05	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
Metals reported in milligrams per liter (mg/L).
[1] Data suspect due to well integrity.

-- = No PRG assigned.
< = Not detected greater than the reporting limit provided.
Bold = Analyte detected greater than the laboratory reporting limit.
NA = Not analyzed.
ND = Not detected greater than the method detection limit.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT / Date Sampled	MONITORING WELL MW-14S (Aboveground Storage Tank Area)																			PRG
	8/1988	7/23/1992	11/7/1995	8/27/1996	6/11/1997	11/18/1997	4/21/1998	10/15/1998	4/12/1999	10/14/1999	5/4/2000	10/2/2000	4/19/2001	10/30/2001	4/23/2002	10/23/2002	4/16/2003	10/15/2003	4/20/2004	(µg/L)
VOCs (µg/L)																				
Acetone	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0	<20	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA	<2.0	--
n-Butylbenzene	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5	<20	--
Carbon Disulfide	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<20	768
Chloroethane	ND	ND	5.4	22	6.6	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.8	<5.0	<2.0 (J)	--
1,1-Dichloroethane	270	86	320	260	150	160	74	63	19	21	12	13	5.7	7.4	8.4	10.2	8.6	9.1	4.9	973
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	*<1.0*	*<1.0*	0.0167
1,2-Dichloroethane	ND	ND	1.1	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
cis-1,2-Dichloroethene	NA	NA	45	20	3.9	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	70
trans-1,2-Dichloroethene	NA	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	100
1,2-Dichloroethene, Total	[redacted]	[redacted]	45	20	3.9	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	1.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)	*ND*	*ND*	*NA*	*NA*	*NA*	*NA*	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*<12.5*	*<12.5*	*<20*	*487*
1,1,1-Trichloroethane	ND	5	10	9.1	4.9	2.6	ND	ND	5.2	ND	ND	ND	14	15.1	4.7	2.0	9.5	3.5	4.3	200
1,1,2-Trichloroethane	[redacted]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*<1.0*	0.314
Dibromomethane	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	1.43
Trichloroethene	ND	ND	[redacted]	[redacted]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	[redacted]	2.54
1,2,4-Trimethylbenzene	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	NA	--
Vinyl Chloride	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	[redacted]	<1.0	*<1.0*	*<1.0*	0.0283
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	*<1.0*	*<1.0*	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	700
Toluene	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	1.3	828
TOTAL VOCs	1,066	209	402.0	329.0	166.5	171.5	74	63	24.2	21	12	13	19.7	22.5	13.1	16.3	23.9	12.6	13.5	--
Metals (mg/L)																				
Arsenic, Dissolved	0.0054	0.0077	0.014	0.004	ND	ND	ND	ND	ND	0.0079	ND	0.021	ND	ND	ND	ND	<0.10	<0.100	0.0221	--
Barium, Dissolved	0.0891	0.062	0.05	0.05	0.066	0.069	0.066	0.084	0.056	0.1	0.095	0.11	0.07	0.065	0.089	0.13	0.123	0.088	0.117	--
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.030	<0.005	--
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.040	<0.005	--
Cyanide, Total	0.035	0.006	ND	ND	ND	ND	0.0078	ND	0.017	ND	ND	0.009	ND	0.014	ND	ND	0.006	<0.005	<0.005	--
Lead, Dissolved	*ND*	*ND*	*ND*	0.0065	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*0.17*	*ND*	*<0.080*	*<0.080*	*<0.005*	--
Nickel, Dissolved	ND	ND	ND	0.02	0.027	0.026	0.022	ND	ND	ND	ND	0.009	0.016	0.01	0.011	0.012	<0.010	<0.010	0.0102	--
Zinc, Dissolved	0.0035	0.021	ND	ND	0.026	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.050	<0.050	0.0280	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L)
Metals reported in milligrams per liter (mg/L)
October 2002 data validated to Level IV, and April 2003 and October 2003 data validated to Level II; no flags were required for the data in this table collected on those dates
April 2004 data validated to Level II
(J) = Estimated

-- = No PRG assigned
< = Not detected greater than the reporting limit provided
Bold = Analyte detected greater than the laboratory reporting limit
Italics = Reporting limit greater than the corresponding PRG
NA = not analyzed
ND = Not detected greater than the method detection limit
Shaded = Analyte detected greater than the corresponding PRG

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT	Date Sampled	MONITORING WELL MW-15S (Aboveground Storage Tank Area)								PRG
		8/6/1992	11/29/1995	6/12/1997	10/14/1999	10/2/2000	10/30/2001	10/23/2002	10/15/2003	(µg/L)
VOCs (µg/L)										
Acetone		ND	NA	NA	ND	ND	ND	ND	<20.0	3,650
Bromomethane		ND	ND	ND	ND	ND	ND	ND	NA	--
n-Butylbenzene		NA	ND	ND	ND	ND	ND	ND	<1.0	--
2-Butanone (MEK)		ND	NA	NA	NA	NA	NA	NA	<12.5	--
Carbon Disulfide		ND	NA	NA	ND	ND	ND	ND	<1.0	768
Chloroethane		ND	ND	ND	ND	ND	ND	ND	<5.0	--
1,1-Dichloroethane		**6**	**5.8**	**4.9**	ND	ND	**1.5**	ND	<1.0	973
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.0167
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene		**10**	**13**	**41**	NA	ND	**32.9**	**5.9**	**12.9**	70
trans-1,2-Dichloroethene		ND	ND	**2.5**	NA	ND	**2.3**	ND	<1.0	100
1,2-Dichloroethene, Total		**10**	**13**	**43.5**	ND	ND	**35.2**	**5.9**	**12.9**	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	<1.0	1.25
Chloroform		ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)		ND	NA	NA	ND	ND	ND	ND	<12.5	487
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.314
Dibromomethane		NA	ND	ND	ND	ND	ND	ND	<1.0	--
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	<1.0	1.43
Trichloroethene		ND	ND	**65**	**3.3**	**11**	**14.5**	**13.3**	**52.6**	2.54
1,2,4-Trimethylbenzene		NA	ND	ND	ND	ND	ND	ND	<1.0	--
Vinyl Chloride		ND	**[illegible]**	**2.3**	ND	ND	ND	ND	*<1.0*	0.0283
Benzene		ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.617
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	<1.0	700
Toluene		ND	**1.1**	ND	ND	ND	ND	ND	<1.0	1,000
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	<1.0	828
TOTAL VOCs		**16**	**47.9**	**115.7**	**5.8**	**11**	**181.7**	**19.8**	**105.5**	--
Metals (mg/L)										
Arsenic, Dissolved		**0.0196**	ND	ND	**0.0059**	ND	ND	ND	<0.100	--
Barium, Dissolved		**0.219**	**0.14**	**0.053**	**0.086**	**0.097**	**0.09**	**0.106**	**0.079**	--
Cadmium, Dissolved		**0.015**	ND	ND	ND	ND	ND	ND	<0.030	--
Chromium, Dissolved total		ND	**0.011**	ND	ND	ND	ND	ND	<0.040	--
Cyanide, Total		ND	ND	ND	ND	ND	ND	ND	<0.005	--
Lead, Dissolved		ND	ND	**0.0038**	ND	ND	ND	ND	<0.080	--
Nickel, Dissolved		ND	ND	ND	ND	**0.007**	ND	ND	**0.011**	--
Zinc, Dissolved		**0.047**	ND	**0.055**	ND	ND	ND	ND	<0.050	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
Metals reported in milligrams per liter (mg/L).
October 2002 data validated to Level IV, and October 2003 data validated to Level II; no flags were required for the data in this table collected on those dates.

-- = No PRG assigned.
< = Not detected greater than the reporting limit provided.
Bold = Analyte detected greater than the laboratory reporting limit.
Italics = Reporting limit greater than the corresponding PRG.
NA = Not analyzed.
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT	MONITORING WELL MW-16S (Aboveground Storage Tank Area)										PRG
Date Sampled	8/6/1992	11/7/1995	11/6/1996	6/11/1997	10/15/1998	10/14/1999	10/2/2000	11/1/2001	10/23/2002	10/15/2003	(µg/L)
VOCs (µg/L)											
Acetone	ND	NA	NA	NA	NA	ND	ND	ND	ND	<20.0	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	--
n-Butylbenzene	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
2-Butanone (MEK)	ND	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	--
Carbon Disulfide	ND	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	768
Chloroethane	ND	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	--
1,1-Dichloroethane	**55**	**85**	**26**	**58**	**37**	**38**	ND	**6.1**	**30.3**	**63.1**	973
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.0167
1,2-Dichloroethane	ND	**1.4**	ND	ND	ND	ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene	NA	**190**	**50**	**75**	NA	**93**	**93**	**18.5**	**87.4**	**147**	70
trans-1,2-Dichloroethene	NA	ND	**1.3**	**5.3**	NA	NA	ND	ND	**2.5**	**11.0**	100
1,2-Dichloroethene, Total	**41**	**190**	**51.3**	**80.3**	**130**	**93**	**93**	**18.5**	**89.9**	**158**	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)	ND	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	487
1,1,1-Trichloroethane	**8**	**2.7**	**1**	**2.9**	ND	**6.9**	ND	**1.4**	**10.2**	**56.2**	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.314
Dibromomethane	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.43
Trichloroethene	ND	**3.2**	ND	ND	**3.1**	ND	ND	**1.0**	ND	**2.2**	2.54
1,2,4-Trimethylbenzene	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
Vinyl Chloride	**100**	**11**	**19**	**16**	**37**	**15**	ND	ND	**15.6**	*<1.0*	0.0283
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	700
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	828
TOTAL VOCs	**204**	**327.0**	**97.3**	**157.2**	**251**	**152.9**	**93**	**27.0**	**146.0**	**279.5**	--
Metals (mg/L)											
Arsenic, Dissolved	**0.0025**	**0.003**	ND	ND	ND	ND	**0.021**	ND	ND	<0.100	--
Barium, Dissolved	**0.05**	**0.06**	**0.065**	ND	**0.054**	**0.059**	**0.11**	**0.034**	**0.146**	**0.081**	--
Cadmium, Dissolved	ND	ND	ND	**0.00024**	ND	ND	ND	ND	ND	<0.030	--
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	--
Cyanide, Total	ND	ND	ND	**0.011**	ND	ND	**0.009**	ND	ND	**0.021**	--
Lead, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	--
Nickel, Dissolved	ND	ND	ND	ND	ND	ND	**0.009**	ND	ND	<0.010	--
Zinc, Dissolved	**0.038**	ND	ND	**0.028**	ND	ND	ND	ND	**0.06**	<0.050	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L)
Metals reported in milligrams per liter (mg/L).
October 2002 data validated to Level IV, and October 2003 data validated to Level II; no flags were required for the data in this table collected on those dates

-- = No PRG assigned.
< = Not detected greater than the reporting limit provided.
Bold = Analyte detected greater than the laboratory reporting limit.
Italics = Reporting limit greater than the corresponding PRG
NA = Not analyzed.
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT / Date Sampled	MONITORING WELL MW-18S (Aboveground Storage Tank Area) 8/1/1992[1]	11/1/2001	PRG (µg/L)
VOCs (µg/L)			
Acetone	ND	ND	3,650
Bromomethane	ND	ND	--
n-Butylbenzene	ND	ND	--
2-Butanone (MEK)	NA	NA	--
Carbon Disulfide	ND	ND	768
Chloroethane	ND	ND	--
1,1-Dichloroethane	ND	ND	973
1,1-Dichloroethene	ND	ND	0.0167
1,2-Dichloroethane	ND	ND	--
cis-1,2-Dichloroethene	ND	ND	70
trans-1,2-Dichloroethene	ND	ND	100
1,2-Dichloroethene, Total	ND	ND	(170)
1,2-Dichloropropane	ND	ND	1.25
Chloroform	ND	ND	0.274
4-Methyl-2-pentanone (MIBK)	ND	ND	487
1,1,1-Trichloroethane	ND	ND	200
1,1,2-Trichloroethane	ND	ND	0.314
Dibromomethane	ND	ND	--
Tetrachloroethene	ND	ND	1.43
Trichloroethene	ND	ND	2.54
1,2,4-Trimethylbenzene	ND	ND	--
Vinyl Chloride	ND	**1.6**	0.0283
Benzene	ND	ND	0.617
Ethylbenzene	ND	ND	700
Toluene	ND	ND	1,000
Xylenes, Total	ND	ND	828
TOTAL VOCs	ND	1.6	--
Metals (mg/L)			
Arsenic, Dissolved	ND	ND	--
Barium, Dissolved	**0.177**	**0.084**	--
Cadmium, Dissolved	ND	ND	--
Chromium, Dissolved total	ND	ND	--
Cyanide, Total	NA	NA	--
Lead, Dissolved	ND	ND	--
Nickel, Dissolved	ND	ND	--
Zinc, Dissolved	**5.56**	**0.2**	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
Metals reported in milligrams per liter (mg/L).
[1] August 1992 data from Technical Memorandum (Warzyn, November 1992).

-- = No PRG assigned.
Bold = Analyte detected greater than the laboratory reporting limit.
NA = Not analyzed.
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT / Date Sampled	MONITORING WELL MW-83AS (Southeast Area)																				PRG
	3/1988[1]	8/1988[1]	7/23/1992	11/08/1995	8/27/1996	6/13/1997	11/18/1997	4/21/1998	10/15/1998	4/12/1999	10/13/1999	5/04/2000	10/02/2000	4/19/2001	10/31/2001	4/23/2002	10/24/2002	4/16/2003	10/15/2003	4/20/2004	(µg/L)
VOCs (µg/L)																					
Acetone	ND	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0	<20	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA	<2.0	--
n-Butylbenzene	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
2-Butanone (MEK)	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5	<20	--
Carbon Disulfide	ND	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<20	768
Chloroethane	ND	ND	ND	ND	ND	5.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<5.0	<2.0 (J)	--
1,1-Dichloroethane	ND	ND	ND	48	72	51	56	ND	42	39	43	38	26	ND	31	29.1	33.3	18.1	23.7	21	973
1,1-Dichloroethene	ND	ND	ND	ND	ND	[illegible]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	*<1.0*	*<1.0*	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
cis-1,2-Dichloroethene	ND	ND	NA	[illegible]	[illegible]	[illegible]	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	70
trans-1,2-Dichloroethene	ND	ND	NA	68	[illegible]	56	NA	ND	32	21	17	14	5.9	ND	21	12.6	2.3	2.5	<1.0	1.6	100
1,2-Dichloroethene, Total	ND	ND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	1.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<12.5	<12.5	<20	487
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*<1.0*	0.314
Dibromomethane	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	1.43
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	1.0	2.54
1,2,4-Trimethylbenzene	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	NA	--
Vinyl Chloride	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0283
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*<1.0*	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	700
Toluene	ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	828
TOTAL VOCs	110	140.7	13,200	16,816	16,782	12,516.2	10,156	6,100	1,984	5,050	4,290	2,802	1,911.9	970	2,181	1,618.7	1,672.6	1,056.6	1,348.7	1,093.6	--
Metals (mg/L)																					
Arsenic, Dissolved	ND	ND	ND	0.003	ND	0.0022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<0.10*	<0.100	*<0.0100*	--
Barium, Dissolved	0.186	0.117	0.111	0.18	0.09	ND	ND	0.048	0.055	0.088	0.09	0.094	0.068	0.063	0.17	0.068	0.16	0.125	0.078	0.0910	--
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.030	<0.005	--
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.040	<0.005	--
Cyanide, Total	ND	0.022	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	0.0089	<0.005	--
Lead, Dissolved	ND	ND	ND	ND	0.011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18	ND	<0.080	<0.080	<0.005	--
Nickel, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002	ND	ND	ND	ND	*<0.010*	<0.010	*<0.0100*	--
Zinc, Dissolved	ND	0.0054	ND	ND	ND	0.041	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.063	<0.050	<0.050	<0.0200	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.
Volatile organic compounds (VOC's) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L)
Metals reported in milligrams per liter (mg/L)
[1] Possible mislabeling of sample occurred in 1988
October 2002 data validated to Level IV, and April 2003 and October 2003 data validated to Level II, no flags were required for the data in this table collected on those dates
April 2004 data validated to Level II
(J) = Estimated

-- = No PRG assigned.
< = Not detected greater than the reporting limit provided
Bold = Analyte detected greater than the laboratory reporting limit
Italics = Reporting limit greater than the corresponding PRG
NA = Not analyzed
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT / Date Sampled	MONITORING WELL MW-83AD (Southeast Area)												PRG
	3/1988	8/1988	7/31/1992	11/8/1995	11/6/1996	6/13/1997	10/15/1998	10/13/1999	10/2/2000	10/31/2001	10/24/2002	10/15/2003	(µg/L)
VOCs (µg/L)													
Acetone	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND	<20.0	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	--
n-Butylbenzene	ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
2-Butanone (MEK)	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND	<12.5	--
Carbon Disulfide	ND	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	768
Chloroethane	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	--
1,1-Dichloroethane	ND	ND	0.6	ND	1.5	ND	ND	ND	ND	ND	ND	<1.0	973
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene	ND	NA	NA	**140**	**88**	**60**	**38**	**33**	**8.9**	**9.3**	**3.5**	**2.4**	70
trans-1,2-Dichloroethene	ND	NA	NA	ND	ND	ND	ND	ND	NA	ND	ND	<1.0	100
1,2-Dichloroethene, Total	ND	**7.2**	**10**	**140**	**88**	**60**	**38**	**33**	**8.9**	**9.3**	**3.5**	**2.4**	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	487
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	[illegible]	ND	ND	ND	*<1.0*	0.314
Dibromomethane	ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.43
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	2.54
1,2,4-Trimethylbenzene	ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
Vinyl Chloride	**4**	**38**	**3.7**	**110**	**73**	**54**	**8.8**	**35**	**16**	**3.9**	**5.8**	**3.4**	0.0283
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	700
Toluene	ND	**0.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	828
TOTAL VOCs	**4**	**46.1**	**13.6**	**250**	**163**	**114**	**46.8**	**81**	**24.9**	**13.2**	**9.3**	**5.8**	--
Metals (mg/L)													
Arsenic, Dissolved	NA	NA	ND	**0.004**	ND	ND	ND	ND	ND	ND	ND	<0.100	--
Barium, Dissolved	NA	NA	**0.022**	**0.25**	**0.24**	**0.27**	**0.17**	**0.19**	**0.17**	**0.16**	**0.288**	**0.217**	--
Cadmium, Dissolved	NA	NA	**0.005**	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	--
Chromium, Dissolved total	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	--
Cyanide, Total	NA	NA	**0.07**	ND	ND	**0.014**	ND	ND	ND	ND	ND	<0.005	--
Lead, Dissolved	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	--
Nickel, Dissolved	NA	NA	ND	ND	ND	ND	ND	ND	**0.004**	ND	ND	<0.010	--
Zinc, Dissolved	NA	NA	ND	**0.01**	ND	**0.02**	**0.022**	**0.02**	ND	**0.069**	**0.057**	<0.050	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L)
Metals reported in milligrams per liter (mg/L).
October 2002 data validated to Level IV, and October 2003 data validated to Level II; no flags were required for the data in this table collected on those dates

-- = No PRG assigned.
< = Not detected greater than the reporting limit provided.
Bold = Analyte detected greater than the laboratory reporting limit.
Italics = Reporting limit greater than the corresponding PRG.
NA = Not analyzed.
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT Date Sampled	MONITORING WELL MW-83B (Northeast Area)										PRG
	3/1988	7/31/1992	6/7/1996	11/6/1996	6/12/1997	10/15/1998	10/2/2000	10/31/2001	10/23/2002	10/15/2003	(µg/L)
VOCs (µg/L)											
Acetone	**270**	ND	ND	NA	NA	ND	ND	ND	ND	<20.0	**3,650**
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	--
n-Butylbenzene	ND	NA	ND	NA	NA	ND	ND	ND	ND	<1.0	--
2-Butanone (MEK)	**23**	ND	ND	NA	NA	NA	NA	NA	NA	<12.5	--
Carbon Disulfide	ND	NA	ND	NA	NA	ND	ND	ND	ND	<1.0	**768**
Chloroethane	ND	ND	ND	NA	ND	ND	ND	ND	ND	<5.0	--
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**973**
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.0167**
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**70**
trans-1,2-Dichloroethene	ND	NA	ND	ND	ND	ND	ND	ND	ND	<1.0	**100**
1,2-Dichloroethene, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	**1.25**
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.274**
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	NA	NA	ND	ND	ND	ND	<12.5	**487**
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**200**
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.314**
Dibromomethane	ND	NA	ND	NA	NA	ND	ND	ND	ND	<1.0	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**1.43**
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**2.54**
1,2,4-Trimethylbenzene	ND	NA	ND	NA	NA	ND	ND	ND	ND	<1.0	--
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.0283**
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.617**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**700**
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**1,000**
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**828**
TOTAL VOCs	**293**	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
Metals (mg/L)											
Arsenic, Dissolved	ND	ND	**0.003**	**0.0031**	**0.0027**	ND	**0.0054**	ND	ND	<0.100	--
Barium, Dissolved	ND	ND	**0.16**	**0.22**	**0.19**	**0.16**	**0.26**	**0.18**	**0.227**	**0.257**	--
Cadmium, Dissolved	ND	**0.005**	ND	ND	ND	ND	ND	ND	ND	<0.030	--
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	--
Cyanide, Total	ND	**0.019**	ND	ND	ND	ND	ND	ND	ND	**0.0059**	--
Lead, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	--
Nickel, Dissolved	ND	ND	**0.02**	**0.021**	ND	ND	ND	ND	ND	<0.010	--
Zinc, Dissolved	ND	ND	**0.1**	**0.081**	**0.029**	ND	ND	ND	ND	<0.050	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L)

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV, and October 2003 data validated to Level II; no flags were required for the data in this table collected on those dates.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

Bold = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT / Date Sampled	MONITORING WELL MW-83DS (Formerly GW-83E; Southeast Area)					PRG
	8/1988	11/1/2001	4/23/2002	10/24/2002	10/17/2003	(µg/L)
VOCs (µg/L)						
Acetone	ND	ND	ND	ND	<20.0	3,650
Bromomethane	ND	ND	ND	ND	NA	--
n-Butylbenzene	ND	ND	ND	ND	<1.0	--
2-Butanone (MEK)	ND	NA	NA	NA	**14.4**	--
Carbon Disulfide	ND	ND	ND	ND	<1.0	768
Chloroethane	ND	ND	ND	ND	<5.0	--
1,1-Dichloroethane	ND	**1.1**	ND	ND	<1.0	973
1,1-Dichloroethene	ND	ND	ND	ND	*<1.0*	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene	ND	**191**	**35**	**26**	**235**	70
trans-1,2-Dichloroethene	ND	**1.1**	ND	ND	**1.1**	100
1,2-Dichloroethene, Total	ND	**192**	**35**	**26**	**236.1**	(170)
1,2-Dichloropropane	ND	ND	ND	**1.0**	<1.0	1.25
Chloroform	ND	ND	ND	ND	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	ND	<12.5	487
1,1,1-Trichloroethane	ND	ND	ND	ND	<1.0	200
1,1,2-Trichloroethane	ND	ND	ND	ND	*<1.0*	0.314
Dibromomethane	ND	ND	ND	ND	<1.0	--
Tetrachloroethene	ND	ND	ND	ND	<1.0	1.43
Trichloroethene	ND	ND	ND	ND	<1.0	2.54
1,2,4-Trimethylbenzene	ND	ND	ND	ND	<1.0	--
Vinyl Chloride	ND	**16**	**120**	**166**	**29.7**	0.0283
Benzene	ND	ND	ND	ND	*<1.0*	0.617
Ethylbenzene	ND	ND	ND	ND	<1.0	700
Toluene	ND	ND	ND	ND	<1.0	1,000
Xylenes, Total	ND	ND	ND	ND	<1.0	828
TOTAL VOCs	ND	**209.2**	**470**	**509**	**334.4**	--
Metals (mg/L)						
Arsenic, Dissolved	**0.003**	ND	ND	ND	<0.100	--
Barium, Dissolved	**0.211**	**0.077**	**0.12**	**0.153**	**0.106**	--
Cadmium, Dissolved	ND	ND	ND	ND	<0.030	--
Chromium, Dissolved total	ND	ND	ND	ND	<0.040	--
Cyanide, Total	ND	NA	NA	NA	NA	--
Lead, Dissolved	ND	ND	**0.16**	ND	<0.080	--
Nickel, Dissolved	ND	ND	ND	ND	<0.010	--
Zinc, Dissolved	ND	**0.062**	ND	ND	<0.050	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
Metals reported in milligrams per liter (mg/L).
October 2002 data validated to Level IV, and October 2003 data validated to Level II; no flags were required for the data in this table collected on those dates.

-- = No PRG assigned.
< = Not detected greater than the reporting limit provided.
Bold = Analyte detected greater than the laboratory reporting limit.
Italics = Reporting limit greater than the corresponding PRG.
NA = Not analyzed.
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling Site

CONSTITUENT / Date Sampled	MONITORING WELL MW-83DD (Formerly GW-83D; Southeast Area) 8/1988	11/6/2001	PRG (µg/L)
VOCs (µg/L)			
Acetone	ND	ND	3,650
Bromomethane	ND	ND	--
n-Butylbenzene	ND	ND	--
2-Butanone (MEK)	ND	NA	--
Carbon Disulfide	ND	ND	768
Chloroethane	ND	ND	--
1,1-Dichloroethane	ND	ND	973
1,1-Dichloroethene	ND	ND	0.0167
1,2-Dichloroethane	ND	ND	--
cis-1,2-Dichloroethene	ND	ND	70
trans-1,2-Dichloroethene	ND	ND	100
1,2-Dichloroethene, Total	ND	ND	(170)
1,2-Dichloropropane	ND	ND	1.25
Chloroform	ND	ND	0.274
4-Methyl-2-pentanone (MIBK)	ND	ND	487
1,1,1-Trichloroethane	ND	ND	200
1,1,2-Trichloroethane	ND	ND	0.314
Dibromomethane	ND	ND	--
Tetrachloroethene	ND	ND	1.43
Trichloroethene	ND	ND	2.54
1,2,4-Trimethylbenzene	ND	ND	--
Vinyl Chloride	ND	ND	0.0283
Benzene	ND	ND	0.617
Ethylbenzene	ND	ND	700
Toluene	ND	ND	1,000
Xylenes, Total	ND	ND	828
TOTAL VOCs	ND	ND	--
Metals (mg/L)			
Arsenic, Dissolved	**0.057**	ND	--
Barium, Dissolved	**0.009**	**0.05**	--
Cadmium, Dissolved	ND	ND	--
Chromium, Dissolved total	ND	ND	--
Cyanide, Total	**0.022**	NA	--
Lead, Dissolved	**0.0023**	ND	--
Nickel, Dissolved	ND	ND	--
Zinc, Dissolved	**0.004**	ND	--

Notes:

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.
Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
Metals reported in milligrams per liter (mg/L).

-- = No PRG assigned.
Bold = Analyte detected greater than the laboratory reporting limit.
NA = Not analyzed.
ND = Not detected greater than the method detection limit.

Table 4
Groundwater Treatment System Flow Summary
Wayne Reclamation & Recycling

	JANUARY 2004		FEBRUARY 2004		MARCH 2004		APRIL 2004		MAY 2004		JUNE 2004	
	DATE	FLOW (gpd)	DATE	FLOW (gpd)	DATE	FLOW (gpd)	DATE	FLOW (gpd)	DATE	FLOW (gpd)	DATE	FLOW (gpd)
	1	99,000	1	75,000	1	77,000	1	74,000	1	109,000	1	141,000
	2	90,000	2	75,000	2	77,000	2	74,000	2	109,000	2	141,000
	3	90,000	3	44,000	3	63,000	3	74,000	3	109,000	3	141,000
	4	90,000	4	43,000	4	77,000	4	74,000	4	109,000	4	140,000
	5	79,000	5	40,000	5	77,000	5	74,000	5	109,000	5	141,000
	6	90,000	6	44,000	6	77,000	6	74,000	6	109,000	6	141,000
	7	96,000	7	44,000	7	77,000	7	93,000	7	110,000	7	141,000
	8	101,000	8	44,000	8	75,000	8	93,000	8	110,000	8	141,000
	9	121,000	9	70,000	9	75,000	9	93,000	9	110,000	9	126,000
	10	121,000	10	70,000	10	75,000	10	93,000	10	110,000	10	126,000
	11	121,000	11	70,000	11	75,000	11	93,000	11	110,000	11	126,000
	12	121,000	12	70,000	12	75,000	12	93,000	12	110,000	12	68,000
	13	116,000	13	60,000	13	75,000	13	93,000	13	110,000	13	0
	14	116,000	14	70,000	14	75,000	14	100,000	14	110,000	14	0
	15	116,000	15	70,000	15	67,000	15	100,000	15	117,000	15	43,000
	16	116,000	16	70,000	16	59,000	16	100,000	16	117,000	16	115,000
	17	116,000	17	90,000	17	67,000	17	100,000	17	117,000	17	115,000
	18	116,000	18	90,000	18	67,000	18	100,000	18	117,000	18	115,000
	19	116,000	19	90,000	19	66,000	19	99,000	19	117,000	19	115,000
	20	77,000	20	90,000	20	67,000	20	99,000	20	111,000	20	115,000
	21	92,000	21	90,000	21	67,000	21	105,000	21	117,000	21	115,000
	22	103,000	22	90,000	22	67,000	22	69,000	22	95,000	22	115,000
	23	103,000	23	90,000	23	85,000	23	61,000	23	95,000	23	115,000
	24	103,000	24	54,000	24	86,000	24	112,000	24	95,000	24	113,000
	25	103,000	25	70,000	25	86,000	25	112,000	25	90,000	25	115,000
	26	107,000	26	91,000	26	86,000	26	112,000	26	95,000	26	115,000
	27	111,000	27	91,000	27	86,000	27	112,000	27	95,000	27	115,000
	28	98,000	28	91,000	28	86,000	28	112,000	28	147,000	28	115,000
	29	111,000	29	91,000	29	86,000	29	110,000	29	147,000	29	109,000
	30	53,000			30	86,000	30	112,000	30	147,000	30	109,000
	31	41,000			31	84,000			31	147,000		
Total Monthly Flow (gallons)		3,133,000		2,077,000		2,348,000		2,810,000		3,500,000		3,327,000
Average Daily Flow (gallons)		101,065		71,621		75,742		93,667		112,903		110,900
Total Plant Run Time (minutes)		41,521		40,522		44,169		41,840		44,485		38,678
Av. Flow During Actual Plant Run Time (gpm)		**75.5**		**51.3**		**53.2**		**67.2**		**78.7**		**86.0**

Notes:
gpd = Gallons per day. Av. = Average. gpm = Gallons per minute.

Table 5
Summary of Monitoring Well Construction Details
Wayne Reclamation & Recycling

Well Identification	TOIC Elevations 2001 - 2003	Surface Elevation (msl)	Total Depth (bgs)	Well Diameter (inches)	Screen Length (feet)	Bottom Screen Elevation (msl)	Top Screen Elevation (msl)	Slot Size (inches)	General Location	Well Installer	Installation Date
MW-1D	826.08	823.81	150.00	2.00	10.00	673.81	683.81	0.010	Southeast Area	Montgomery Watson	June-96
MW-2S	825.34	822.90	23.00	2.00	10.00	799.90	809.90	0.010	Southeast Area	Warzyn	February-88
MW-3S	824.06	820.82	20.00	2.00	10.00	800.82	810.82	0.010	Southeast Area	Warzyn	February-88
MW-4S	843.06	840.04	37.00	2.00	10.00	803.04	813.04	0.010	RW-4 Area	Warzyn	February-88
MW-5S	833.02	830.19	25.00	2.00	10.00	805.19	815.19	0.010	Cemetery	Warzyn	February-88
MW-7S	836.12	833.70	31.00	2.00	10.00	802.70	812.70	0.010	RW-4 area	Warzyn	February-88
MW-8S	835.52	832.11	30.00	2.00	10.00	802.11	812.11	0.010	AST area	Warzyn	February-88
MW-8D	834.11	831.57	150.00	2.00	10.00	681.57	691.57	0.010	AST Area	Warzyn	August-88
MW-9S	825.44	822.43	20.00	2.00	10.00	802.43	812.43	0.010	AST Area	Warzyn	February-88
MW-10S	823.15	821.66	16.00	2.00	10.00	805.66	815.66	0.010	Southeast Area	Warzyn	February-88
MW-11S	825.08	823.26	34.00	2.00	10.00	789.26	799.26	0.010	Southeast Area	Warzyn	February-88
MW-13S [1]	826.40	823.58	25.00	2.00	10.00	798.58	808.58	0.010	Southeast Area	Warzyn	July-88
MW-13D [1]	826.44	823.86	145.00	2.00	10.00	678.86	688.86	0.010	Southeast Area	Warzyn	July-88
MW-14S	821.30	819.11	18.90	2.00	10.00	800.21	810.21	0.010	AST Area	Warzyn	July-88
MW-15S	827.64	825.00	25.00	2.00	10.00	800.00	810.00	0.010	AST Area	Warzyn	July-90
MW-16S	827.41	825.23	25.00	2.00	10.00	800.23	810.23	0.010	AST Area	Warzyn	July-90
MW-17S	826.56	824.66	40.00	2.00	10.00	784.66	794.66	0.007	AST Area	Warzyn	August-92
MW-18S	824.16	821.54	32.50	2.00	10.00	789.04	799.04	0.007	AST Area	Warzyn	July-92
MW-19S [1]	832.07	830.20	25.00	2.00	10.00	805.20	815.20	0.010	AST Area	Warzyn	July-92

Notes:

TOIC = Top of inner well casing; msl = above mean sea level; bgs = below ground surface; AST = Aboveground Storage Tank; MW = monitoring well; RW = recovery well

[1] TOIC elevations based on InSite, Inc. survey of 7/2/2002, following repair of those wells.

Depth to groundwater measured in feet below TOIC.

Prior to 2001, TOIC elevations based on Ayres-Lewis-Norris-May, Inc. survey of 10/10/1997.

TOIC and surface elevations based on Benchmark Surveying, Inc. surveys of 7/2/2001, 10/25/2001,and 5/1/2003, except where noted.

Table 5
Summary of Monitoring Well Construction Details
Wayne Reclamation & Recycling

Well Identification	TOIC Elevations 2001 - 2003	Surface Elevation (msl)	Total Depth (bgs)	Well Diameter (inches)	Screen Length (feet)	Bottom Screen Elevation (msl)	Top Screen Elevation (msl)	Slot Size (inches)	General Location	Well Installer	Installation Date
P-1	834.28	832.29	28.00	2.00	10.00	804.29	814.29	0.010	RW-4 Area	Warzyn	July-88
P-2	825.49	822.90	18.00	2.00	10.00	804.90	814.90	0.010	Southeast Area	Warzyn	July-88
P-3	823.48	820.82	20.00	2.00	10.00	800.82	810.82	0.010	Southeast Area	Warzyn	July-88
P-4	822.67	820.01	15.00	2.00	10.00	805.01	815.01	0.010	AST Area	Warzyn	July-88
MW-83AS [2]	826.13	824.39	28.22	2.00	5.00	796.17	801.17	-	Southeast Area	Peerless - Midwest	May-83
MW-83AD [2]	826.15	824.36	46.95	2.00	4.00	777.41	781.41	-	Southeast Area	Peerless - Midwest	May-83
MW-83B	840.55	838.30	60.00	2.00	9.70	778.30	788.00	0.010	Southeast Area	Montgomery Watson	June-96
MW-83DS [2]	825.21	823.75	36.40	2.00	2.00	787.35	789.35	-	Southeast Area	Peerless - Midwest	May-83
MW-83DD [2]	825.30	823.82	52.93	2.00	0.50	770.89	771.39	-	Southeast Area	Peerless - Midwest	May-83
GM-1 [3]	841.08	838.98	34.84	2.00	-	804.14	-	-	Landfill	G&M	-
GM-2 [3]	833.30	830.51	38.86	2.00	-	791.65	-	-	Landfill	G&M	-
GM-3 [3]	822.87	820.65	27.75	2.00	-	792.90	-	-	Landfill	G&M	-
GM-4 [3]	827.40	824.11	27.95	2.00	-	796.16	-	-	Landfill	G&M	-
PZ-1 [4]	823.66	821.00	26.00	2.00	5.00	795.00	800.00	0.010	AST Area	MWH	December-02
PZ-2 [4]	825.73	823.80	17.00	2.00	5.00	806.80	811.80	0.010	Southeast Area	MWH	December-02
PZ-3 [4]	826.46	823.10	20.00	2.00	5.00	803.10	808.10	0.010	Southeast Area	MWH	December-02
PZ-4 [4]	825.52	821.45	17.00	2.00	5.00	804.45	809.45	0.010	RW-5 Area (Landfill)	MWH	December-02

Notes:

TOIC = Top of inner well casing; msl = above mean sea level; bgs = below ground surface; AST = Aboveground Storage Tank; MW = monitoring well; RW = recovery well; P and PZ = piezometer.

[2] Total depth and screen length revised based on InSite, Inc. field documentation study on 7/17/02.

[3] Groundwater elevations estimated for GM-1 through GM-4 for April 2001 reading; that same value is used for April 2003

[4] Groundwater elevations from first round of measurements following piezometer installation, on 1/14/2003.

Depth to groundwater measured in feet below TOIC.

- = No data available.

Prior to 2001, TOIC elevations based on Ayres-Lewis-Norris-May, Inc. survey of 10/10/1997.

TOIC and surface elevations based on Benchmark Surveying, Inc. surveys of 7/2/2001, 10/25/2001,and 5/1/2003, except where noted.

Table 6
Summary of Groundwater Elevations
Wayne Reclamation & Recycling

Well Identification	TOIC Elevations 2001 - 2003	1/29/2004 Elevations System On	2/20/2004 Elevations System On	3/24/2004 Elevations System On	4/20/2004 Elevations System On	5/18/2004 Elevations System On	06/24/04 Elevations System On
MW-1D	*826.08*	---	---	---	*810.39*	---	---
MW-2S	825.34	808.70	808.54	809.42	808.54	807.70	809.97
MW-3S	824.06	807.66	807.68	808.23	807.37	807.58	810.21
MW-4S	843.06	---	---	---	810.77	---	---
MW-5S	833.02	---	---	---	812.07	---	---
MW-7S	836.12	---	---	---	810.80	---	---
MW-8S	835.52	---	---	---	809.74	---	---
MW-8D	834.11	---	---	---	810.46	---	---
MW-9S	825.44	810.94	810.30	811.03	810.14	809.65	812.36
MW-10S	823.15	808.14	807.96	808.85	807.87	807.66	810.15
MW-11S	825.08	806.96	808.51	808.99	807.28	806.86	810.39
MW-13S	826.40	811.46	811.19	811.57	811.13	811.13	812.03
MW-13D [1]	826.44	---	---	---	809.86	---	---
MW-14S	821.30	---	---	---	810.51	---	---
MW-15S	827.64	---	---	---	810.74	---	---
MW-16S	827.41	---	---	---	810.84	---	---
MW-17S	826.56	---	---	---	811.37	---	---
MW-18S	824.16	---	---	---	810.61	---	---
MW-19S [1]	832.07	---	---	---	811.14	---	---
P-1	834.28	---	---	---	810.90	---	---
P-2	825.49	---	---	---	810.75	---	---
P-3	823.48	---	---	---	810.56	---	---
P-4	822.67	---	---	---	810.49	---	---
MW-83AS	826.13	808.60	808.41	809.31	808.45	807.65	809.95
MW-83AD	826.15	810.12	809.81	810.20	809.43	808.86	811.58
MW-83B	840.55	---	---	---	810.47	---	---
MW-83DS	825.21	811.10	810.73	811.09	810.46	810.22	812.09
MW-83DD	825.30	---	---	---	810.31	---	---
GM-1	841.08	---	---	---	---	---	---
GM-2	833.30	---	---	---	---	---	---
GM-3	822.87	811.36	810.86	811.51	810.79	810.60	812.29
GM-4	827.40	811.21	810.73	811.50	810.61	810.30	812.21
PZ-1	823.66	810.95	810.33	811.06	810.17	809.64	812.36
PZ-2	825.73	811.44	811.18	811.57	811.12	811.12	812.04
PZ-3	826.46	810.95	810.96	811.44	810.92	810.91	812.11
PZ-4	825.52	811.34	810.95	811.54	810.83	810.56	812.34
RW-3	822.71	808.39	807.66	805.93	809.54	802.81	809.57
RW-5	823.94	810.16	807.79	810.56	803.60	806.42	808.96

Notes:

TOIC = Top of inner well casing; MW = monitoring well; RW = recovery well; P and PZ = piezometer

TOIC and surface elevations based on Benchmark Surveying, Inc. surveys of 7/2/2001, 10/25/2001,and 5/1/2003, except where noted

Depth to groundwater measured in feet below TOIC

--- = No data available.

[1] TOIC elevations based on InSite, Inc. survey of 7/2/2002, following repair of those wells

Table 7
Columbia City Municipal Water Supply Well Results - Volatile Organic Compounds and Polychlorinated Biphenyls
Wayne Reclamation & Recycling

CONSTITUENT	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8
Date Sampled	10/14/1998		12/9/1999		10/3/2000		10/31/2001		10/23/2002		10/16/2003	
VOCs (µg/L)												
Benzene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromodichloromethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	<10	<10	<10	<10	<10	<10	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
Carbon Disulfide	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	<10	<10	<10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroform	<5.0	<5.0	<20	<20	<20	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane	<10	<10	<10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichlororethene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Hexanone	<50	<50	<50	<50	<50	<50	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5
Methylene Chloride	<10	<10	<10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl-ethyl-ketone	<50	<50	<50	<50	<50	<50	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5
4-Methyl-2-pentanone (MIBK)	<50	<50	<50	<50	<50	<50	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5
Styrene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	<2	<2	<5.0	<5.0	<2.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes, Total	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
PCBs (µg/L)												
Aroclor 1016	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs) reported in micrograms per liter (µg/L)

PW = Public well

< = Not detected above the reporting limit provided

NA = Not analyzed

October 2002 and 2003 data validated to Level IV, no flags were required for the data in this table collected on those dates

Table 8
Columbia City Municipal Water Supply Well Results - Metals and Inorganics
Wayne Reclamation & Recycling

CONSTITUENT	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8
Date Sampled	10/14/1998		12/9/1999		10/3/2000		10/31/2001		10/23/2002		10/16/2003	
Total Metals (mg/L)												
Aluminum	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100
Antimony	<0.005	<0.005	<0.005	<0.005	<0.026	<0.026	<0.0010	<0.0010	<0.0010	<0.0010	<0.100	<0.100
Arsenic	**0.0083**	**0.0071**	**0.0091**	**0.0056**	<0.028	<0.028	**0.0087**	**0.0062**	**0.0087**	**0.0066**	<0.100	<0.100
Barium	**0.15**	**0.13**	**0.12**	**0.11**	**0.15**	**0.13**	**0.161**	**0.138**	**0.150**	**0.132**	**0.155**	**0.135**
Beryllium	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.0010	<0.0010	<0.0010	<0.0010	<0.005	<0.005
Cadmium	<0.005	<0.005	<0.010	<0.010	<0.005	<0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.030	<0.030
Calcium	**86**	**83**	**70**	**67**	**87**	**80**	**80.2**	**75.8**	**89.8 (J)**	**92.9**	**95.0**	**84.5**
Chromium	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.040	<0.040
Cobalt	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.020	<0.020
Copper	<0.010	<0.010	<0.010	<0.010	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.020	<0.020
Iron	**2**	**1.6**	**1.6**	**1.4**	**1.8**	**1.5**	**1.82**	**1.5**	**1.85**	**1.66**	**2.15**	**1.67**
Lead	<0.005	<0.005	<0.005	<0.005	<0.018	<0.018	<0.0010	<0.0010	<0.0010	<0.0010	<0.080	<0.080
Magnesium	**35**	**36**	**28**	**29**	**34**	**34**	**32.1**	**32.8**	**33.7 (J)**	**36.7**	**38.1**	**36.0**
Manganese	**0.16**	**0.14**	**0.11**	**0.12**	**0.12**	**0.13**	**0.109**	**0.114**	**0.112**	**0.119**	**0.137**	**0.143**
Mercury	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	**0.023**	**0.031**	**0.025**	**0.031**	<0.020	**0.021**	<0.020	**0.021**	NA	NA	**0.036**	**0.043**
Nickel	<0.020	<0.020	<0.020	<0.020	<0.002	<0.0068	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010
Potassium	**1.4**	**1.5**	<5.0	<5.0	<5.0	<5.0	**1.6**	**1.8**	**1.8**	**2.4**	**1.90**	**2.00**
Selenium	<0.005	<0.005	<0.005	<0.005	<0.036	<0.005	<0.20	<0.20	<0.0050	<0.0050	<0.100	<0.100
Silver	<0.020	<0.020	<0.020	<0.020	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.040	<0.040
Sodium	**13**	**17**	**11**	**13**	**14**	**17**	**14**	**15.8**	**12.8**	**17.7**	**16.1**	**18.4**
Thallium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0100	<0.0100	<0.0010	<0.0010	<0.010	<0.010
Vanadium	<0.02	<0.02	<0.020	<0.020	<0.02	<0.02	<0.050	<0.050	<0.0050	<0.0050	<0.050	<0.050
Zinc	**0.024**	<0.020	<0.020	<0.020	<0.020	**0.04**	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Inorganics/Wet Chemistry (mg/L)												
Biological Oxygen Demand	<5	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Cyanide	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Oil & Grease	<5	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Phenols	<0.010	<0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Phosphorus	<0.05	<0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Surfactants (MBAs)	**0.10**	<0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	<5	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite Nitrogen	**0.021**	**0.022**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen	<0.02	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia Nitrogen	**0.38**	**0.41**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen	**0.64**	**0.73**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Total metals and inorganic/wet chemistry parameters reported in milligrams per liter (mg/L)

PW = Public well.

October 2002 data was validated to Level IV; (J) = estimated

October 2003 data validated to Level IV; no flags were required for the data in this table collected on that date.

< = Not detected above the reporting limit provided

Bold = Analyte detected above the laboratory reporting limit.

NA = Not analyzed

Table 9
Hydrological Assessment Groundwater and Surface Water Elevation Data, January through June 2004
Wayne Reclamation & Recycling

Location	Approximate Distance from River Bank (ft)	River Bottom Elevation (ft MSL)	Groundwater or Surface Water Elevation (ft MSL)					
		5/1/2003	1/29/2004	2/20/2004	3/24/2004	4/20/2004	5/18/2004	6/24/2004
RW-3 Area (Aboveground Storage Tank Area - Cross-Section A-A')								
Groundwater Elevation at RW-3	75	NA	808.39 (Pump running, 14 gpm)	807.66 (Pump running, 28 gpm)	805.93 (Pump running, 27 gpm)	809.54 (Pump off)	802.81 (Pump off)	809.57 (Pump running, 18 gpm)
Groundwater Elevation at MW-9S	45	NA	810.94	810.30	811.03	810.14	809.65	812.36
Groundwater Elevation at PZ-1	25	NA	810.95	810.33	811.06	810.17	809.64	812.36
River Surface Elevation Adjacent to PZ-1 (G-1)	NA	NA	811.15 (Heaving ice)	810.68 (Open water)	810.88 (Open water)	810.42 (Open water)	810.46 (Open water)	811.17 (Open water)
Deepest River Bottom Elevation Adjacent to PZ-1	NA	808.82	NA	NA	NA	NA	NA	NA
MW-13S Area (Southeast Area - Cross-Section B-B')								
Groundwater Elevation at PZ-2	50	NA	811.44	811.18	811.57	811.12	811.12	812.04
Groundwater Elevation at MW-13S	25	NA	811.46	811.19	811.57	811.13	811.13	812.03
River Surface Elevation Adjacent to PZ-2 (G-2)	NA	NA	811.64 (Heaving ice)	811.32 (Open water)	811.50 (Open water)	811.20 (Open water)	811.22 (Open water)	811.72 (Open water)
Deepest River Bottom Elevation Adjacent to PZ-2	NA	810.10	NA	NA	NA	NA	NA	NA
MW-83DS Area (Southeast Area - Cross-Section C-C')								
Groundwater Elevation at MW-83DS	60	NA	811.10	810.73	811.09	810.46	810.22	812.09
Groundwater Elevation at PZ-3	50	NA	810.95	810.96	811.44	810.92	810.91	812.11
River Surface Elevation Adjacent to PZ-3 (G-3)	NA	NA	811.96 (Heaving ice)	811.41 (Open water)	811.60 (Open water)	811.24 (Open water)	811.26 (Open water)	811.95 (Open water)
Deepest River Bottom Elevation Adjacent to PZ-3	NA	809.91	NA	NA	NA	NA	NA	NA
RW-5 Area (Area Southeast of the Landfill - Cross-Section D-D')								
Groundwater Elevation at GM-4	160	NA	811.21	810.73	811.50	810.61	810.30	812.21
Groundwater Elevation at RW-5	85	NA	810.16 (Pump running, 6 gpm)	807.79 (Pump running, 4 gpm)	810.56 (Pump running, 6 gpm)	803.60 (Pump running, 13 gpm)	806.42 (Pump running, 14 gpm)	808.96 (Pump running, 9.9 gpm)
Groundwater Elevation at PZ-4	50	NA	811.34	810.95	811.54	810.83	810.56	812.34
Groundwater Elevation at GM-3	25	NA	811.36	810.86	811.51	810.79	810.60	812.29
River Surface Elevation Adjacent to PZ-4 (G-4)	NA	NA	811.99 (Heaving ice)	811.51 (Open water)	811.74 (Open water)	811.32 (Open water)	811.33 (Open water)	812.01 (Open water)
Deepest River Bottom Elevation Adjacent to PZ-4	NA	810.21	NA	NA	NA	NA	NA	NA

Notes:
ft = Feet.
MSL = Above mean sea level.
RW = Recovery well.
NA = Not applicable.
gpm = Gallons per minute.
MW = Monitoring well.
PZ = Piezometer.
G = Gauge point.
GM = Landfill monitoring well.

Table 10
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT / Date Sampled	RECOVERY WELL RW-1 (Aboveground Storage Tank Area)								PRG
	8/27/1996	11/6/1996	6/11/1997	11/18/1997	4/21/1998	11/1/2001	10/25/2002	12/22/2003	(µg/L)
VOCs (µg/L)									
Acetone	NA	NA	NA	NA	ND	ND	ND	<20.0	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	ND	NA	--
n-Butylbenzene	ND	NA	NA	NA	ND	ND	ND	<1.0	--
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	ND	<12.5	--
Carbon Disulfide	NA	NA	NA	NA	ND	ND	ND	<1.0	768
Chloroethane	ND	**2.4**	**2.2**	**3.7**	ND	ND	ND	<5.0	--
1,1-Dichloroethane	**170**	**180**	**110**	**190**	**140**	**103**	**11**	**73.7**	973
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**1,100**	**84.6**	70
trans-1,2-Dichloroethene	ND	**1.4**	**1.4**	**2.9**	ND	**1.3**	**13**	<1.0	100
1,2-Dichloroethene, Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**120.3**	[illegible]	**84.6**	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	<1.0	1.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.274
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	ND	<12.5	487
1,1,1-Trichloroethane	**22**	**23**	**20**	**31**	**19**	**12.7**	**12.7**	**14.7**	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.314
Dibromomethane	ND	NA	NA	NA	ND	ND	ND	<1.0	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	<1.0	1.43
Trichloroethene	ND	ND	ND	ND	ND	**2.4**	**240**	**9.2**	2.54
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	ND	<1.0	--
Vinyl Chloride	**170**	ND	**100**	**140**	**80**	**54.8**	**60**	**40.2**	0.0283
Benzene	ND	ND	ND	ND	ND	ND	ND	*<1.0*	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	<1.0	700
Toluene	ND	ND	ND	ND	ND	ND	ND	<1.0	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	<1.0	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
-- = No PRG assigned.
< = Not detected above the reporting limit provided.
No data was collected during the October 1998 sampling event.
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
October 2003 data validated to Level II; no flags were required for the data in this table collected on that date.

ND = Not detected above the method detection limit.
NA = Not analyzed.
Bold = Analyte detected above laboratory reporting limit.
Italics = Reporting limit above the corresponding PRG.
Shaded = Analyte detected above the corresponding PRG.

Table 10
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	RECOVERY WELL RW-2 (Aboveground Storage Tank Area)							PRG
		8/27/1996	11/6/1996	6/11/1997	11/18/1997	4/21/1998	11/1/2001	10/25/2002	(µg/L)
VOCs (µg/L)									
Acetone		NA	NA	NA	NA	ND	ND	ND	3,650
Bromomethane		ND	ND	ND	ND	ND	ND	ND	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	ND	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	ND	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	ND	768
Chloroethane		ND	**2.6**	**2.2**	ND	ND	ND	ND	--
1,1-Dichloroethane		**8.1**	**160**	**110**	**21**	**52**	**18.2**	**19**	973
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	0.0167
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	--
cis-1,2-Dichloroethene		**6.6**	**150**	**180**	**53**	**78**	**45**	**55**	70
trans-1,2-Dichloroethene		ND	**1.6**	**1.4**	ND	ND	**1.7**	ND	100
1,2-Dichloroethene, Total		**6.6**	**151.6**	**181**	**53**	**78**	**46.7**	**55**	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	1.25
Chloroform		ND	ND	ND	ND	ND	ND	ND	0.274
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	ND	487
1,1,1-Trichloroethane		ND	**23.0**	**20.0**	ND	**6.1**	**4.4**	ND	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	0.314
Dibromomethane		ND	NA	NA	NA	ND	ND	ND	--
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	1.43
Trichloroethene		ND	ND	ND	ND	ND	**1.2**	ND	2.54
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	ND	--
Vinyl Chloride		**7.7**	**150**	**97**	**19**	**34**	**5.3**	**10**	0.0283
Benzene		ND	ND	ND	ND	ND	ND	ND	0.617
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	700
Toluene		ND	ND	ND	ND	ND	ND	ND	1,000
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
ND = Not detected above the method detection limit.
NA = Not analyzed.
No data was collected during the October 1998 sampling event.
October 2002 data was validated to Level IV; no flags were required for the data in this table collected on that date.

Bold = Analyte detected above laboratory reporting limit
Shaded = Analyte detected above the corresponding PRG.
-- = No PRG assigned.

Table 10
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	RECOVERY WELL RW-3 (Aboveground Storage Tank Area)									PRG
		8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	8/18/1999	10/19/1999	11/1/2001	12/22/2003	(µg/L)
VOCs (µg/L)											
Acetone		NA	NA	NA	NA	ND	ND	ND	ND	<20.0	**3,650**
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	NA	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	ND	NA	NA	<12.5	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	ND	ND	<1.0	**768**
Chloroethane		ND	NA	ND	ND	ND	ND	ND	ND	<5.0	--
1,1-Dichloroethane		ND	**3.1**	**2.7**	**4.9**	ND	ND	ND	**9.4**	**3.6**	**973**
1,1-Dichloroethene		ND	ND	ND	**1.9**	ND	ND	ND	ND	*<1.0*	**0.0167**
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene		**390**	**30**	**70**	**690**	**340**	**150**	**200**	**349**	**183**	**70**
trans-1,2-Dichloroethene		**10**	**5.9**	**6.9**	**15**	**11**	ND	**5.1**	**8.6**	**7.1**	**100**
1,2-Dichloroethene, Total		**400**	**35**	**76**	**705**	**351**	**150**	**205.1**	**357.6**	**190.1**	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**1.25**
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.274**
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	ND	ND	<12.5	**487**
1,1,1-Trichloroethane		ND	ND	ND	**1.7**	ND	ND	ND	**4.4**	**4.9**	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.314**
Dibromomethane		ND	NA	NA	NA	ND	ND	ND	ND	<1.0	--
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**1.43**
Trichloroethene		**150**	**130**	**120**	**240**	**330**	**96**	**140**	**99.1**	**106**	**2.54**
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	ND	ND	<1.0	--
Vinyl Chloride		**43**	**40**	**28**	**50**	**3.5**	**11.0**	**15.0**	**30.4**	**30.7**	**0.0283**
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.617**
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**700**
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**1,000**
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**828**

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
-- = No PRG assigned.
< = Not detected above the reporting limit provided.
No data was collected during the October 1998 sampling event.
October 2003 data validated to Level II; no flags were required for the data in this table collected on that date.

ND = Not detected above the method detection limit.
NA = Not analyzed.
Bold = Analyte detected above laboratory reporting limit.
Italics = Reporting limit above the corresponding PRG.
Shaded = Analyte detected above the corresponding PRG.

Table 10
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	RECOVERY WELL RW-4 (Monitoring Wells MW-4S and MW-7S Area)								PRG
		8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	4/23/2002	12/22/2003	(µg/L)
VOCs (µg/L)										
Acetone		NA	NA	NA	NA	ND	ND	ND	<20.0	**3,650**
Bromomethane		ND	ND	ND	ND	ND	ND	ND	NA	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	ND	<1.0	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	NA	<12.5	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	ND	<1.0	**768**
Chloroethane		ND	NA	ND	ND	ND	ND	ND	<5.0	--
1,1-Dichloroethane		ND	**2.9**	**1.5**	**2.6**	ND	**13.3**	**1.2**	**1.5**	**973**
1,1-Dichloroethene		ND	ND	ND	ND	ND	2.3	ND	*<1.0*	**0.0167**
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	--
cis-1,2-Dichloroethene		**330**	**150**	**360**	**190**	**180**	**1,580**	**147**	**165**	**70**
trans-1,2-Dichloroethene		**27**	**26**	**18**	**24**	**12**	**23.2**	**16.4**	**13.8**	**100**
1,2-Dichloroethene, Total		**357**	**176**	**378**	**214**	**192**	**1,603.2**	**163.4**	**178.8**	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	<1.0	**1.25**
Chloroform		ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.274**
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	ND	<12.5	**487**
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.314**
Dibromomethane		ND	NA	NA	NA	ND	ND	ND	<1.0	--
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	<1.0	**1.43**
Trichloroethene		ND	ND	ND	ND	ND	**258**	ND	<1.0	**2.54**
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	ND	<1.0	--
Vinyl Chloride		ND	ND	ND	ND	ND	**142**	ND	*<1.0*	**0.0283**
Benzene		ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.617**
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	<1.0	**700**
Toluene		ND	ND	ND	ND	ND	ND	ND	<1.0	**1,000**
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	<1.0	**828**

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
-- = No PRG assigned.
< = Not detected above the reporting limit provided.
No data was collected during the October 1998 sampling event.
October 2003 data validated to Level II; no flags were required for the data in this table collected on that date.

ND = Not detected above the method detection limit.
NA = Not analyzed.
Bold = Analyte detected above laboratory reporting limit.
Italics = Reporting limit above the corresponding PRG.
Shaded = Analyte detected above the corresponding PRG.

Table 10
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	RECOVERY WELL RW-5 (Southeast of the Landfill)									PRG
		8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	4/23/2002	10/25/2002	12/22/2003	(µg/L)
VOCs (µg/L)											
Acetone		NA	NA	NA	NA	ND	ND	ND	ND	<100	**3,650**
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	NA	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	ND	ND	<5.0	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	NA	NA	<62	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	ND	ND	<5.0	**768**
Chloroethane		ND	NA	ND	ND	ND	ND	ND	ND	<25	--
1,1-Dichloroethane		ND	ND	**1.1**	**4.0**	ND	**7.1**	**4.7**	**5.7**	<5.0	**973**
1,1-Dichloroethene		ND	ND	ND	ND	ND	**2.9**	**2.2**	**5.2**	*<5.0*	**0.0167**
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	<5.0	--
cis-1,2-Dichloroethene		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**70**
trans-1,2-Dichloroethene		**20**	**26**	**53**	[illegible]	[illegible]	[illegible]	[illegible]	**96**	[illegible]	**100**
1,2-Dichloroethene, Total		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	*<5.0*	**1.25**
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	*<5.0*	**0.274**
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	ND	ND	<62	**487**
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	**4.0**	**3.1**	ND	<5.0	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	*<5.0*	**0.314**
Dibromomethane		ND	NA	NA	NA	ND	ND	ND	ND	<5.0	--
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	*<5.0*	**1.43**
Trichloroethene		ND	**1.8**	ND	**15**	**130**	**348**	**219**	**55**	**175**	**2.54**
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	ND	ND	<5.0	--
Vinyl Chloride		**100**	**200**	**520**	**1,600**	**1,100**	**393**	**436**	**600**	**335**	**0.0283**
Benzene		ND	ND	ND	ND	ND	**4.0**	**3.8**	**5.6**	*<5.0*	**0.617**
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	<5.0	**700**
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	<5.0	**1,000**
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	<5.0	**828**

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

-- = No PRG assigned.

< = Not detected above the reporting limit provided.

No data was collected during the October 1998 sampling event.

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003 data validated to Level II; no flags were required for the data in this table collected on that date.

ND = Not detected above the method detection limit.

NA = Not analyzed.

Bold = Analyte detected above laboratory reporting limit.

Italics = Reporting limit above the corresponding PRG.

Shaded = Analyte detected above the corresponding PRG.

Table 10
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT / Date Sampled	RECOVERY WELL RW-6 (Southeast Area)						PRG
	8/27/1996	11/6/1996	6/12/1997	11/18/97	4/21/1998	11/2/2001	(µg/L)
VOCs (µg/L)							
Acetone	NA	NA	NA	NA	ND	ND	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	--
n-Butylbenzene	ND	NA	NA	NA	ND	ND	--
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	--
Carbon Disulfide	NA	NA	NA	NA	ND	ND	768
Chloroethane	ND	NA	**7.5**	ND	ND	ND	--
1,1-Dichloroethane	ND	ND	**21**	ND	ND	ND	973
1,1-Dichloroethene	ND	ND	**3.6**	ND	ND	ND	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	--
cis-1,2-Dichloroethene	ND	ND	**500**	**1.0**	**5.7**	**43.1**	70
trans-1,2-Dichloroethene	ND	ND	**53**	ND	ND	ND	100
1,2-Dichloroethene, Total	ND	ND	**553**	**1.0**	**5.7**	**43.1**	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	1.25
Chloroform	ND	ND	ND	ND	ND	ND	0.274
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	487
1,1,1-Trichloroethane	ND	ND	**3.1**	ND	ND	ND	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	0.314
Dibromomethane	ND	NA	NA	NA	ND	ND	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	1.43
Trichloroethene	ND	ND	**240**	ND	ND	ND	2.54
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	--
Vinyl Chloride	ND	ND	**780**	**1.1**	ND	**112**	0.0283
Benzene	ND	ND	ND	ND	ND	ND	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	700
Toluene	ND	ND	ND	ND	ND	ND	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

ND = Not detected above the method detection limit.

NA = Not analyzed.

No data was collected during the October 1998 sampling event.

Bold = Analyte detected above laboratory reporting limit.

Shaded = Analyte detected above the corresponding PRG.

-- = No PRG assigned.

Table 10
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT / Date Sampled	RECOVERY WELL RW-7 (Southeast Area)						PRG
	8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	(µg/L)
VOCs (µg/L)							
Acetone	NA	NA	NA	NA	ND	ND	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	--
n-Butylbenzene	ND	NA	NA	NA	ND	ND	--
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	--
Carbon Disulfide	NA	NA	NA	NA	ND	ND	768
Chloroethane	ND	NA	ND	ND	ND	ND	--
1,1-Dichloroethane	ND	ND	ND	ND	ND	**1.7**	973
1,1-Dichloroethene	ND	ND	ND	ND	ND	**1.1**	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	--
cis-1,2-Dichloroethene	**2.4**	**240**	**300**	**50**	ND	**653**	70
trans-1,2-Dichloroethene	ND	**43**	**2.2**	**12**	ND	**7.1**	100
1,2-Dichloroethene, Total	**2.4**	**283**	**102.2**	**62**	ND	**660.1**	(170)
1,2-Dichloropropane	ND	**2.4**	ND	**4.4**	ND	ND	1.25
Chloroform	ND	ND	ND	ND	ND	ND	0.274
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	487
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	0.314
Dibromomethane	ND	NA	NA	NA	ND	ND	--
Tetrachloroethene	ND	**1.0**	ND	ND	ND	ND	1.43
Trichloroethene	**1.7**	**290**	**20**	**140**	**43**	**101**	2.54
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	--
Vinyl Chloride	ND	ND	ND	**2.9**	**32**	**174**	0.0283
Benzene	ND	ND	ND	ND	ND	ND	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	700
Toluene	ND	ND	ND	ND	ND	ND	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

ND = Not detected above the method detection limit.

NA = Not analyzed.

No data was collected during the October 1998 sampling event.

Bold = Analyte detected above laboratory reporting limit.

Shaded = Analyte detected above the corresponding PRG.

-- = No PRG assigned.

Table 10
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	RECOVERY WELL RW-8 (Southeast Area)						PRG
		8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	(µg/L)
VOCs (µg/L)								
Acetone		NA	NA	NA	NA	ND	ND	3,650
Bromomethane		ND	ND	ND	ND	ND	ND	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	768
Chloroethane		ND	NA	**3.6**	**2.1**	ND	ND	--
1,1-Dichloroethane		ND	**11**	**19**	**29**	ND	**110**	973
1,1-Dichloroethene		ND	**3.1**	**5.5**	**5.8**	ND	**30.6**	0.0167
1,2-Dichloroethane		ND	**1,400**	ND	ND	ND	ND	--
cis-1,2-Dichloroethene		**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**18,500**	70
trans-1,2-Dichloroethene		**66**	ND	**42**	**44**	ND	**144**	100
1,2-Dichloroethene, Total		**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	1.25
Chloroform		ND	ND	ND	ND	ND	ND	0.274
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	487
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	0.314
Dibromomethane		ND	NA	NA	NA	ND	ND	--
Tetrachloroethene		ND	ND	ND	ND	ND	ND	1.43
Trichloroethene		**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**5,250**	2.54
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	--
Vinyl Chloride		**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	ND	**802**	0.0283
Benzene		ND	ND	ND	ND	ND	ND	0.617
Ethylbenzene		ND	ND	ND	ND	ND	ND	700
Toluene		ND	ND	ND	ND	ND	ND	1,000
Xylenes, Total		ND	ND	ND	ND	ND	ND	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

ND = Not detected above the method detection limit.

NA = Not analyzed.

No data was collected during the October 1998 sampling event.

Bold = Analyte detected above laboratory reporting limit

Shaded = Analyte detected above the corresponding PRG.

-- = No PRG assigned.

Table 10
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT / Date Sampled	RECOVERY WELL RW-9 (Southeast Area)						PRG
	8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	(µg/L)
VOCs (µg/L)							
Acetone	NA	NA	NA	NA	ND	ND	3,650
Bromomethane	ND	ND	ND	ND	ND	ND	--
n-Butylbenzene	ND	NA	NA	NA	ND	ND	--
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	--
Carbon Disulfide	NA	NA	NA	NA	ND	ND	768
Chloroethane	ND	NA	**3.3**	ND	ND	ND	--
1,1-Dichloroethane	**1.3**	**3.3**	**1.2**	**1.9**	ND	**3.0**	973
1,1-Dichloroethene	ND	**3.1**	**3.7**	**3.4**	ND	**6.3**	0.0167
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	--
cis-1,2-Dichloroethene	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**300**	**3,880**	70
trans-1,2-Dichloroethene	**3**	**19**	**32**	**17**	**61**	**32.6**	100
1,2-Dichloroethene, Total	**[illegible]**	**[illegible]**	**[illegible]**	**[illegible]**	**361**	**9126**	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	**1.8**	1.25
Chloroform	ND	ND	ND	ND	ND	ND	0.274
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	487
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	0.314
Dibromomethane	ND	NA	NA	NA	ND	ND	--
Tetrachloroethene	ND	ND	**[illegible]**	ND	ND	ND	1.43
Trichloroethene	**[illegible]**	**230**	**480**	**300**	**510**	**565**	2.54
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	--
Vinyl Chloride	**[illegible]**	**220**	**410**	**300**	ND	**306**	0.0283
Benzene	ND	ND	ND	ND	ND	ND	0.617
Ethylbenzene	ND	ND	ND	ND	ND	ND	700
Toluene	ND	ND	ND	ND	ND	ND	1,000
Xylenes, Total	ND	ND	ND	ND	ND	ND	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
ND = Not detected above the method detection limit.
NA = Not analyzed.
No data was collected during the October 1998 sampling event.

Bold = Analyte detected above laboratory reporting limit.
Shaded = Analyte detected above the corresponding PRG.
-- = No PRG assigned.

Table 10
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	RECOVERY WELL RW-10 (Southeast Area) 8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	PRG (µg/L)
VOCs (µg/L)								
Acetone		NA	NA	NA	NA	ND	ND	3,650
Bromomethane		2	ND	ND	ND	ND	ND	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	768
Chloroethane		10	NA	NA	17	ND	17	--
1,1-Dichloroethane		68	8	55	71	74	82	973
1,1-Dichloroethene		[redacted]	ND	[redacted]	8	ND	7	0.0167
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	--
cis-1,2-Dichloroethene		[redacted]	[redacted]	[redacted]	[redacted]	11,000	11,000	70
trans-1,2-Dichloroethene		89	28	58	77	84	89	100
1,2-Dichloroethene, Total		[redacted]	[redacted]	[redacted]	[redacted]	11,084	11,089	(170)
1,2-Dichloropropane		ND	ND	ND	1	ND	2	1.25
Chloroform		ND	ND	ND	ND	ND	ND	0.274
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	487
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	0.314
Dibromomethane		ND	NA	NA	NA	ND	ND	--
Tetrachloroethene		1	ND	1	ND	ND	ND	1.43
Trichloroethene		[redacted]	[redacted]	[redacted]	[redacted]	640	308	2.54
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	--
Vinyl Chloride		[redacted]	[redacted]	[redacted]	[redacted]	1,400	548	0.0283
Benzene		ND	ND	ND	ND	ND	[redacted]	0.617
Ethylbenzene		ND	ND	ND	ND	ND	ND	700
Toluene		ND	ND	ND	ND	ND	ND	1,000
Xylenes, Total		ND	ND	ND	ND	ND	ND	828

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

ND = Not detected above the method detection limit.

NA = Not analyzed.

No data was collected during the October 1998 sampling event.

Bold = Analyte detected above laboratory reporting limit.

Shaded = Analyte detected above the corresponding PRG.

-- = No PRG assigned.

Table 11
Summary of Recovery Well Construction Details
Wayne Reclamation & Recycling

Recovery Well Identification	TOIC Elevations 2001	Surface Elevations (msl)	Total Depth (bgs)	Well Diameter (inches)	Screen Length (feet)	Sump Length (feet)	Bottom Screen Elevation (msl)	Top Screen Elevation (msl)	Slot Size (inches)	General Location	Installation Date
RW-1	818.45	819.52	32.00	6	20	5	792.52	812.52	0.02	AST Area	October-94
RW-2	824.29	825.07	40.00	6	20	5	790.07	810.07	0.02	AST Area	October-94
RW-3	822.71	823.36	32.00	6	20	5	796.36	816.36	0.02	AST Area	October-94
RW-4	833.24	833.53	48.30	6	20	5	790.23	810.23	0.02	RW-4 Area	October-94
RW-5	823.94	824.20	40.00	6	30	0	784.20	814.20	0.02	SE Area	October-94
RW-6	820.71	821.62	43.50	6	35	0	778.12	813.12	0.02	SE Area	October-94
RW-7	820.21	821.51	36.00	6	30	0	785.51	815.51	0.02	SE Area	October-94
RW-8	821.86	823.03	41.80	6	35	0	781.23	816.23	0.02	SE Area	October-94
RW-9	821.69	821.88	37.00	6	30	0	784.88	814.88	0.02	SE Area	October-94
RW-10	822.55	824.03	40.30	6	35	0	783.73	818.73	0.02	SE Area	October-94

Notes:

TOIC = Top of inner well casing.
msl = Above mean sea level.
bgs = Below ground surface.
RW = Recovery well.
AST = Aboveground Storage Tank.
SE = Southeast.
Depth to groundwater measured in feet below TOIC.
TOIC and surface elevations based on Benchmark Surveying, Inc. surveys of 7/2/2001 and 10/25/2001.
Construction details from As-Built Remedial Design drawings (Warzyn, March 1995).

Table 12
Summary of Groundwater Treatment System Volatile Organic Compound Influent and Effluent Sampling
Wayne Reclamation & Recycling

CONSTITUENT	IN	EFF	IN	EFF	IN	EFF
Date Sampled	1/29/2004		2/20/2004		3/16/2004	
VOCs (µg/L)						
1,1-Dichloroethane	**5.6**	<1.0	**19.9**	**1.2**	**18.1**	**1.0**
1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	<1.0	<1.0	**3.0**	<1.0	**1.4**	<1.0
cis-1,2-Dichloroethene	**425**	**34.8**	**1,540**	**184**	**1,210**	**105**
trans-1,2-Dichloroethene	**4.9**	<1.0	**17.8**	<1.0	**10.9**	<1.0
Trichloroethene	**33.1**	**1.1**	**236**	**10.1**	**174**	**6.8**
Vinyl Chloride	**116.0**	<1.0	**181**	<1.0	**142**	<1.0
Total VOC Concentration	**584.6**	**35.9**	**1,997.7**	**195.3**	**1,556.4**	**112.8**

CONSTITUENT	IN	EFF	IN	EFF	IN	EFF
Date Sampled	4/20/2004		5/18/2004		6/23/2004	
VOCs (µg/L)						
1,1-Dichloroethane	**9.0**	<1.0	**14**	<1.0	**25**	<1.0
1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	**3.6**	<1.0	**2.3**	<1.0	**2.7**	<1.0
cis-1,2-Dichloroethene	**830**	**140**	**1,200**	**150**	**2,100**	**88 (J)**
trans-1,2-Dichloroethene	**8.7**	<1.0	**14**	<1.0	**20**	<1.0
Trichloroethene	**160**	**11**	**200**	**8.6**	**310**	**3.8**
Vinyl Chloride	**150**	**2.1**	**140**	**1.5**	**150**	**1.2**
Total VOC Concentration	**1,161.3**	**153.1**	**1,570.3**	**160.1**	**2,607.7**	**5.0**

Notes:

Volatile organic compounds (VOCs) reported in micrograms per liter (µg/L)
< = Not detected above the reporting limit provided.
Bold = Analyte detected above the laboratory reporting limit.
January through June 2004 data validated to Level II; (J) = estimated.

IN = Influent water sample.
EFF = Effluent water sample.
Results indicated for primary detected constituents.

Table 13
Summary of Groundwater Treatment System Effluent Sampling - Metals, Inorganics, and Polychlorinated Biphenyls
Wayne Reclamation & Recycling

CONSTITUENT / Date Sampled	11/18/1997	12/18/1997	1/30/1998	10/13/1998	10/13/1999	10/6/2000	10/31/2001	10/24/2002	10/16/2003
Total Metals (mg/L)									
Arsenic	**0.015**	**0.0044**	**0.005**	<0.005	<0.005	<0.028	<0.0050	<0.0050	**0.0130**
Beryllium	<0.0050	<0.0050	<0.0050	<0.003	<0.003	<0.003	<0.0010	<0.0010	<0.0010
Cadmium	<0.0050	<0.0050	<0.0050	<0.005	<0.010	<0.005	<0.0010	<0.0010	<0.0010
Chromium	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0020	<0.0020	<0.0020
Copper	**0.032**	<0.020	**1.9**	<0.010	<0.005	<0.005	<0.0050	<0.0050	**0.0170**
Lead	<0.10	<0.10	<0.10	<0.005	<0.005	<0.005	<0.0010	<0.0010	<0.0010
Mercury	<0.00020	<0.00020	<0.00020	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002
Molybdenum	<0.20	<0.20	<0.20	<0.020	<0.020	<0.020	**0.0061**	**0.0084**	**0.0064**
Nickel	<0.050	<0.020	<0.020	<0.020	<0.020	<0.005	**0.0091**	**0.0078**	**0.0110**
Potassium	**12.0**	**12.0**	**9.5**	**11.0**	**9.0**	**9.0**	**8.6**	**10.7**	**10.8**
Selenium	<0.0020	<0.0020	<0.0020	<0.005	<0.005	<0.036	<0.0050	<0.0050	<0.0050
Silver	<0.010	<0.010	<0.010	<0.020	<0.001	<0.005	<0.0005	<0.0005	<0.0005
Zinc	**0.054**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.050	<0.050	**0.226**
Inorganics/Wet Chemistry (mg/L)									
Biological Oxygen Demand (BOD)	<2.0	<2.0	<2.0	<5	**6**	**8**	<5	**9.4**	<5
Chemical Oxygen Demand (COD)	**23**	**18**	**21**	<10	<10	**16**	**72**	**24**	**17**
Total Cyanide	<0.005	<0.005	<0.0050	<0.005	<0.005	<0.020	<0.005	<0.005	<0.005 (J)
Oil & Grease	<5.0	<5.0	<5.0	<5.0	**6**	**6**	<5	<5	<5
pH	**8.3**	**8.27**	**7.65**	NA	**7.2**	**7.2**	NA	**8.06**	**7.87**
Total Phenols	<0.01	<0.01	**0.17**	<0.010	<0.010	<0.005	0.0093	0.0084	<0.010
Total Phosphorus	**0.93**	**0.75**	**0.96**	<0.05	**0.48**	<0.15	<0.15	<0.15	<0.05
Surfactants (MBAs)	Negative	Negative	Negative	**Positive**	**Positive**	Negative	**0.13**	**0.16**	<0.10
Total Solids	**1,100**	**820**	**850**	**830**	**790**	**820**	**850**	**800**	**960**
Total Suspended Solids	**11**	**14**	**19**	**27**	<5	**5**	**9**	<5	**6**
Nitrate/Nitrite Nitrogen	**0.32**	**0.33**	**0.44**	**0.036**	**0.04**	**0.033**	**0.23**	**0.033**	**0.20**
Ammonia Nitrogen	**0.72**	**0.15**	**0.28**	**1.00**	**0.80**	**1.10**	**1.20**	**1.8**	**2.6**
Total Kjeldahl Nitrogen	**47**	**1.21**	**0.98**	**1.6**	**1.09**	**1.5**	**1.6**	**2.1**	**2.7**
PCBs (µg/L)									
Aroclor 1016	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20
Aroclor 1221	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20
Aroclor 1232	<0.4	<0.4	<0.4	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20
Aroclor 1242	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20
Aroclor 1248	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20
Aroclor 1254	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20
Aroclor 1260	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20

Notes:

Total metals and inorganic/wet chemistry parameters reported in milligrams per liter (mg/L).

Polychlorinated biphenyls (PCBs) are reported in micrograms per liter (µg/L).

Bold = Analyte detected above laboratory reporting limit.

< = Not detected above the reporting limit provided

NA = Not analyzed.

October 2002 data was validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003 data was validated to Level II; (J) = estimated.

Table 14
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	IN	EFF	IN	EFF	IN	EFF
	4/23/1999		5/17/1999		6/24/1999	
Tetrachloroethene	<14	**17**	**110**	**52**	**46**	**6**
Trichloroethene	**220**	**300**	**570**	**240**	**860**	**120**
1,1-Dichloroethene	<14	<13	<18	<12	<17	**6**
cis-1,2-Dichloroethene	**1,600**	**1,500**	**2,200**	**1,000**	**2,300**	**390**
trans-1,2-Dichloroethene	**50**	**58**	**52**	**36**	**140**	**35**
Vinyl Chloride	**360**	**280**	**220**	**120**	**240**	**35**
1,1,1-Trichloroethane	**36**	**36**	**83**	**25**	**43**	**8**
1,1-Dichloroethane	**26**	**25**	**29**	**13**	**45**	**9**
Toluene	**20**	<13	<18	<12	<17	**3**
Cumulative Risk [1]	**7.52E-07**	**5.93E-07**	**4.98E-07**	**2.67E-07**	**5.45E-07**	**7.90E-08**

CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
	7/13/1999	8/6/1999	9/1/1999	10/14/1999	11/23/1999	12/13/1999
Tetrachloroethene	**51**	**27**	**25**	**63**	**16**	**38**
Trichloroethene	**440**	**810**	**390**	**1,700**	**390**	**520**
1,1-Dichloroethene	<7.8	<9.2	**4**	<9.2	<14	<12
cis-1,2-Dichloroethene	**2,200**	<9.2	**1,600**	**3,300**	**1,400**	**1,500**
trans-1,2-Dichloroethene	**100**	**140**	**120**	**260**	**76**	**95**
Vinyl Chloride	**340**	**270**	**220**	**180**	**200**	**200**
1,1,1-Trichloroethane	**180**	**44**	**200**	**99**	**97**	**66**
1,1-Dichloroethane	**45**	**45**	**60**	**61**	**32**	**32**
Toluene	<7.8	<9.2	<2.3	<9.2	<14	<12
Cumulative Risk [1]	**7.29E-07**	**6.01E-07**	**4.76E-07**	**4.68E-07**	**4.33E-07**	**4.44E-07**

Notes:

[1] Cumulative Risk calculation is indicated on Table 14.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

IN = Influent; EFF = effluent sample; < = not detected above the reporting limit provided.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

Table 14
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
	1/3/2000	2/7/2000	3/15/2000	4/25/2000	5/24/2000	6/6/2000
Tetrachloroethene	**57**	<8.3	**88**	<21	**110**	**30**
Trichloroethene	**440**	**220**	**400**	**300**	**440**	**380**
1,1-Dichloroethene	<18	<8.3	<9.0	<3.1	<12	**2**
cis-1,2-Dichloroethene	**1,100**	**740**	**1,200**	**2,300**	**1,000**	**1,800**
trans-1,2-Dichloroethene	**68**	**55**	**46**	**83**	**71**	**85**
Vinyl Chloride	**94**	**91**	**61**	**260**	**130**	**190**
1,1,1-Trichloroethane	**110**	**29**	**89**	**47**	**150**	**110**
1,1-Dichloroethane	**29**	**17**	**25**	**31**	**30**	**27**
Toluene	<18	<8.3	<9.0	<3.1	<12	<2.0
Cumulative Risk [1]	**2.25E-07**	**2.00E-07**	**1.60E-07**	**5.52E-07**	**3.07E-07**	**4.14E-07**

CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
	7/25/2000	8/4/2000	9/5/2000	10/6/2000	11/7/2000	12/21/2000
Tetrachloroethene	**31**	**56**	**22**	**52**	**110**	**38**
Trichloroethene	**290**	**840**	**540**	**920**	**840**	**760**
1,1-Dichloroethene	<9.7	<12	<12	<18	<10	<9.3
cis-1,2-Dichloroethene	**1,400**	**2,200**	**2,100**	**2,200**	**1,900**	**1,900**
trans-1,2-Dichloroethene	**39**	**100**	**140**	**160**	**97**	**100**
Vinyl Chloride	**190**	**230**	**210**	**130**	**170**	**190**
1,1,1-Trichloroethane	**80**	**59**	**80**	**93**	**73**	**50**
1,1-Dichloroethane	**21**	**30**	**34**	**49**	**36**	**30**
Toluene	<9.7	<12	<12	<18	<10	<9.3
Cumulative Risk [1]	**4.10E-07**	**5.25E-07**	**4.63E-07**	**3.23E-07**	**4.10E-07**	**4.36E-07**

Notes:

[1] Cumulative Risk calculation is indicated on Table 14.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

< = Not detected above the reporting limit provided.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

Table 14
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
	1/30/2001	2/26/2001	3/21/2001	4/23/2001	5/21/2001	6/13/2001
Tetrachloroethene	**38**	<140	**34**	<140	<150	<150
Trichloroethene	**630**	**260**	**340**	**160**	<150	**430**
1,1-Dichloroethene	<9.2	<140	**2.1**	<140	<150	<150
cis-1,2-Dichloroethene	**2,000**	**1,700**	**1,300**	**1,000**	**630**	**1,400**
trans-1,2-Dichloroethene	**49**	NA	NA	NA	NA	NA
Vinyl Chloride	**270**	**180**	**190**	**160**	<150	**210**
1,1,1-Trichloroethane	**53**	<140	**26**	<140	<150	<150
1,1-Dichloroethane	**30**	<140	**18**	<140	<150	<150
Toluene	<9.2	<140	**4.0**	<140	<150	<150
Cumulative Risk [1]	**5.93E-07**	**4.05E-07**	**4.13E-07**	**3.58E-07**	**3.39E-07**	**4.77E-07**

CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
	7/23/2001	8/23/2001	9/17/2001	10/31/2001	11/18/2001	12/28/2001
Tetrachloroethene	<140	<140	<140	<140	<100	<130
Trichloroethene	**140**	**280**	**280**	**410**	**460**	**300**
1,1-Dichloroethene	<140	<140	<140	<140	<100	<130
cis-1,2-Dichloroethene	**1,100**	**600**	**680**	**1,500**	**2,200**	**1,700**
trans-1,2-Dichloroethene	NA	NA	NA	<140	<100	NA
Vinyl Chloride	<140	<140	<140	**260**	**210**	**210**
1,1,1-Trichloroethane	<140	<140	<140	<140	<100	<130
1,1-Dichloroethane	<140	<140	<140	<140	<100	<130
Toluene	<140	<140	<140	<140	<100	<130
Cumulative Risk [1]	**3.16E-07**	**3.24E-07**	**3.24E-07**	**5.77E-07**	**4.71E-07**	**4.67E-07**

Notes:

[1] Cumulative Risk calculation is indicated on Table 14.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents. analyzed via United States Environmental Protection Agency Method TO-14.

< = Not detected above the reporting limit provided; NA = not analyzed.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

Table 14
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
	1/18/2002	2/7/2002	3/21/2002	4/23/2002	5/23/2002	6/18/2002
Tetrachloroethene	<130	<130	<140	**7.8**	<140	<140
Trichloroethene	**280**	**530**	**180**	**29**	**160**	**290**
1,1-Dichloroethene	<130	<130	<140	<0.69	<140	<140
cis-1,2-Dichloroethene	**1,600**	**2,800**	**900**	**37**	**800**	**1,200**
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA
Vinyl Chloride	**280**	**500**	**160**	**1.0**	**150**	**220**
1,1,1-Trichloroethane	<130	<130	<140	**42**	<140	<140
1,1-Dichloroethane	<130	<130	<140	**3.5**	<140	<140
Toluene	<130	<130	<140	<0.69	<140	<140
Cumulative Risk [1]	**6.09E-07**	**1.07E-06**	**3.59E-07**	**4.79E-09**	**3.38E-07**	**4.88E-07**

CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
	7/19/2002	8/14/2002	9/20/2002	10/24/2002	11/21/2002	12/13/2002
Tetrachloroethene	<140	<140	<100	<130	<140	<140
Trichloroethene	<140	**200**	**520**	**1,000**	**720**	**410**
1,1-Dichloroethene	<140	<140	<100	<130	<140	<140
cis-1,2-Dichloroethene	**230**	**920**	**1,500**	**1,500**	**1,200**	**1,100**
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA
Vinyl Chloride	<140	**220**	<100	<130	<140	<140
1,1,1-Trichloroethane	<140	<140	<100	<130	<140	<140
1,1-Dichloroethane	<140	<140	<100	<130	<140	<140
Toluene	<140	<140	<100	<130	<140	<140
Cumulative Risk [1]	**3.16E-07**	**4.84E-07**	**2.48E-07**	**3.47E-07**	**3.47E-07**	**3.31E-07**

Notes:

[1] Cumulative Risk calculation is indicated on Table 14.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

< = Not detected above the reporting limit provided; NA = not analyzed.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

July through December 2002 data validated to Level IV; no flags required for data in this table collected on those dates.

Table 14
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
	1/23/2003	2/10/2003	3/19/2003	4/15/2003	5/19/2003	6/6/2003
Tetrachloroethene	<140	<140	<130	<140	<130	<140
Trichloroethene	**420**	**320**	**320**	**380**	**280**	**390**
1,1-Dichloroethene	<140	<140	<130	<140	<130	<140
cis-1,2-Dichloroethene	**920**	**520**	**760**	**1,400**	**750**	**1,000**
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA
Vinyl Chloride	<140	<140	<130	<140	<130	<140
1,1,1-Trichloroethane	<140	<140	<130	<140	<130	<140
1,1-Dichloroethane	<140	<140	<130	<140	<130	<140
Toluene	<140	<140	<130	<140	<130	<140
Cumulative Risk [1]	**3.31E-07**	**3.26E-07**	**3.04E-07**	**3.29E-07**	**3.02E-07**	**3.29E-07**

CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
	7/14/2003	8/21/2003	9/15/2003	10/16/2003	11/7/2003	12/22/2003
Tetrachloroethene	<140	<140	**7.4**	< 130	< 130	< 130
Trichloroethene	**290**	**330**	**240**	**230**	**230**	**220**
1,1-Dichloroethene	<140	<140	<0.66	< 130	< 130	< 130
cis-1,2-Dichloroethene	**740**	**800**	**270**	**750**	**380**	**1,100**
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA
Vinyl Chloride	<140	<140	**11**	< 130	< 130	**190**
1,1,1-Trichloroethane	<140	<140	**5.4**	< 130	< 130	< 130
1,1-Dichloroethane	<140	<140	**2.3**	< 130	< 130	< 130
Toluene	<140	<140	<0.66	< 130	< 130	< 130
Cumulative Risk [1]	**3.24E-07**	**3.26E-07**	**3.63E-08**	**2.99E-07**	**2.99E-07**	**4.22E-07**

Notes:

[1] Cumulative Risk calculation is indicated on Table 14.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

< = Not detected above the reporting limit provided; NA = not analyzed.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

2003 data validated to Level II; no flags required for data in this table collected in 2003.

Table 14
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE					
	1/29/2004	2/20/2004	3/16/2004	4/19/2004	5/18/04	6/23/2004
Tetrachloroethene	<130	<120	<140	**7.1**	<150	**12**
Trichloroethene	<130	**300**	<140	**480**	<150	**260**
1,1-Dichloroethene	<130	<120	<140	**3.1**	<150	**5.0**
cis-1,2-Dichloroethene	**350**	**1,200**	**540**	**2,300**	**510**	**1,800**
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA
Vinyl Chloride	**150**	**220**	<140	**350**	<150	**300**
1,1,1-Trichloroethane	<130	<120	<140	**4.8**	<150	**4.3**
1,1-Dichloroethane	<130	<120	<140	**18**	<150	**23**
Toluene	<130	<120	<140	**2.1**	<150	**5.8**
Cumulative Risk [1]	**3.35E-07**	**4.86E-07**	**3.16E-07**	**7.44E-07**	**3.39E-07**	**6.31E-07**

Notes:

[1] Cumulative Risk calculation is indicated on Table 14.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

< = Not detected above the reporting limit provided; NA = not analyzed.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

2004 data validated to Level II; no flags required for data in this table collected in 2004.

Table 15
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Scenario Number	Description	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
			Tetrachloroethene Carcinogen	*Trichloroethene Carcinogen*	*1,1-Dichloroethene Non-Carcinogen*	*cis-1,2-Dichloroethene Non-Carcinogen*	*trans-1,2-Dichloroethene Non-Carcinogen*	*Vinyl Chloride Carcinogen*	*1,1,1-Trichloroethane Non-Carcinogen*	*1,1-Dichloroethane Carcinogen*	*Toluene Non-Carcinogen*	
93	IN	(ppb[v/v])	46	860	17	2300	140	240	43	45	17	
	6/24/1999	(g/s)	0.0003	0.0048	0.0001	0.0129	0.0008	0.0013	0.0002	0.0003	0.0001	
		Max.Conc.	0.001	0.023	0.000	0.060	0.004	0.006	0.001	0.001	0.000	
		ECR	7.14E-09	4.52E-08				4.92E-07		1.93E-11		5.45E-07
94	EFF	(ppb[v/v])	6	120	6	390	35	35	8	9	3	
	6/24/1999	(g/s)	0.0000	0.0007	0.0000	0.0022	0.0002	0.0002	0.0000	0.0001	0.0000	
		Max.Conc.	0.000	0.003	0.000	0.010	0.001	0.001	0.000	0.000	0.000	
		ECR	9.31E-10	6.31E-09				7.18E-08		3.86E-12		7.90E-08
95	EFF	(ppb[v/v])	51	440	8	2200	100	340	180	45	8	
	7/13/1999	(g/s)	0.0003	0.0025	0.0000	0.0123	0.0006	0.0019	0.0010	0.0003	0.0000	
		Max.Conc.	0.001	0.012	0.000	0.058	0.003	0.009	0.005	0.001	0.000	
		ECR	7.91E-09	2.31E-08				6.97E-07		1.93E-11		7.29E-07
96	EFF	(ppb[v/v])	27	810	45	9	140	270	44	45	9	
	8/6/1999	(g/s)	0.0002	0.0045	0.0003	0.0001	0.0008	0.0015	0.0002	0.0003	0.0001	
		Max.Conc.	0.001	0.021	0.001	0.000	0.004	0.007	0.001	0.001	0.000	
		ECR	4.19E-09	4.26E-08				5.54E-07		1.93E-11		6.01E-07
97	EFF	(ppb[v/v])	25	390	4	1600	120	220	200	60	2	
	9/1/1999	(g/s)	0.0001	0.0022	0.0000	0.0090	0.0007	0.0012	0.0011	0.0003	0.0000	
		Max.Conc.	0.001	0.010	0.000	0.042	0.003	0.006	0.005	0.002	0.000	
		ECR	3.88E-09	2.05E-08				4.51E-07		2.57E-11		4.76E-07
98	EFF	(ppb[v/v])	63	1700	9	3300	260	180	99	61	9	
	10/14/1999	(g/s)	0.0004	0.0095	0.0001	0.0185	0.0015	0.0010	0.0006	0.0003	0.0001	
		Max.Conc.	0.002	0.045	0.000	0.087	0.007	0.005	0.003	0.002	0.000	
		ECR	9.78E-09	8.94E-08				3.69E-07		2.62E-11		4.68E-07
99	EFF	(ppb[v/v])	16	390	14	1400	76	200	97	32	14	
	11/22/1999	(g/s)	0.0001	0.0022	0.0001	0.0078	0.0004	0.0011	0.0005	0.0002	0.0001	
		Max.Conc.	0.000	0.010	0.000	0.037	0.002	0.005	0.003	0.001	0.000	
		ECR	2.48E-09	2.05E-08				4.10E-07		1.37E-11		4.33E-07
100	EFF	(ppb[v/v])	38	520	14	1500	95	200	66	32	14	
	12/13/1999	(g/s)	0.0002	0.0029	0.0001	0.0084	0.0005	0.0011	0.0004	0.0002	0.0001	
		Max.Conc.	0.001	0.014	0.000	0.039	0.002	0.005	0.002	0.001	0.000	
		ECR	5.90E-09	2.74E-08				4.10E-07		1.37E-11		4.44E-07
101	EFF	(ppb[v/v])	57	440	18	1100	68	94	110	29	18	
	1/3/2000	(g/s)	0.0003	0.0025	0.0001	0.0062	0.0004	0.0005	0.0006	0.0002	0.0001	
		Max.Conc.	0.001	0.012	0.000	0.029	0.002	0.002	0.003	0.001	0.000	
		ECR	8.84E-09	2.31E-08				1.93E-07		1.24E-11		2.25E-07
102	EFF	(ppb[v/v])	8	220	8	740	55	91	29	17	8	
	2/7/2000	(g/s)	0.0000	0.0012	0.0000	0.0041	0.0003	0.0005	0.0002	0.0001	0.0000	
		Max.Conc.	0.000	0.006	0.000	0.019	0.001	0.002	0.001	0.000	0.000	
		ECR	1.29E-09	1.16E-08				1.87E-07		7.29E-12		2.00E-07

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600).

ECR = Excess Cancer Risk = Maximum concentration (in $\mu g/m^3$) x Unit Risk Factor

IN = Sample collected from air treatment system influent

EFF = Sample collected from air treatment system effluent

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu g/m^3$) from ISC-LT2 model run output

Unit Risk Factors are

Vinyl Chloride --	7.80E-05
1,1-Dichloroethane --	1.63E-08
Trichloroethene --	2.00E-06
Tetrachloroethene --	5.90E-06

Table 15
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Scenario Number	Description	Input / Output	CONSTITUENTS: *Tetrachloroethene Carcinogen*	*Trichloroethene Carcinogen*	*1,1-Dichloroethene Non-Carcinogen*	*cis-1,2-Dichloroethene Non-Carcinogen*	*trans-1,2-Dichloroethene Non-Carcinogen*	*Vinyl Chloride Carcinogen*	*1,1,1-Trichloroethane Non-Carcinogen*	*1,1-Dichloroethane Carcinogen*	*Toluene Non-Carcinogen*	*Cumulative* Cancer Risk
103	EFF	(ppb[v/v])	88	400	9	1200	46	61	89	25	9	
	3/15/2000	(g/s)	0.0005	0.0022	0.0001	0.0067	0.0003	0.0003	0.0005	0.0001	0.0001	
		Max.Conc.	0.002	0.011	0.000	0.032	0.001	0.002	0.002	0.001	0.000	
		ECR	1.37E-08	2.10E-08				1.25E-07		1.07E-11		1.60E-07
104	EFF	(ppb[v/v])	21	300	3	2300	83	260	47	31	3	
	4/25/2000	(g/s)	0.0001	0.0017	0.0000	0.0129	0.0005	0.0015	0.0003	0.0002	0.0000	
		Max.Conc	0.001	0.008	0.000	0.060	0.002	0.007	0.001	0.001	0.000	
		ECR	3.26E-09	1.58E-08				5.33E-07		1.33E-11		5.52E-07
105	EFF	(ppb[v/v])	110	440	12	1000	71	130	150	30	12	
	5/24/2000	(g/s)	0.0006	0.0025	0.0001	0.0056	0.0004	0.0007	0.0008	0.0002	0.0001	
		Max.Conc	0.003	0.012	0.000	0.026	0.002	0.003	0.004	0.001	0.000	
		ECR	1.71E-08	2.31E-08				2.67E-07		1.29E-11		3.07E-07
106	EFF	(ppb[v/v])	30	380	2	1800	85	190	110	27	2	
	6/6/2000	(g/s)	0.0002	0.0021	0.0000	0.0101	0.0005	0.0011	0.0006	0.0002	0.0000	
		Max.Conc.	0.001	0.010	0.000	0.047	0.002	0.005	0.003	0.001	0.000	
		ECR	4.66E-09	2.00E-08				3.90E-07		1.16E-11		4.14E-07
107	EFF	(ppb[v/v])	31	290	10	1400	39	190	80	21	10	
	7/25/2000	(g/s)	0.0002	0.0016	0.0001	0.0078	0.0002	0.0011	0.0004	0.0001	0.0001	
		Max.Conc.	0.001	0.008	0.000	0.037	0.001	0.005	0.002	0.001	0.000	
		ECR	4.81E-09	1.53E-08				3.90E-07		9.00E-12		4.10E-07
108	EFF	(ppb[v/v])	56	840	12	2200	100	230	59	30	12	
	8/4/2000	(g/s)	0.0003	0.0047	0.0001	0.0123	0.0006	0.0013	0.0003	0.0002	0.0001	
		Max.Conc	0.001	0.022	0.000	0.058	0.003	0.006	0.002	0.001	0.000	
		ECR	8.69E-09	4.42E-08				4.72E-07		1.29E-11		5.25E-07
109	EFF	(ppb[v/v])	22	540	12	2100	140	210	80	34	12	
	9/5/2000	(g/s)	0.0001	0.0030	0.0001	0.0118	0.0008	0.0012	0.0004	0.0002	0.0001	
		Max.Conc.	0.001	0.014	0.000	0.055	0.004	0.006	0.002	0.001	0.000	
		ECR	3.41E-09	2.84E-08				4.31E-07		1.46E-11		4.63E-07
110	EFF	(ppb[v/v])	52	920	18	2200	160	130	93	49	18	
	10/6/2000	(g/s)	0.0003	0.0052	0.0001	0.0123	0.0009	0.0007	0.0005	0.0003	0.0001	
		Max.Conc	0.001	0.024	0.000	0.058	0.004	0.003	0.002	0.001	0.000	
		ECR	8.07E-09	4.84E-08				2.67E-07		2.10E-11		3.23E-07
111	EFF	(ppb[v/v])	110	840	10	1900	97	170	73	36	10	
	11/7/2000	(g/s)	0.0006	0.0047	0.0001	0.0106	0.0005	0.0010	0.0004	0.0002	0.0001	
		Max.Conc.	0.003	0.022	0.000	0.050	0.003	0.004	0.002	0.001	0.000	
		ECR	1.71E-08	4.42E-08				3.49E-07		1.54E-11		4.10E-07
112	EFF	(ppb[v/v])	38	760	9	1900	100	190	50	30	9	
	12/21/2000	(g/s)	0.0002	0.0043	0.0001	0.0106	0.0006	0.0011	0.0003	0.0002	0.0001	
		Max.Conc.	0.001	0.020	0.000	0.050	0.003	0.005	0.001	0.001	0.000	
		ECR	5.90E-09	4.00E-08				3.90E-07		1.29E-11		4.36E-07

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600)

ECR = Excess Cancer Risk = Maximum concentration (in $\mu g/m^3$) x Unit Risk Factor

EFF = Sample collected from air treatment system effluent

Max Conc = Maximum predicted concentration in micrograms per meter cubed ($\mu g/m^3$) from ISC-LT2 model run output

Unit Risk Factors are

Vinyl Chloride --	7.80E-05
1,1-Dichloroethane --	1.63E-08
Trichloroethene --	2.00E-06
Tetrachloroethene --	5.90E-06

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Table 15
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Scenario Number	Description	Input / Output	CONSTITUENTS: *Tetrachloroethene Carcinogen*	*Trichloroethene Carcinogen*	*1,1-Dichloroethene Non-Carcinogen*	*cis-1,2-Dichloroethene Non-Carcinogen*	*trans-1,2-Dichloroethene Non-Carcinogen*	*Vinyl Chloride Carcinogen*	*1,1,1-Trichloroethane Non-Carcinogen*	*1,1-Dichloroethane Carcinogen*	*Toluene Non-Carcinogen*	Cumulative Cancer Risk
113	EFF	(ppb[v/v])	38	630	9	2000	49	270	53	30	9	
	1/30/2001	(g/s)	0.0002	0.0035	0.0001	0.0112	0.0003	0.0015	0.0003	0.0002	0.0001	
		Max.Conc	0.001	0.017	0.000	0.053	0.001	0.007	0.001	0.001	0.000	
		ECR	5.90E-09	3.31E-08				5.54E-07		1.29E-11		5.93E-07
114	EFF	(ppb[v/v])	140	260	140	1700	1	180	140	140	140	
	2/26/2001	(g/s)	0.0008	0.0015	0.0008	0.0095	0.0000	0.0010	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.007	0.004	0.045	0.000	0.005	0.004	0.004	0.004	
		ECR	2.17E-08	1.37E-08				3.69E-07		6.00E-11		4.05E-07
115	EFF	(ppb[v/v])	34	340	2	1300	1	190	26	18	4	
	3/21/2001	(g/s)	0.0002	0.0019	0.0000	0.0073	0.0000	0.0011	0.0001	0.0001	0.0000	
		Max.Conc.	0.001	0.009	0.000	0.034	0.000	0.005	0.001	0.000	0.000	
		ECR	5.28E-09	1.79E-08				3.90E-07		7.72E-12		4.13E-07
116	EFF	(ppb[v/v])	140	160	140	1000	1	160	140	140	140	
	4/23/2001	(g/s)	0.0008	0.0009	0.0008	0.0056	0.0000	0.0009	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.004	0.004	0.026	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	8.42E-09				3.28E-07		6.00E-11		3.58E-07
117	EFF	(ppb[v/v])	150	150	150	630	1	150	150	150	150	
	5/21/2001	(g/s)	0.0008	0.0008	0.0008	0.0035	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.004	0.004	0.017	0.000	0.004	0.004	0.004	0.004	
		ECR	2.33E-08	7.89E-09				3.08E-07		6.43E-11		3.39E-07
118	EFF	(ppb[v/v])	150	430	150	1400	1	210	150	150	150	
	6/13/2001	(g/s)	0.0008	0.0024	0.0008	0.0078	0.0000	0.0012	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.011	0.004	0.037	0.000	0.006	0.004	0.004	0.004	
		ECR	2.33E-08	2.26E-08				4.31E-07		6.43E-11		4.77E-07
119	EFF	(ppb[v/v])	140	140	140	1100	1	140	140	140	140	
	7/23/2001	(g/s)	0.0008	0.0008	0.0008	0.0062	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc	0.004	0.004	0.004	0.029	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	7.36E-09				2.87E-07		6.00E-11		3.16E-07
120	EFF	(ppb[v/v])	140	280	140	600	1	140	140	140	140	
	8/23/2001	(g/s)	0.0008	0.0016	0.0008	0.0034	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc	0.004	0.007	0.004	0.016	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	1.47E-08				2.87E-07		6.00E-11		3.24E-07
121	EFF	(ppb[v/v])	140	280	140	680	1	140	140	140	140	
	9/17/2001	(g/s)	0.0008	0.0016	0.0008	0.0038	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.007	0.004	0.018	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	1.47E-08				2.87E-07		6.00E-11		3.24E-07
122	EFF	(ppb[v/v])	140	410	140	1500	140	260	140	140	140	
	10/31/2001	(g/s)	0.0008	0.0023	0.0008	0.0084	0.0008	0.0015	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.011	0.004	0.039	0.004	0.007	0.004	0.004	0.004	
		ECR	2.17E-08	2.16E-08				5.33E-07		6.00E-11		5.77E-07

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600)

ECR = Excess Cancer Risk Maximum concentration (in $\mu g/m^3$) x Unit Risk Factor

EFF = Sample collected from air treatment system effluent

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu g/m^3$) from ISC-LT2 model run output

Unit Risk Factors are

Vinyl Chloride --	7.80E-05
1,1-Dichloroethane --	1.63E-08
Trichloroethene --	2.00E-06
Tetrachloroethene --	5.90E-06

Table 15
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Scenario Number	Description	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
			Tetrachloroethene Carcinogen	*Trichloroethene Carcinogen*	*1,1-Dichloroethene Non-Carcinogen*	*cis-1,2-Dichloroethene Non-Carcinogen*	*trans-1,2-Dichloroethene Non-Carcinogen*	*Vinyl Chloride Carcinogen*	*1,1,1-Trichloroethane Non-Carcinogen*	*1,1-Dichloroethane Carcinogen*	*Toluene Non-Carcinogen*	
123	EFF	(ppb[v/v])	100	460	100	2200	100	210	100	100	100	
	11/18/2001	(g/s)	0.0006	0.0026	0.0006	0.0123	0.0006	0.0012	0.0006	0.0006	0.0006	
		Max.Conc.	0.003	0.012	0.003	0.058	0.003	0.006	0.003	0.003	0.003	
		ECR	1.55E-08	2.42E-08				4.31E-07		4.29E-11		4.71E-07
124	EFF	(ppb[v/v])	130	300	130	1700	1	210	130	130	130	
	12/28/2001	(g/s)	0.0007	0.0017	0.0007	0.0095	0.0000	0.0012	0.0007	0.0007	0.0007	
		Max.Conc.	0.003	0.008	0.003	0.045	0.000	0.006	0.003	0.003	0.003	
		ECR	2.02E-08	1.58E-08				4.31E-07		5.57E-11		4.67E-07
125	EFF	(ppb[v/v])	130	280	130	1600	1	280	130	130	130	
	1/18/2002	(g/s)	0.0007	0.0016	0.0007	0.0090	0.0000	0.0016	0.0007	0.0007	0.0007	
		Max.Conc	0.003	0.007	0.003	0.042	0.000	0.007	0.003	0.003	0.003	
		ECR	2.02E-08	1.47E-08				5.74E-07		5.57E-11		6.09E-07
126	EFF	(ppb[v/v])	130	530	130	2800	1	500	130	130	130	
	2/7/2002	(g/s)	0.0007	0.0030	0.0007	0.0157	0.0000	0.0028	0.0007	0.0007	0.0007	
		Max.Conc	0.003	0.014	0.003	0.074	0.000	0.013	0.003	0.003	0.003	
		ECR	2.02E-08	2.79E-08				1.03E-06		5.57E-11		1.07E-06
127	EFF	(ppb[v/v])	140	180	140	900	1	160	140	140	140	
	3/21/2002	(g/s)	0.0008	0.0010	0.0008	0.0050	0.0000	0.0009	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.005	0.004	0.024	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	9.47E-09				3.28E-07		6.00E-11		3.59E-07
128	EFF	(ppb[v/v])	8	29	1	37	1	1	42	4	1	
	4/23/2002	(g/s)	0.0000	0.0002	0.0000	0.0002	0.0000	0.0000	0.0002	0.0000	0.0000	
		Max.Conc	0.000	0.001	0.000	0.001	0.000	0.000	0.001	0.000	0.000	
		ECR	1.21E-09	1.53E-09				2.05E-09		1.50E-12		4.79E-09
129	EFF	(ppb[v/v])	140	160	140	800	1	150	140	140	140	
	5/23/2002	(g/s)	0.0008	0.0009	0.0008	0.0045	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.004	0.004	0.021	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	8.42E-09				3.08E-07		6.00E-11		3.38E-07
130	EFF	(ppb[v/v])	140	290	140	1200	1	220	140	140	140	
	6/18/2002	(g/s)	0.0008	0.0016	0.0008	0.0067	0.0000	0.0012	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.008	0.004	0.032	0.000	0.006	0.004	0.004	0.004	
		ECR	2.17E-08	1.53E-08				4.51E-07		6.00E-11		4.88E-07
131	EFF	(ppb[v/v])	140	140	140	230	1	140	140	140	140	
	7/19/2002	(g/s)	0.0008	0.0008	0.0008	0.0013	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.004	0.004	0.006	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	7.36E-09				2.87E-07		6.00E-11		3.16E-07
132	EFF	(ppb[v/v])	140	200	140	920	1	220	140	140	140	
	8/14/2002	(g/s)	0.0008	0.0011	0.0008	0.0052	0.0000	0.0012	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.005	0.004	0.024	0.000	0.006	0.004	0.004	0.004	
		ECR	2.17E-08	1.05E-08				4.51E-07		6.00E-11		4.84E-07

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600)

ECR = Excess Cancer Risk = Maximum concentration (in $\mu g/m^3$) x Unit Risk Factor

EFF = Sample collected from air treatment system effluent

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu g/m^3$) from ISC-LT2 model run output

Unit Risk Factors are

Vinyl Chloride --	7.80E-05
1,1-Dichloroethane --	1.63E-08
Trichloroethene --	2.00E-06
Tetrachloroethene --	5.90E-06

Table 15
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Scenario Number	Description	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
			Tetrachloroethene Carcinogen	*Trichloroethene Carcinogen*	*1,1-Dichloroethene Non-Carcinogen*	*cis-1,2-Dichloroethene Non-Carcinogen*	*trans-1,2-Dichloroethene Non-Carcinogen*	*Vinyl Chloride Carcinogen*	*1,1,1-Trichloroethane Non-Carcinogen*	*1,1-Dichloroethane Carcinogen*	*Toluene Non-Carcinogen*	
133	EFF	(ppb[v/v])	100	520	100	1500	1	100	100	100	100	
	9/20/2002	(g/s)	0.0006	0.0029	0.0006	0.0084	0.0000	0.0006	0.0006	0.0006	0.0006	
		Max.Conc.	0.003	0.014	0.003	0.039	0.000	0.003	0.003	0.003	0.003	
		ECR	1.55E-08	2.74E-08				2.05E-07		4.29E-11		2.48E-07
134	EFF	(ppb[v/v])	140	720	140	1300	1	140	140	140	140	
	10/24/2002	(g/s)	0.0008	0.0040	0.0008	0.0073	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.019	0.004	0.034	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	3.79E-08				2.87E-07		6.00E-11		3.47E-07
135	EFF	(ppb[v/v])	140	720	140	1200	1	140	140	140	140	
	11/21/2002	(g/s)	0.0008	0.0040	0.0008	0.0067	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.019	0.004	0.032	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	3.79E-08				2.87E-07		6.00E-11		3.47E-07
136	EFF	(ppb[v/v])	140	410	140	1100	1	140	140	140	140	
	12/13/2002	(g/s)	0.0008	0.0023	0.0008	0.0062	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.011	0.004	0.029	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	2.16E-08				2.87E-07		6.00E-11		3.31E-07
137	EFF	(ppb[v/v])	140	420	140	920	1	140	140	140	140	
	1/23/2003	(g/s)	0.0008	0.0024	0.0008	0.0052	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.011	0.004	0.024	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	2.21E-08				2.87E-07		6.00E-11		3.31E-07
138	EFF	(ppb[v/v])	140	320	140	520	1	140	140	140	140	
	2/10/2003	(g/s)	0.0008	0.0018	0.0008	0.0029	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.008	0.004	0.014	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	1.68E-08				2.87E-07		6.00E-11		3.26E-07
139	EFF	(ppb[v/v])	130	320	130	760	1	130	130	130	130	
	3/19/2003	(g/s)	0.0007	0.0018	0.0007	0.0043	0.0000	0.0007	0.0007	0.0007	0.0007	
		Max.Conc	0.003	0.008	0.003	0.020	0.000	0.003	0.003	0.003	0.003	
		ECR	2.02E-08	1.68E-08				2.67E-07		5.57E-11		3.04E-07
140	EFF	(ppb[v/v])	140	380	140	1400	1	140	140	140	140	
	4/15/2003	(g/s)	0.0008	0.0021	0.0008	0.0078	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.010	0.004	0.037	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	2.00E-08				2.87E-07		6.00E-11		3.29E-07
141	EFF	(ppb[v/v])	130	280	130	750	1	130	130	130	130	
	5/19/2003	(g/s)	0.0007	0.0016	0.0007	0.0042	0.0000	0.0007	0.0007	0.0007	0.0007	
		Max.Conc.	0.003	0.007	0.003	0.020	0.000	0.003	0.003	0.003	0.003	
		ECR	2.02E-08	1.47E-08				2.67E-07		5.57E-11		3.02E-07
142	EFF	(ppb[v/v])	140	390	140	1000	1	140	140	140	140	
	6/6/2003	(g/s)	0.0008	0.0022	0.0008	0.0056	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.010	0.004	0.026	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	2.05E-08				2.87E-07		6.00E-11		3.29E-07

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600)

ECR = Excess Cancer Risk = Maximum concentration (in µg/m³) x Unit Risk Factor.

EFF = Sample collected from air treatment system effluent

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed (µg/m³) from ISC-LT2 model run output

Unit Risk Factors are

Vinyl Chloride --	7.80E-05
1,1-Dichloroethane --	1.63E-08
Trichloroethene --	2.00E-06
Tetrachloroethene --	5.90E-06

Table 15
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Scenario Number	Description	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
			Tetrachloroethene Carcinogen	*Trichloroethene Carcinogen*	*1,1-Dichloroethene Non-Carcinogen*	*cis-1,2-Dichloroethene Non-Carcinogen*	*trans-1,2-Dichloroethene Non-Carcinogen*	*Vinyl Chloride Carcinogen*	*1,1,1-Trichloroethane Non-Carcinogen*	*1,1-Dichloroethane Carcinogen*	*Toluene Non-Carcinogen*	
143	EFF	(ppb[v/v])	140	290	140	740	1	140	140	140	140	
	7/14/2003	(g/s)	0.0008	0.0016	0.0008	0.0041	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.008	0.004	0.019	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	1.53E-08				2.87E-07		6.00E-11		3.24E-07
144	EFF	(ppb[v/v])	140	330	140	800	1	140	140	140	140	
	8/21/2003	(g/s)	0.0008	0.0018	0.0008	0.0045	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc	0.004	0.009	0.004	0.021	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	1.74E-08				2.87E-07		6.00E-11		3.26E-07
145	EFF	(ppb[v/v])	7.4	240	0.66	270	1	11	5.4	2.3	0.66	
	9/15/2003	(g/s)	0.0000	0.0013	0.0000	0.0015	0.0000	0.0001	0.0000	0.0000	0.0000	
		Max.Conc.	0.000	0.006	0.000	0.007	0.000	0.000	0.000	0.000	0.000	
		ECR	1.15E-09	1.26E-08				2.26E-08		9.86E-13		3.63E-08
146	EFF	(ppb[v/v])	130	230	130	750	1	130	130	130	130	
	10/16/2003	(g/s)	0.0007	0.0013	0.0007	0.0042	0.0000	0.0007	0.0007	0.0007	0.0007	
		Max.Conc.	0.003	0.006	0.003	0.020	0.000	0.003	0.003	0.003	0.003	
		ECR	2.02E-08	1.21E-08				2.67E-07		5.57E-11		2.99E-07
147	EFF	(ppb[v/v])	130	230	130	380	1	130	130	130	130	
	11/7/2003	(g/s)	0.0007	0.0013	0.0007	0.0021	0.0000	0.0007	0.0007	0.0007	0.0007	
		Max.Conc.	0.003	0.006	0.003	0.010	0.000	0.003	0.003	0.003	0.003	
		ECR	2.02E-08	1.21E-08				2.67E-07		5.57E-11		2.99E-07
148	EFF	(ppb[v/v])	130	220	130	1100	1	190	130	130	130	
	12/22/2003	(g/s)	0.0007	0.0012	0.0007	0.0062	0.0000	0.0011	0.0007	0.0007	0.0007	
		Max.Conc.	0.003	0.006	0.003	0.029	0.000	0.005	0.003	0.003	0.003	
		ECR	2.02E-08	1.16E-08				3.90E-07		5.57E-11		4.22E-07
149	EFF	(ppb[v/v])	130	130	130	350	1	150	130	130	130	
	1/29/2004	(g/s)	0.0007	0.0007	0.0007	0.0020	0.0000	0.0008	0.0007	0.0007	0.0007	
		Max.Conc.	0.003	0.003	0.003	0.009	0.000	0.004	0.003	0.003	0.003	
		ECR	2.02E-08	6.84E-09				3.08E-07		5.57E-11		3.35E-07
150	EFF	(ppb[v/v])	120	300	120	1200	1	220	120	120	120	
	2/20/2004	(g/s)	0.0007	0.0017	0.0007	0.0067	0.0000	0.0012	0.0007	0.0007	0.0007	
		Max.Conc.	0.003	0.008	0.003	0.032	0.000	0.006	0.003	0.003	0.003	
		ECR	1.86E-08	1.58E-08				4.51E-07		5.14E-11		4.86E-07
151	EFF	(ppb[v/v])	140	140	140	540	1	140	140	140	140	
	3/16/2004	(g/s)	0.0008	0.0008	0.0008	0.0030	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc	0.004	0.004	0.004	0.014	0.000	0.004	0.004	0.004	0.004	
		ECR	2.17E-08	7.36E-09				2.87E-07		6.00E-11		3.16E-07
152	EFF	(ppb[v/v])	7.1	480	3.1	2300	1	350	4.8	18	2.1	
	4/19/2004	(g/s)	0.0000	0.0027	0.0000	0.0129	0.0000	0.0020	0.0000	0.0001	0.0000	
		Max.Conc.	0.000	0.013	0.000	0.060	0.000	0.009	0.000	0.000	0.000	
		ECR	1.10E-09	2.52E-08				7.18E-07		7.72E-12		7.44E-07

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600)

ECR = Excess Cancer Risk = Maximum concentration (in $\mu g/m^3$) x Unit Risk Factor

EFF = Sample collected from air treatment system effluent

Max. Conc = Maximum predicted concentration in micrograms per meter cubed ($\mu g/m^3$) from ISC-3 T2 model run output

Unit Risk Factors are

Vinyl Chloride --	7.80E-05
1,1-Dichloroethane --	1.63E-08
Trichloroethene --	2.00E-06
Tetrachloroethene --	5.90E-06

Table 15
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Scenario Number	Description	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
			Tetrachloroethene Carcinogen	*Trichloroethene Carcinogen*	*1,1-Dichloroethene Non-Carcinogen*	*cis-1,2-Dichloroethene Non-Carcinogen*	*trans-1,2-Dichloroethene Non-Carcinogen*	*Vinyl Chloride Carcinogen*	*1,1,1-Trichloroethane Non-Carcinogen*	*1,1-Dichloroethane Carcinogen*	*Toluene Non-Carcinogen*	
153	EFF	(ppb[v/v])	150	150	150	510	1	150	150	150	150	
	5/18/2004	(g/s)	0.0008	0.0008	0.0008	0.0029	0.0000	0.0008	0.0008	0.0008	0.0008	
		Max.Conc.	0.004	0.004	0.004	0.013	0.000	0.004	0.004	0.004	0.004	
		ECR	2.33E-08	7.89E-09				3.08E-07		6.43E-11		3.39E-07
154	EFF	(ppb[v/v])	12	260	5.0	1800	1	300	4.3	23	5.8	
	6/23/2004	(g/s)	0.0001	0.0015	0.0000	0.0101	0.0000	0.0017	0.0000	0.0001	0.0000	
		Max.Conc	0.000	0.007	0.000	0.047	0.000	0.008	0.000	0.001	0.000	
		ECR	1.86E-09	1.37E-08				6.15E-07		9.86E-12		6.31E-07

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

g/s = ppb[v/v] x 1,000 / (22,500 x 2.205 x 3,600)

ECR = Excess Cancer Risk = Maximum concentration (in $\mu g/m^3$) x Unit Risk Factor

EFF = Sample collected from air treatment system effluent

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ($\mu g/m^3$) from ISC-LT2 model run output

Unit Risk Factors are

Vinyl Chloride --	7.80E-05
1,1-Dichloroethane --	1.63E-08
Trichloroethene --	2.00E-06
Tetrachloroethene --	5.90E-06

Table 16
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

		SE Area SVE System [1]			AST Area - SVE Branch Line G [2]			AST Area - SVE Branch Line H [3]			Air Stripper [4]			Sum of VOCs Removed
DATE	CONSTITUENT	Air Flow Rate[5] (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Groundwater Flow Rate (gpm)	IN minus EFF Conc. (µg/L)	Removal Rate (lbs/day)	(lbs/day)
April 1998	Trichloroethene	1,350	540	0.35	140	57	0.00	160	100	0.01	30	140	0.05	0.41
April 1998	cis-1,2-DCE	1,350	1,000	0.53	140	110	0.01	160	200	0.01	30	1,190	0.43	0.98
April 1998	Vinyl Chloride	1,350	0	0.00	140	7	0.00	160	0	0.00	30	240	0.09	0.09
	Total			0.88			0.01			0.02			0.57	**1.48**
October 1998	Trichloroethene	2,575	2,900	3.60	140	48	0.00	160	300	0.02	56	83	0.06	3.69
October 1998	cis-1,2-DCE	2,575	3,500	3.54	140	50	0.00	160	250	0.02	56	254	0.17	3.73
October 1998	Vinyl Chloride	2,575	0	0.00	140	0	0.00	160	0	0.00	56	110	0.07	0.07
	Total			7.14			0.01			0.04			0.30	**7.49**
April 1999	Trichloroethene	2,730	94	0.12	98	8	0.00	112	21	0.00	71	254	0.22	0.34
April 1999	cis-1,2-DCE	2,730	210	0.23	98	21	0.00	112	47	0.00	71	1,560	1.33	1.56
April 1999	Vinyl Chloride	2,730	15	0.01	98	2	0.00	112	2	0.00	71	210	0.18	0.19
	Total			0.36			0.00			0.00			1.73	**2.09**
Nov/Dec 1999	Trichloroethene	2,590	540	0.68	187	9	0.00	213	23	0.00	47	120	0.07	0.75
Nov/Dec 1999	cis-1,2-DCE	2,590	1,300	1.32	187	24	0.00	213	89	0.01	47	888	0.50	1.83
Nov/Dec 1999	Vinyl Chloride	2,590	29	0.02	187	4	0.00	213	0	0.00	47	120	0.07	0.09
	Total			2.01			0.00			0.01			0.64	**2.66**

Notes:

[1] Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

[2] VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

[3] VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

[4] VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

[5] SE Area air flow rate based on sum of the six branch line field measurements.

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion; µg/L = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene.

Table 16
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

		SE Area SVE System [1]			AST Area - SVE Branch Line G [2]			AST Area - SVE Branch Line H [3]			Air Stripper [4]			Sum of VOCs Removed
DATE	CONSTITUENT	Air Flow Rate[5] (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Groundwater Flow Rate (gpm)	IN minus EFF Conc. (µg/L)	Removal Rate (lbs/day)	(lbs/day)
April 2000	Trichloroethene	1,500	710	0.51	187	590	0.05	213	50	0.01	51	250	0.15	0.73
April 2000	cis-1,2-DCE	1,500	1,400	0.82	187	330	0.02	213	150	0.01	51	1,450	0.89	1.75
April 2000	Vinyl Chloride	1,500	0	0.00	187	0	0.00	213	0	0.00	51	170	0.10	0.10
	Total			1.34			0.08			0.02			1.15	**2.58**
October 2000	Trichloroethene	1,500	750	0.54	187	710	0.06	213	78	0.01	55	120	0.08	0.69
October 2000	cis-1,2-DCE	1,500	1,300	0.77	187	300	0.02	213	190	0.02	55	1,580	1.04	1.85
October 2000	Vinyl Chloride	1,500	0	0.00	187	0	0.00	213	0	0.00	55	170	0.11	0.11
	Total			1.31			0.09			0.02			1.24	**2.65**
April 2001	Trichloroethene	1,600	140	0.11	105	57	0.00	120	48	0.00	65	190	0.15	0.26
April 2001	cis-1,2-DCE	1,600	150	0.09	105	21	0.00	120	70	0.00	65	1,230	0.96	1.06
April 2001	Vinyl Chloride	1,600	0	0.00	105	0	0.00	120	0	0.00	65	146	0.11	0.11
	Total			0.20			0.00			0.01			1.22	**1.44**
Oct/Nov 2001	Trichloroethene	1,600	410	0.32	225	150	0.02	225	0	0.00	90	241	0.26	0.59
Oct/Nov 2001	cis-1,2-DCE	1,600	1,500	0.94	225	130	0.01	225	0	0.00	90	1,447	1.56	2.52
Oct/Nov 2001	Vinyl Chloride	1,600	0	0.00	225	3	0.00	225	0	0.00	90	121	0.13	0.13
	Total			1.26			0.03			0.00			1.96	**3.24**

Notes:

[1] Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

[2] VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

[3] VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

[4] VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

[5] SE Area air flow rate based on sum of the six branch line field measurements.

IN = Influent; EFF = effluent; Conc = concentration; scfm = standard cubic feet per minute; ppb = parts per billion; µg/L = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene.

Table 16
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

		SE Area SVE System [1]			AST Area - SVE Branch Line G [2]			AST Area - SVE Branch Line H [3]			Air Stripper [4]			Sum of VOCs Removed
DATE	CONSTITUENT	Air Flow Rate [5] (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Groundwater Flow Rate (gpm)	IN minus EFF Conc. (µg/L)	Removal Rate (lbs/day)	(lbs/day)
April 2002	Trichloroethene	2,600	330	0.41	245	22	0.00	245	48	0.01	65	74	0.06	0.48
April 2002	cis-1,2-DCE	2,600	370	0.38	245	27	0.00	245	60	0.01	65	692	0.54	0.93
April 2002	Vinyl Chloride	2,600	18	0.01	245	0.92	0.00	245	2.1	0.00	65	160	0.12	0.14
	Total			0.80			0.01			0.01			0.72	**1.54**
October 2002	Trichloroethene	1,200	430	0.25	280	180	0.02	(susp)	0	0.00	44	300	0.16	0.43
October 2002	cis-1,2-DCE	1,200	790	0.37	280	0	0.00	(susp)	0	0.00	44	1,359	0.72	1.09
October 2002	Vinyl Chloride	1,200	0	0.00	280	0	0.00	(susp)	0	0.00	44	220	0.12	0.12
	Total			0.62			0.02			0.00			0.99	**1.64**
April 2003	Trichloroethene	1,300	270	0.17	640	280	0.09	(susp)	0	0.00	50	268	0.16	0.42
April 2003	cis-1,2-DCE	1,300	470	0.24	640	190	0.05	(susp)	0	0.00	50	1,405	0.84	1.13
April 2003	Vinyl Chloride	1,300	0	0.00	640	0	0.00	(susp)	0	0.00	50	134	0.08	0.08
	Total			0.41			0.13			0.00			1.09	**1.63**
October 2003	Trichloroethene	2,100	240	0.24	420	260	0.05	(susp)	0	0.00	44	180	0.10	0.39
October 2003	cis-1,2-DCE	2,100	340	0.28	420	0	0.00	(susp)	0	0.00	44	1,694	0.90	1.18
October 2003	Vinyl Chloride	2,100	0	0.00	420	0	0.00	(susp)	0	0.00	44	140.7	0.07	0.07
	Total			0.52			0.05			0.00			1.07	**1.64**

Notes:

[1] Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

[2] VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

[3] VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

[4] VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

[5] SE Area air flow rate based on sum of the six branch line field measurements.

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion; µg/L = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene

(susp) = The operation of Branch Line H was suspended in October 2002.

Table 16
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

		SE Area SVE System [1]			AST Area - SVE Branch Line G [2]			AST Area - SVE Branch Line H [3]			Air Stripper [4]			Sum of VOCs
DATE	CONSTITUENT	Air Flow Rate[5] (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Air Flow Rate (scfm)	Conc. (ppb)	Removal Rate (lbs/day)	Groundwater Flow Rate (gpm)	IN minus EFF Conc. (µg/L)	Removal Rate (lbs/day)	Removed (lbs/day)
April 2004	Trichloroethene	1,000	0	0.00	470	360	0.08	(susp)	0	0.00	67	149	0.12	0.20
April 2004	cis-1,2-DCE	1,000	160	0.06	470	160	0.03	(susp)	0	0.00	67	690	0.56	0.65
April 2004	Vinyl Chloride	1,000	0	0.00	470	0	0.00	(susp)	0	0.00	67	147.9	0.12	0.12
	Total			0.06			0.11			0.00			0.79	**0.97**

Notes:

[1] Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

[2] VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

[3] VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

[4] VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations

[5] SE Area air flow rate based on sum of the six branch line field measurements.

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion; µg/L = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene.

(susp) = The operation of Branch Line H was suspended in October 2002.

FIGURES

NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN. DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, MORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASC-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. RECORD OF CONSTRUCTION PIPING LAYOUT IS BASED ON FIELD MEASUREMENTS AND OBSERVATIONS. PIPING LAYOUT WAS NOT SURVEYED.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION (DEC '02)
- RIVER GAUGE POINT LOCATION (DEC '02)
- RIVER WATER SAMPLING LOCATION (DEC '02)
- SYSTEM PIPING

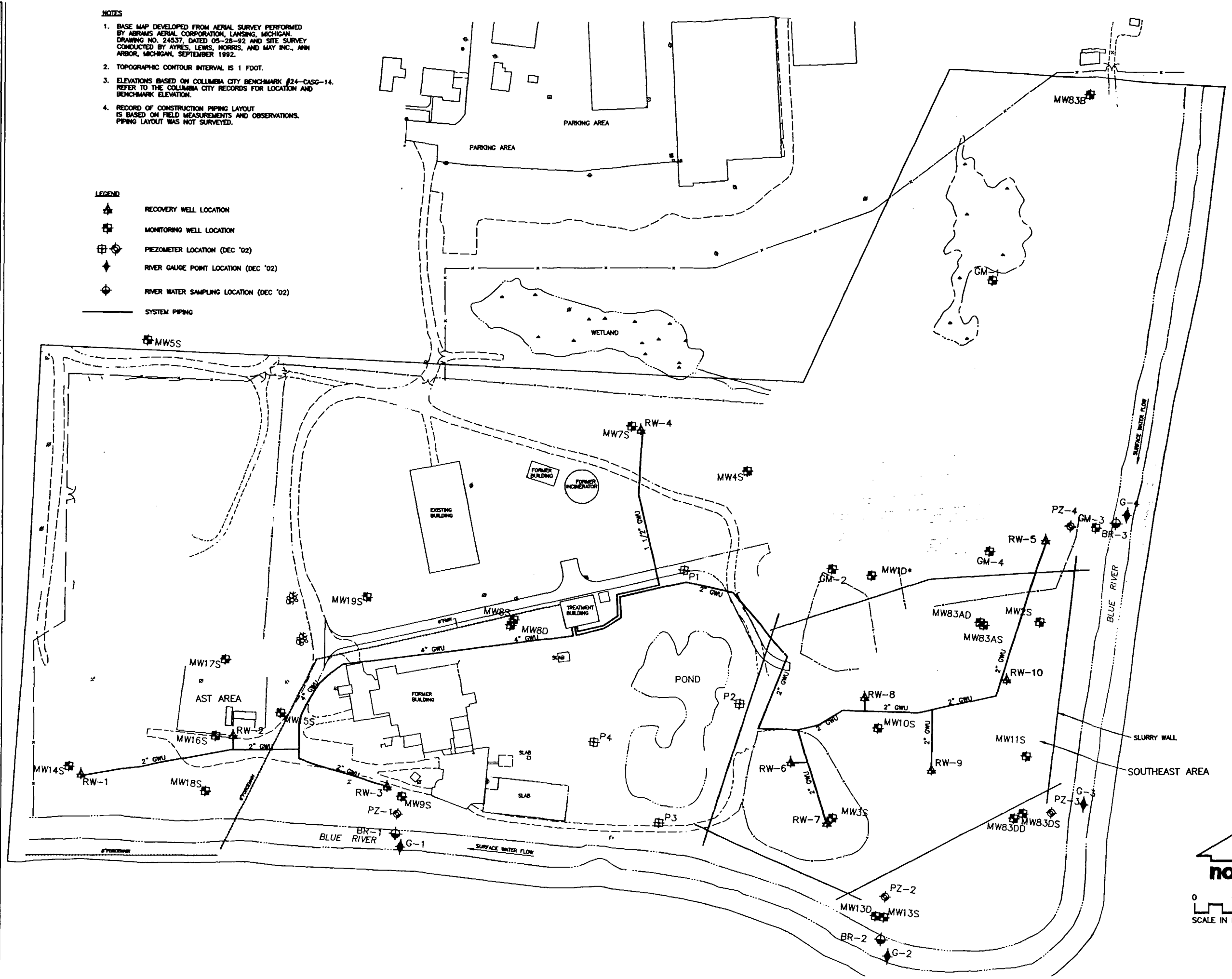

FIGURE 1

SITE PLAN - GROUNDWATER EXTRACTION & TREATMENT SYSTEM AND SLURRY WALL
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COLUMBIA CITY, INDIANA

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3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. RECORD OF CONSTRUCTION PIPING LAYOUT IS BASED ON FIELD MEASUREMENTS AND OBSERVATIONS. PIPING LAYOUT WAS NOT SURVEYED.

LEGEND

- PRESSURE PROBE LOCATION
- SOIL VAPOR EXTRACTION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION (DEC '02)
- RIVER GAUGE POINT LOCATION (DEC '02)
- RIVER WATER SAMPLING LOCATION (DEC '02)
- SYSTEM PIPING

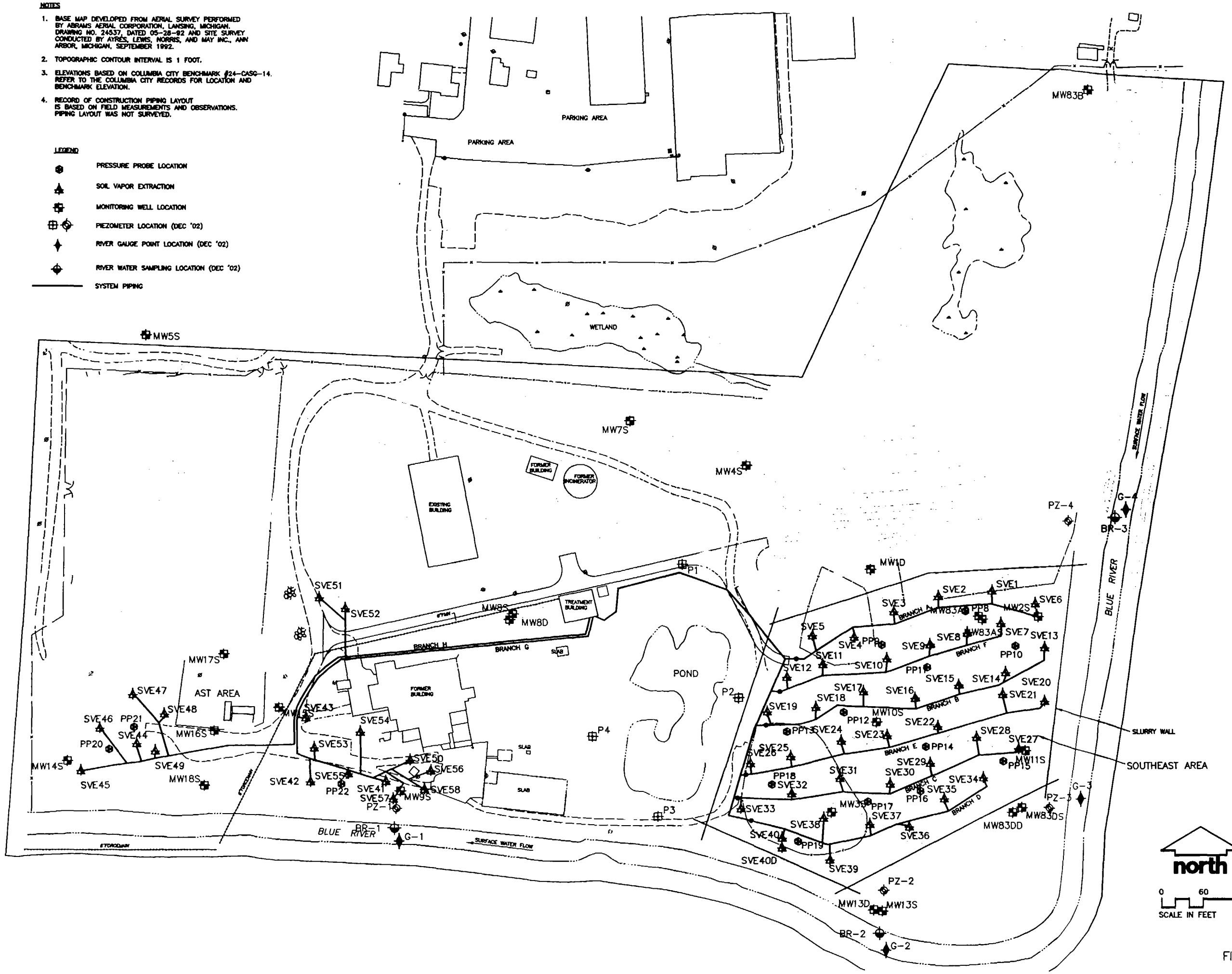

FIGURE 2

SITE PLAN - SOIL VAPOR EXTRACTION SYSTEM

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4. RECORD OF CONSTRUCTION PIPING LAYOUT IS BASED ON FIELD MEASUREMENTS AND OBSERVATIONS. PIPING LAYOUT WAS NOT SURVEYED.

LEGEND

- AIR SPARGING WELL LOCATION
- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION (DEC '02)
- RIVER GAUGE POINT LOCATION (DEC '02)
- RIVER WATER SAMPLING LOCATION (DEC '02)
- SYSTEM PIPING

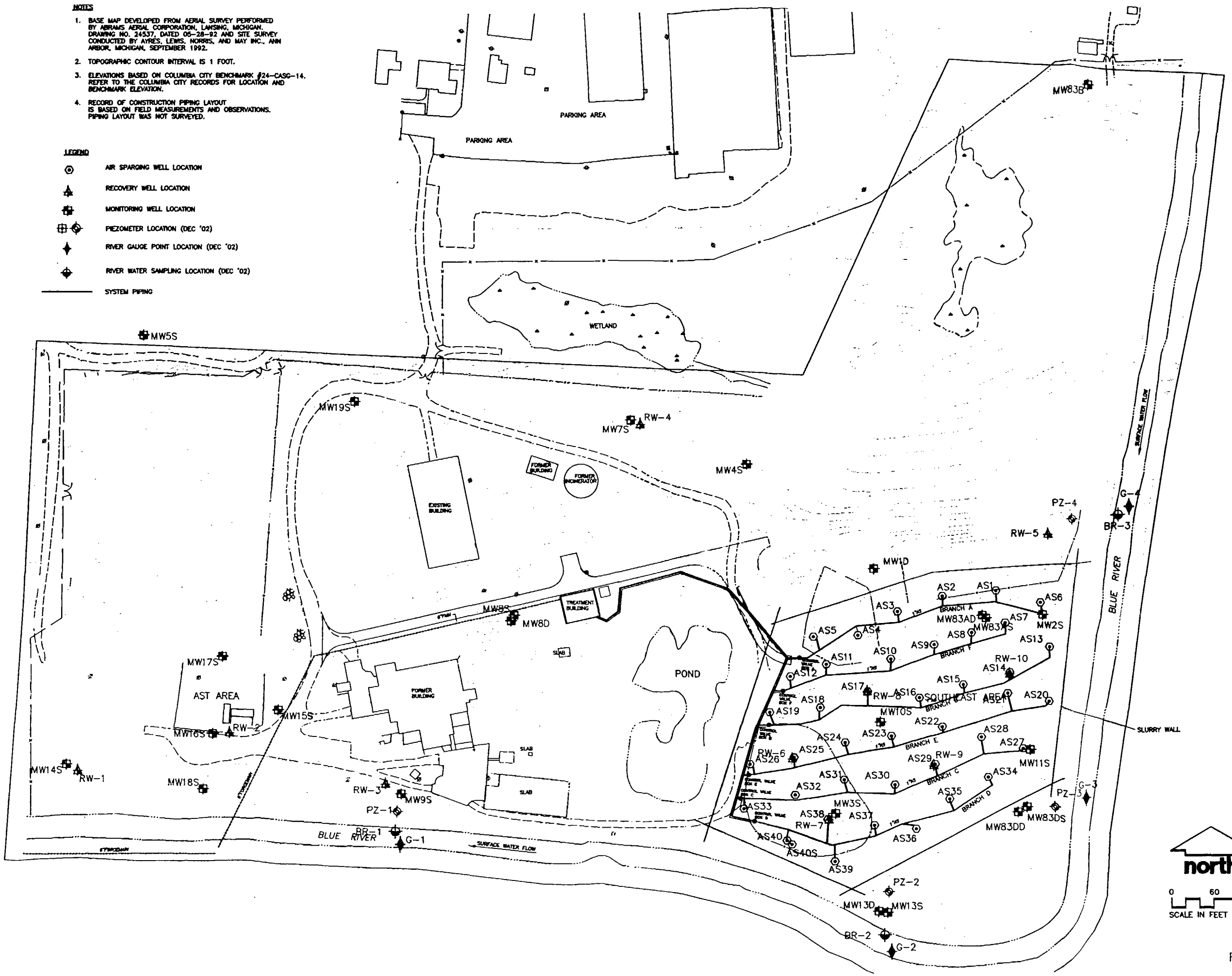

FIGURE 3

SITE PLAN - AIR SPARGING SYSTEM
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Figure 4
Summary of Groundwater Treatment and SVE Systems Combined Air System Effluent Data
Wayne Reclamation & Recycling

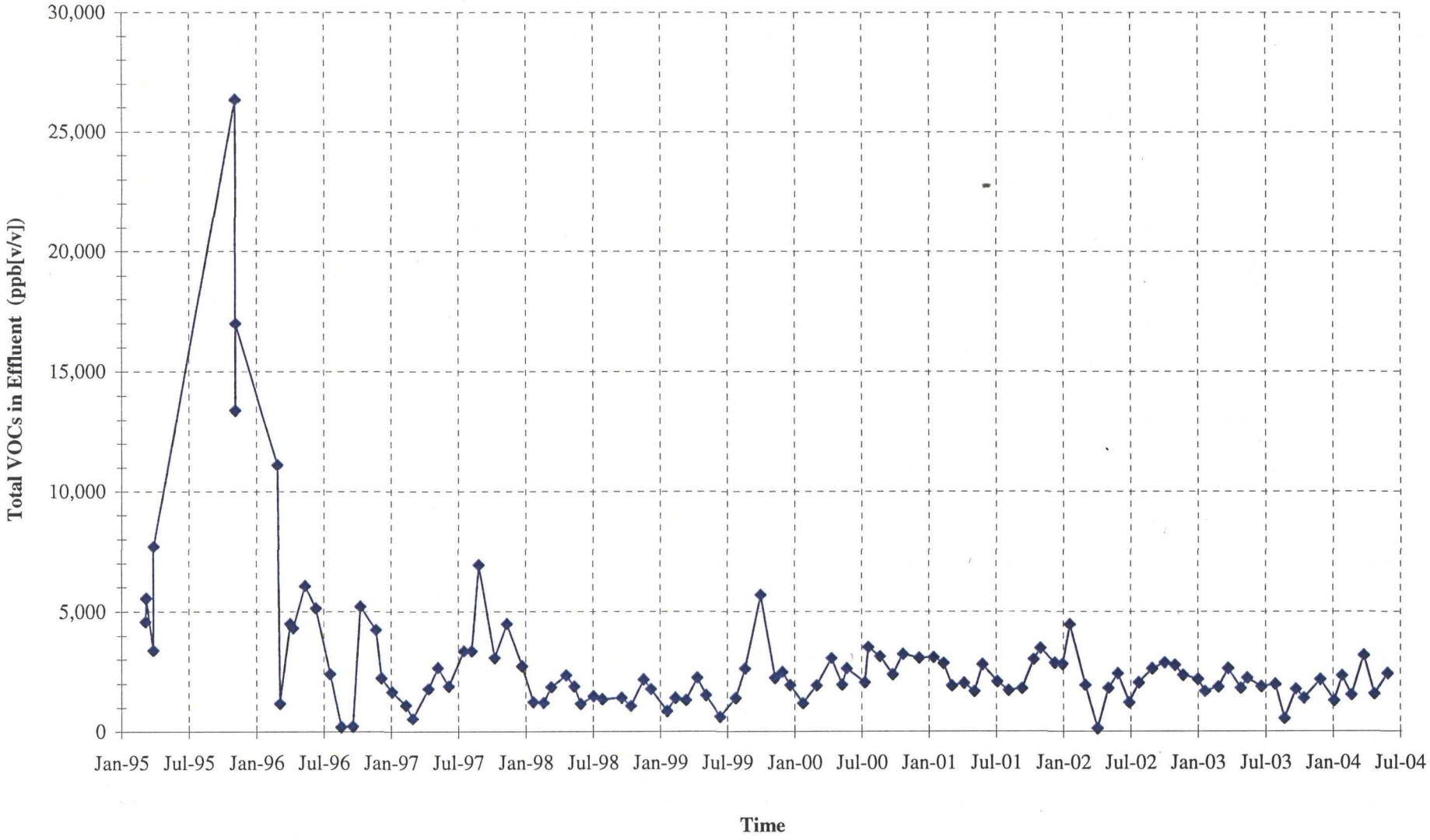


Figure 5
Effect of Air Sparge on Soil Vapor Extraction Volatile Organic Compound Concentrations, Southeast Area
Wayne Reclamation & Recycling

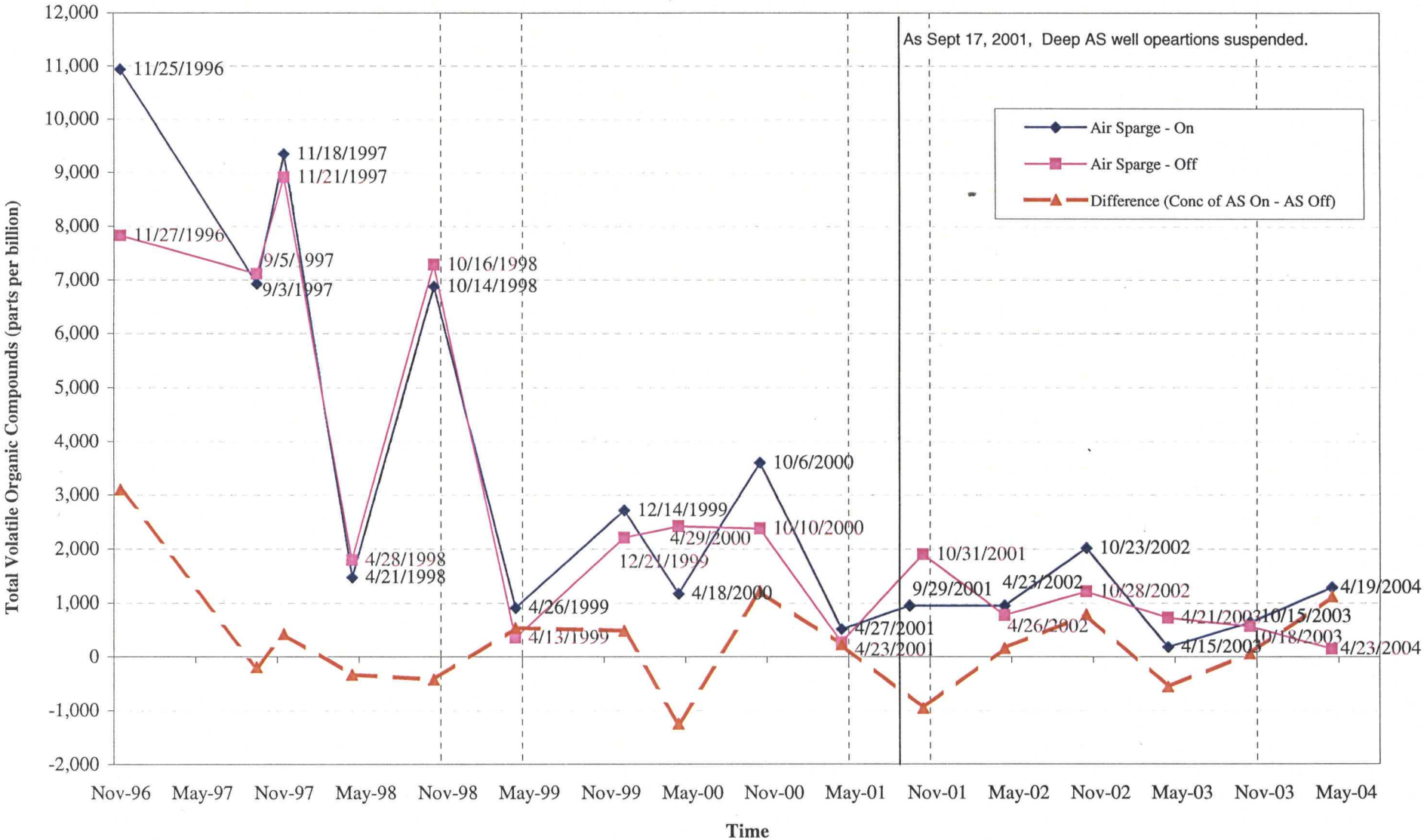


Figure 6
Cumulative and Sustained Groundwater Recovery
Wayne Reclamation & Recycling

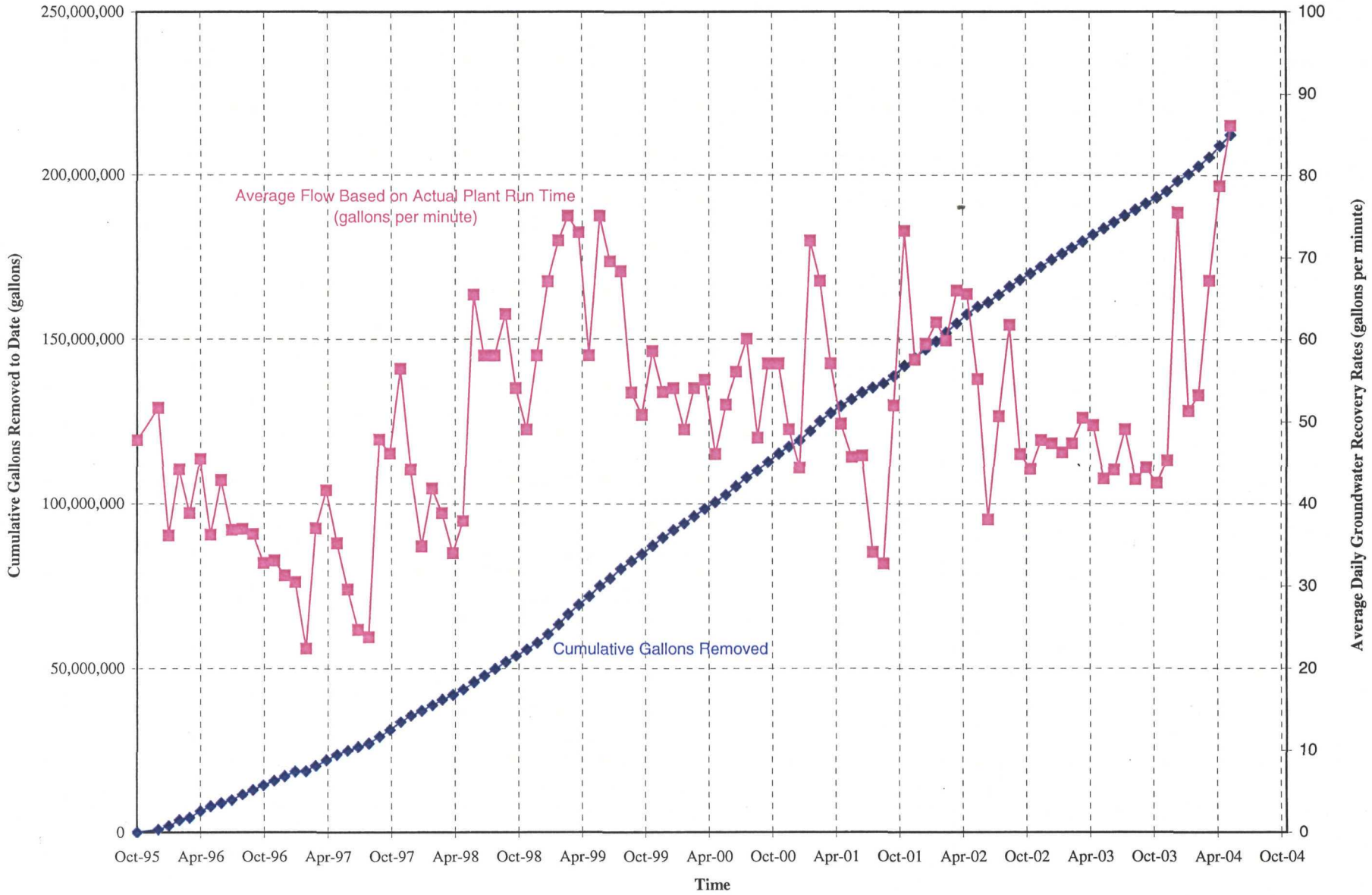
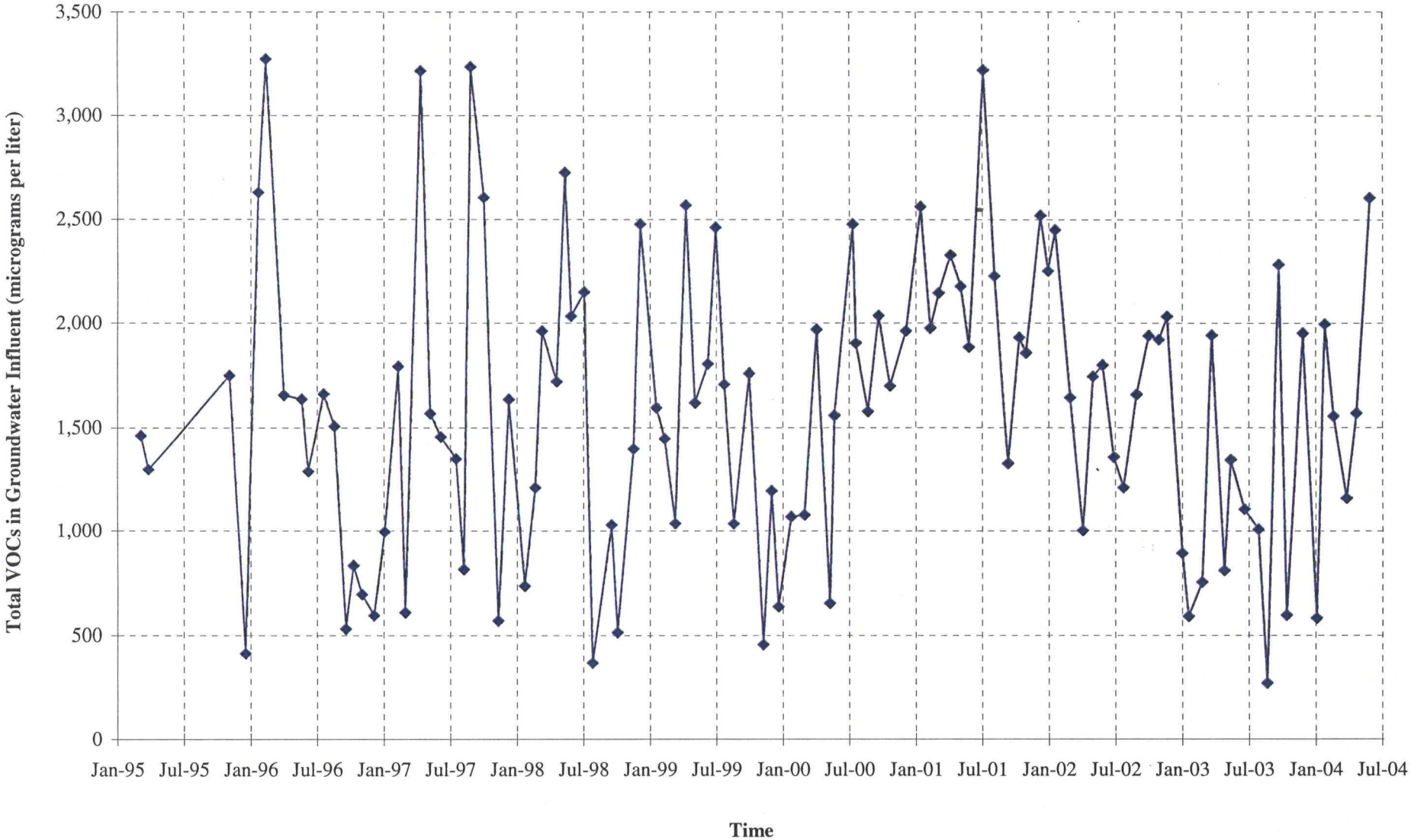


Figure 7
Summary of Groundwater Treatment System Influent Data
Wayne Reclamation & Recycling



NOTES

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2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION (DEC '02)
- GAUGE POINT LOCATION (DEC '02)
- NOT USED IN CONTOURING.
- 809.0 GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 0.5 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION

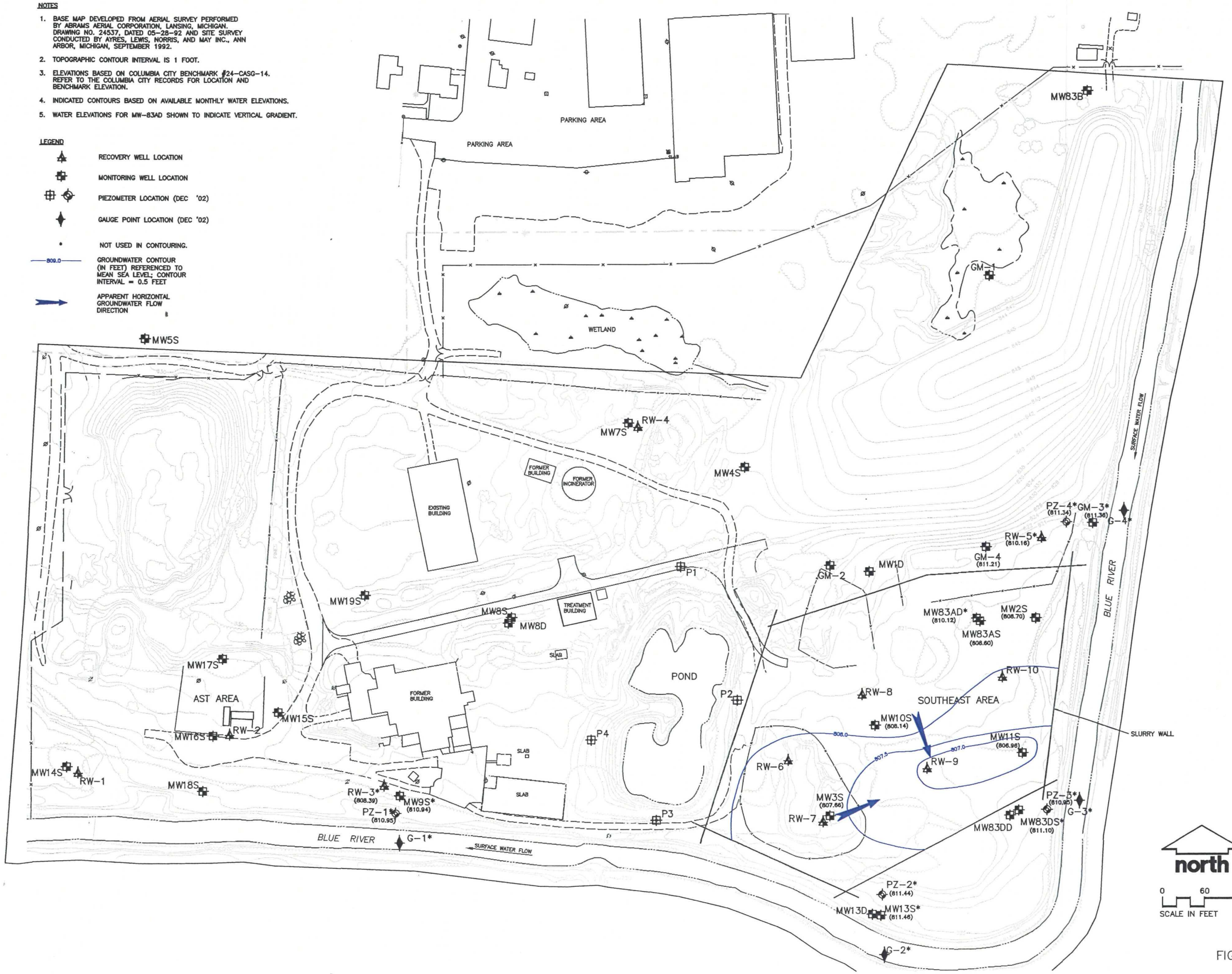

FIGURE 8-1

GROUNDWATER CONTOURS - JANUARY 2004

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4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION (DEC '02)
- GAUGE POINT LOCATION (DEC '02)
- NOT USED IN CONTOURING.
- 809.0 — GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 0.5 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION

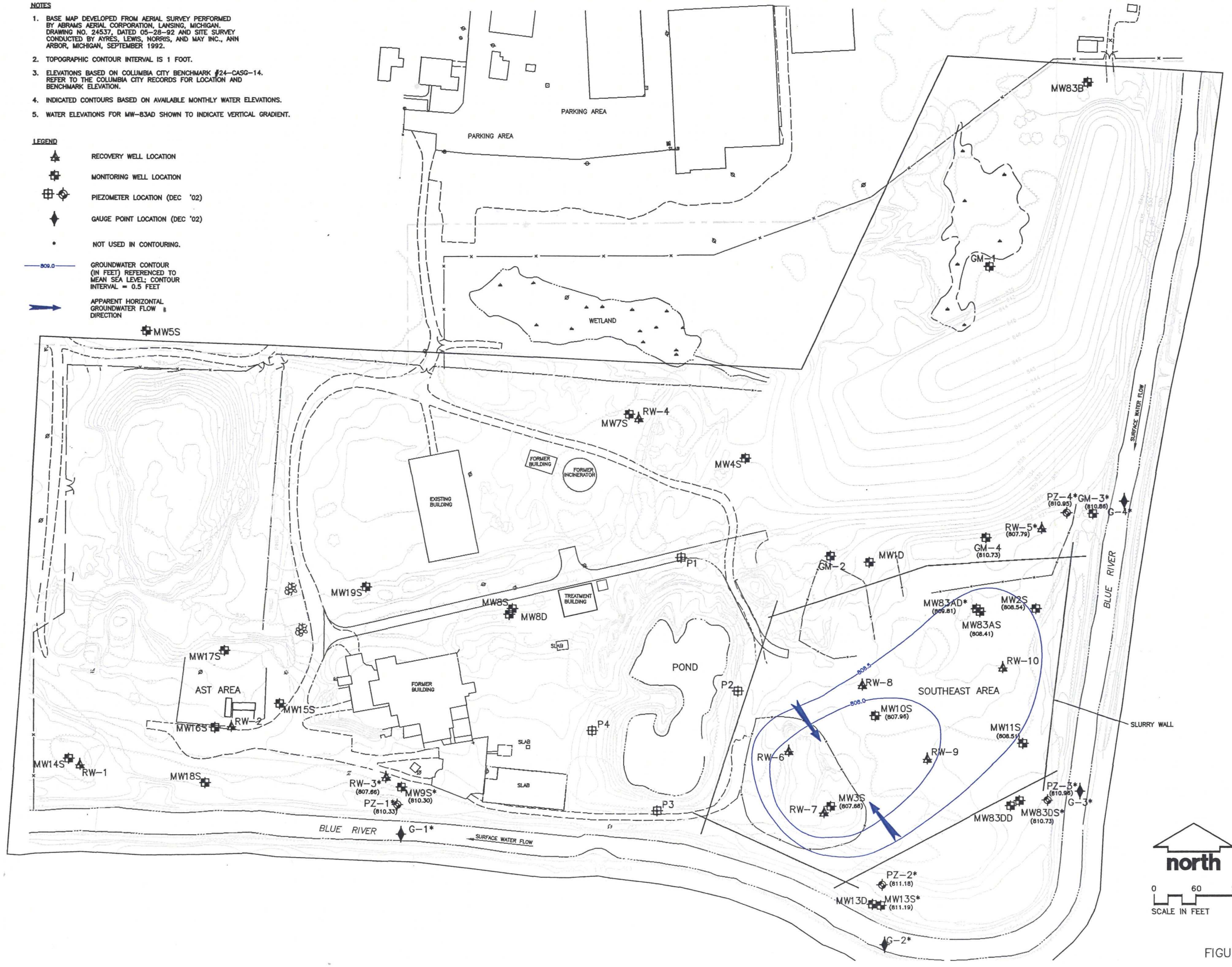

FIGURE 8-2

GROUNDWATER CONTOURS - FEBRUARY 2004

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Date
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Consultants

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3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION (DEC '02)
- GAUGE POINT LOCATION (DEC '02)
- NOT USED IN CONTOURING.
- 809.0 — GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 0.5 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW & DIRECTION

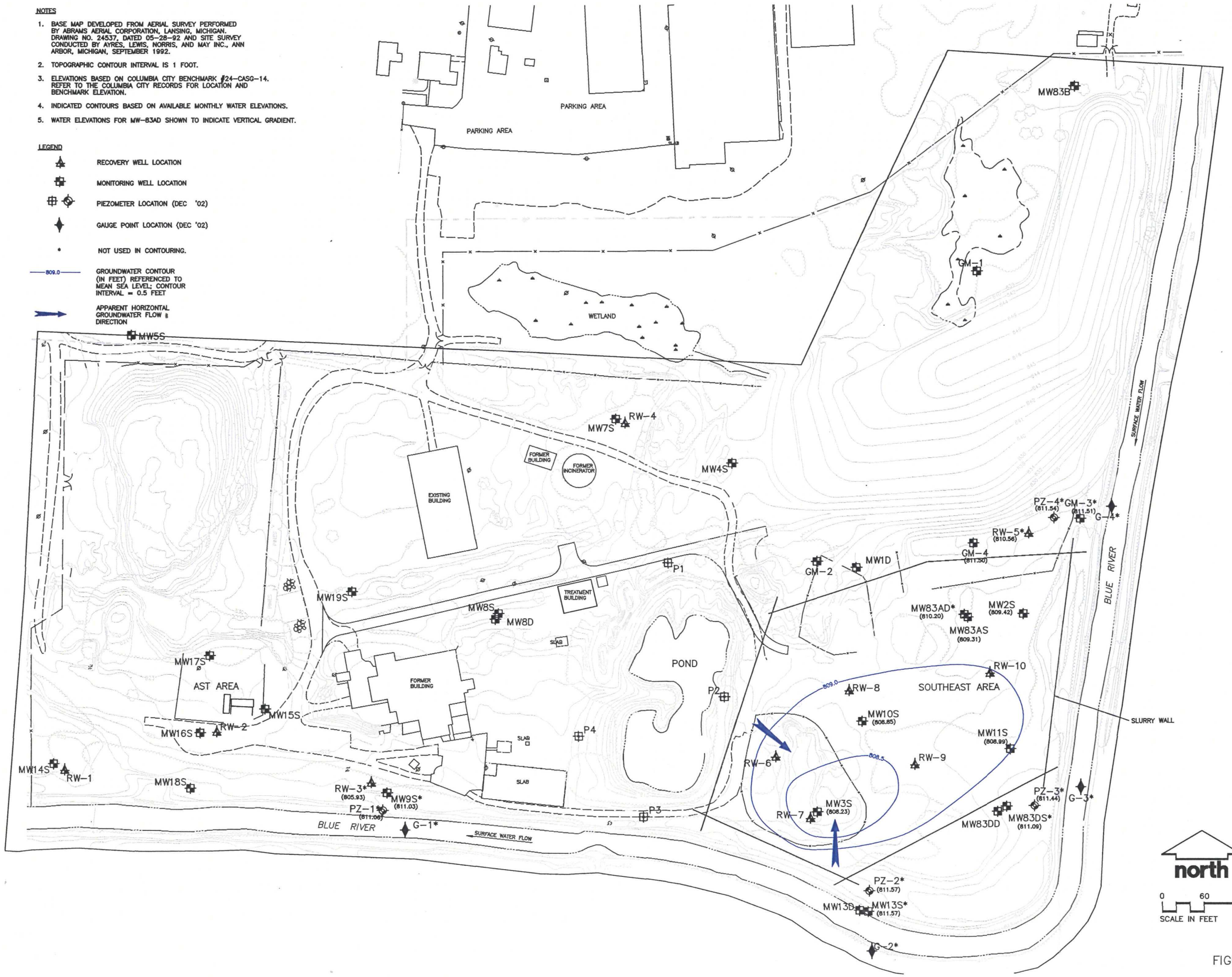

FIGURE 8-3

Revision	Issuance/Revisions	Date	By	Approvd.

Developed By
Approved By
Reference
Consultants
Drawn By
Date

GROUNDWATER CONTOURS - MARCH 2004

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NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN. DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, MORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION (DEC '02)
- GAUGE POINT LOCATION (DEC '02)
- NOT USED IN CONTOURING.
- 809.0 — GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 0.5 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION

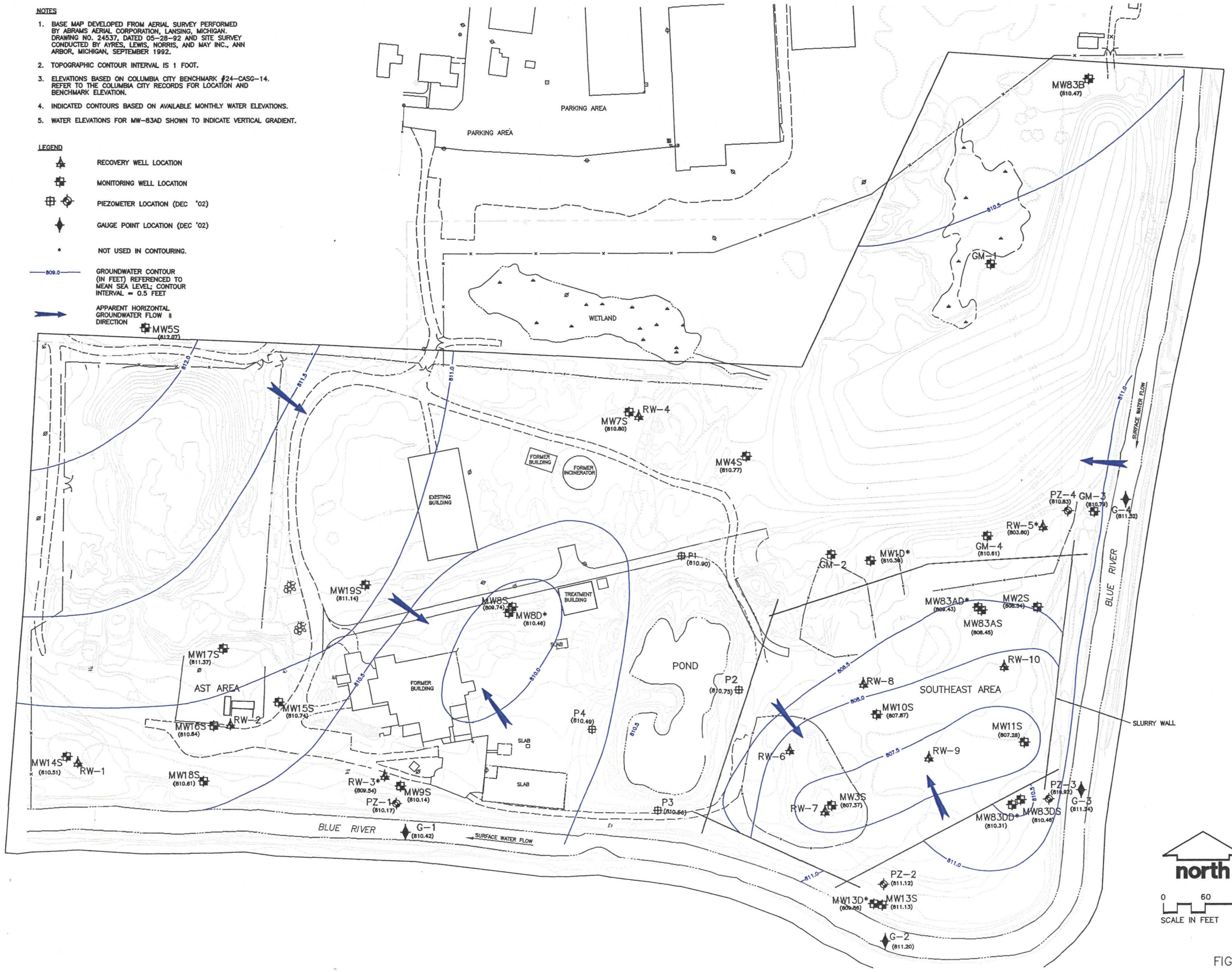

FIGURE 8-4

Issuance/Revisions	Date	By	Approvd.

Releases

Drawn By
Developed By
Approved By
Reference
Consultants
Date

GROUNDWATER CONTOURS – APRIL 2004

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

Printed
Sheet Number
Drawing Number

MWH

Technical Review
Project Manager
Management Review
Other

COUNTY COUNSEL
Inquire Standards
Lead Professional

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J:\Jobs\3868-Wayne RR\06-2004-07 GMBM\5 - CADD\progrpt18\Fig 08_4.dwg Aug/25/04

NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN, DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, MORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR DEEP WELLS SHOWN TO INDICATE VERTICAL GRADIENT.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION (DEC '02)
- GAUGE POINT LOCATION (DEC '02)
- NOT USED IN CONTOURING
- 809.0 — APRIL 2004 GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 0.5 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION

VOLATILE ORGANIC COMPOUND (VOC) ABBREVIATIONS

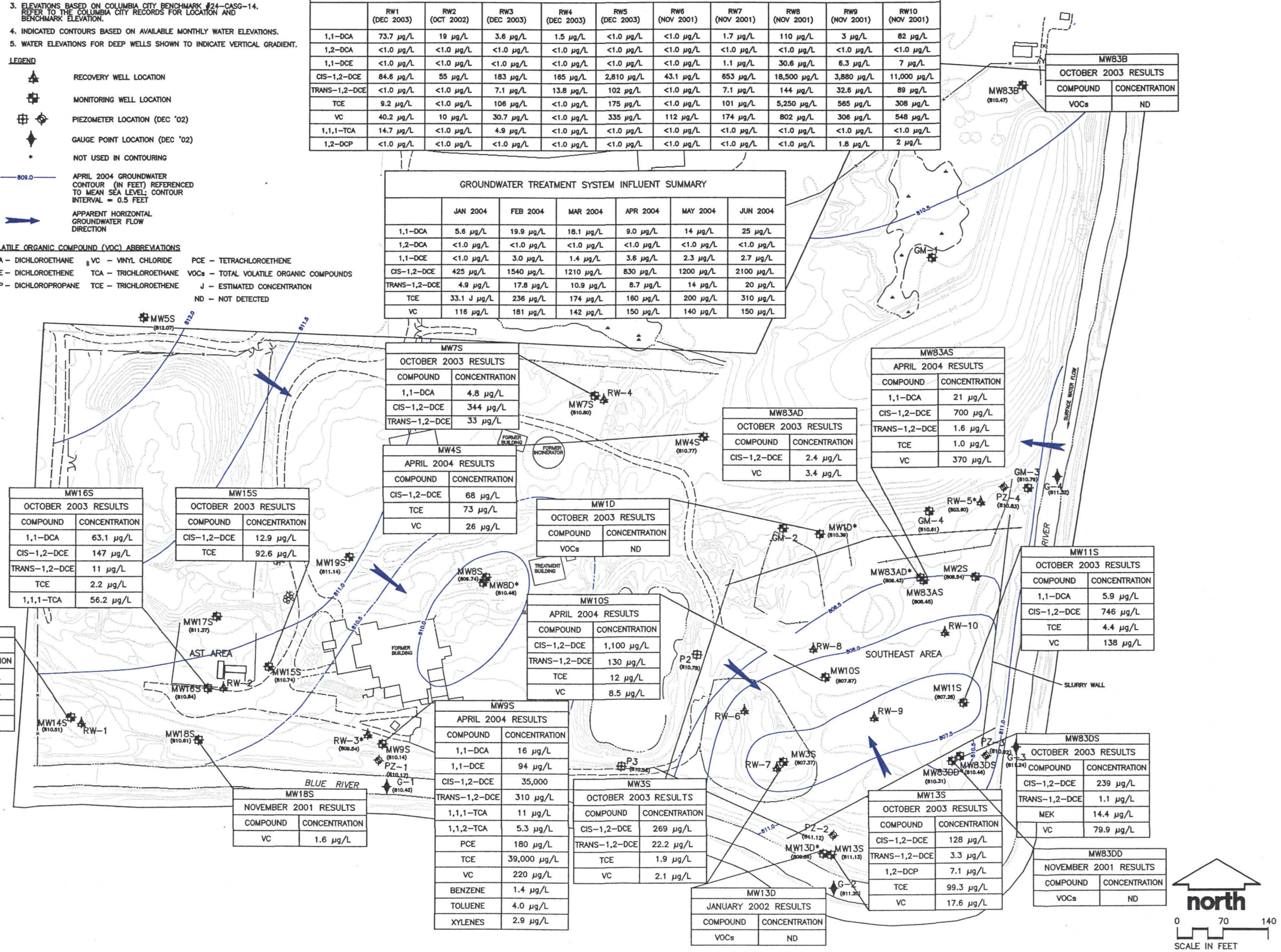
DCA – DICHLOROETHANE
DCE – DICHLOROETHENE
DCP – DICHLOROPROPANE
VC – VINYL CHLORIDE
TCA – TRICHLOROETHANE
TCE – TRICHLOROETHENE
PCE – TETRACHLOROETHENE
VOCs – TOTAL VOLATILE ORGANIC COMPOUNDS
J – ESTIMATED CONCENTRATION
ND – NOT DETECTED

NOVEMBER 2001, OCTOBER 2002, AND DECEMBER 2003 RECOVERY WELL DATA

	RW1 (DEC 2003)	RW2 (OCT 2002)	RW3 (DEC 2003)	RW4 (DEC 2003)	RW5 (DEC 2003)	RW6 (NOV 2001)	RW7 (NOV 2001)	RW8 (NOV 2001)	RW9 (NOV 2001)	RW10 (NOV 2001)
1,1-DCA	73.7 µg/L	19 µg/L	3.6 µg/L	1.5 µg/L	<1.0 µg/L	<1.0 µg/L	1.7 µg/L	110 µg/L	3 µg/L	82 µg/L
1,2-DCA	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L
1,1-DCE	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	1.1 µg/L	30.6 µg/L	6.3 µg/L	7 µg/L
CIS-1,2-DCE	84.6 µg/L	55 µg/L	183 µg/L	165 µg/L	2,810 µg/L	43.1 µg/L	653 µg/L	18,500 µg/L	3,880 µg/L	11,000 µg/L
TRANS-1,2-DCE	<1.0 µg/L	<1.0 µg/L	7.1 µg/L	13.8 µg/L	102 µg/L	<1.0 µg/L	7.1 µg/L	144 µg/L	32.6 µg/L	89 µg/L
TCE	9.2 µg/L	<1.0 µg/L	106 µg/L	<1.0 µg/L	175 µg/L	<1.0 µg/L	101 µg/L	5,250 µg/L	565 µg/L	308 µg/L
VC	40.2 µg/L	10 µg/L	30.7 µg/L	<1.0 µg/L	335 µg/L	112 µg/L	174 µg/L	802 µg/L	306 µg/L	548 µg/L
1,1,1-TCA	14.7 µg/L	<1.0 µg/L	4.9 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L
1,2-DCP	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	1.8 µg/L	2 µg/L

GROUNDWATER TREATMENT SYSTEM INFLUENT SUMMARY

	JAN 2004	FEB 2004	MAR 2004	APR 2004	MAY 2004	JUN 2004
1,1-DCA	5.6 µg/L	19.9 µg/L	18.1 µg/L	9.0 µg/L	14 µg/L	25 µg/L
1,2-DCA	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L
1,1-DCE	<1.0 µg/L	3.0 µg/L	1.4 µg/L	3.6 µg/L	2.3 µg/L	2.7 µg/L
CIS-1,2-DCE	425 µg/L	1540 µg/L	1210 µg/L	830 µg/L	1200 µg/L	2100 µg/L
TRANS-1,2-DCE	4.9 µg/L	17.8 µg/L	10.9 µg/L	8.7 µg/L	14 µg/L	20 µg/L
TCE	33.1 J µg/L	236 µg/L	174 µg/L	160 µg/L	200 µg/L	310 µg/L
VC	116 µg/L	181 µg/L	142 µg/L	150 µg/L	140 µg/L	150 µg/L



MW83B

OCTOBER 2003 RESULTS	
COMPOUND	CONCENTRATION
VOCs	ND

MW83AS

APRIL 2004 RESULTS	
COMPOUND	CONCENTRATION
1,1-DCA	21 µg/L
CIS-1,2-DCE	700 µg/L
TRANS-1,2-DCE	1.6 µg/L
TCE	1.0 µg/L
VC	370 µg/L

MW83AD

OCTOBER 2003 RESULTS	
COMPOUND	CONCENTRATION
CIS-1,2-DCE	2.4 µg/L
VC	3.4 µg/L

MW7S

OCTOBER 2003 RESULTS	
COMPOUND	CONCENTRATION
1,1-DCA	4.8 µg/L
CIS-1,2-DCE	344 µg/L
TRANS-1,2-DCE	33 µg/L

MW4S

APRIL 2004 RESULTS	
COMPOUND	CONCENTRATION
CIS-1,2-DCE	68 µg/L
TCE	73 µg/L
VC	26 µg/L

MW16S

OCTOBER 2003 RESULTS	
COMPOUND	CONCENTRATION
1,1-DCA	63.1 µg/L
CIS-1,2-DCE	147 µg/L
TRANS-1,2-DCE	11 µg/L
TCE	2.2 µg/L
1,1,1-TCA	56.2 µg/L

MW15S

OCTOBER 2003 RESULTS	
COMPOUND	CONCENTRATION
CIS-1,2-DCE	12.9 µg/L
TCE	92.6 µg/L

MW1D

OCTOBER 2003 RESULTS	
COMPOUND	CONCENTRATION
VOCs	ND

MW10S

APRIL 2004 RESULTS	
COMPOUND	CONCENTRATION
CIS-1,2-DCE	1,100 µg/L
TRANS-1,2-DCE	130 µg/L
TCE	12 µg/L
VC	8.5 µg/L

MW11S

OCTOBER 2003 RESULTS	
COMPOUND	CONCENTRATION
1,1-DCA	5.9 µg/L
CIS-1,2-DCE	746 µg/L
TCE	4.4 µg/L
VC	138 µg/L

MW14S

APRIL 2004 RESULTS	
COMPOUND	CONCENTRATION
1,1-DCA	4.9 µg/L
1,1,1-TCA	4.3 µg/L
TCE	3.0 µg/L
XYLENES	1.3 µg/L

MW9S

APRIL 2004 RESULTS	
COMPOUND	CONCENTRATION
1,1-DCA	16 µg/L
1,1-DCE	94 µg/L
CIS-1,2-DCE	35,000
TRANS-1,2-DCE	310 µg/L
1,1,1-TCA	11 µg/L
1,1,2-TCA	5.3 µg/L
PCE	180 µg/L
TCE	39,000 µg/L
VC	220 µg/L
BENZENE	1.4 µg/L
TOLUENE	4.0 µg/L
XYLENES	2.9 µg/L

MW18S

NOVEMBER 2001 RESULTS	
COMPOUND	CONCENTRATION
VC	1.6 µg/L

MW3S

OCTOBER 2003 RESULTS	
COMPOUND	CONCENTRATION
CIS-1,2-DCE	269 µg/L
TRANS-1,2-DCE	22.2 µg/L
TCE	1.9 µg/L
VC	2.1 µg/L

MW13D

JANUARY 2002 RESULTS	
COMPOUND	CONCENTRATION
VOCs	ND

MW13S

OCTOBER 2003 RESULTS	
COMPOUND	CONCENTRATION
CIS-1,2-DCE	128 µg/L
TRANS-1,2-DCE	3.3 µg/L
1,2-DCP	7.1 µg/L
TCE	99.3 µg/L
VC	17.6 µg/L

MW83DS

OCTOBER 2003 RESULTS	
COMPOUND	CONCENTRATION
CIS-1,2-DCE	239 µg/L
TRANS-1,2-DCE	1.1 µg/L
MEK	14.4 µg/L
VC	79.9 µg/L

MW83DD

NOVEMBER 2001 RESULTS	
COMPOUND	CONCENTRATION
VOCs	ND

FIGURE 8-5

VOC ANALYTICAL RESULTS SUMMARY
SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

MWH

Drawn By
Date
Developed By
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Consultants
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By
Date
Issuance/Revisions
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Printed
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Drawing Number

Management Review
Director
Technical Review
Project Manager
Drawn, Reviewed
Lead Preparer
DRAFT/ SEAL

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NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN. DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, NORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
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4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION (DEC '02)
- GAUGE POINT LOCATION (DEC '02)
- NOT USED IN CONTOURING.
- 809.0 GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 0.5 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION

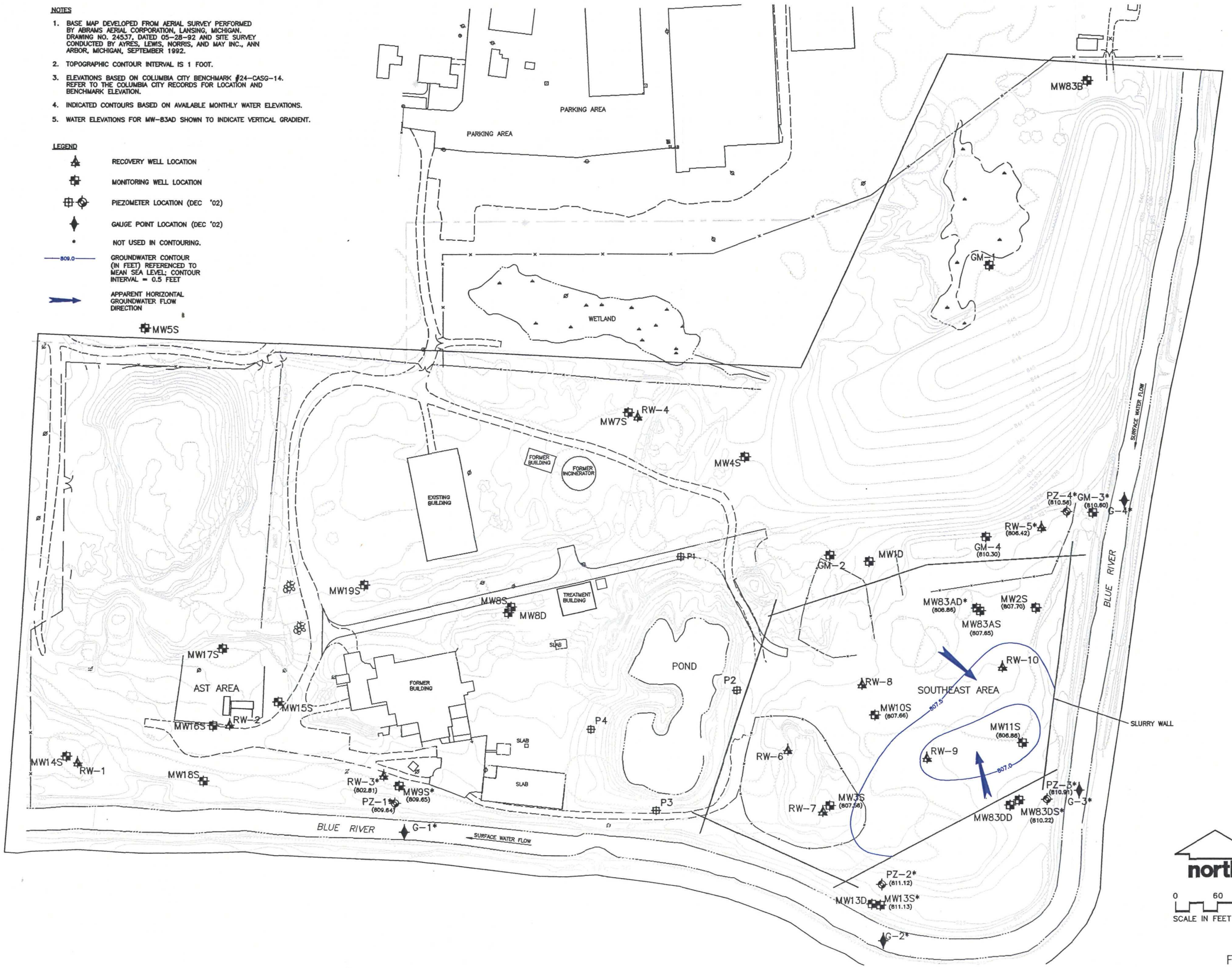

FIGURE 8-6

GROUNDWATER CONTOURS – MAY 2004

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WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

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NOTES

1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN. DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, NORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.

LEGEND

- RECOVERY WELL LOCATION
- MONITORING WELL LOCATION
- PIEZOMETER LOCATION (DEC '02)
- GAUGE POINT LOCATION (DEC '02)
- RIVER WATER SAMPLING LOCATION
- A—A' CROSS-SECTION

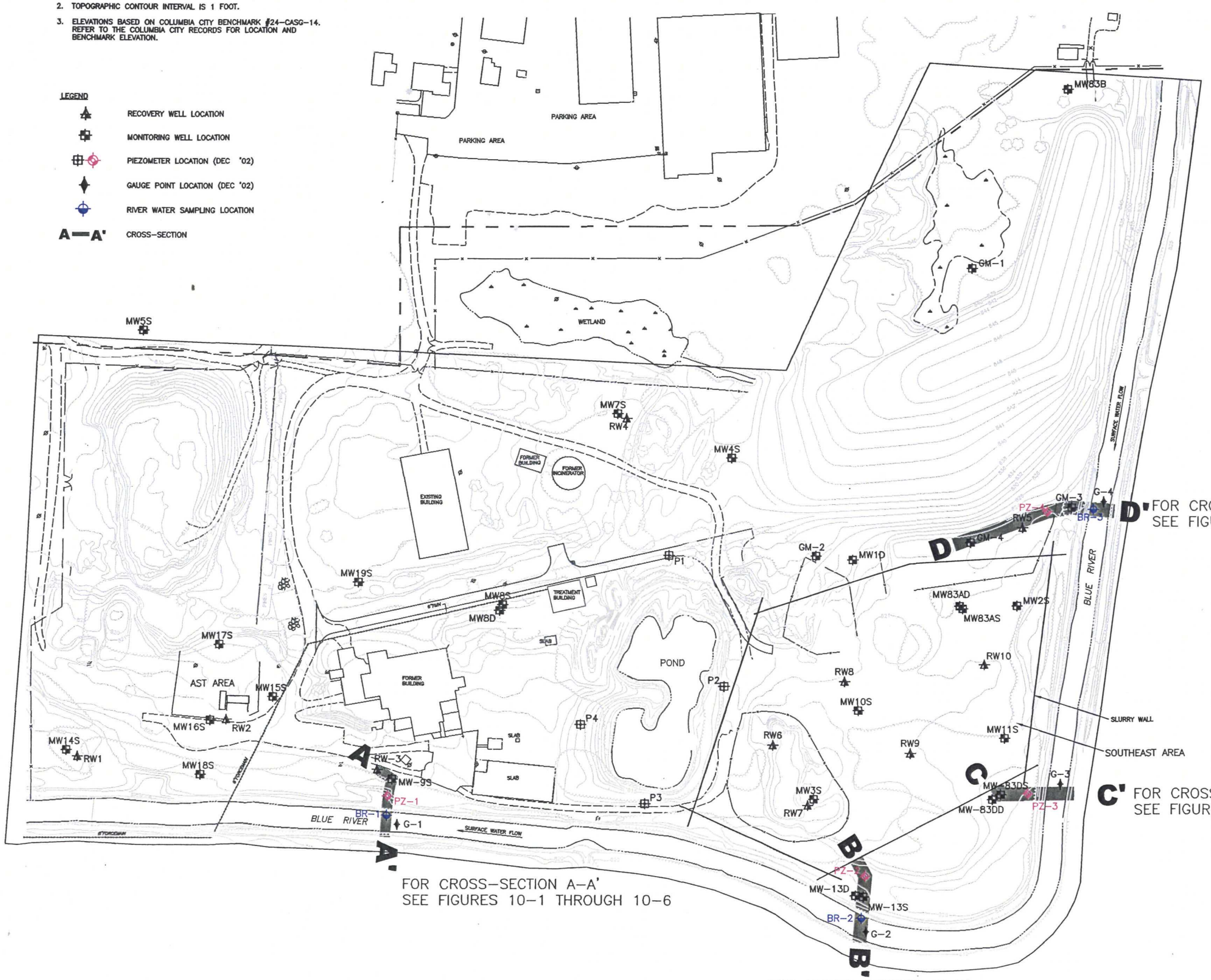

FIGURE 9

Release	Issuance/Revisions	Date	By	Appvd.

Developed By
Approved By
Reference
Consultants
Drawn By
Date

HYDRAULIC ASSESSMENT
CROSS-SECTION LOCATIONS
SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

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Technical Review
Project Manager
Management Review
Director

QUALITY CONTROL
Review Standards
Level Performed

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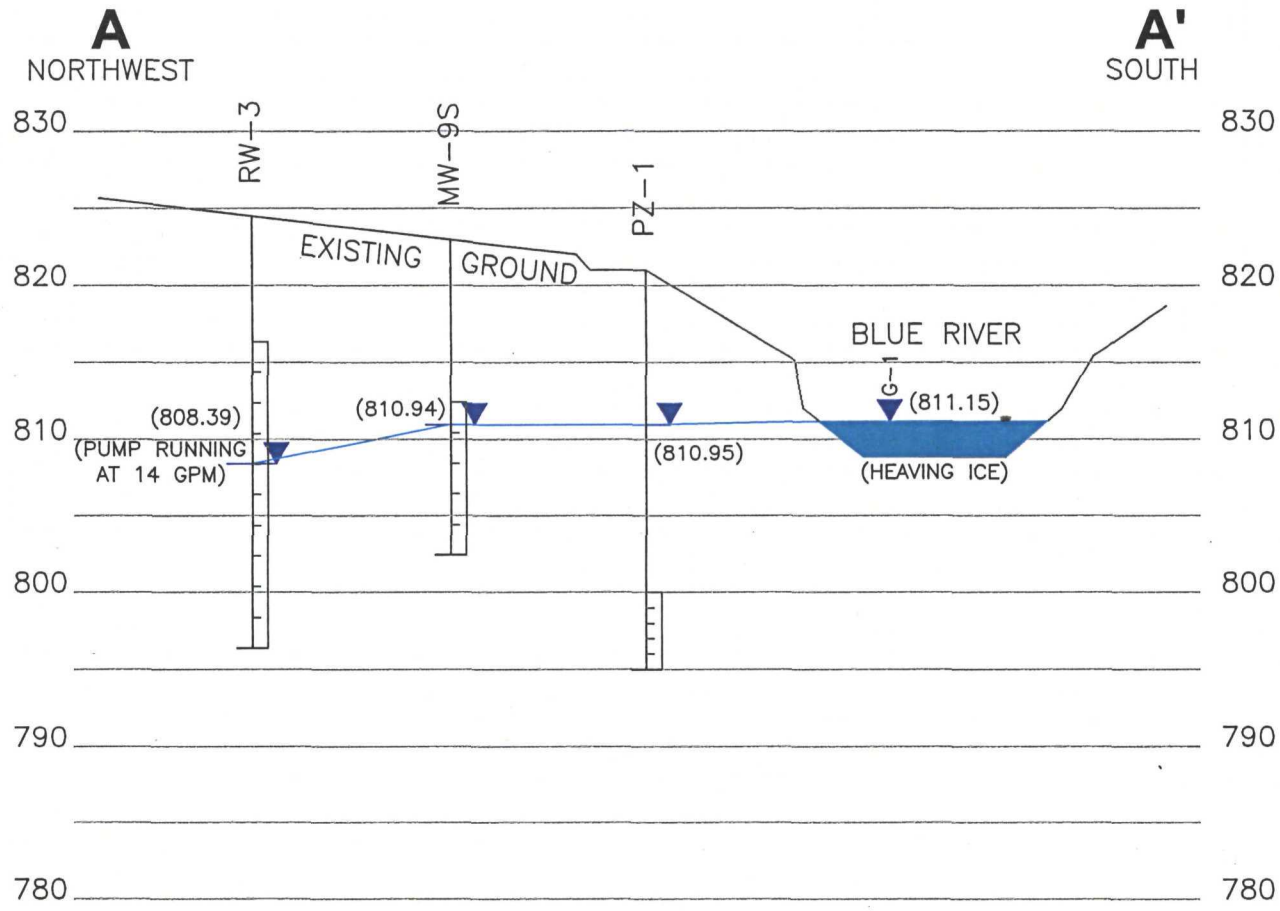

LEGEND:

MW-9S	MONITORING WELL
PZ-1	PIEZOMETER
RW-3	RECOVERY WELL
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
⊟	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

CROSS-SECTION A-A'
JANUARY 2004

FIGURE 10-1

MWH

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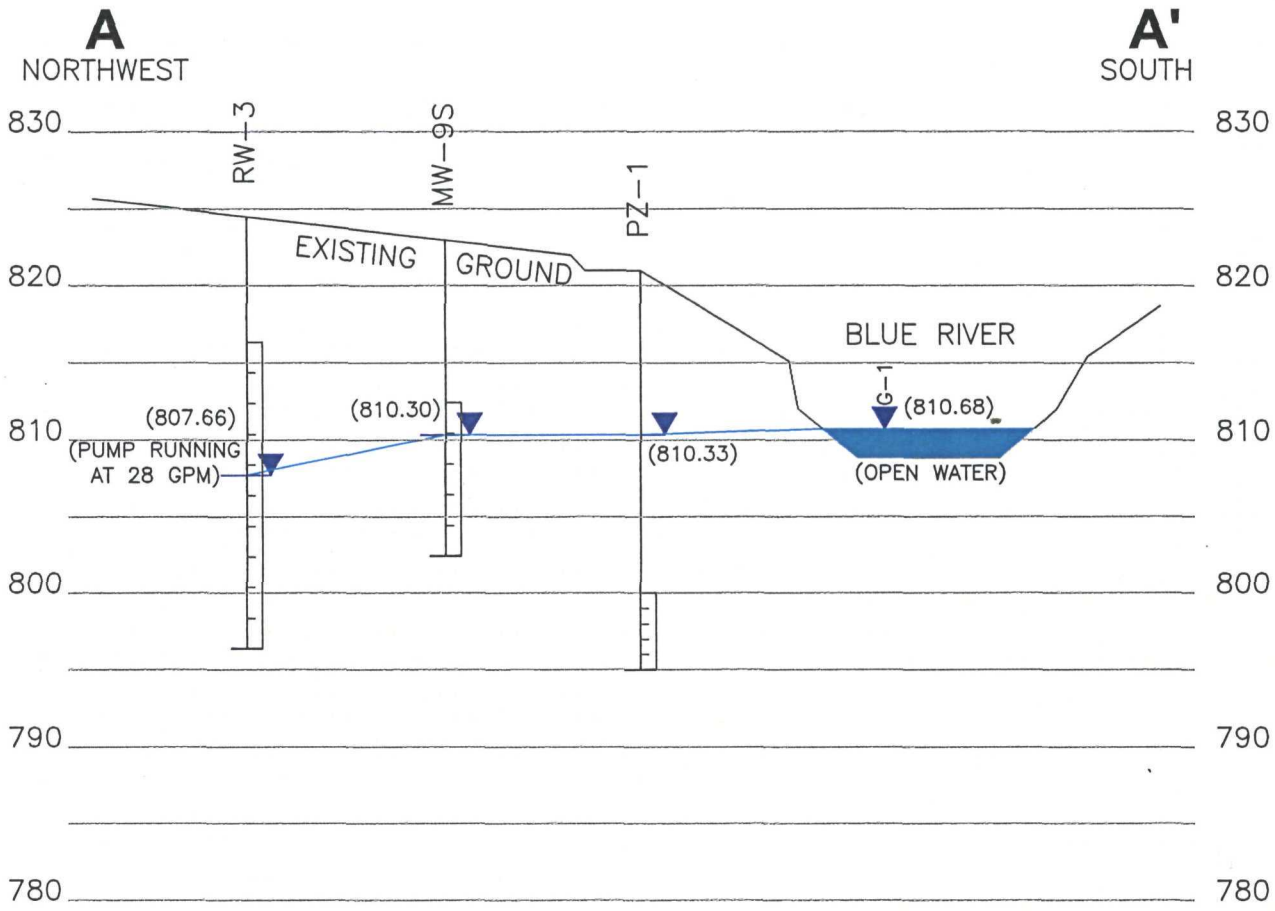
Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

MW-9S	MONITORING WELL
PZ-1	PIEZOMETER
RW-3	RECOVERY WELL
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
⊟	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

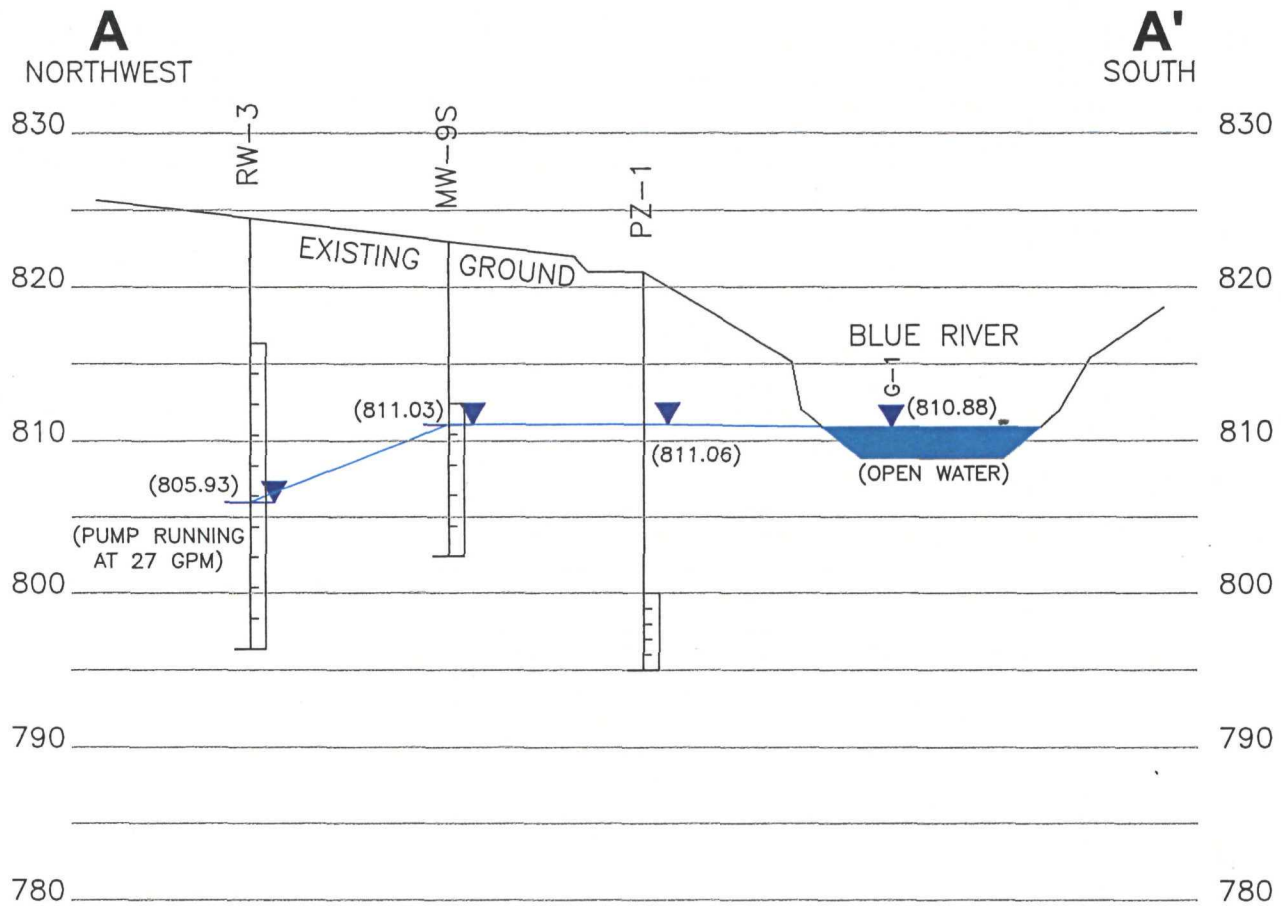
CROSS-SECTION A-A'
FEBRUARY 2004

FIGURE 10-2

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Feb04AA.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

MW-9S	MONITORING WELL
PZ-1	PIEZOMETER
RW-3	RECOVERY WELL
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
▯	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

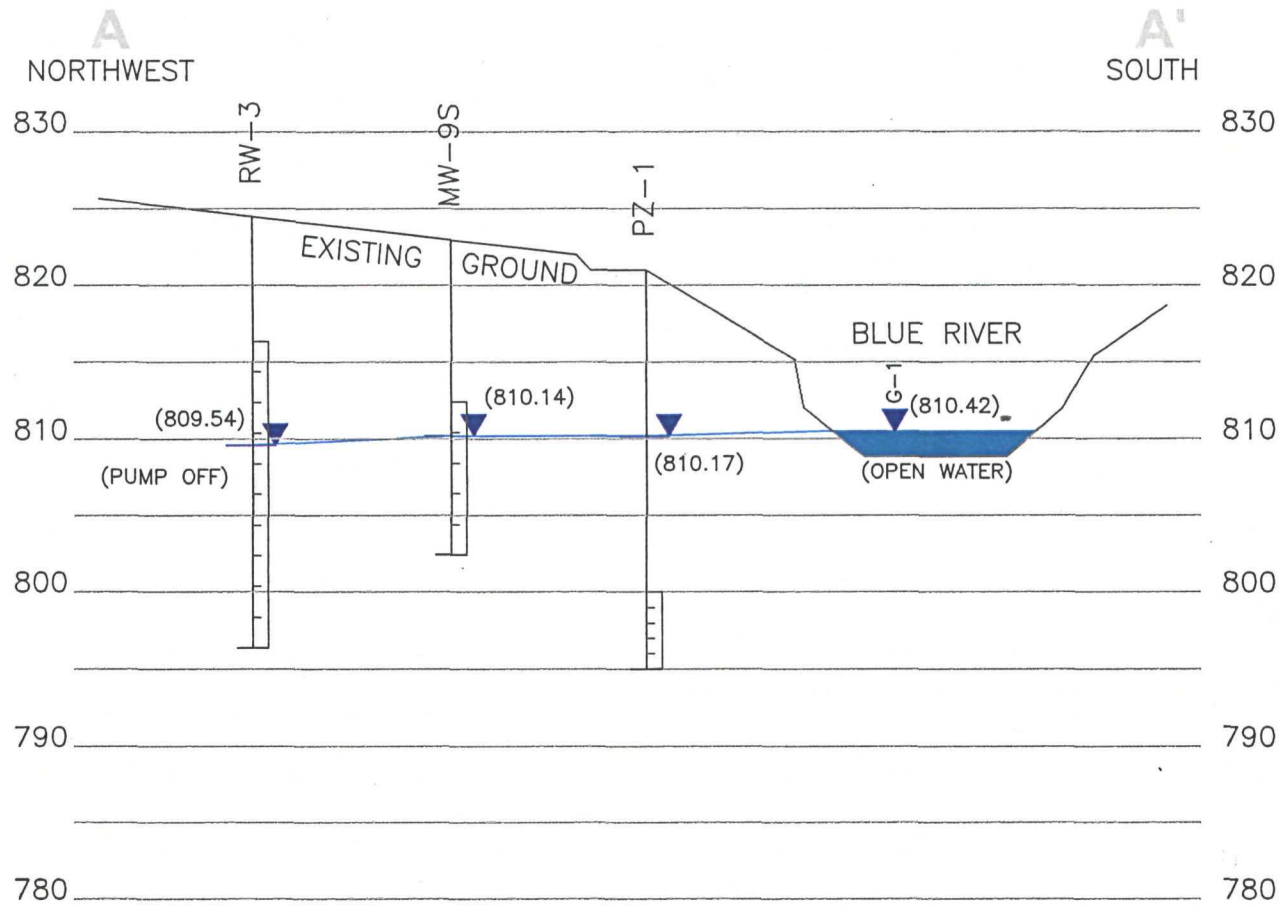
CROSS-SECTION A-A'
MARCH 2004

FIGURE 10-3

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Mar04AA.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

MW-9S	MONITORING WELL
PZ-1	PIEZOMETER
RW-3	RECOVERY WELL
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
⊟	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

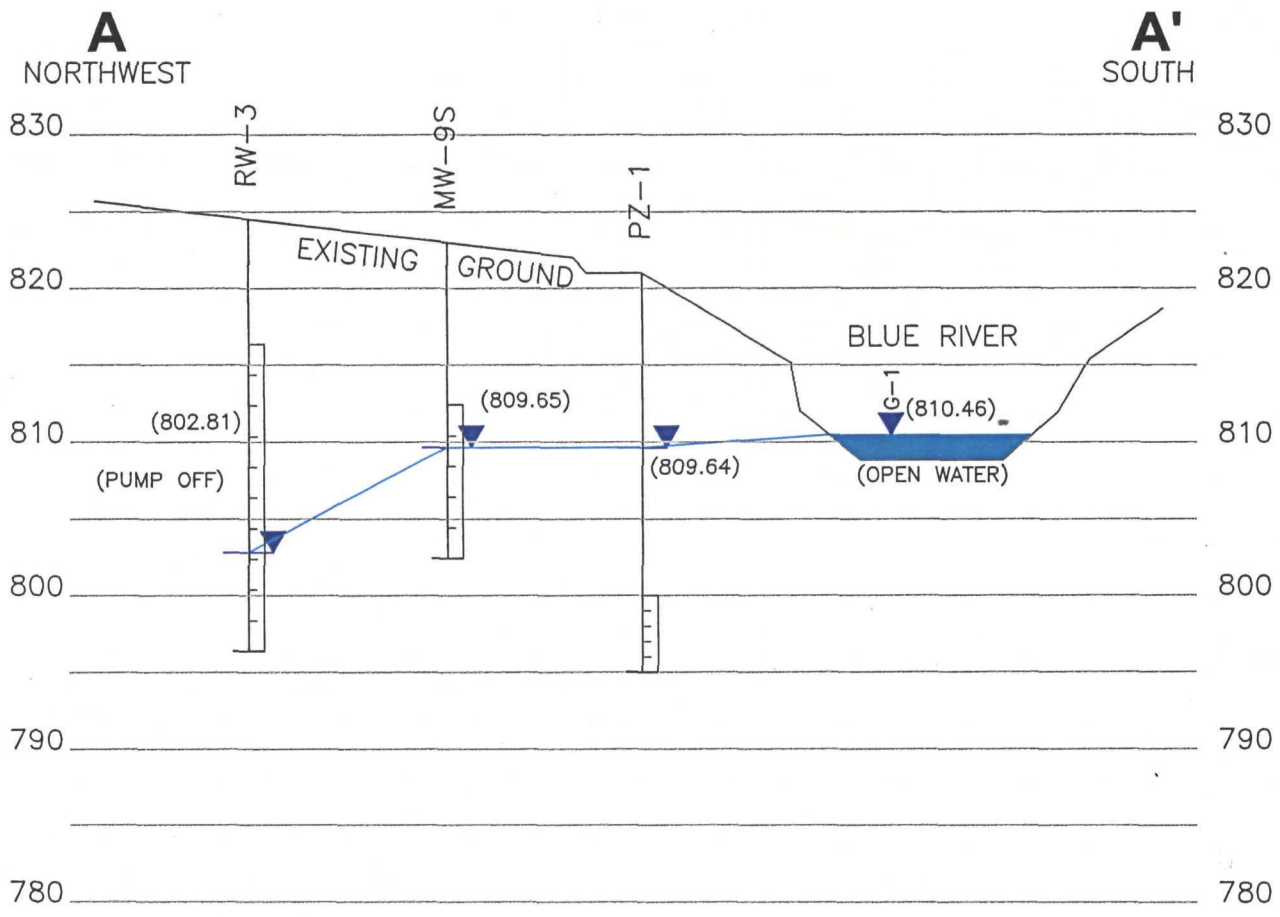
CROSS-SECTION A-A'
APRIL 2004

FIGURE 10-4

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Apr04AA.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

MW-9S	MONITORING WELL
PZ-1	PIEZOMETER
RW-3	RECOVERY WELL
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
⊟	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

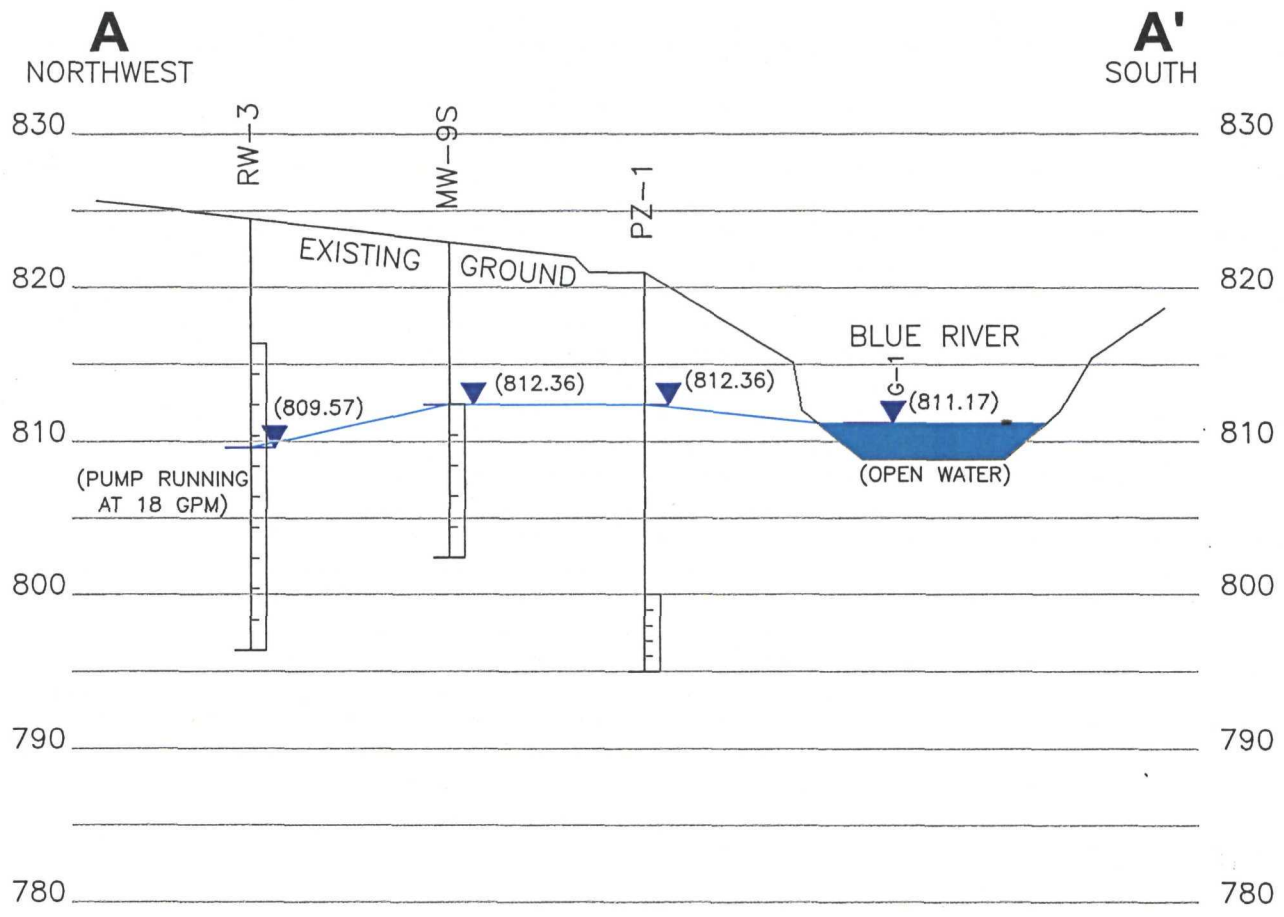
CROSS-SECTION A-A'
MAY 2004

FIGURE 10-5

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_May04AA.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

MW-9S	MONITORING WELL
PZ-1	PIEZOMETER
RW-3	RECOVERY WELL
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
⊟	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

CROSS-SECTION A-A'
JUNE 2004

FIGURE 10-6

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Jun04AA.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:

LEGEND:

MW-13	MONITORING WELL
PZ-2	PIEZOMETER
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
⊟	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

CROSS-SECTION B-B'
JANUARY 2004

FIGURE 11-1

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Jan04BB.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:

LEGEND:

MW-13	MONITORING WELL
PZ-2	PIEZOMETER
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
	SCREENED INTERVAL

SCALE:

HORIZONTAL: 1"=25'

VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

CROSS-SECTION B-B'
FEBRUARY 2004

FIGURE 11-2

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Feb04BB.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:

LEGEND:

MW-13	MONITORING WELL
PZ-2	PIEZOMETER
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
▭	SCREENED INTERVAL

SCALE:

HORIZONTAL: 1"=25'

VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

CROSS-SECTION B-B'
MARCH 2004

FIGURE 11-3

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Mar04BB.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:

LEGEND:

MW-13	MONITORING WELL
PZ-2	PIEZOMETER
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
⊟	SCREENED INTERVAL

SCALE:

HORIZONTAL: 1"=25'

VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

CROSS-SECTION B-B'
APRIL 2004

FIGURE 11-4

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Apr04BB.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:

LEGEND:

MW-13	MONITORING WELL
PZ-2	PIEZOMETER
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

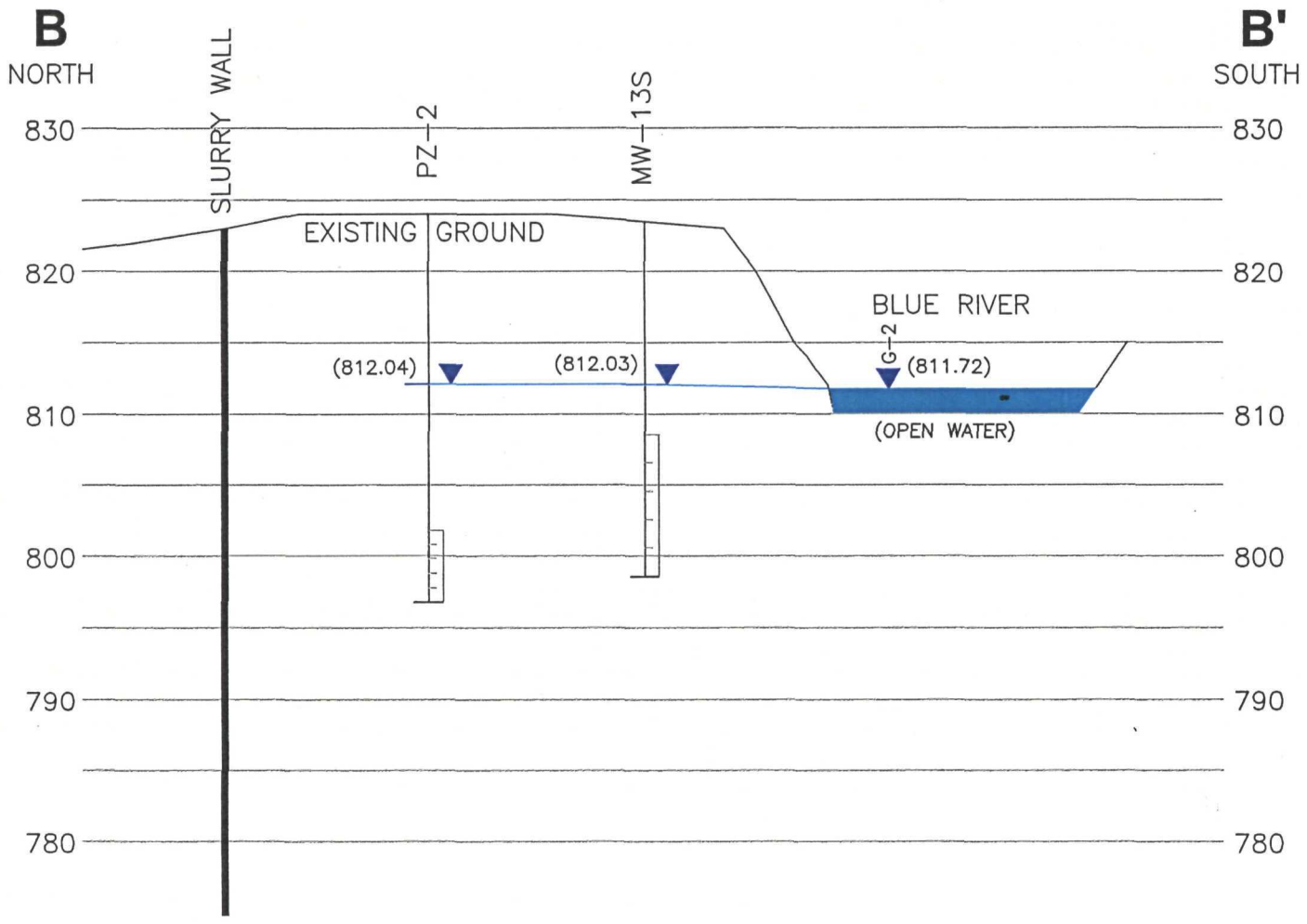
CROSS-SECTION B-B'
MAY 2004

FIGURE 11-5

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_May04BB.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

MW-13	MONITORING WELL
PZ-2	PIEZOMETER
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
▭	SCREENED INTERVAL

SCALE:

HORIZONTAL: 1"=25'

VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

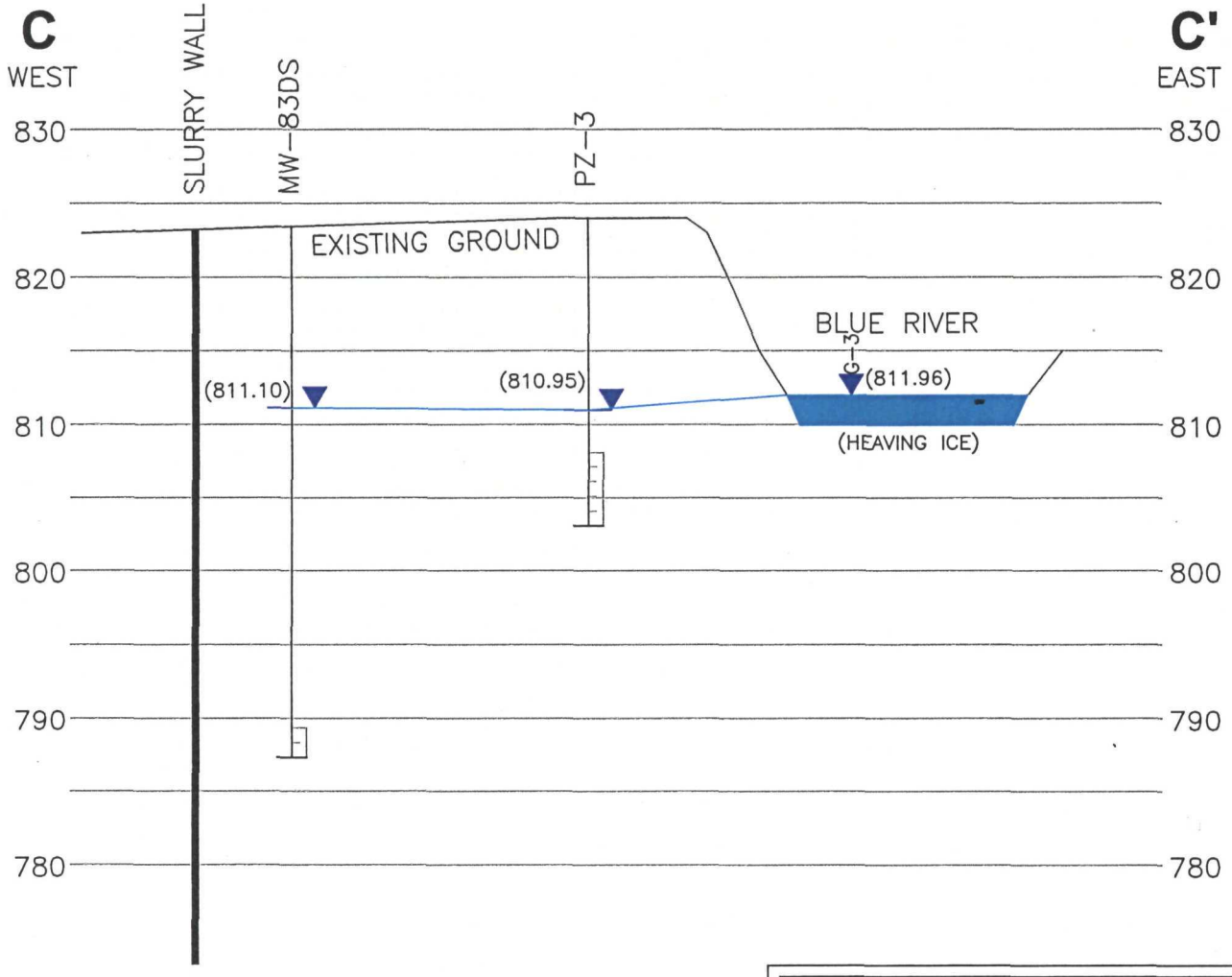
CROSS-SECTION B-B'
JUNE 2004

FIGURE 11-6

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Jun04BB.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

MW-83 MONITORING WELL
PZ-3 PIEZOMETER
800 ELEVATION (FEET)
GPM GALLONS PER MINUTE
WATER LEVEL
SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

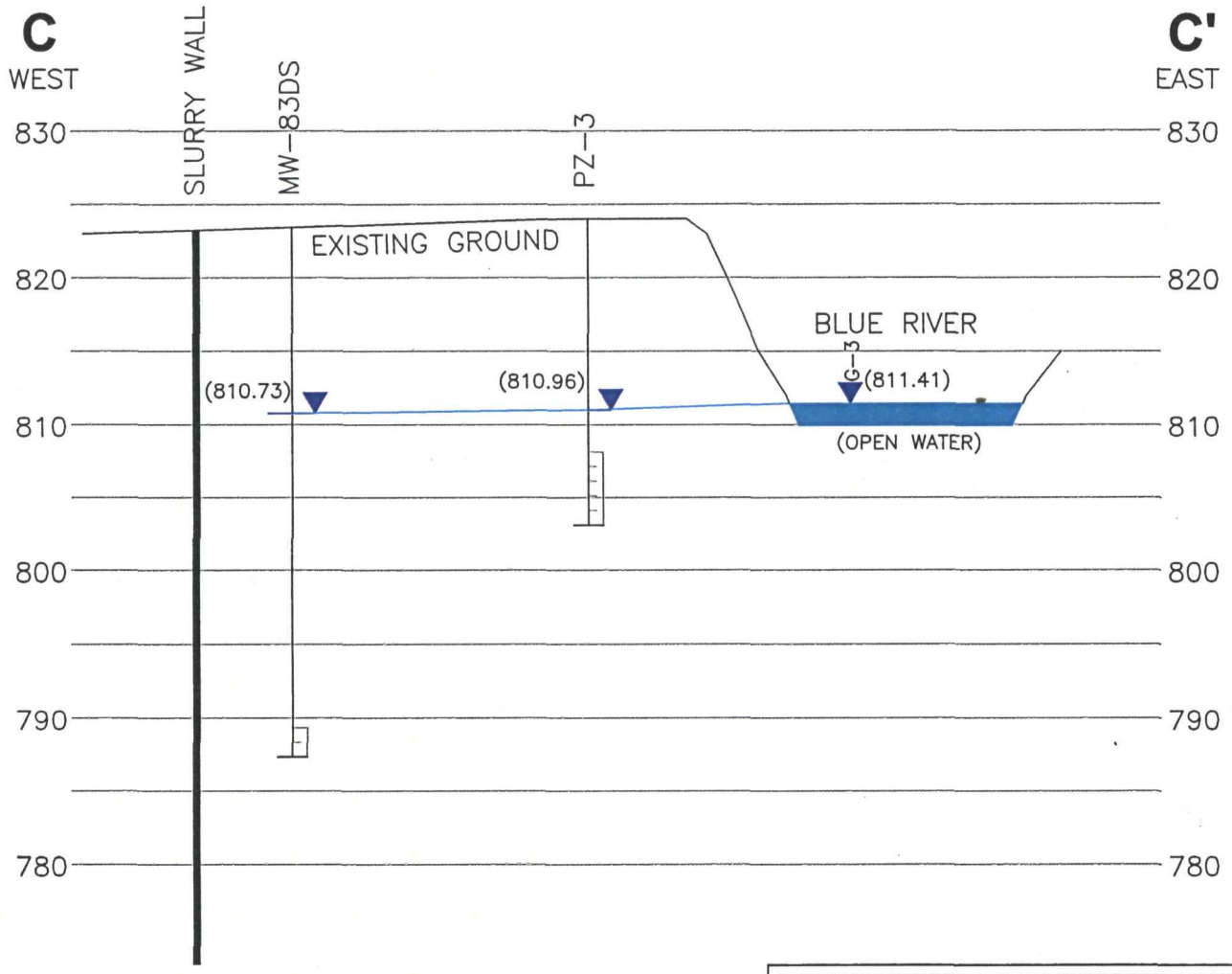
CROSS-SECTION C-C'
JANUARY 2004

FIGURE 12-1

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Jan04CC.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

MW-83 MONITORING WELL
PZ-3 PIEZOMETER
800 ELEVATION (FEET)
GPM GALLONS PER MINUTE
WATER LEVEL
SCREENED INTERVAL

SCALE:

HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

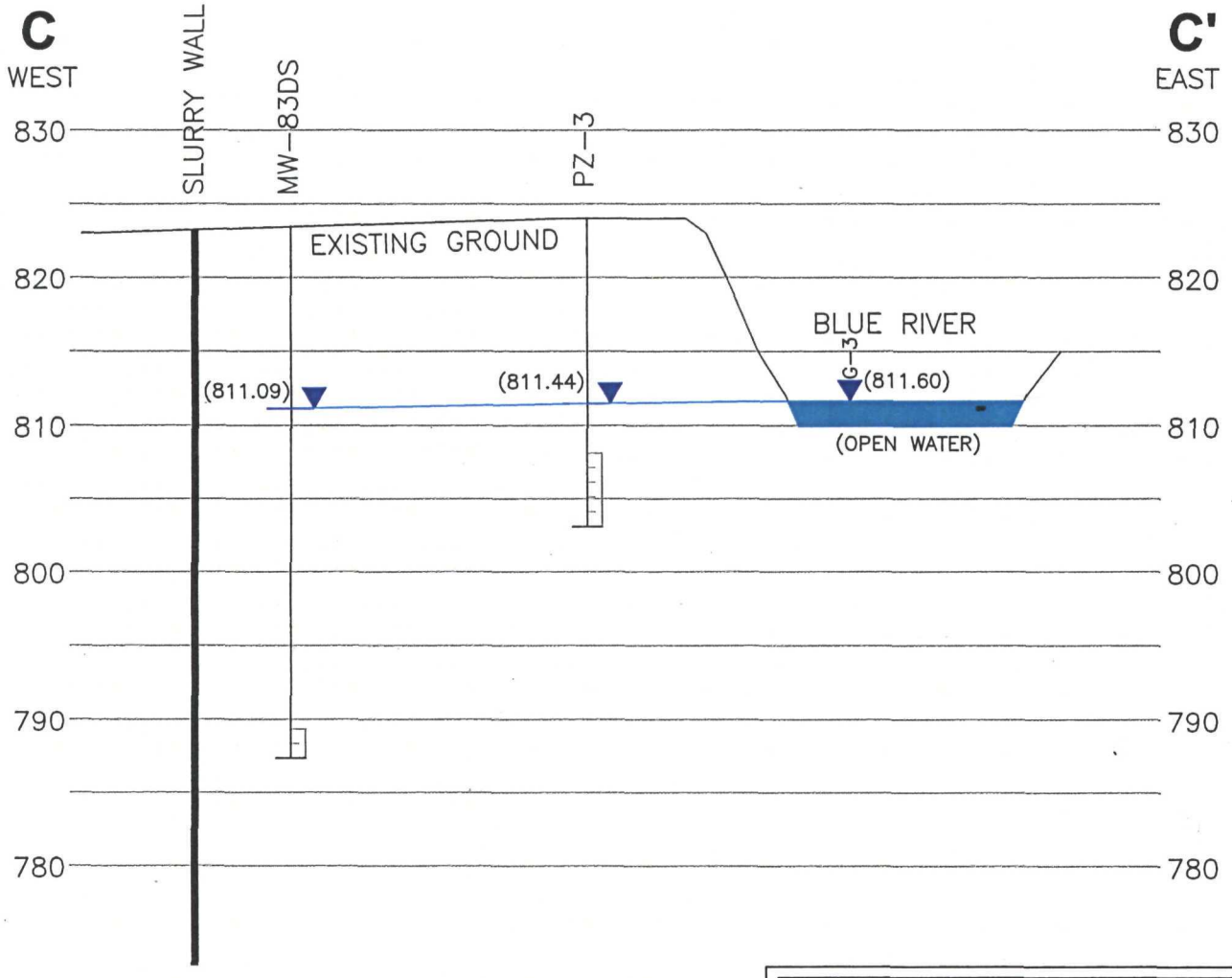
CROSS-SECTION C-C'
FEBRUARY 2004

FIGURE 12-2

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Feb04CC.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

MW-83 MONITORING WELL
PZ-3 PIEZOMETER
800 ELEVATION (FEET)
GPM GALLONS PER MINUTE
WATER LEVEL
SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

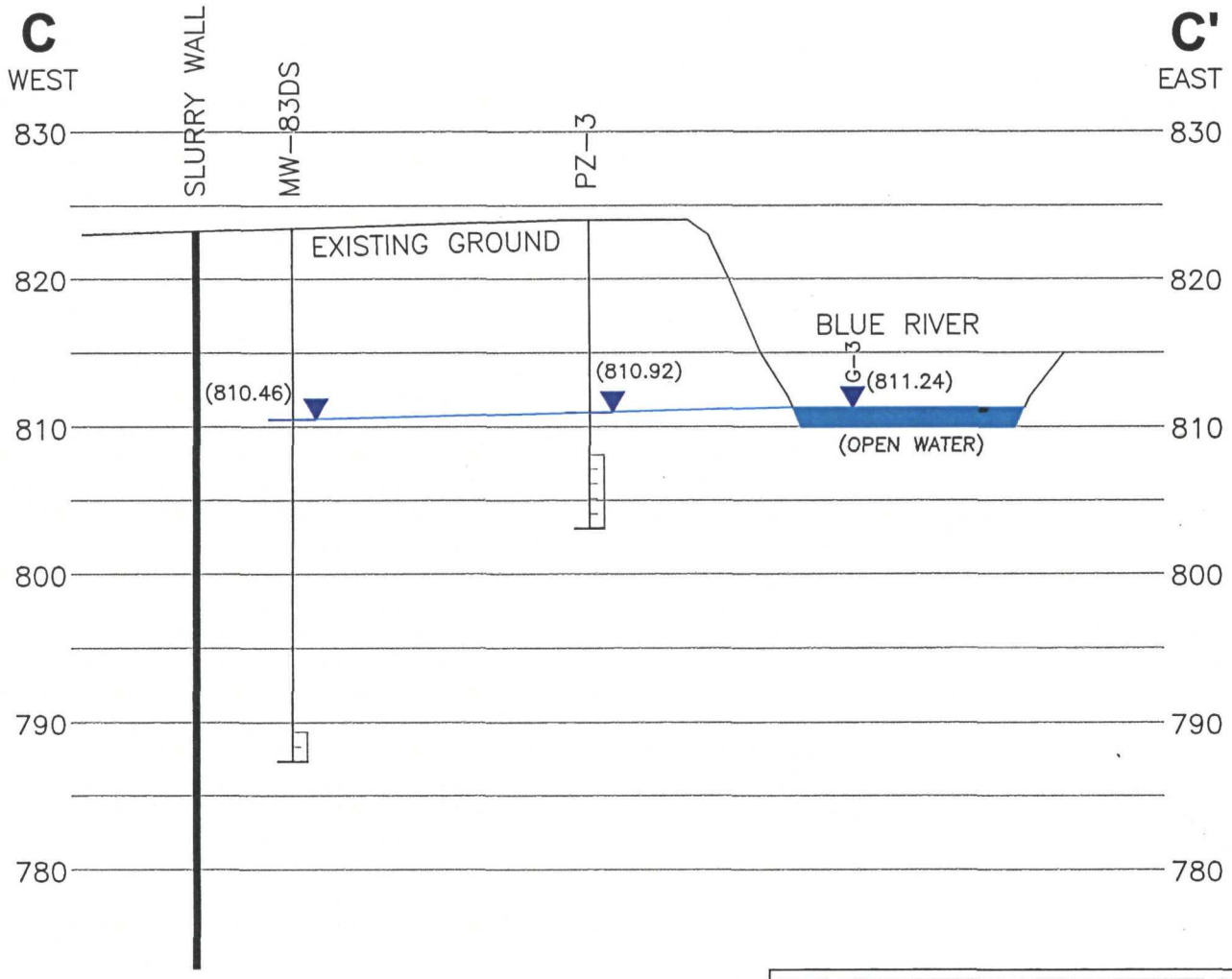
CROSS-SECTION C-C'
MARCH 2004

FIGURE 12-3

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Mar04CC.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

MW-83 MONITORING WELL
PZ-3 PIEZOMETER
800 ELEVATION (FEET)
GPM GALLONS PER MINUTE
WATER LEVEL
SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

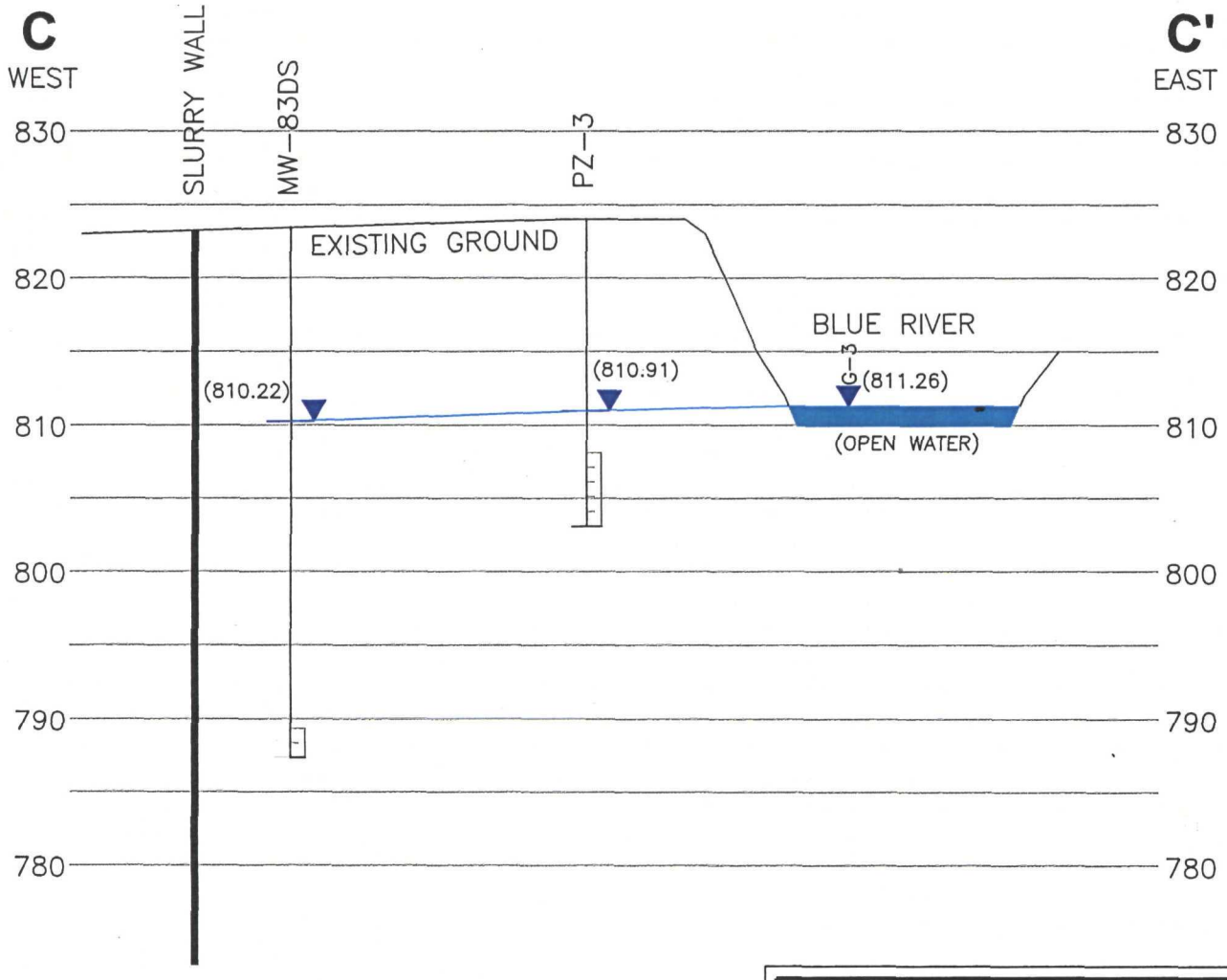
CROSS-SECTION C-C'
APRIL 2004

FIGURE 12-4

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Apr04CC.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

MW-83 MONITORING WELL
PZ-3 PIEZOMETER
800 ELEVATION (FEET)
GPM GALLONS PER MINUTE
WATER LEVEL
SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

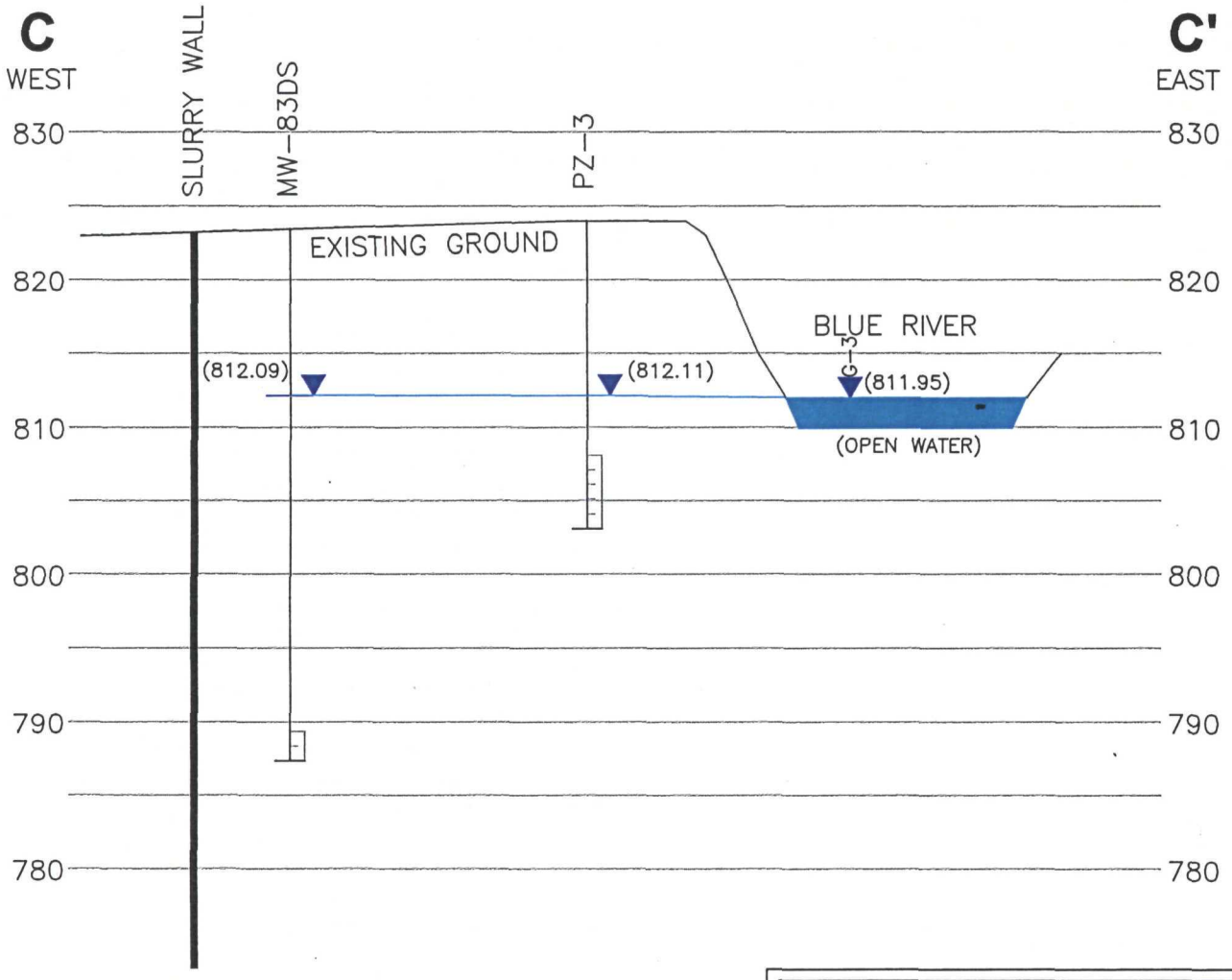
CROSS-SECTION C-C'
MAY 2004

FIGURE 12-5

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_May04CC.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

MW-83 MONITORING WELL
PZ-3 PIEZOMETER
800 ELEVATION (FEET)
GPM GALLONS PER MINUTE
WATER LEVEL
SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=25'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

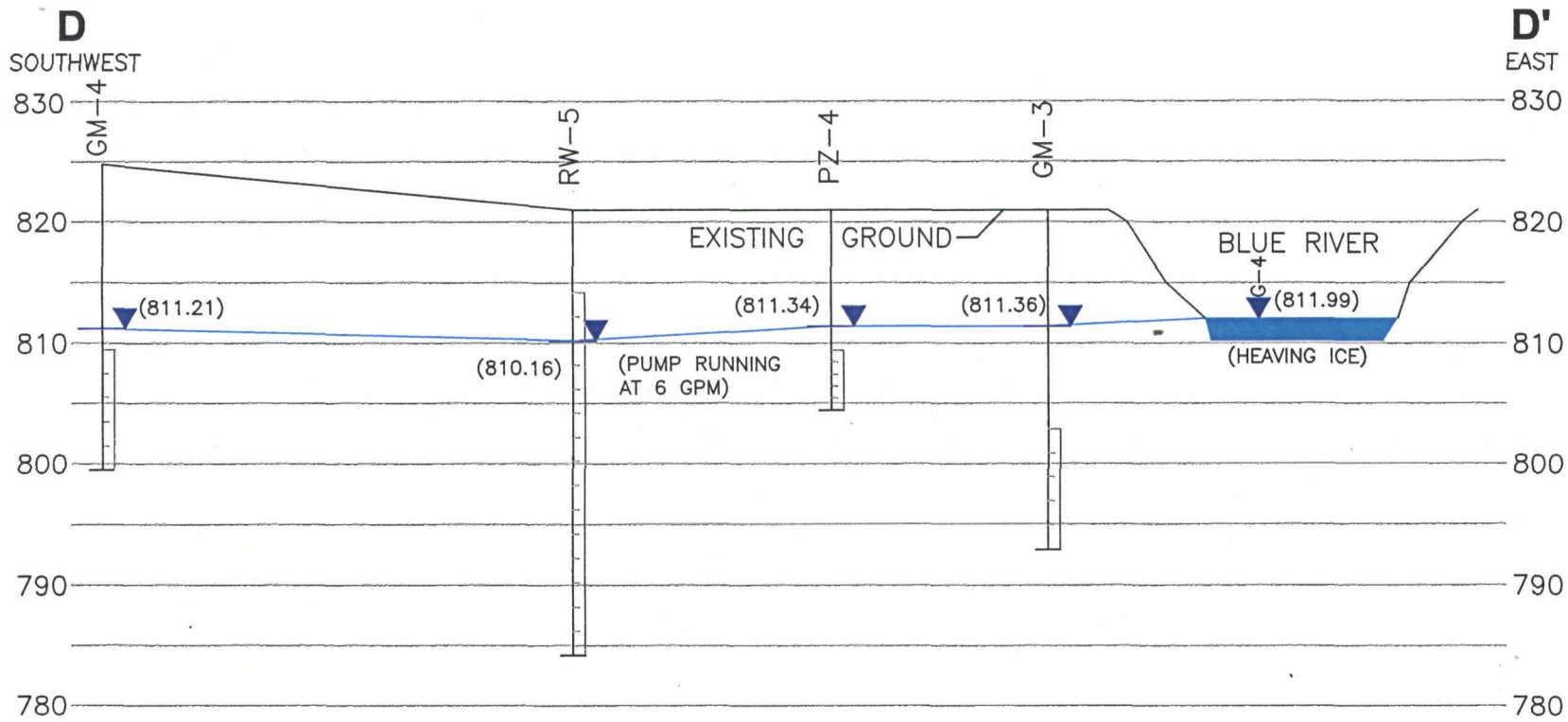
CROSS-SECTION C-C'
JUNE 2004

FIGURE 12-6

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Jun04CC.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

GM-3	MONITORING WELL
RW-5	RECOVERY WELL
PZ-4	PIEZOMETER
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=30'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

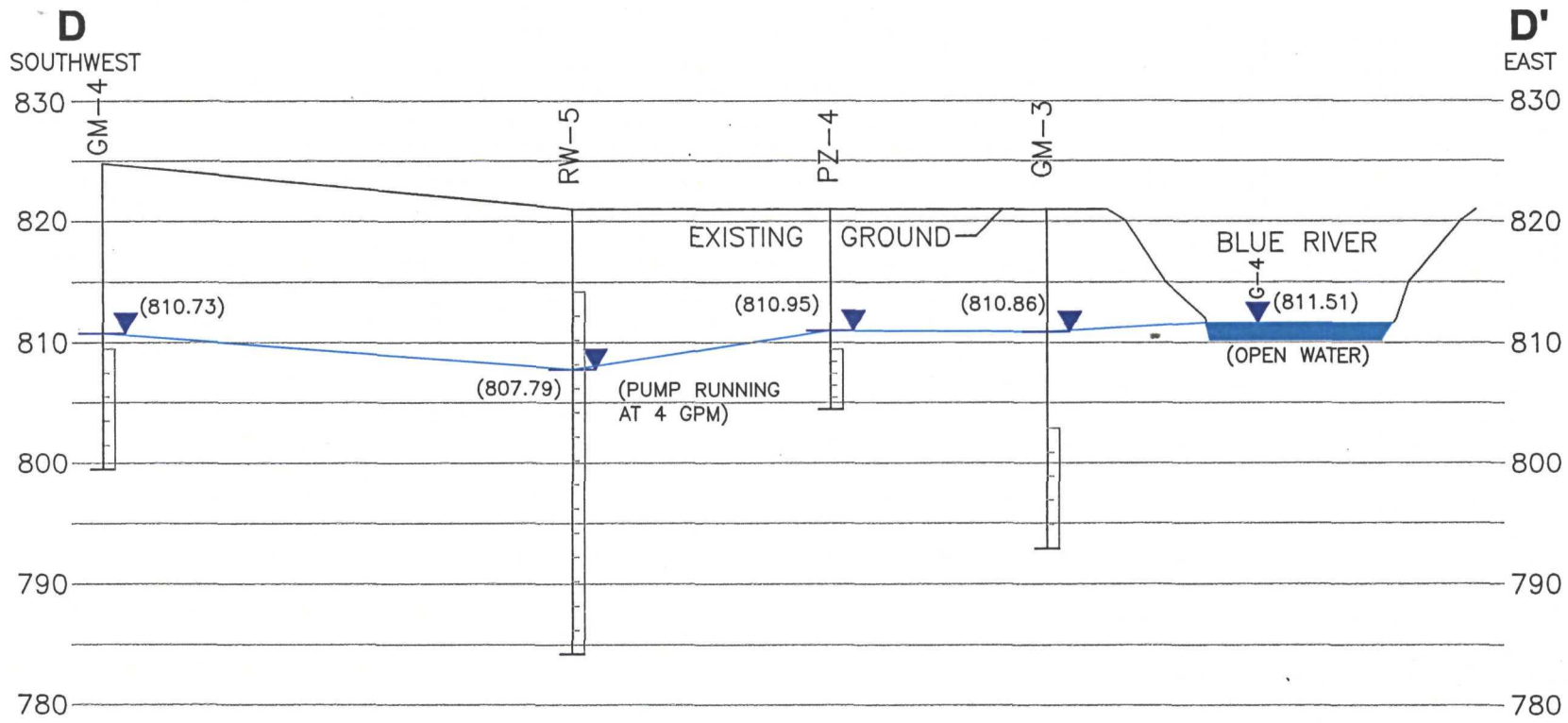
CROSS-SECTION D-D'
JANUARY 2004

FIGURE 13-1

MWH

J:\Jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Jan04DD.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

GM-3	MONITORING WELL
RW-5	RECOVERY WELL
PZ-4	PIEZOMETER
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
▭	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=30'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

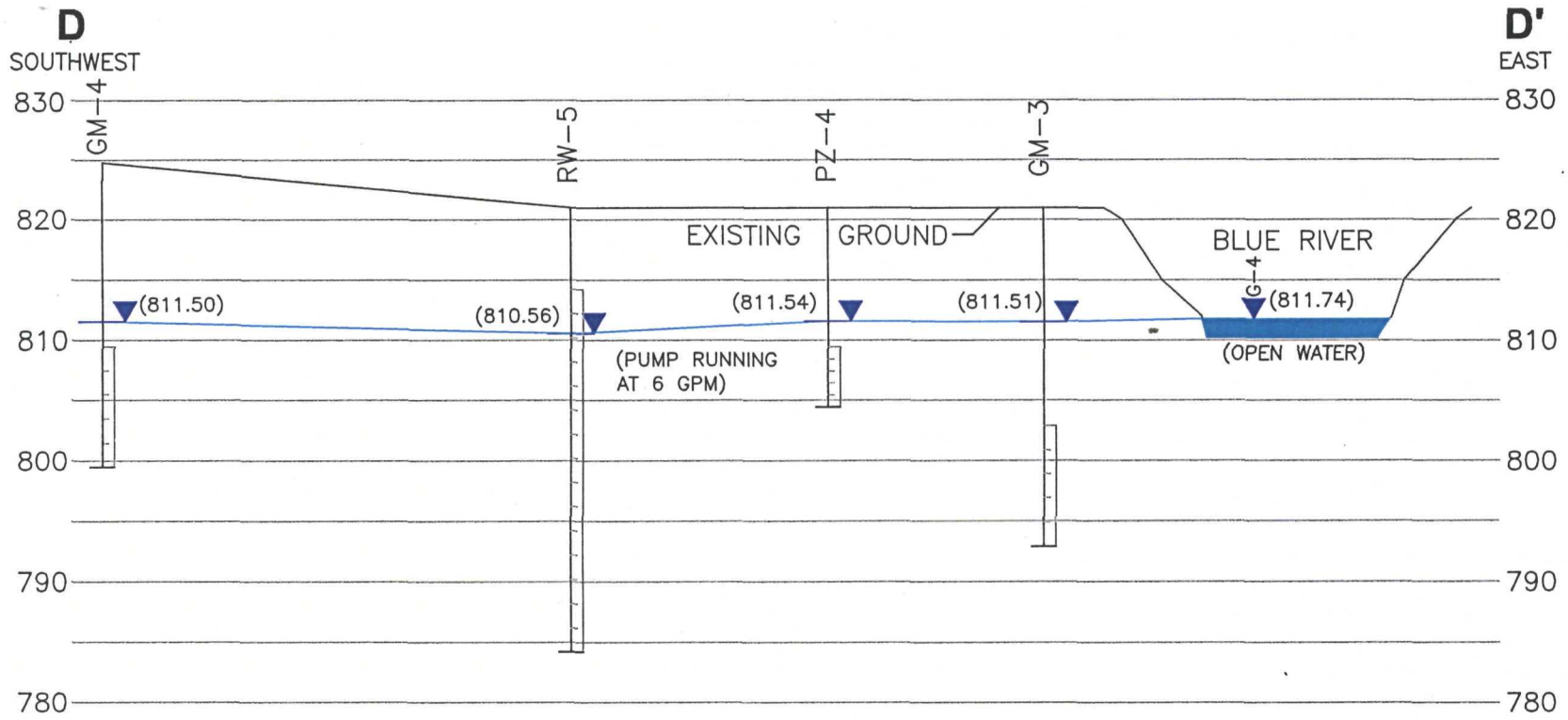
CROSS-SECTION D-D'
FEBRUARY 2004

FIGURE 13-2

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Feb04DD.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

GM-3	MONITORING WELL
RW-5	RECOVERY WELL
PZ-4	PIEZOMETER
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=30'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

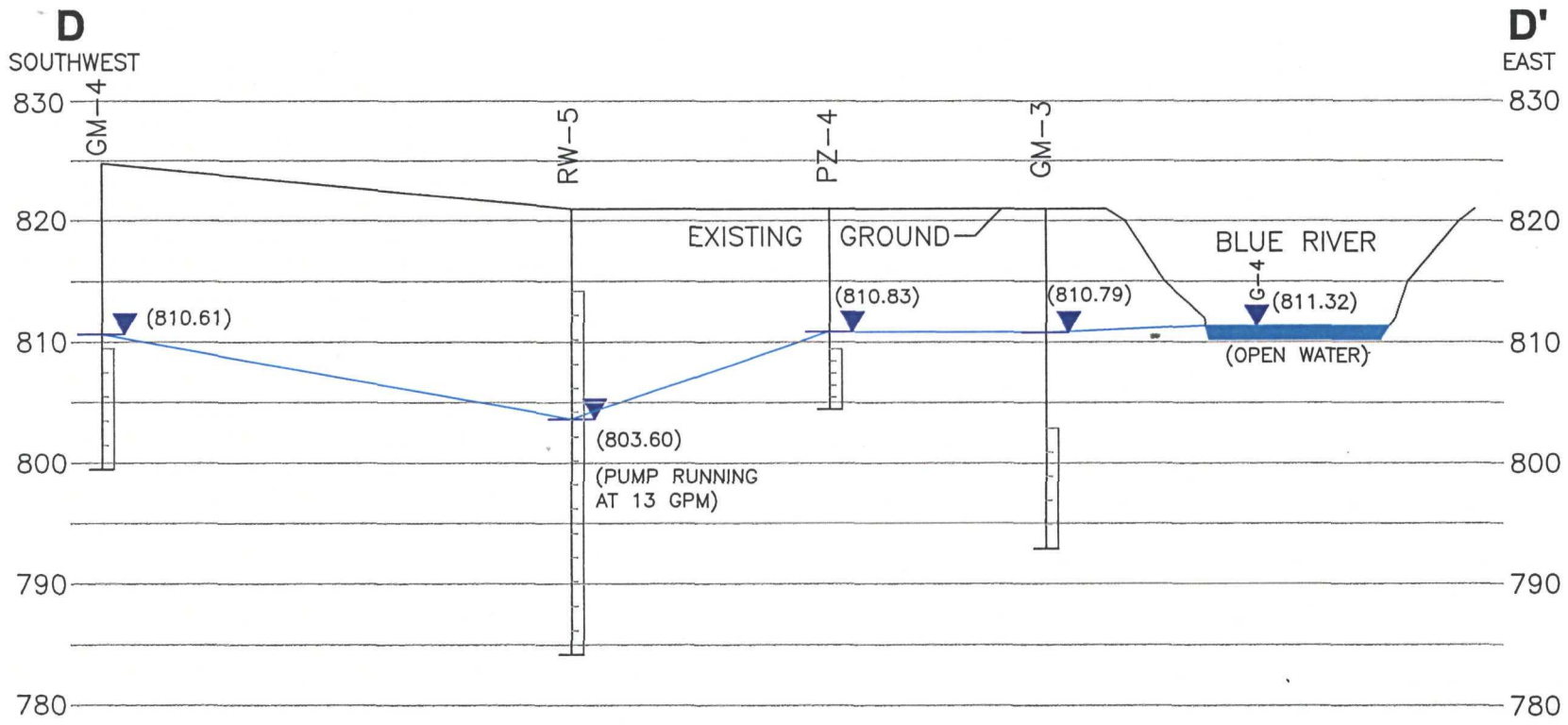
CROSS-SECTION D-D'
MARCH 2004

FIGURE 13-3

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Mar04DD.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

GM-3	MONITORING WELL
RW-5	RECOVERY WELL
PZ-4	PIEZOMETER
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
[-]	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=30'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

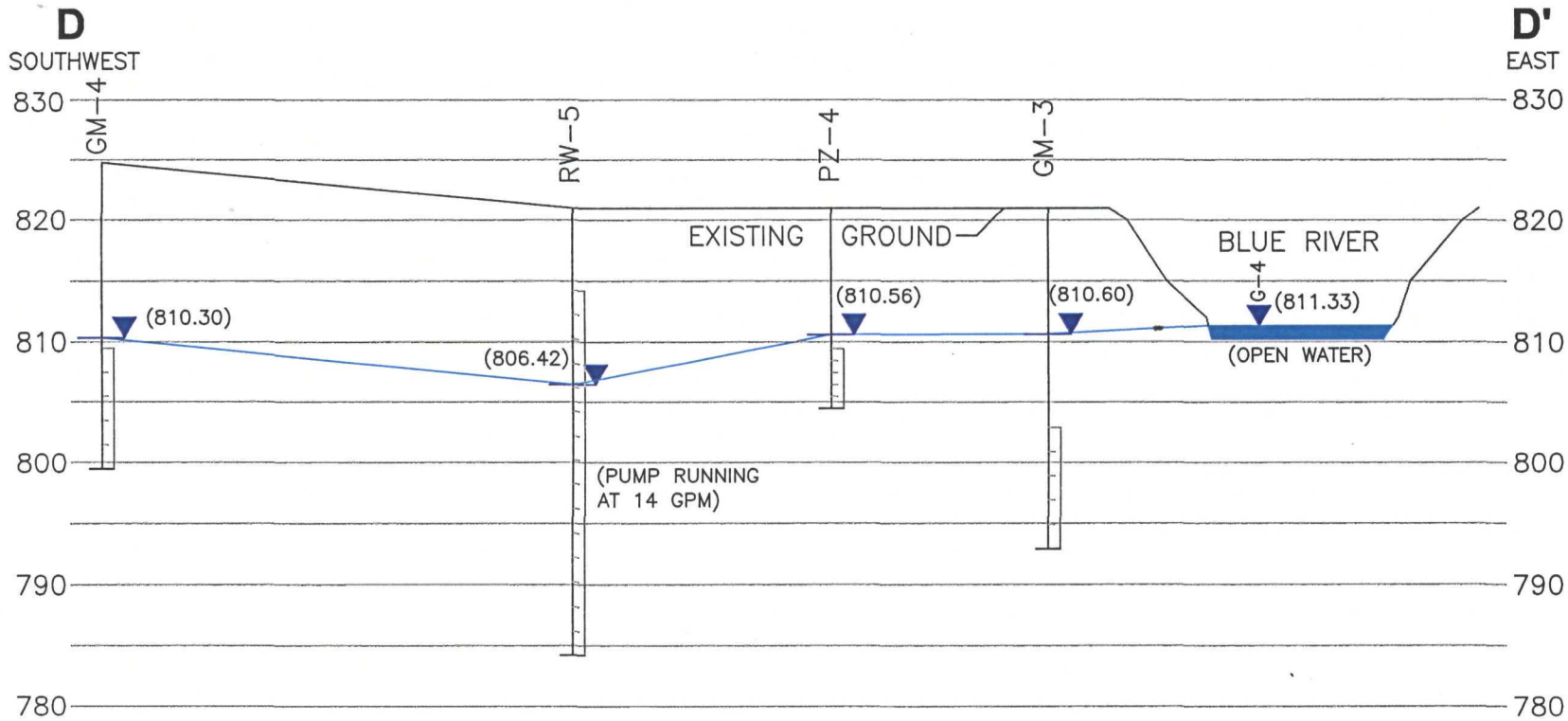
CROSS-SECTION D-D'
APRIL 2004

FIGURE 13-4

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Apr04DD.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

GM-3	MONITORING WELL
RW-5	RECOVERY WELL
PZ-4	PIEZOMETER
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
▯	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=30'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

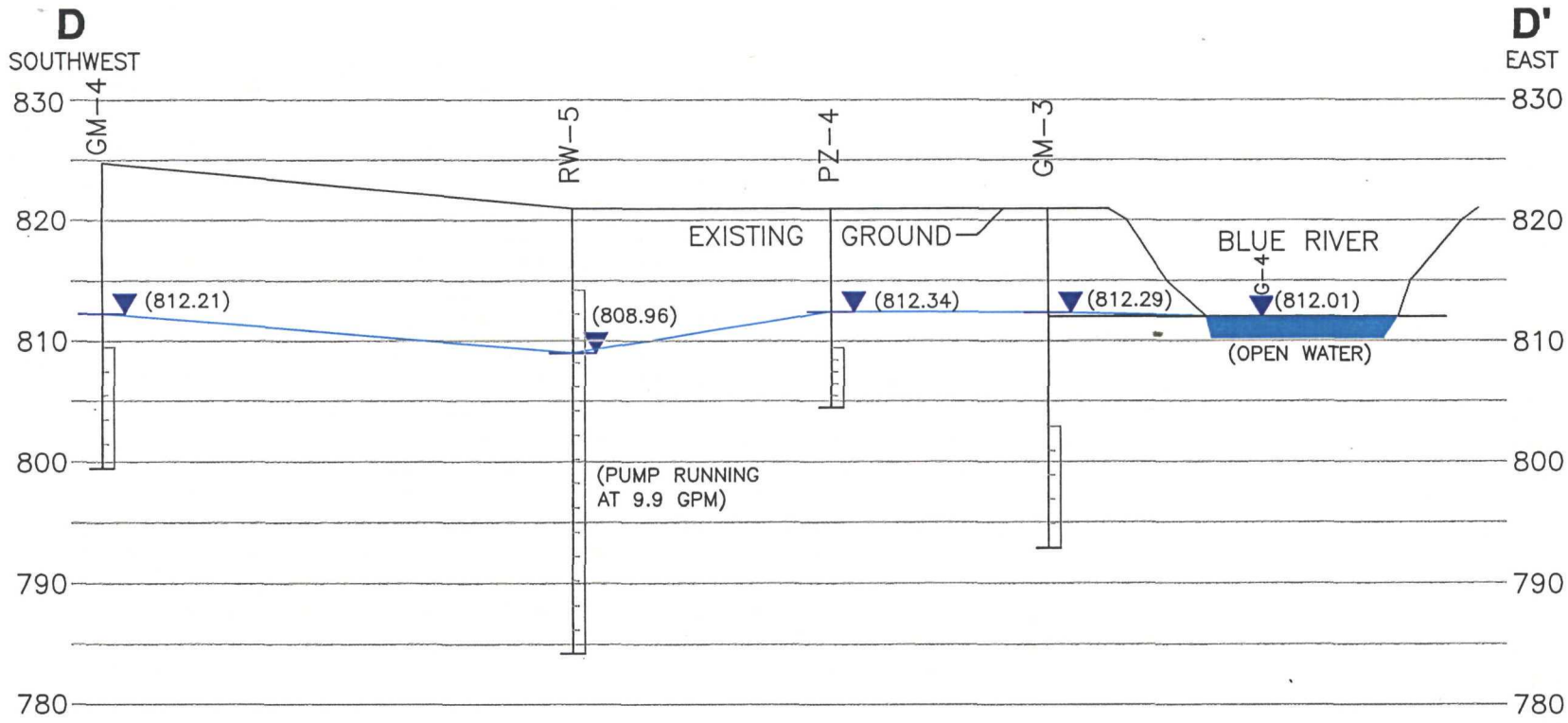
CROSS-SECTION D-D'
MAY 2004

FIGURE 13-5

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_May04DD.dwg Aug/25/04

Drawn By & Date:	Approved By & Date:	Revised By & Date: str 08/25/04	Approved By & Date:



LEGEND:

GM-3	MONITORING WELL
RW-5	RECOVERY WELL
PZ-4	PIEZOMETER
800	ELEVATION (FEET)
GPM	GALLONS PER MINUTE
▼	WATER LEVEL
[-]	SCREENED INTERVAL

SCALE:
HORIZONTAL: 1"=30'
VERTICAL: TWO (2) TIMES EXAGGERATION

SEMI-ANNUAL PROGRESS REPORT 18
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

CROSS-SECTION D-D'
JUNE 2004

FIGURE 13-6

MWH

J:\jobs\3868-Wayne RR\06-2004-07 OM&M\5 - CADD\progrpt18\Hydro_Jun04DD.dwg Aug/25/04

Figure 14
Summary of Site Volatile Organic Compound Removal Rates
Soil and Groundwater Remediation Systems
Wayne Reclamation & Recycling

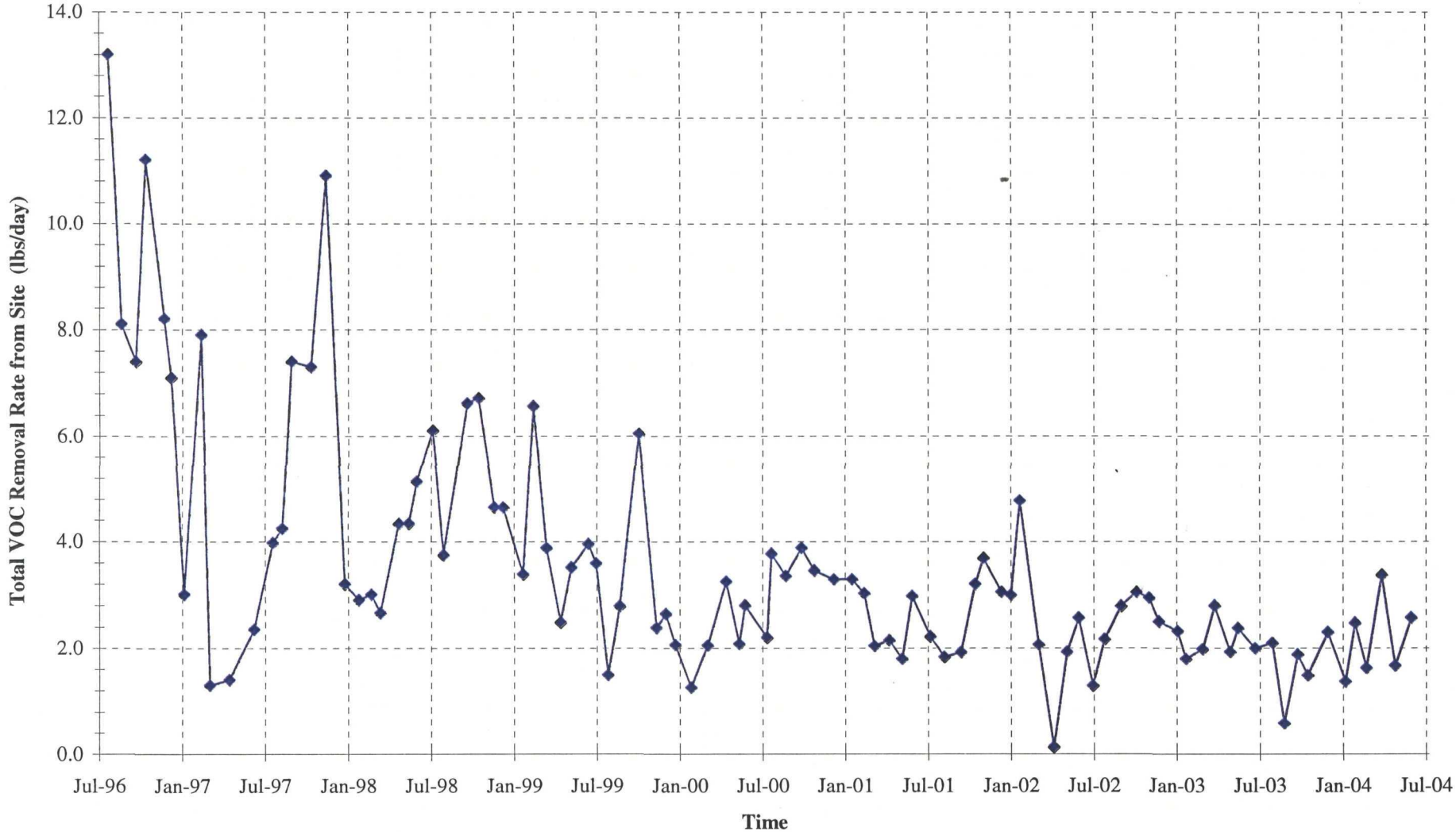
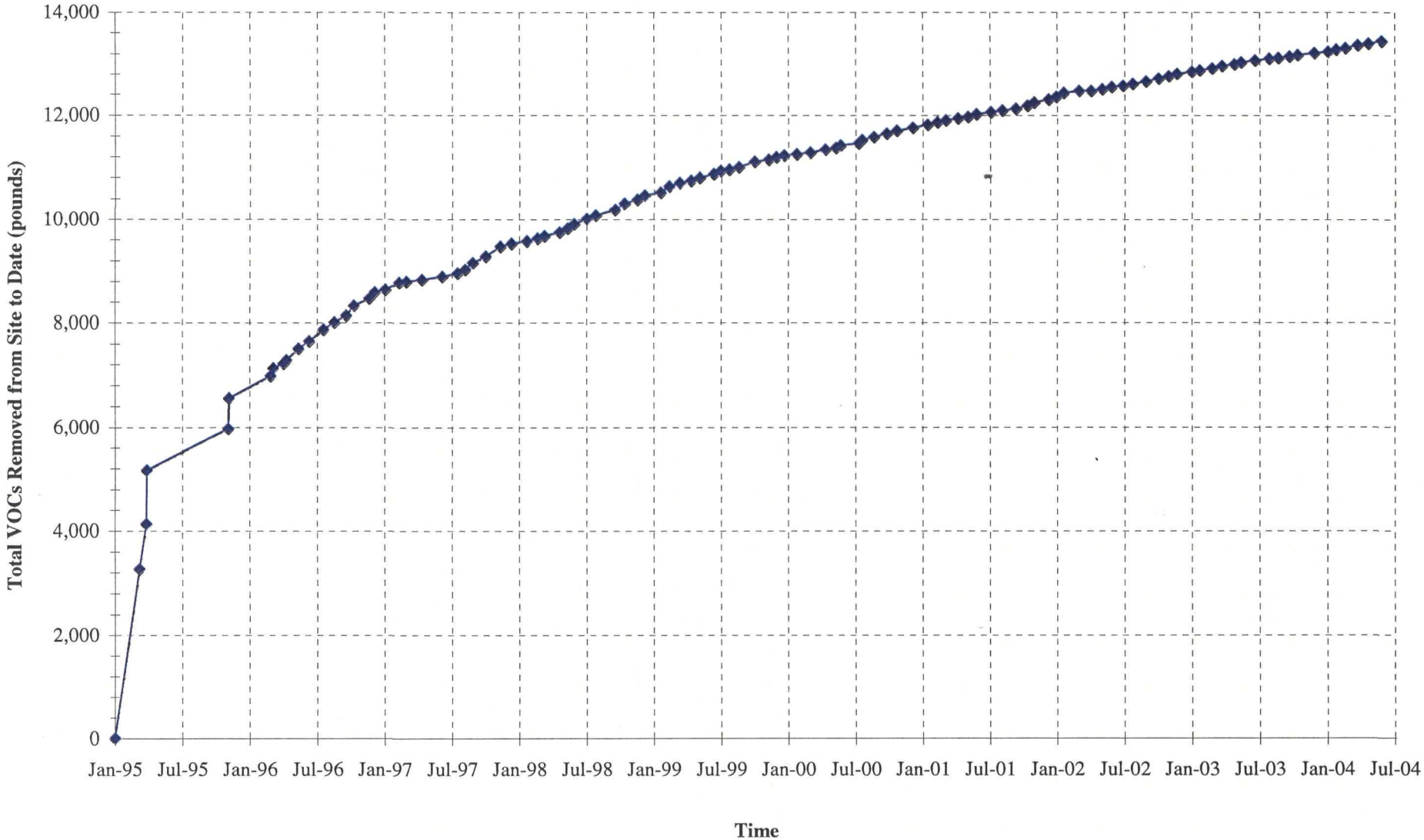


Figure 15
Cumulative Volatile Organic Compounds Removed From Site
Soil and Groundwater Remediation Systems
Wayne Reclamation & Recycling



APPENDIX A

LANDFILL SAMPLING DATA, APRIL 23, 2004 SAMPLING EVENT

RECEIVED
JUN 0 1 2004
MWH DETROIT

BURGESS & NIPLE

RECEIVED
MAY 2 6 2004

Mr. Jeffrey P. Walker
Outside Operations Manager
City of Columbia City
112 S. Chauncey Street
Columbia City, IN 46725

Re: City of Columbia City
Wayne Reclamation & Recycling Facility
April 2004 Groundwater Sampling Event

May 14, 2004

Burgess & Niple, Inc.
5085 Reed Road
Columbus, OH 43220
614 459.2050
Fax 614 451.1385

Dear Mr. Walker:

Burgess & Niple, Inc. (B&N) has completed this report to provide you with additional information that is not included in the formal report submitted to the U.S. Environmental Protection Agency (EPA), as required by the facility's *Operation and Maintenance Sampling and Analysis Plan* (OMSAP) (Geraghty & Miller, Inc., October 1993). B&N completed groundwater sampling and analysis of four monitoring wells located at the Wayne Reclamation and Recycling Facility (WRRF) in the City of Columbia City, Indiana on April 23, 2004. The following sections summarize the results of the most recent sampling event. Figure 1 displays the groundwater monitoring network. Attachment 1 includes the field-sampling sheets and chain-of-custody form completed during the most recent sampling event. Attachment 2 contains the analytical laboratory report submitted by American Analytical Laboratories, Inc. (AAL). Time-versus-concentration plots generated from the groundwater quality data are presented in Attachment 3.

METHODS

Groundwater elevations were measured at each well, using an electronic water-level measuring tape. The depth to the bottom of each well was also measured. Measurements were made to the nearest 0.01 foot and recorded on field-sampling sheets. The well stick-up was measured to the nearest 0.1 foot and recorded.

Field-sampling personnel completed a wellhead inspection of each well documenting any evidence of activity near the well, the condition of the protective casing, any insect or rodent intrusions, or other notable conditions.

Disposable polyethylene bailers were used to purge each well of a minimum of five well volumes prior to sampling. Field parameters (pH, specific conductance, temperature, and turbidity) were measured and recorded during well purging. Sampling began once at least five well volumes were removed and the field parameters stabilized (within ±10 percent). Purge water was disposed of on the ground away from each well, as specified by the facility's OMSAP (Geraghty & Miller, Inc., October 1993).

Groundwater samples were collected from the four monitoring wells (GM-1, GM-2, GM-3, and GM-4). One duplicate was collected at GM-4 by splitting each bailer of water between two sets of sample containers. One field blank was collected to evaluate possible cross-contaminants from the field-sampling equipment. Deionized water was poured into a

disposable bailer and transferred into the sample containers. The laboratory prepared one trip blank (two 40-milliliter [ml] vials of deionized water) and sent it along with the sample containers. Field personnel filled the sample containers and placed them in a cooler that was chilled with ice to 4 degrees Celsius (°C) or cooler. Groundwater samples were brought back to AAL for analysis.

AAL analyzed the groundwater samples from the four monitoring wells, the duplicate sample, and the equipment blank for ammonia (Method 350.1), chloride (Method 4500-CL), chemical oxygen demand (COD) (Method 410.4), sodium (Method 6010/200), and volatile organic compounds (VOCs) (Method 8260). The trip blank was analyzed for VOCs only.

RESULTS

Table 1 includes all historical groundwater quality results reported for the WRRF, including the results of the April 23, 2004 groundwater sampling event. VOCs included in Table 1 are only those parameters historically detected at the facility. All other VOCs have been reported below the respective laboratory detection limits.

Most of the inorganic concentrations reported for GM-1, GM-2, GM-3, and GM-4 during the most recent groundwater sampling event were within the respective range of historical results. The lowest historical concentrations for ammonia in GM-2 and GM-3 were reported during the April 2004 sampling event.

There were no VOCs reported above the laboratory detection limits in either GM-1 or GM-2 during the April 2004 sampling event. This is consistent with historical results for these two wells. All detected VOCs in GM-3 and GM-4 were within the respective range of historical concentrations.

Time-versus-concentration plots were constructed for ammonia, chloride, COD, sodium, and each of the historically detected VOCs. Historical results from each of the monitoring wells are included on each plot for comparative purposes. No increasing trends in inorganic constituents are evident. It appears that each of the defected VOCs in GM-3 and GM-4 have stabilized, or depict a decreasing trend in concentration, since 2000.

The following conclusions for the consistently detected organic compound concentrations in well GM-4 are noted:

- Concentrations of 1,1-DCA steadily increased from June 1996 (4.0 micrograms per liter [μg/l]) to a high of 26 μg/l in April 2003, but appear to have stabilized since October 2001,with the latest concentration reported at 15 μg/l in April 2004. There is no U.S. EPA Primary Maximum Contamination Level (MCL) established for 1,1-DCA.

- Concentrations of 1,1-DCE consistently increased from December 1997 (less than 0.5 μg/l) to a maximum value of 7.1 μg/l in October 2001. Since then, the last five semiannual analytical results have all been lower (6.0 μg/l, 5.1 μg/l, 6.2 μg/l, 4.9 μg/l, and 3.8 μg/l respectively). The Primary MCL for 1,1-DCE is 7 μg/l.

- Previously, concentrations of 1,1,1-TCA were concluded as having an overall *increasing trend from December 1999 (143 µg/l) to October 2002 (380 µg/l).* However, concentrations have consistently decreased with the latest reported concentration of 180 µg/l in April 2004, which is lower than the MCL of 200 µg/l for 1,1,1-TCA.

- Previously, concentrations of TCE were concluded as having a consistently increasing trend from June 2000 (440 µg/l) to October 2002 (1,300 µg/l). However, since October 2002, concentrations have consistently decreased with the latest reported concentration of 630 µg/l in April 2004. The MCL is 5 µg/l for TCE.

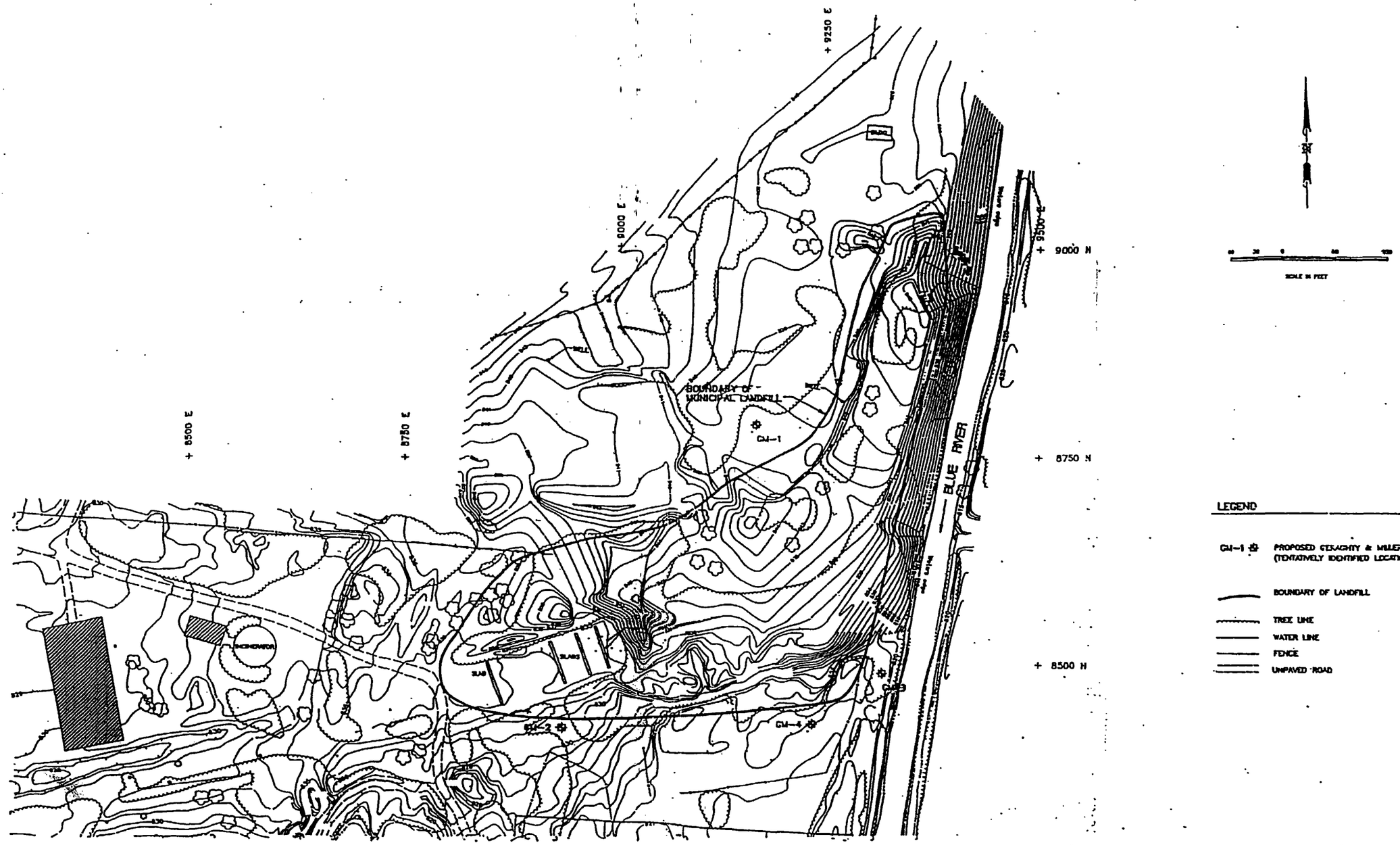
Table 2 includes historical groundwater elevations and other well data recorded at the facility. Groundwater elevation data prior to December 1999 was not available. Groundwater elevations decreased between October 2003 and April 2004 from a minimum of 0.46 feet at GM-1 to a maximum of 0.81 feet at GM-4.

If you have any questions or comments, please do not hesitate to call.

Sincerely,

Michael R. Akins
Project Geologist

MEL:cmc
Attachments
copy: Mr. Howard Lowen, Columbia City Wastewater Superintendent (w/att)
Ms. Jessica Huxhold-Fliss, IDEM (w/att)
Mr. Tom Tiefert, PE, B&N (w/att)
Mr. Dan Forlastro, Engineering Management, Inc. (w/att)



SOURCES: BONAR SURVEYORS AND WARZYN ENGINEERING, INC.

GERAGHTY & MILLER, INC.
Environmental Services

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SCALE VERIFICATION
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.
USE TO VERIFY FIGURE REPRODUCTION SCALE

REV. NO.	DATE	DESCRIPTION	BY	APPR.

MONITORING WELL LOCATION MAP-
POST-CLOSURE LANDFILL MONITORING
WAYNE RECLAMATION AND RECYCLING SITE
COLUMBIA CITY, INDIANA

FIGURE
1

Table 1
Wayne Reclamation and Recycling Facility
City of Columbia City
Groundwater Monitoring Program

Parameter	Units	MCL[1]	MDL[2]	GM-1																		
				Jun-95	Jan-96	Jun-96	Jan-97	Jun-97	Dec-97	Jun-98	Jan-99	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04
Inorganics																						
Ammonia	mg/l	--	0.05	0.43	0.6	0.58	0.25	0.41	0.28	1.7	0.587	0.45	0.48	1.08	1.20	1.41	1.09	1.14	1.24	0.96	0.94	1.04
Chloride	mg/l	250 (S)	1	130	120	80	48	39	35	80	64	31	37	26	23	46	39	44	31	31	37	51
Chemical Oxygen Demand (COD)	mg/l	--	1	130	55	87	100	39	25	38	74	22	36	27	45	13	29	52	37	<5	14	5
Sodium	mg/l	--	0.10	60	59	54	26	22	19	18	22.8	18	15	19.2	17.5	19.0	22.9	22.2	21.5	17.6	17.1	23.1
Volatile Organic Compounds																						
2-Butanone (Methyl ethyl ketone)	ug/l	--	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/l	--	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1-Dichloroethene	ug/l	7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	ug/l	70	0.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	ug/l	100	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,2-Dichloropropane	ug/l	5	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<5.0	<5.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1,1-Trichloroethane	ug/l	200	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1,2-Trichloroethane	ug/l	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	ug/l	5	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
Vinyl Chloride	ug/l	2	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<2	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
Field Parameters																						
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	--	--	6.90	7.58	6.94	7.49	7.55	7.11	7.17	7.40	6.72
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	--	700	832	784	541	730	605	487	667	431	762
Temperature	oC	--	--	--	--	--	--	--	--	--	--	--	11.1	12.9	10.2	11.9	11.3	11.3	11.7	11.7	11.5	12.0
Turbidity	NTU	--	--	--	--	--	--	--	--	--	--	--	--	111	455	133	182	140	664	55	258	44

All other VOCs have been historically below laboratory detection limits.

[1] = U.S. EPA Maximum Contaminant Level

[2] = Current Laboratory Method Detection Limit

(S) = Secondary U.S. EPA MCL

Duplicate samples collected at GM-4.

Table 1 (continued)
Wayne Reclamation and Recycling Facility
City of Columbia City
Groundwater Monitoring Program

Parameter	Units	MCL[1]	MDL[2]	GM-2																		
				Jun-95	Jan-96	Jun-96	Jan-97	Jun-97	Dec-97	Jun-98	Jan-99	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04
Inorganics																						
Ammonia	mg/l	--	0.05	2.6	2.6	2.4	1.6	3	2.6	3	2.64	1.7	1.8	1.99	1.80	2.03	2.10	1.46	1.43	1.35	1.30	1.28
Chloride	mg/l	250 (S)	1	18	15	19	16	16	22	19	10	7	12	16	10	12	14	20	14	15	50	11
Chemical Oxygen Demand (COD)	mg/l	--	1	30	<20	<20	<20	<20	<20	20	38	15	<15	17	8	<1	18	26	12	<5	<5	15
Sodium	mg/l	--	0.10	20	15	17	16	13	19	10	11.2	10.1	12.3	12.1	10.5	11.3	14.4	14.4	12.2	12.0	12.2	10.1
Volatile Organic Compounds																						
2-Butanone (Methyl ethyl ketone)	ug/l	--	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/l	--	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1-Dichloroethene	ug/l	7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	ug/l	70	0.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	ug/l	100	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,2-Dichloropropane	ug/l	5	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1,1-Trichloroethane	ug/l	200	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1,2-Trichloroethane	ug/l	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	ug/l	5	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
Vinyl Chloride	ug/l	2	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<2	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
Field Parameters																						
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	--	--	7.13	7.65	7.06	7.59	7.41	7.10	7.32	7.61	7.05
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	--	700	818	715	524	936	804	586	826	458	723
Temperature	oC	--	--	--	--	--	--	--	--	--	--	--	11.3	12.9	10.6	11.4	10.2	10.6	11.5	12.1	12.7	12.0
Turbidity	NTU	--	--	--	--	--	--	--	--	--	--	--	--	9	13	22	10.5	7.44	16.0	13	10	12

All other VOCs have been historically below laboratory detection limits.
[1] = U.S. EPA Maximum Contaminant Level
[2] = Current Laboratory Method Detection Limit
(S) = Secondary U.S. EPA MCL
Duplicate samples collected at GM-4.

Table 1 (continued)
Wayne Reclamation and Recycling Facility
City of Columbia City
Groundwater Monitoring Program

Parameter	Units	MCL[1]	MDL[2]	GM-3																		
				Jun-95	Jan-96	Jun-96	Jan-97	Jun-97	Dec-97	Jun-98	Jan-99	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04
Inorganics																						
Ammonia	mg/l	--	0.05	6	4.9	3.2	0.98	1.4	1	1.4	1.15	0.6	0.8	0.59	0.79	0.52	0.62	0.51	0.76	0.52	0.55	0.45
Chloride	mg/l	250 (S)	1	23	14	25	32	20	40	25	42	24	20	29	44	22	28	24	32	67	27	42
Chemical Oxygen Demand (COD)	mg/l	--	1	120	80	38	33	<20	<20	25	24	22	<15	28	10	14	18	22	15	5	20	33
Sodium	mg/l	--	0.10	26	14	14	17	11	16	10	19.2	16.4	16.5	17.7	21.5	15.8	15.0	12.2	20.4	36.2	19.7	15.7
Volatile Organic Compounds																						
2-Butanone (Methyl ethyl ketone)	ug/l	--	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/l	--	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1-Dichloroethene	ug/l	7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	ug/l	70	0.5	84	33	26	17	17	36	94	51	85.6	60.7	110	82	61	150	85	100	52	72	59
trans-1,2-Dichloroethene	ug/l	100	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.6	0.9	<0.5	<1.0	<5	<1.0	<1.0	1	<1.0	2	<1	<1	<1
1,2-Dichloropropane	ug/l	5	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1,1-Trichloroethane	ug/l	200	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1,2-Trichloroethane	ug/l	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	ug/l	5	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
Vinyl Chloride	ug/l	2	1	10	<1.0	18	42	33	45	32	22.6	22.3	16.6	26	28	24	54	33	41	19	40	27
Field Parameters																						
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	--	--	7.74	7.88	7.08	7.99	6.89	7.50	7.99	8.03	7.86
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	--	650	615	767	382	635	410	445	739	356	560
Temperature	oC	--	--	--	--	--	--	--	--	--	--	--	16.9	13.4	12	8.5	14.6	8.6	16.7	6.7	14.3	8.4
Turbidity	NTU	--	--	--	--	--	--	--	--	--	--	--	--	45	34	13	30.8	29.2	28.0	16	140	45

All other VOCs have been historically below laboratory detection limits.
[1] = U.S. EPA Maximum Contaminant Level
[2] = Current Laboratory Method Detection Limit
(S) = Secondary U.S. EPA MCL
Duplicate samples collected at GM-4.

Table 1 (continued)
Wayne Reclamation and Recycling Facility
City of Columbia City
Groundwater Monitoring Program

Parameter	Units	MCL[1]	MDL[2]	GM-4																		
				Jun-95	Jan-96	Jun-96	Jan-97	Jun-97	Dec-97	Jun-98	Jan-99	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04
Inorganics																						
Ammonia	mg/l	--	0.05	0.37	0.33	0.34	0.28	0.13	0.37	3.1	0.697	0.29	0.24	0.32	0.46	0.36	0.33	0.29	0.25	0.31	0.23	0.22
Chloride	mg/l	250 (S)	1	23	41	12	8.3	11	11	12	16	4.5	19	7	8	5	6	9	4	7	6	5
Chemical Oxygen Demand (COD)	mg/l	--	1	220	65	47	55	20	<20	20	20	20	<15	13	2	6	28	13	8	<5	<5	10
Sodium	mg/l	--	0.10	31	41	22	25	18	26	25	40	21	12	17.6	27.8	14.6	15.1	10.2	11.6	11.0	7.86	8.98
Volatile Organic Compounds																						
2-Butanone (Methyl ethyl ketone)	ug/l	--	10	<10	150	<10	<10	<10	<10	<10	<10	<10	<33.3	<50	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/l	--	1	<1.0	<1.0	<1.0	10	12	13	11	16	14	13	19	18	21	25	17	20	26	20	15
1,1-Dichloroethene	ug/l	7	0.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	3.2	5.2	5	3.7	<5	4.2	7.0	7.1	6.0	5.1	6.2	4.9	3.8
cis-1,2-Dichloroethene	ug/l	70	0.5	130	140	190	260	250	320	250	323	243	250	190	270	570	250	230	180	190	98	110
trans-1,2-Dichloroethene	ug/l	100	1	<1.0	<1.0	<1.0	12	14	16	13	16.3	13	14	13	14	18	20	14	14	15	11	8
1,2-Dichloropropane	ug/l	5	5	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<3.3	<5.0	<5.0	6	<1.0	<1.0	<1.0	<1	4	<1
1,1,1-Trichloroethane	ug/l	200	1	180	<1.0	200	140	140	210	180	144	193	143	170	210	610	260	330	380	260	94	180
1,1,2-Trichloroethane	ug/l	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<3.3	<5	<0.5	0.8	0.9	<0.5	0.8	0.8	0.7	0.6
Trichloroethene	ug/l	5	1	410	380	530	280	430	490	500	462	556	435	440	640	1,900	860	870	1,300	840	400	630
Vinyl Chloride	ug/l	2	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.8	5.2	3.7	4.9	4	8	6	7	5	2	4	2	3
Field Parameters																						
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	--	--	7.34	7.02	6.99	7.51	7.23	7.23	7.35	7.70	7.29
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	--	690	964	1,141	553	880	660	471	729	413	732
Temperature	oC	--	--	--	--	--	--	--	--	--	--	--	15.2	12.9	11.9	10.8	12.1	9.9	13.1	11.1	12.4	10.8
Turbidity	NTU	--	--	--	--	--	--	--	--	--	--	--	--	13	21	29	22.9	17.4	37.0	25	51	30

All other VOCs have been historically below laboratory detection limits.
[1] = U.S. EPA Maximum Contaminant Level
[2] = Current Laboratory Method Detection Limit
(S) = Secondary U.S. EPA MCL
Duplicate samples collected at GM-4.

Table 1 (continued)
Wayne Reclamation and Recycling Facility
City of Columbia City
Groundwater Monitoring Program

Parameter	Units	MCL[1]	MDL[2]	Duplicate (GM-4)									
				Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04
Inorganics													
Ammonia	mg/l	--	0.05	0.25	0.31	0.40	0.34	0.34	0.29	0.26	0.36	0.26	0.22
Chloride	mg/l	250 (S)	1	19	7	7	5	8	8	4	7	5	5
Chemical Oxygen Demand (COD)	mg/l	--	1	<15	24	4	8	22	16	11	<5	<5	10
Sodium	mg/l	--	0.10	12.8	21.5	28.1	14.0	15.8	10.5	7.32	11.1	7.80	8.76
Volatile Organic Compounds													
2-Butanone (Methyl ethyl ketone)	ug/l	--	10	<33.3	<50	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/l	--	1	15	19	19	21	24	18	27	28	20	14
1,1-Dichloroethene	ug/l	7	0.5	4.5	<5	4.4	6.2	6.9	6.6	5.1	6.2	5.0	3.7
cis-1,2-Dichloroethene	ug/l	70	0.5	246	190	290	540	180	280	260	210	110	110
trans-1,2-Dichloroethene	ug/l	100	1	13	13	14	17	20	15	15	15	11	8
1,2-Dichloropropane	ug/l	5	5	<3.3	<5.0	<5.0	6	<1.0	<1.0	<1.0	<1	<1	<1
1,1,1-Trichloroethane	ug/l	200	1	143	170	230	580	180	410	410	270	95	170
1,1,2-Trichloroethane	ug/l	5	0.5	<3.3	<5	<0.5	0.8	0.9	<0.5	0.9	0.8	0.6	0.5
Trichloroethene	ug/l	5	1	434	440	650	1,800	610	840	1,400	820	440	620
Vinyl Chloride	ug/l	2	1	4.3	4	9	5	6	5	2	4	2	2
Field Parameters													
pH	S.U.	6.5-8.5 (S)	--	--	7.34	7.02	6.99	7.51	7.23	7.23	7.35	7.70	7.29
Specific Conductance	umhos/cm	--	--	690	964	1,141	553	880	660	471	729	413	732
Temperature	oC	--	--	15.2	12.9	11.9	10.8	12.1	9.9	13.1	11.1	12.4	10.8
Turbidity	NTU	--	--	--	13	21	29	22.9	17.4	37.0	25	51	30

All other VOCs have been historically below laboratory detection limits.
[1] = U.S. EPA Maximum Contaminant Level
[2] = Current Laboratory Method Detection Limit
(S) = Secondary U.S. EPA MCL
Duplicate samples collected at GM-4.

Table 1 (continued)
Wayne Reclamation and Recycling Facility
City of Columbia City
Groundwater Monitoring Program

Parameter	Units	MCL[1]	MDL[2]	Field Blank																		
				Jun-95	Jan-96	Jun-96	Jan-97	Jun-97	Dec-97	Jun-98	Jan-99	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04
Inorganics																						
Ammonia	mg/l	--	0.05	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.22	<0.010	<0.010	0.54	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	mg/l	250 (S)	1	<1.0	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	<1.0	19	<1	<1.0	<1.0	1	<1	1	2	<1	<1
Chemical Oxygen Demand (COD)	mg/l	--	1	<20	<20	<20	<20	<20	<20	115	33	<15	<15	4	<1.0	<1.0	3	<5	<5	<5	<5	7
Sodium	mg/l	--	0.10	<0.50	<0.50	<0.50	<0.50	14	<0.50	76	<0.20	<0.20	94.2	<0.10	0.28	0.33	0.20	0.403	0.18	0.442	0.10	<0.10
Volatile Organic Compounds																						
2-Butanone (Methyl ethyl ketone)	ug/l	--	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/l	--	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1-Dichloroethene	ug/l	7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	ug/l	70	0.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	ug/l	100	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,2-Dichloropropane	ug/l	5	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1,1-Trichloroethane	ug/l	200	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1,2-Trichloroethane	ug/l	5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	ug/l	5	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	1	<1.0	<1.0	<1	<1	<1
Vinyl Chloride	ug/l	2	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
Field Parameters																						
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Temperature	oC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Turbidity	NTU	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

All other VOCs have been historically below laboratory detection limits.
[1] = U.S. EPA Maximum Contaminant Level
[2] = Current Laboratory Method Detection Limit
(S) = Secondary U.S. EPA MCL
Duplicate samples collected at GM-4.

Table 1 (continued)
Wayne Reclamation and Recycling Facility
City of Columbia City
Groundwater Monitoring Program

Parameter	Units	MCL[1]	MDL[2]	Trip Blank																		
				Jun-95	Jan-96	Jun-96	Jan-97	Jun-97	Dec-97	Jun-98	Jan-99	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04
Inorganics																						
Ammonia	mg/l	--	0.05	<0.030	<0.030	<0.030	<0.030	--	--	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	250 (S)	1	<1.0	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand (COD)	mg/l	--	1	<20	<20	<20	<20	--	--	<5	<5	--	--	--	--	--	--	--	--	--	--	--
Sodium	mg/l	--	0.10	<0.50	<0.50	<0.50	<0.50	--	--	<0.20	<0.20	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds																						
2-Butanone (Methyl ethyl ketone)	ug/l	--	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	ug/l	--	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1-Dichloroethene	ug/l	7	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	ug/l	70	0.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	ug/l	100	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,2-Dichloropropane	ug/l	5	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1,1-Trichloroethane	ug/l	200	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
1,1,2-Trichloroethane	ug/l	5	0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	ug/l	5	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
Vinyl Chloride	ug/l	2	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<1.0	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1
Field Parameters																						
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Temperature	oC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Turbidity	NTU	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

All other VOCs have been historically below laboratory detection limits.
[1] = U.S. EPA Maximum Contaminant Level
[2] = Current Laboratory Method Detection Limit
(S) = Secondary U.S. EPA MCL
Duplicate samples collected at GM-4.

Table 2
City of Columbia City, Indiana
Wayne Reclamation & recycling Facility
Groundwater Elevations & Well Data

Well No.	TOC Elevation (feet amsl)	Depth to Water (feet BTOC)									
		12/13/99	6/29/00	12/5/00	6/4/01	10/25/01	4/22/02	10/15/02	4/18/03	10/17/03	4/23/04
GM-1	841.03	31.26	30.19	31.61	30.31	29.54	29.24	31.64	31.51	30.22	30.68
GM-2	833.24	23.65	22.08	23.60	22.18	21.45	21.12	23.75	23.32	22.20	22.69
GM-3	822.86	11.74	10.69	12.45	11.73	8.46	10.51	12.40	12.08	11.16	11.95
GM-4	827.37	16.54	15.33	17.18	16.39	13.51	15.17	17.21	16.79	15.78	16.59
MW-4S	842.94	--	--	33.43	32.03	31.52	30.92	33.55	33.17	32.02	32.42

Well No.	TOC Elevation (feet amsl)	Groundwater Elevation (feet amsl)									
		12/13/99	6/29/00	12/5/00	6/4/01	10/25/01	4/22/02	10/15/02	4/18/03	10/17/03	4/23/04
GM-1	841.03	809.77	810.84	809.42	810.72	811.49	811.79	809.39	809.52	810.81	810.35
GM-2	833.24	809.59	811.16	809.64	811.06	811.79	812.12	809.49	809.92	811.04	810.55
GM-3	822.86	811.12	812.17	810.41	811.13	814.40	812.35	810.46	810.78	811.70	810.91
GM-4	827.37	810.83	812.04	810.19	810.98	813.86	812.20	810.16	810.58	811.59	810.78
MW-4S	842.94	--	--	809.51	810.91	811.42	812.02	809.39	809.77	810.92	810.52

Well No.	TOC Elevation (feet amsl)	Well Stick-Up (feet)									
		12/13/1999	6/29/2000	12/5/2000	6/4/2001	10/25/2001	4/22/2002	10/15/2002	4/18/2003	10/17/2003	4/23/2004
GM-1	841.03	2.1	--	1.9	1.9	2.1	1.8	2.1	1.8	1.8	1.8
GM-2	833.24	2.5	--	2.2	2.2	2.5	2.2	2.5	2.2	2.2	2.2
GM-3	822.86	2.2	--	2.0	2.0	2.3	1.9	2.3	1.9	2.0	2.0
GM-4	827.37	3.3	--	2.6	2.6	3.0	2.5	3.0	2.6	2.7	2.6
MW-4S	842.94	--	--	--	--	3.0	2.6	--	--	--	1.5

Well No.	TOC Elevation (feet amsl)	Depth-to-Bottom (feet BTOC)									
		12/13/1999	6/29/2000	12/5/2000	6/4/2001	10/25/2001	4/22/2002	10/15/2002	4/18/2003	10/17/2003	4/23/2004
GM-1	841.03	35.10	34.84	34.84	34.84	34.86	34.81	34.81	34.91	35.05	34.96
GM-2	833.24	39.08	38.87	38.86	38.86	38.88	38.83	38.83	38.80	38.85	38.82
GM-3	822.86	27.95	27.72	27.75	27.75	27.74	27.71	27.71	27.68	27.72	27.68
GM-4	827.37	28.17	27.93	27.95	27.95	27.95	27.91	27.91	27.89	27.92	27.90
MW-4S	842.94	--	--	39.74	39.74	40.93	40.88	--	--	--	40.85

Data prior to 12/99 unavailable.
TOC = Top of casing elevation reported by *Geraghty & Miller SAP*.
amsl = above mean sea level.
BTOC = below top of casing

ATTACHMENT 1

FIELD-SAMPLING SHEETS
AND
CHAIN-OF-CUSTODY FORM

GROUNDWATER MONITORING WELL RECORD FORM
SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY - CITY OF COLUMBIA CITY, IN

WELL NO.: GM-1 DATE: 4-23-04 PROJECT NO.: 34776

FIELD BOOK NO.: N/A WEATHER: P. cloudy / 60° F

SAMPLING CREW: Botley / Akins

WELLHEAD INSPECTION:

Evidence of Activities at Well: No ✓ Yes ____ Comment: ____

Well Protector Condition: Good ✓ Poor ____ Comment: ____

Insect/Rodent Intrusion: No ✓ Yes ____ Comment: ____

Other: N/A

FIELD EQUIPMENT USED: Date Calibrated:

Water Level Indicator: Solinst ✓ Soiltest ____ Plopper ____ 4-23-04

pH Meter: Hanna ____ Orion ____ Oakton ✓

Conductivity Meter: YSI ____ Oakton ✓ Myron L ____

Thermometer: YSI ____ Hanna ____ Oakton ✓

Turbidity: Hach ✓ HF Scientific ____

Dissolved Oxygen: Corning No. 1 ____ Corning No. 2 ____

Other: QED FF 8200 GW Filter

STATIC WATER LEVEL:

Reference Point (RP) Elevation: Top Casing ✓ Top Protector ____ Well Stick-up ____

Measured Level:	1st	2nd	3rd	Average
Time/Depth:	11:16am / 30.68	1116AM / 30.68	1116AM / 30.68	30.68

Well Bottom: Measured Distance from RP: 34.96' 1WV: 0.70 gal 5WV: 3.5 gal

PURGING:

Purging Device: Dedicated Pump ____ Dedicated Pump ____ Disposable Bailer ✓
Grundfos Pump ____ Bladder Pump ____ Other ____

Time Elapsed During Purging (mins.): 8 Total Gallons Removed During Purging: 6.0 + Gallons

MEASUREMENTS gal.	TIME (IN MINUTES)							
	1130AM	1131AM	1133AM	1134AM	1135AM	1137AM	1138AM	—
Amount of Water Removed ~~(mlor)~~	Initial	1.0	2.0	3.0	4.0	5.0	6.0	—
pH (S.U.)	6.52	6.56	6.60	6.64	6.68	6.70	6.72	—
Conductivity (umhos/cm)	768	764	765	763	766	764	762	—
Temperature (°C)	12.3	12.0	11.9	11.9	11.9	12.0	12.0	—
Turbidity (NTU)	154	80	73	61	50	49	44	—
TDS (ppm)	384	382	383	381	384	382	383	—
Dissolved Oxygen (mg/l)	-	-	-	-	-	-	—	—

SAMPLING:

Sampling Device: Dedicated Pump ____ Dedicated Pump ____ Disposable Bailer ✓
Grundfos Pump ____ Bladder Pump ____ Other ____

Time Sampling Began: 1140AM Time Completed: 1150 AM

Characteristics of Water: Odor N/A Color Clear
Turbidity Clear Other Small fine Sand in water

QA/QC Sample Collected: Duplicate ___ Replicate ___ Matrix Spike/Matrix Spike Duplicate ___ None ✓

REMARKS:

* Initial 2 Gallons boiled out alot of Iron then Cleared!

GROUNDWATER MONITORING WELL RECORD FORM
SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY - CITY OF COLUMBIA CITY, IN

WELL NO.: GM-2 DATE: 4-23-04 PROJECT NO.: 34776

FIELD BOOK NO.: N/A WEATHER: P. Cloudy 60's

SAMPLING CREW: Botley / Akins

WELLHEAD INSPECTION:

Evidence of Activities at Well: No ✓ Yes ____ Comment: ____

Well Protector Condition: Good ✓ Poor ____ Comment: ____

Insect/Rodent Intrusion: No ✓ Yes ____ Comment: ____

Other: N/A

FIELD EQUIPMENT USED: Date Calibrated:

Water Level Indicator: Solinst ✓ Soiltest ____ Plopper ____ 4-23-04

pH Meter: Hanna ____ Orion ____ Oakton ✓

Conductivity Meter: YSI ____ Oakton ✓ Myron L ____

Thermometer: YSI ____ Hanna ____ Oakton ✓

Turbidity: Hach ✓ HF Scientific ____

Dissolved Oxygen: Corning No. 1 ____ Corning No. 2 ____

Other: QED FF 8200 GW Filter

STATIC WATER LEVEL:

Reference Point (RP) Elevation: Top Casing ✓ Top Protector ____ Well Stick-up ____

Measured Level:	1st	2nd	3rd	Average
Time/Depth:	1110AM / 22.69	1110AM / 22.69	1110AM / 22.69	22.69

Well Bottom: Measured Distance from RP: 38.82 1WV = 2.62919 5WV = 13.14595

PURGING:

Purging Device: Dedicated Pump ____ Dedicated Pump ____ Disposable Bailer ✓
Grundfos Pump ____ Bladder Pump ____ Other ____

Time Elapsed During Purging (mins.): 16 Total Gallons Removed During Purging: 15.0+ Gallons

MEASUREMENTS	TIME (IN MINUTES)							
	1157AM	1159AM	1200PM	1203PM	1205PM	1208PM	1211PM	1213PM
Amount of Water Removed (mls.)	1	1.0	3.0	5.0	7.0	10.0	13.0	15.0
pH (S.U.)	7.05	7.01	7.00	6.95	6.93	6.96	7.02	7.05
Conductivity (umhos/cm)	699	709	713	719	721	724	715	723
Temperature (°C)	11.4	11.2	11.4	11.9	11.8	12.0	12.1	12.0
Turbidity (NTU)	83	91	92	20	15	13	13	12
TDS (ppm)	351	355	356	359	361	363	358	359
Dissolved Oxygen (mg/l)	–	–	–	–	–	–	–	–

SAMPLING:

Sampling Device: Dedicated Pump ____ Dedicated Pump ____ Disposable Bailer ✓
Grundfos Pump ____ Bladder Pump ____ Other ____

Time Sampling Began: 1215PM Time Completed: 1225PM

Characteristics of Water: Odor N/A Color Clear
Turbidity Clear Other N/A

QA/QC Sample Collected: Duplicate ___ Replicate ___ Matrix Spike/Matrix Spike Duplicate ___ None ✓

REMARKS:

+ Initial Gallon Some Iron in Purged Water then cleared out!

GROUNDWATER MONITORING WELL RECORD FORM
SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY - CITY OF COLUMBIA CITY, IN

WELL NO.: GM-3 DATE: 4-23-04 PROJECT NO.: 34776

FIELD BOOK NO.: N/A WEATHER: Sunny few Clouds 65-70°

SAMPLING CREW: Botley / Akins

WELLHEAD INSPECTION:

Evidence of Activities at Well: No ✓ Yes ____ Comment: ____

Well Protector Condition: Good ✓ Poor ____ Comment: ____

Insect/Rodent Intrusion: No ✓ Yes ____ Comment: ____

Other: N/A

FIELD EQUIPMENT USED: Date Calibrated:

Water Level Indicator: Solinst ✓ Soiltest ____ Plopper ____ 4-23-04

pH Meter: Hanna ____ Orion ____ Oakton ✓

Conductivity Meter: YSI ____ Oakton ✓ Myron L ____

Thermometer: YSI ____ Hanna ____ Oakton ✓

Turbidity: Hach ✓ HF Scientific ____

Dissolved Oxygen: Corning No. 1 ____ Corning No. 2 ____

Other: QED FF 8200 GW Filter

STATIC WATER LEVEL:

Reference Point (RP) Elevation: Top Casing ✓ Top Protector ____ Well Stick-up ____

Measured Level:	1st	2nd	3rd	Average
Time/Depth:	210PM / 11.95	210PM / 11.95	210PM / 11.95	11.95

Well Bottom: Measured Distance from RP: 27.68 1WV= 2.56399 5WV= 12.81995

PURGING:

Purging Device: Dedicated Pump ____ Dedicated Pump ____ Disposable Bailer ✓
Grundfos Pump ____ Bladder Pump ____ Other ____

Time Elapsed During Purging (mins.): 15 Total Gallons Removed During Purging: 13.0+ Gallons

MEASUREMENTS	TIME (IN MINUTES)							
	213PM	216PM	218PM	220PM	223PM	225PM	228PM	
Amount of Water Removed (mls.)	1	1.0	3.0	5.0	8.0	10.0	13.0	
pH (S.U.)	8.48	8.29	8.12	8.06	7.95	7.89	7.86	
Conductivity (umhos/cm)	509	549	571	572	557	557	560	
Temperature (°C)	9.4	8.1	8.2	8.1	8.2	8.3	8.4	
Turbidity (NTU)	92	101	69	56	46	44	45	
TDS (ppm)	257	274	286	286	280	279	280	
Dissolved Oxygen (mg/l)	-	-	-	-	-	-	-	

SAMPLING:

Sampling Device: Dedicated Pump ____ Dedicated Pump ____ Disposable Bailer ✓
Grundfos Pump ____ Bladder Pump ____ Other ____

Time Sampling Began: 230PM Time Completed: 240PM

Characteristics of Water: Odor N/A Color Clear
Turbidity Clear Other N/A

QA/QC Sample Collected: Duplicate ____ Replicate ____ Matrix Spike/Matrix Spike Duplicate ____ None ✓

REMARKS:

* Equipment Blank Taken at 130PM Before Sampling this well!

...plicate thi...
...en at Well

GROUNDWATER MONITORING WELL RECORD FORM
SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY - CITY OF COLUMBIA CITY, IN

WELL NO.: GM-4 DATE: 4-23-04 PROJECT NO.: 34776

FIELD BOOK NO.: N/A WEATHER: Sunny to Partly Cloudy 60ish

SAMPLING CREW: Botley / Akins

WELLHEAD INSPECTION:

Evidence of Activities at Well: No ✓ Yes ____ Comment: ____

Well Protector Condition: Good ✓ Poor ____ Comment: ____

Insect/Rodent Intrusion: No ✓ Yes ____ Comment: ____

Other: N/A

FIELD EQUIPMENT USED: Date Calibrated:

Water Level Indicator: Solinst ✓ Soiltest ____ Plopper ____ 4-23-04

pH Meter: Hanna ____ Orion ____ Oakton ✓

Conductivity Meter: YSI ____ Oakton ✓ Myron L ____

Thermometer: YSI ____ Hanna ____ Oakton ✓

Turbidity: Hach ✓ HF Scientific ____

Dissolved Oxygen: Corning No. 1 ____ Corning No. 2 ____

Other: QED FF 8200 GW Filter

STATIC WATER LEVEL:

Reference Point (RP) Elevation: Top Casing ✓ Top Protector ____ Well Stick-up ____

Measured Level:	1st	2nd	3rd	Average
Time/Depth:	1236PM/ 16.59	1236PM/ 16.59	1236PM/ 16.59	16.59

Well Bottom: Measured Distance from RP: 27.90 IWV= 1.84353 SWV = 9.21765

PURGING:

Purging Device: Dedicated Pump ____ Dedicated Pump ____ Disposable Bailer ✓
Grundfos Pump ____ Bladder Pump ____ Other ____

Time Elapsed During Purging (mins.): 14 Total Gallons Removed During Purging: 10.0+ Gallons

MEASUREMENTS	TIME (IN MINUTES)							
	1243PM	1245PM	1247PM	1250PM	1253PM	1255PM	1257PM	
Amount of Water Removed (mls.)	1	1.0	3.0	5.0	7.0	9.0	10.0	
pH (S.U.)	7.56	7.38	7.35	7.35	7.30	7.29	7.29	
Conductivity (umhos/cm)	760	766	766	749	733	732	732	
Temperature (°C)	11.4	10.5	10.7	10.9	10.8	10.9	10.8	
Turbidity (NTU)	53	192	220	144	65	43	30	
TDS (ppm)	380	389	377	374	366	366	366	
Dissolved Oxygen (mg/l)	–	–	–	–	–	–	–	

SAMPLING:

Sampling Device: Dedicated Pump ____ Dedicated Pump ____ Disposable Bailer ✓
Grundfos Pump ____ Bladder Pump ____ Other ____

Time Sampling Began: 100PM Time Completed: 110PM

Characteristics of Water: Odor N/A Color Clear
Turbidity Clear Other N/A

QA/QC Sample Collected: Duplicate ✓ Replicate ____ Matrix Spike/Matrix Spike Duplicate ____ None ____

REMARKS:

* Initially first 4.5 Gallons lot of Iron in purged water then cleared!

BURGESS & NIPLE ENVIRONMENTAL LABORATORY
CHAIN-OF-CUSTODY RECORD

PROJECT NO: 34776

CLIENT NAME: Columbia City Indiana

SAMPLER: Stephen C. Bottley Jr.

Burgess Niple Inc.

2 cooler 2°. 0°

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION	TOTAL #	500 mL Plastic U/P	SCB [redacted] 250 mL Plastic HNO3	250 mL Plastic H2SO4	40 mL Glass VOALS HCL			REMARKS Temp.	PH	Cond.	Turb.
GM-1	4/23/04	1140AM		✓	Groundwater	6	1	1	1	3	3151		12.0	6.72	762	.44
GM-2		1215PM		✓		6	1	1	1	3	3152		12.0	7.05	723	12
GM-3		230 PM		✓		6	1	1	1	3	3153		8.4	7.86	560	45
GM-4		100 PM		✓		6	1	1	1	3	3154		10.8	7.29	732	30
GM-Duplicate				✓		6	1	1	1	3	3155					
Equipment Blank					DI Water	6	1	1	1	3	3156					
Trip Blank	4/23/04										3157					

Relinquished by:	Date	Time	Received by:	Date	Time	Remarks:
Relinquished by: Stephen C. Bottley Jr.	4/26/04	Time 720AM	Received for Lab by: [signature]	4/26/04	Time 0720	PH < 2 H2SO4 HNO3

BURGESS & NIPLE, LIMITED
ENVIRONMENTAL LABORATORY

5085 REED ROAD, COLUMBUS, OH 43220
TELEPHONE: (614)459-2050
FAX: (614)459-5398

METHOD OF SHIPMENT: Hand Delivered to Lab

ATTACHMENT 2

LABORATORY REPORT

AMERICAN ANALYTICAL LABORATORIES, INC. - CERTIFICATE OF ANALYSIS -

ANALYTICAL SCIENCES • COLUMBUS OPERATIONS

City of Columbia City, IN
Wayne Reclamation and Recycling Facility
Groundwater Monitoring
c/o 5085 Reed Road
Columbus, OH 43220

Report Date: *07-May-04*

Attn: BN-Mike Akins

American Analytical Lab #: 04-03151 **Sample ID:** GM-1

Date Submitted to Lab: 4/26/04 **Date Logged-In:** 4/26/04

Client Project #: 34776 **Matrix:** G/Water

- SAMPLE COLLECTION INFORMATION -

Date: 4/23/04 **Time** 11:40 AM **By:** Botley

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst WS#
NH3A	350.1	Ammonia	0.05	1.041	1.04	mg/l	4/29/04	JRW 36145
CL	4500-Cl	Chloride	1	51.290	51	mg/l	4/27/04	JRW 36104
COD	410.4	Chemical Oxygen Demand	5	5.000	5	mg/l	4/28/04	MRW36140
NAICP	6010/200	Sodium	10.00	23.100	23.1	mg/l	4/29/04	CIU 36157
8260-COLUMBI	8260	Acetone	100	2.020	< 100	ug/l	4/28/04	KBJ 36151
	8260	Acrylonitrile	50	0.000	< 50	ug/l	4/28/04	KBJ 36151
	8260	Benzene	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Bromochloromethane	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Bromodichloromethane	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Bromoform	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Bromomethane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ 36151
	8260	Carbon disulfide	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ 36151
	8260	Carbon tetrachloride	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Chlorobenzene	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Chloroethane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ 36151
	8260	Chloroform	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Chloromethane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ 36151

Ohio Lab Approval # 4032 - Ohio VAP Certificate # CL0042 - US EPA Lab # OH0020

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Lab Number 04-03151 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	1,2-Dibromo-3-chloropropane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	Dibromochloromethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,2-Dibromoethane (EDB)	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Dibromomethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,2-Dichlorobenzene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,4-Dichlorobenzene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Trans-1,4-Dichloro-2-Butene	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	1,1-Dichloroethane	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	1,2-Dichloroethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,1-Dichloroethene	0.5	0.000	< 0.5	ug/l	4/28/04	KBJ	36151
	8260	cis-1,2-Dichloroethene	0.5	0.000	< 0.5	ug/l	4/28/04	KBJ	36151
	8260	trans-1,2-Dichloroethene	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	1,2-Dichloropropane	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	cis-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	trans-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Ethylbenzene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	2-Hexanone	50	0.000	< 50	ug/l	4/28/04	KBJ	36151
	8260	Methyl ethyl ketone	10	0.000	< 10	ug/l	4/28/04	KBJ	36151
	8260	Methyl Iodide	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	4-Methyl-2-pentanone (MIBK)	50	0.000	< 50	ug/l	4/28/04	KBJ	36151
	8260	Methylene chloride	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Styrene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,1,1,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,1,2,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Tetrachloroethene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Toluene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,1,1-Trichloroethane	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	1,1,2-Trichloroethane	0.5	0.000	< 0.5	ug/l	4/28/04	KBJ	36151

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Lab Number 04-03151 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	Trichloroethene	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	Trichlorofluoromethane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	1,2,3-Trichloropropane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Vinyl acetate	50	0.000	< 50	ug/l	4/28/04	KBJ	36151
	8260	Vinyl chloride	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	Xylene, Total	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
		MS/MSD high recovery for dichlorodifluoromethane. LCS OK.							
TEMP		Temperature		12.000	12.0	degrees (	4/23/04	SCB	36106
PHFIELD		pH	1.00	6.720	6.72	S.U.	4/23/04	SCB	36106
CONDFIELD		Conductivity	1	762.000	762	umhos/cr	4/23/04	SCB	36106
TURBFIELD		Turbidity	0.0	44.000	44	NTU	4/23/04	SCB	36106

End of Report

Report Approved By: Peter J. Youll

Peter J. Youll
Laboratory Director

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AMERICAN ANALYTICAL LABORATORIES, INC. - CERTIFICATE OF ANALYSIS -

ANALYTICAL SCIENCES • COLUMBUS OPERATIONS

City of Columbia City, IN
Wayne Reclamation and Recycling Facility
Groundwater Monitoring
c/o 5085 Reed Road
Columbus, OH 43220

Report Date: *07-May-04*

Attn: BN-Mike Akins

American Analytical Lab #: 04-03152 **Sample ID:** GM-2

Date Submitted to Lab: 4/26/04 **Date Logged-In:** 4/26/04

Client Project #: 34776 **Matrix:** G/Water

- SAMPLE COLLECTION INFORMATION -

Date: 4/23/04 **Time** 12:15 PM **By:** Botley

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst WS#
NH3A	350.1	Ammonia	0.05	1.284	1.28	mg/l	4/29/04	JRW 36145
CL	4500-Cl	Chloride	1	11.060	11	mg/l	4/27/04	JRW 36104
COD	410.4	Chemical Oxygen Demand	5	15.000	15	mg/l	4/28/04	MRW36140
NAICP	6010/200	Sodium	1.0	10.070	10.1	mg/l	4/29/04	CIU 36157
8260-COLUMBI	8260	Acetone	100	2.540	< 100	ug/l	4/28/04	KBJ 36151
	8260	Acrylonitrile	50	0.000	< 50	ug/l	4/28/04	KBJ 36151
	8260	Benzene	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Bromochloromethane	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Bromodichloromethane	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Bromoform	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Bromomethane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ 36151
	8260	Carbon disulfide	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ 36151
	8260	Carbon tetrachloride	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Chlorobenzene	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Chloroethane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ 36151
	8260	Chloroform	5	0.000	< 5	ug/l	4/28/04	KBJ 36151
	8260	Chloromethane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ 36151

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Lab Number 04-03152 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	1,2-Dibromo-3-chloropropane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	Dibromochloromethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,2-Dibromoethane (EDB)	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Dibromomethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,2-Dichlorobenzene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,4-Dichlorobenzene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Trans-1,4-Dichloro-2-Butene	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	1,1-Dichloroethane	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	1,2-Dichloroethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,1-Dichloroethene	0.5	0.000	< 0.5	ug/l	4/28/04	KBJ	36151
	8260	cis-1,2-Dichloroethene	0.5	0.000	< 0.5	ug/l	4/28/04	KBJ	36151
	8260	trans-1,2-Dichloroethene	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	1,2-Dichloropropane	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	cis-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	trans-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Ethylbenzene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	2-Hexanone	50	0.000	< 50	ug/l	4/28/04	KBJ	36151
	8260	Methyl ethyl ketone	10	0.000	< 10	ug/l	4/28/04	KBJ	36151
	8260	Methyl Iodide	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	4-Methyl-2-pentanone (MIBK)	50	0.000	< 50	ug/l	4/28/04	KBJ	36151
	8260	Methylene chloride	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Styrene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,1,1,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,1,2,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Tetrachloroethene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Toluene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,1,1-Trichloroethane	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	1,1,2-Trichloroethane	0.5	0.000	< 0.5	ug/l	4/28/04	KBJ	36151

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Lab Number 04-03152 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	Trichloroethene	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	Trichlorofluoromethane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	1,2,3-Trichloropropane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Vinyl acetate	50	0.000	< 50	ug/l	4/28/04	KBJ	36151
	8260	Vinyl chloride	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	Xylene, Total	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
TEMP		Temperature		12.000	12.0	legrees (	4/23/04	SCB	36106
PHFIELD		pH	1.00	7.050	7.05	S.U.	4/23/04	SCB	36106
CONDFIELD		Conductivity	1	723.000	723	mhos/cr	4/23/04	SCB	36106
TURBFIELD		Turbidity	0.0	12.000	12	NTU	4/23/04	SCB	36106

End of Report

Report Approved By: Peter J. Youll

Peter J. Youll
Laboratory Director

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ANALYTICAL SCIENCES • COLUMBUS OPERATIONS

City of Columbia City, IN
Wayne Reclamation and Recycling Facility
Groundwater Monitoring
c/o 5085 Reed Road
Columbus, OH 43220

Report Date: *07-May-04*

Attn: BN-Mike Akins

American Analytical Lab #: 04-03153 **Sample ID:** GM-3

Date Submitted to Lab: 4/26/04 **Date Logged-In:** 4/26/04

Client Project #: 34776 **Matrix:** G/Water

- SAMPLE COLLECTION INFORMATION -

Date: 4/23/04 **Time** 2:30 PM **By:** Botley

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
NH3A	350.1	Ammonia	0.05	0.450	0.45	mg/l	4/29/04	JRW	36145
CL	4500-Cl	Chloride	1	41.740	42	mg/l	4/27/04	JRW	36104
COD	410.4	Chemical Oxygen Demand	5	33.000	33	mg/l	4/28/04	MRW	36140
NAICP	6010/200	Sodium	2.0	15.740	15.7	mg/l	4/29/04	CIU	36157
8260-COLUMBI	8260	Acetone	100	1.780	< 100	ug/l	4/28/04	KBJ	36151
	8260	Acrylonitrile	50	0.000	< 50	ug/l	4/28/04	KBJ	36151
	8260	Benzene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Bromochloromethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Bromodichloromethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Bromoform	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Bromomethane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	Carbon disulfide	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	Carbon tetrachloride	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Chlorobenzene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Chloroethane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	Chloroform	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Chloromethane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151

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Lab Number 04-03153 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	1,2-Dibromo-3-chloropropane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	Dibromochloromethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,2-Dibromoethane (EDB)	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Dibromomethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,2-Dichlorobenzene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,4-Dichlorobenzene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Trans-1,4-Dichloro-2-Butene	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	1,1-Dichloroethane	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	1,2-Dichloroethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,1-Dichloroethene	0.5	0.000	< 0.5	ug/l	4/28/04	KBJ	36151
	8260	cis-1,2-Dichloroethene	0.5	58.840	59	ug/l	4/28/04	KBJ	36151
	8260	trans-1,2-Dichloroethene	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	1,2-Dichloropropane	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	cis-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	trans-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Ethylbenzene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	2-Hexanone	50	0.000	< 50	ug/l	4/28/04	KBJ	36151
	8260	Methyl ethyl ketone	10	0.000	< 10	ug/l	4/28/04	KBJ	36151
	8260	Methyl Iodide	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	4-Methyl-2-pentanone (MIBK)	50	0.000	< 50	ug/l	4/28/04	KBJ	36151
	8260	Methylene chloride	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Styrene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,1,1,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,1,2,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Tetrachloroethene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Toluene	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	1,1,1-Trichloroethane	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	1,1,2-Trichloroethane	0.5	0.000	< 0.5	ug/l	4/28/04	KBJ	36151

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Lab Number 04-03153 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	Trichloroethene	1	0.000	< 1	ug/l	4/28/04	KBJ	36151
	8260	Trichlorofluoromethane	10.0	0.000	< 10.0	ug/l	4/28/04	KBJ	36151
	8260	1,2,3-Trichloropropane	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
	8260	Vinyl acetate	50	0.000	< 50	ug/l	4/28/04	KBJ	36151
	8260	Vinyl chloride	1	27.110	27	ug/l	4/28/04	KBJ	36151
	8260	Xylene, Total	5	0.000	< 5	ug/l	4/28/04	KBJ	36151
TEMP		Temperature		8.400	8.4	degrees (	4/23/04	SCB	36106
PHFIELD		pH	1.00	7.860	7.86	S.U.	4/23/04	SCB	36106
CONDFIELD		Conductivity	1	560.000	560	umhos/cr	4/23/04	SCB	36106
TURBFIELD		Turbidity	0.0	45.000	45	NTU	4/23/04	SCB	36106

End of Report

Report Approved By: Peter J. Youll

Peter J. Youll
Laboratory Director

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ANALYTICAL SCIENCES • COLUMBUS OPERATIONS

City of Columbia City, IN
Wayne Reclamation and Recycling Facility
Groundwater Monitoring
c/o 5085 Reed Road
Columbus, OH 43220

Report Date: *07-May-04*

Attn: BN-Mike Akins

American Analytical Lab #: 04-03154 **Sample ID:** GM-4

Date Submitted to Lab: 4/26/04 **Date Logged-In:** 4/26/04

Client Project #: 34776 **Matrix:** G/Water

- SAMPLE COLLECTION INFORMATION -

Date: 4/23/04 **Time** 1:00 PM **By:** Botley

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
NH3A	350.1	Ammonia	0.05	0.219	0.22	mg/l	4/29/04	JRW	36145
CL	4500-Cl	Chloride	1	5.030	5	mg/l	4/27/04	JRW	36104
COD	410.4	Chemical Oxygen Demand	5	10.000	10	mg/l	4/28/04	MRW	36140
NAICP	6010/200	Sodium	2.00	8.980	8.98	mg/l	4/29/04	CIU	36157
8260-COLUMBI	8260	Acetone	100	0.000	< 100	ug/l	4/29/04	KBJ	36183
	8260	Acrylonitrile	50	0.000	< 50	ug/l	4/29/04	KBJ	36183
	8260	Benzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Bromochloromethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Bromodichloromethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Bromoform	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Bromomethane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Carbon disulfide	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Carbon tetrachloride	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Chlorobenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Chloroethane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Chloroform	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Chloromethane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183

Ohio Lab Approval # 4032 - Ohio VAP Certificate # CL0042 - US EPA Lab # OH0020

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Lab Number 04-03154 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	1,2-Dibromo-3-chloropropane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Dibromochloromethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dibromoethane (EDB)	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Dibromomethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dichlorobenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,4-Dichlorobenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Trans-1,4-Dichloro-2-Butene	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	1,1-Dichloroethane	1	14.600	15	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dichloroethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1-Dichloroethene	0.5	3.760	3.8	ug/l	4/29/04	KBJ	36183
	8260	cis-1,2-Dichloroethene Compound analysed at a 10X dilution.	5.0	106.500	110	ug/l	4/29/04	KBJ	36183
	8260	trans-1,2-Dichloroethene	1	8.110	8	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dichloropropane	1	0.000	< 1	ug/l	4/29/04	KBJ	36183
	8260	cis-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	trans-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Ethylbenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	2-Hexanone	50	0.000	< 50	ug/l	4/29/04	KBJ	36183
	8260	Methyl ethyl ketone	10	0.000	< 10	ug/l	4/29/04	KBJ	36183
	8260	Methyl Iodide	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	4-Methyl-2-pentanone (MIBK)	50	0.000	< 50	ug/l	4/29/04	KBJ	36183
	8260	Methylene chloride	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Styrene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1,1,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1,2,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Tetrachloroethene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Toluene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183

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Lab Number 04-03154 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	1,1,1-Trichloroethane Compound analysed at a 10X dilution.	10.0	176.100	180	ug/l	4/29/04	KBJ	36183
	8260	1,1,2-Trichloroethane	0.5	0.610	0.6	ug/l	4/29/04	KBJ	36183
	8260	Trichloroethene Compound analysed at a 10X dilution.	10.0	626.800	630	ug/l	4/29/04	KBJ	36183
	8260	Trichlorofluoromethane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	1,2,3-Trichloropropane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Vinyl acetate	50	0.000	< 50	ug/l	4/29/04	KBJ	36183
	8260	Vinyl chloride	1	2.640	3	ug/l	4/29/04	KBJ	36183
	8260	Xylene, Total	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
TEMP		Temperature		10.800	10.8	legrees (	4/23/04	SCB	36106
PHFIELD		pH	1.00	7.290	7.29	S.U.	4/23/04	SCB	36106
CONDFIELD		Conductivity	1	732.000	732	mhos/cr	4/23/04	SCB	36106
TURBFIELD		Turbidity	0.0	30.000	30	NTU	4/23/04	SCB	36106

End of Report

Report Approved By: Peter J. Youll

Peter J. Youll
Laboratory Director

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ANALYTICAL SCIENCES • COLUMBUS OPERATIONS

City of Columbia City, IN
Wayne Reclamation and Recycling Facility
Groundwater Monitoring
c/o 5085 Reed Road
Columbus, OH 43220

Report Date: *07-May-04*

Attn: BN-Mike Akins

American Analytical Lab #: 04-03155 **Sample ID:** GM-Duplicate

Date Submitted to Lab: 4/26/04 **Date Logged-In:** 4/26/04

Client Project #: 34776 **Matrix:** G/Water

- SAMPLE COLLECTION INFORMATION -

Date: 4/23/04 **Time** **By:** Botley

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
NH3A	350.1	Ammonia	0.05	0.215	0.22	mg/l	4/29/04	JRW	36145
CL	4500-Cl	Chloride	1	5.030	5	mg/l	4/27/04	JRW	36104
COD	410.4	Chemical Oxygen Demand	5	10.000	10	mg/l	4/28/04	MRW	36140
NAICP	6010/200	Sodium	2.00	8.760	8.76	mg/l	4/29/04	CIU	36157
8260-COLUMBI	8260	Acetone	100	2.550	< 100	ug/l	4/29/04	KBJ	36183
	8260	Acrylonitrile	50	0.000	< 50	ug/l	4/29/04	KBJ	36183
	8260	Benzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Bromochloromethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Bromodichloromethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Bromoform	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Bromomethane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Carbon disulfide	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Carbon tetrachloride	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Chlorobenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Chloroethane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Chloroform	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Chloromethane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183

Ohio Lab Approval # 4032 - Ohio VAP Certificate # CL0042 - US EPA Lab # OH0020

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Lab Number 04-03155 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	1,2-Dibromo-3-chloropropane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Dibromochloromethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dibromoethane (EDB)	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Dibromomethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dichlorobenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,4-Dichlorobenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Trans-1,4-Dichloro-2-Butene	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	1,1-Dichloroethane	1	13.610	14	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dichloroethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1-Dichloroethene	0.5	3.700	3.7	ug/l	4/29/04	KBJ	36183
	8260	cis-1,2-Dichloroethene Compound analysed at a 10X dilution.	5.0	110.800	110	ug/l	4/29/04	KBJ	36183
	8260	trans-1,2-Dichloroethene	1	7.620	8	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dichloropropane	1	0.000	< 1	ug/l	4/29/04	KBJ	36183
	8260	cis-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	trans-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Ethylbenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	2-Hexanone	50	0.000	< 50	ug/l	4/29/04	KBJ	36183
	8260	Methyl ethyl ketone	10	0.000	< 10	ug/l	4/29/04	KBJ	36183
	8260	Methyl Iodide	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	4-Methyl-2-pentanone (MIBK)	50	0.000	< 50	ug/l	4/29/04	KBJ	36183
	8260	Methylene chloride	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Styrene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1,1,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1,2,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Tetrachloroethene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Toluene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183

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Lab Number 04-03155 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	1,1,1-Trichloroethane Compound analysed at 10X dilution.	10.0	172.200	170	ug/l	4/29/04	KBJ	36183
	8260	1,1,2-Trichloroethane	0.5	0.520	0.5	ug/l	4/29/04	KBJ	36183
	8260	Trichloroethene Cmpound analysed at a 10X dilution.	10.0	623.700	620	ug/l	4/29/04	KBJ	36183
	8260	Trichlorofluoromethane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	1,2,3-Trichloropropane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Vinyl acetate	50	0.000	< 50	ug/l	4/29/04	KBJ	36183
	8260	Vinyl chloride	1	2.390	2	ug/l	4/29/04	KBJ	36183
	8260	Xylene, Total	5	0.000	< 5	ug/l	4/29/04	KBJ	36183

End of Report

Report Approved By:

Peter J. Youll
Laboratory Director

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Lab Number 04-03156 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	1,2-Dibromo-3-chloropropane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Dibromochloromethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dibromoethane (EDB)	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Dibromomethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dichlorobenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,4-Dichlorobenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Trans-1,4-Dichloro-2-Butene	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	1,1-Dichloroethane	1	0.000	< 1	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dichloroethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1-Dichloroethene	0.5	0.000	< 0.5	ug/l	4/29/04	KBJ	36183
	8260	cis-1,2-Dichloroethene	0.5	0.000	< 0.5	ug/l	4/29/04	KBJ	36183
	8260	trans-1,2-Dichloroethene	1	0.000	< 1	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dichloropropane	1	0.000	< 1	ug/l	4/29/04	KBJ	36183
	8260	cis-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	trans-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Ethylbenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	2-Hexanone	50	0.000	< 50	ug/l	4/29/04	KBJ	36183
	8260	Methyl ethyl ketone	10	0.000	< 10	ug/l	4/29/04	KBJ	36183
	8260	Methyl Iodide	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	4-Methyl-2-pentanone (MIBK)	50	4.320	< 50	ug/l	4/29/04	KBJ	36183
	8260	Methylene chloride	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Styrene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1,1,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1,2,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Tetrachloroethene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Toluene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1,1-Trichloroethane	1	0.000	< 1	ug/l	4/29/04	KBJ	36183
	8260	1,1,2-Trichloroethane	0.5	0.000	< 0.5	ug/l	4/29/04	KBJ	36183

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City of Columbia City, IN
Wayne Reclamation and Recycling Facility
Groundwater Monitoring
c/o 5085 Reed Road
Columbus, OH 43220

Report Date: *07-May-04*

Attn: BN-Mike Akins

American Analytical Lab #: 04-03157 **Sample ID:** Trip Blank

Date Submitted to Lab: 4/26/04 **Date Logged-In:** 4/26/04

Client Project #: 34776 **Matrix:** Water

- SAMPLE COLLECTION INFORMATION -

Date: 4/23/04 **Time** **By:** Lab

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	Acetone	100	0.000	< 100	ug/l	4/29/04	KBJ	36183
	8260	Acrylonitrile	50	0.000	< 50	ug/l	4/29/04	KBJ	36183
	8260	Benzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Bromochloromethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Bromodichloromethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Bromoform	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Bromomethane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Carbon disulfide	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Carbon tetrachloride	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Chlorobenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Chloroethane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Chloroform	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Chloromethane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dibromo-3-chloropropane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	Dibromochloromethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dibromoethane (EDB)	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Dibromomethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183

Ohio Lab Approval # 4032 - Ohio VAP Certificate # CL0042 - US EPA Lab # OH0020

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Lab Number 04-03157 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	1,2-Dichlorobenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,4-Dichlorobenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Trans-1,4-Dichloro-2-Butene	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	1,1-Dichloroethane	1	0.000	< 1	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dichloroethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1-Dichloroethene	0.5	0.000	< 0.5	ug/l	4/29/04	KBJ	36183
	8260	cis-1,2-Dichloroethene	0.5	0.000	< 0.5	ug/l	4/29/04	KBJ	36183
	8260	trans-1,2-Dichloroethene	1	0.000	< 1	ug/l	4/29/04	KBJ	36183
	8260	1,2-Dichloropropane	1	0.000	< 1	ug/l	4/29/04	KBJ	36183
	8260	cis-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	trans-1,3-Dichloropropene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Ethylbenzene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	2-Hexanone	50	0.000	< 50	ug/l	4/29/04	KBJ	36183
	8260	Methyl ethyl ketone	10	0.000	< 10	ug/l	4/29/04	KBJ	36183
	8260	Methyl Iodide	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	4-Methyl-2-pentanone (MIBK)	50	0.000	< 50	ug/l	4/29/04	KBJ	36183
	8260	Methylene chloride	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Styrene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1,1,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1,2,2-Tetrachloroethane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Tetrachloroethene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Toluene	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	1,1,1-Trichloroethane	1	0.000	< 1	ug/l	4/29/04	KBJ	36183
	8260	1,1,2-Trichloroethane	0.5	0.000	< 0.5	ug/l	4/29/04	KBJ	36183
	8260	Trichloroethene	1	0.000	< 1	ug/l	4/29/04	KBJ	36183
	8260	Trichlorofluoromethane	10.0	0.000	< 10.0	ug/l	4/29/04	KBJ	36183
	8260	1,2,3-Trichloropropane	5	0.000	< 5	ug/l	4/29/04	KBJ	36183
	8260	Vinyl acetate	50	0.000	< 50	ug/l	4/29/04	KBJ	36183

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Lab Number 04-03157 -Continued from Previous Page

Test Group	EPA Method	Test	Calc. RDL	Calc. Result	Final Result	Units	Analysis Date	Analyst	WS#
8260-COLUMBI	8260	Vinyl chloride	1	0.000	< 1	ug/l	4/29/04	KBJ	36183
	8260	Xylene, Total	5	0.000	< 5	ug/l	4/29/04	KBJ	36183

End of Report

Report Approved By:

Peter J. Youll
Laboratory Director

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AMERICAN ANALYTICAL LABORATORIES, INC.
COLUMBUS

COLUMBIA QUALITY ASSURANCE REPORT
APRIL 23, 2004 SAMPLING EVENT

Prepared by:
ShellyAnne Sealy-Payne
Quality Assurance Manager

CLIENT: Burgess & Niple, Inc.
ATTN: Mike Akins

PROJECT #: 34776

PROPERTY: Columbia City

LOCATION: Indiana

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Phone (614) 459-1701 • Fax (614) 459-5398
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COLUMBIA APRIL 23, 2004 SAMPLING EVENT
SAMPLE INVENTORY

AAL-COLUMBUS LABORATORY NUMBER	COLUMBIA SAMPLE I.D.	DATE SAMPLED	TIME SAMPLED	SAMPLED BY
04-03151	GM-1	4/23/04	11:40 am	Stephen Botley
04-03152	GM-2	4/23/04	12:15 pm	Stephen Botley
04-03153	GM-3	4/23/04	11:45 pm	Stephen Botley
04-03154	GM-4	4/23/04	2:30 pm	Stephen Botley
04-03155	GM-Duplicate	4/23/04	1:00 pm	Stephen Botley
04-03156	Equipment Blank	4/23/04	-------	Stephen Botley
04-03157	Trip Blank	4/23/04	-------	Stephen Botley

Case Narratives

WET CHEM PARAMETERS WS# 36104,36140,36145,36258

- No deviations. Analysis had all QC points within limits.

NA (6010) WS # 36157

- No deviations. Analysis had all QC points within limits.

8260A WS# 36151

- All QC associated with these samples passed.
- Samples 3151, 3152 and 3153 had QC within limits.
- Sample 3151 MS/MSD had a high recovery for dichlorodifluoromethane. This was attributed to matrix interference.

8260A WS# 36183

- All QC associated with these samples passed.
- Samples 3154 and 3155 were analyzed x10 for cis-1,2-DCE, 1,1,1-trichloroethane and trichloroethene. The other compounds were analyzed and reported undiluted.
- Samples 3156 and 3157 had QC within limits.

FIELD PARAMETERS WS# 36106

- These results were provided to the laboratory on the COC and we were instructed to provide them on the report to the client.

AMERICAN ANALYTICAL LABORATORIES, INC.

SURROGATE RECOVERY REPORTS

COMPILED BY:
ShellyAnne Sealy-Payne
QA/QC Manager

Volatile Surrogate Compound Recovery

Volatile Surrogate Recovery Report

VOC Waters **WS# 36151**

Lab #	Surrogate Cmpd.	% recovery	Range
LCS std	Dibromofluoromethane	101.3	80 - 120
	1,2-dce-d4	102.5	80 - 120
	toluene-d8	100.5	80 - 120
	4-bfb	97.6	80 - 120
LCS std	Dibromofluoromethane	103.1	80 - 120
	1,2-dce-d4	105.8	80 - 120
	toluene-d8	99.7	80 - 120
	4-bfb	97.7	80 - 120
Blank	Dibromofluoromethane	102.1	80 - 120
	1,2-dce-d4	104.2	80 - 120
	toluene-d8	98.6	80 - 120
	4-bfb	99.4	80 - 120
Blank	Dibromofluoromethane	104.1	80 - 120
	1,2-dce-d4	105.3	80 - 120
	toluene-d8	100.1	80 - 120
	4-bfb	101.5	80 - 120
04-03151	Dibromofluoromethane	102.2	80 - 120
	1,2-dce-d4	103.3	80 - 120
	toluene-d8	101.0	80 - 120
	4-bfb	99.4	80 - 120
04-03152	Dibromofluoromethane	102.2	80 - 120
	1,2-dce-d4	105.2	80 - 120
	toluene-d8	98.9	80 - 120
	4-bfb	98.7	80 - 120
04-03153	Dibromofluoromethane	100.0	80 - 120
	1,2-dce-d4	105.8	80 - 120
	toluene-d8	101.2	80 - 120
	4-bfb	98.1	80 - 120
04-03151MS	Dibromofluoromethane	103.4	80 - 120
	1,2-dce-d4	105.9	80 - 120
	toluene-d8	100.7	80 - 120
	4-bfb	101.8	80 - 120
04-03151MSD	Dibromofluoromethane	101.2	80 - 120
	1,2-dce-d4	104.0	80 - 120
	toluene-d8	100.3	80 - 120
	4-bfb	100.5	80 - 120

Volatile Surrogate Compound Recovery

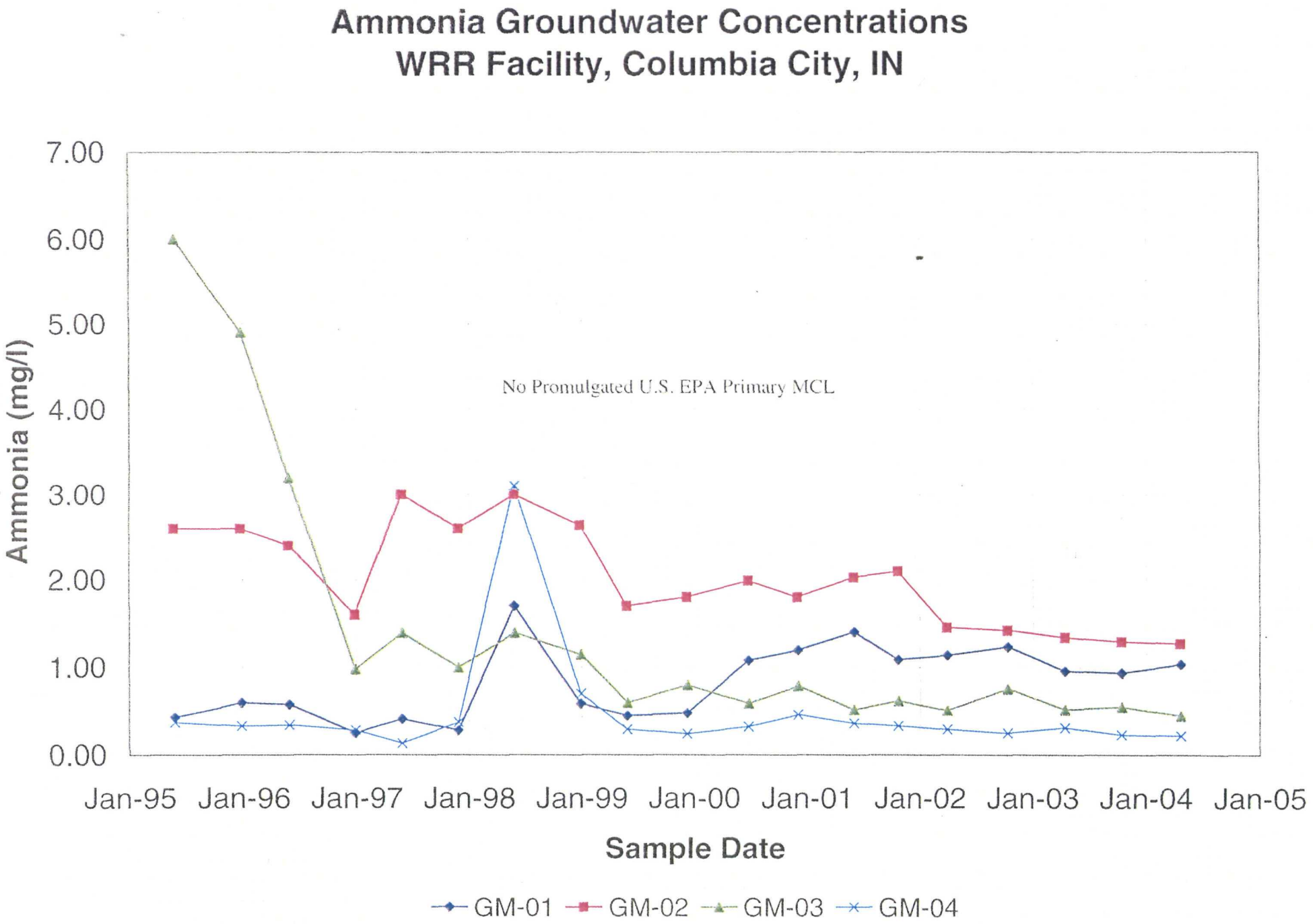
Volatile Surrogate Recovery Report

VOC Waters **WS# 36183**

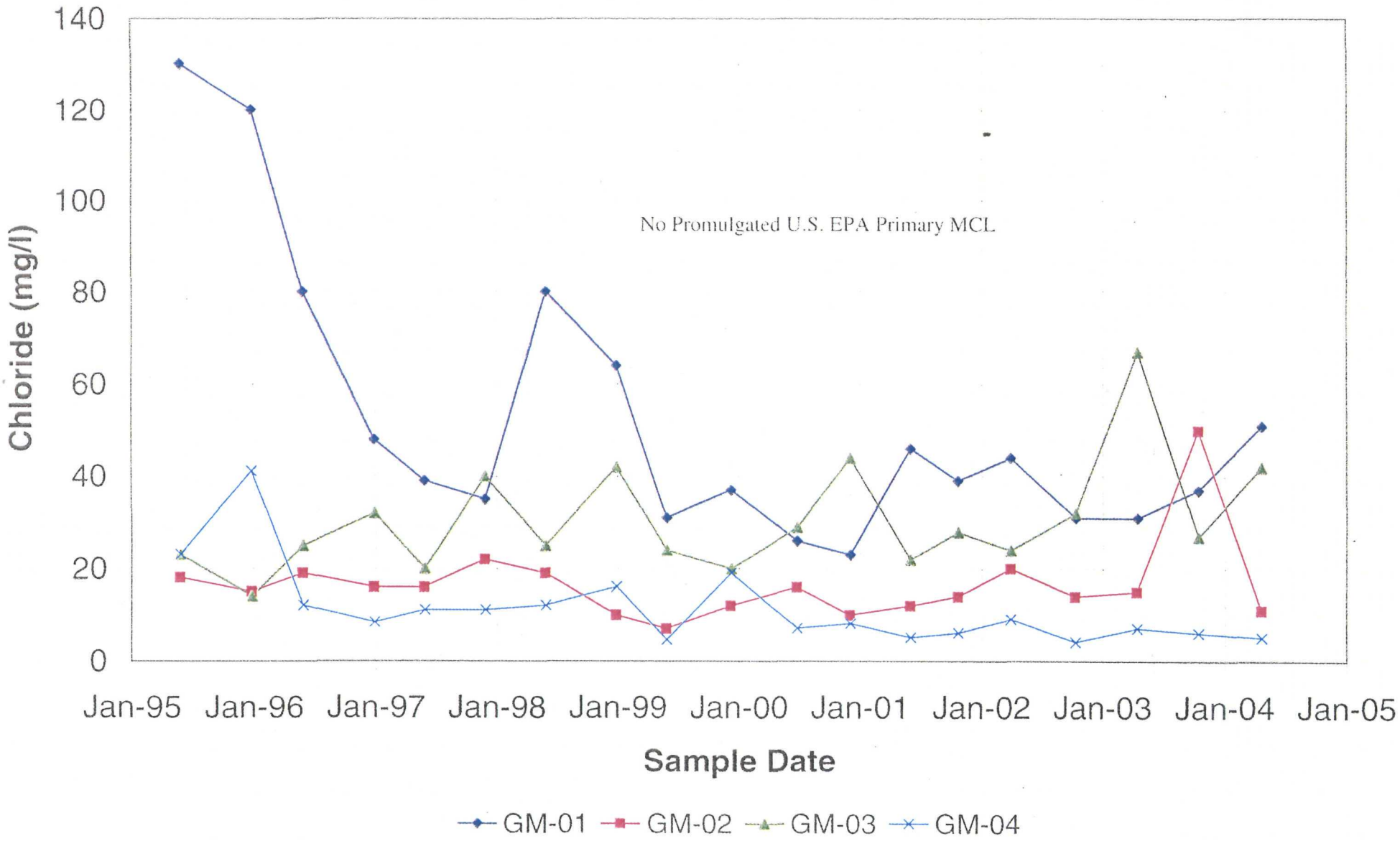
Lab #	Surrogate Cmpd.	% recovery	Range
LCS std	DBFM	102.1	80 - 120
	1,2-dce-d4	102.4	80 - 120
	toluene-d8	100.1	80 - 120
	4-bfb	100.2	80 - 120
LCS std	DBFM	99.7	80 - 120
	1,2-dce-d4	102.2	80 - 120
	toluene-d8	101.2	80 - 120
	4-bfb	100.8	80 - 120
Blank	DBFM	103.7	80 - 120
	1,2-dce-d4	105.7	80 - 120
	toluene-d8	100.3	80 - 120
	4-bfb	100.0	80 - 120
Blank	DBFM	102.4	80 - 120
	1,2-dce-d4	107.8	80 - 120
	toluene-d8	98.2	80 - 120
	4-bfb	101.0	80 - 120
04-03155	DBFM	103.4	80 - 120
	1,2-dce-d4	106.5	80 - 120
	toluene-d8	99.2	80 - 120
	4-bfb	99.2	80 - 120
04-03154	DBFM	104.2	80 - 120
	1,2-dce-d4	106.0	80 - 120
	toluene-d8	100.2	80 - 120
	4-bfb	101.0	80 - 120
04-03156	DBFM	107.8	80 - 120
	1,2-dce-d4	109.9	80 - 120
	toluene-d8	99.2	80 - 120
	4-bfb	101.2	80 - 120
04-03157	DBFM	107.5	80 - 120
	1,2-dce-d4	109.3	80 - 120
	toluene-d8	98.9	80 - 120
	4-bfb	101.8	80 - 120
04-03154	DBFM	104.6	80 - 120
10X	1,2-dce-d4	108.8	80 - 120
	toluene-d8	100.1	80 - 120
	4-bfb	101.2	80 - 120
04-03154MS	DBFM	102.6	80 - 120
10X	1,2-dce-d4	108.4	80 - 120
	toluene-d8	99.5	80 - 120
	4-bfb	102.5	80 - 120
04-03154MSD	DBFM	102.4	80 - 120
10X	1,2-dce-d4	109.1	80 - 120
	toluene-d8	102.2	80 - 120
	4-bfb	101.3	80 - 120
04-03155	DBFM	106.4	80 - 120
10X	1,2-dce-d4	109.7	80 - 120
	toluene-d8	100.6	80 - 120
	4-bfb	102.7	80 - 120

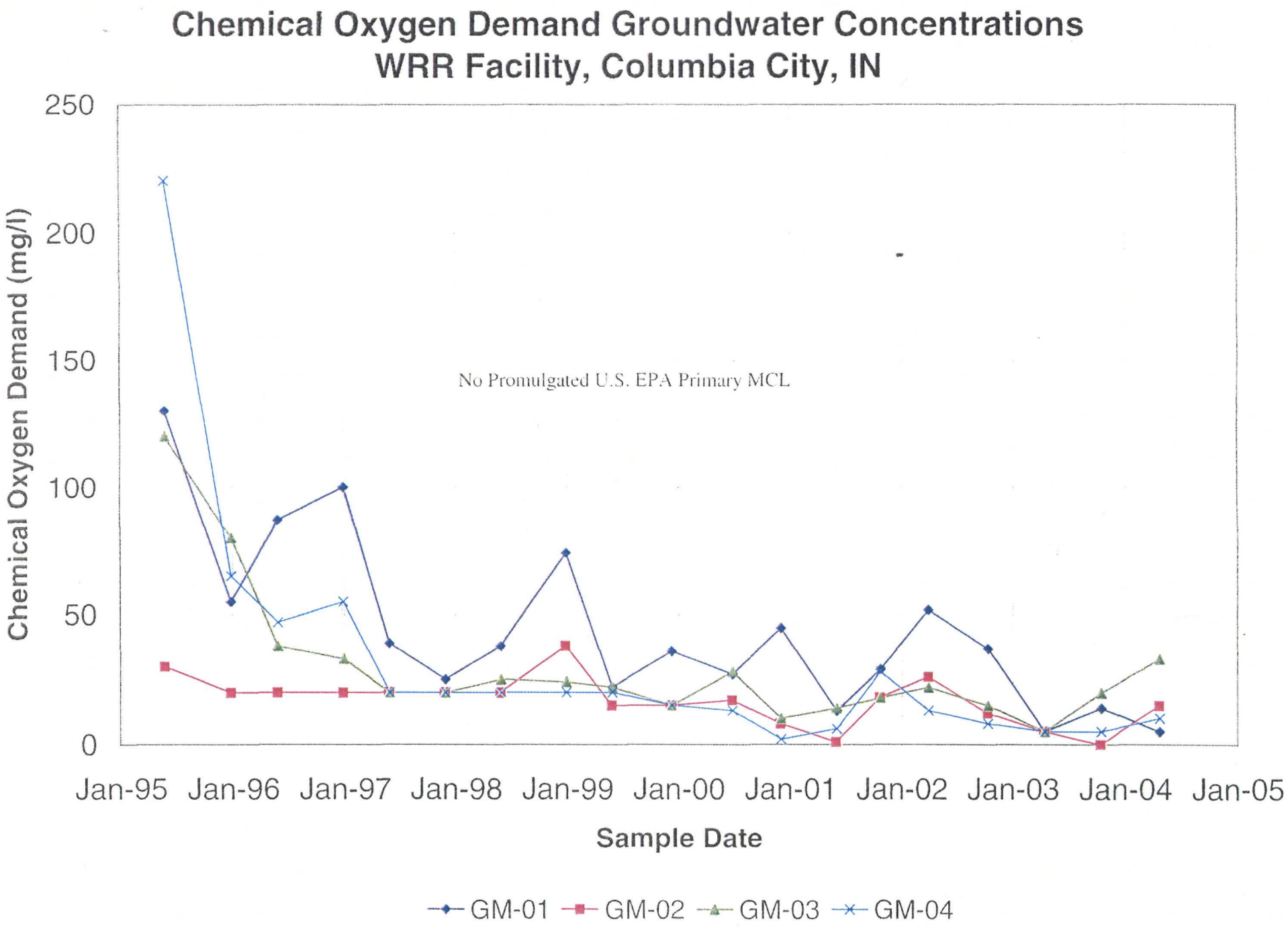
ATTACHMENT 3

TIME-VERSUS-CONCENTRATION PLOTS

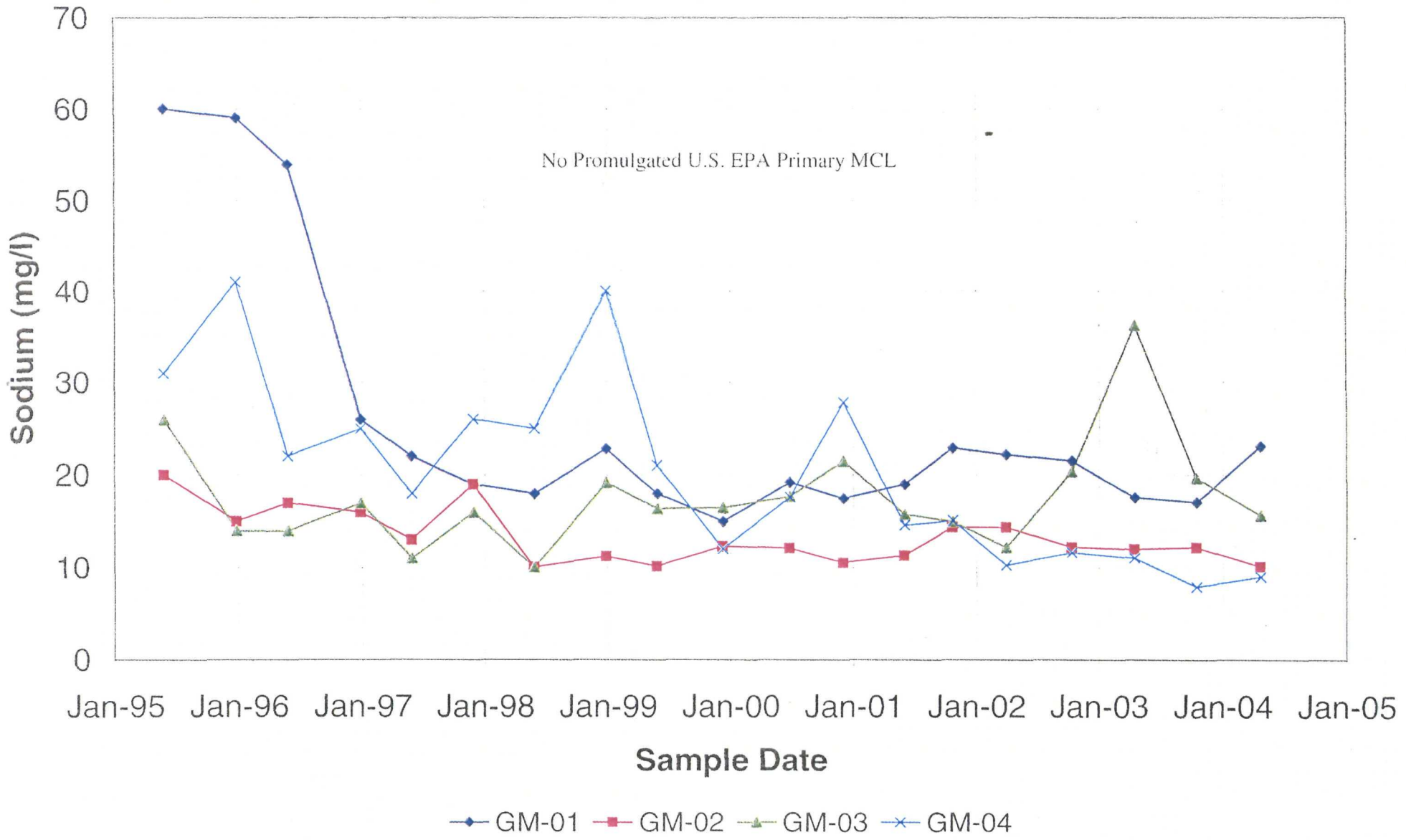

Ammonia Groundwater Concentrations
WRR Facility, Columbia City, IN
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Ammonia (mg/l)
No Promulgated U.S. EPA Primary MCL
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Sample Date
GM-01
GM-02
GM-03
GM-04

Chloride Groundwater Concentrations
WRR Facility, Columbia City, IN

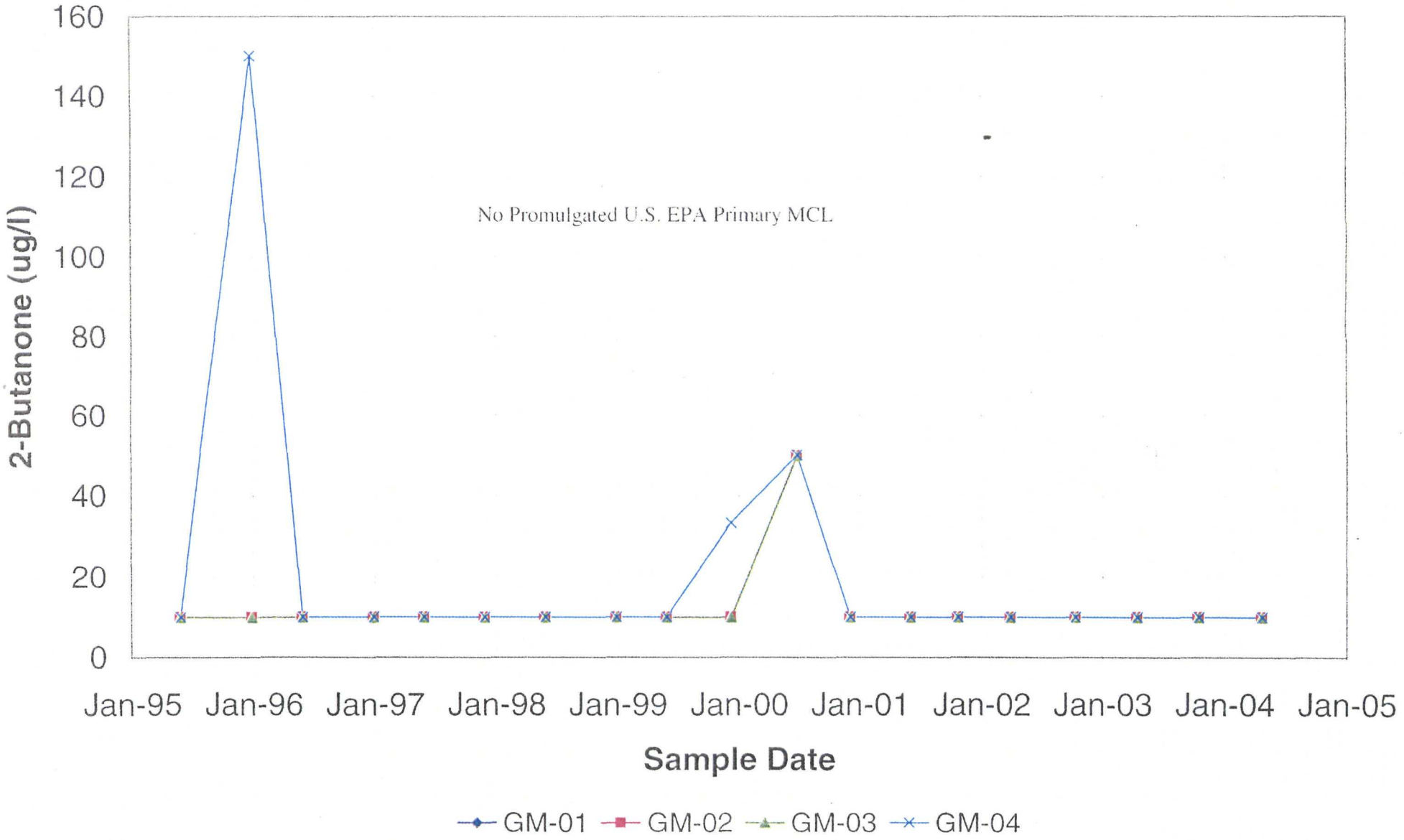



Chemical Oxygen Demand Groundwater Concentrations
WRR Facility, Columbia City, IN
Chemical Oxygen Demand (mg/l)
250
200
150
100
50
0
No Promulgated U.S. EPA Primary MCL
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Sample Date
GM-01
GM-02
GM-03
GM-04

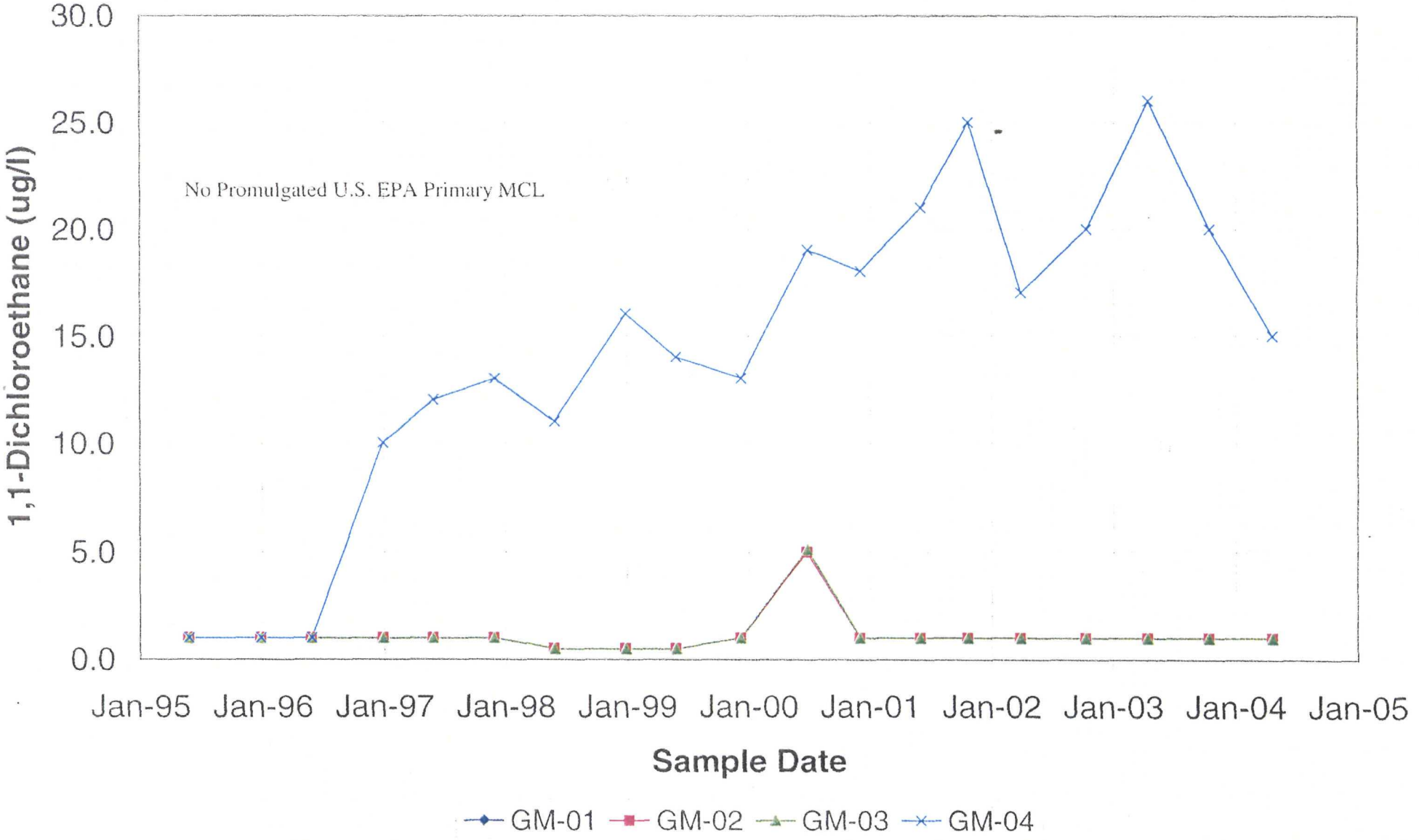
Sodium Groundwater Concentrations
WRR Facility, Columbia City, IN



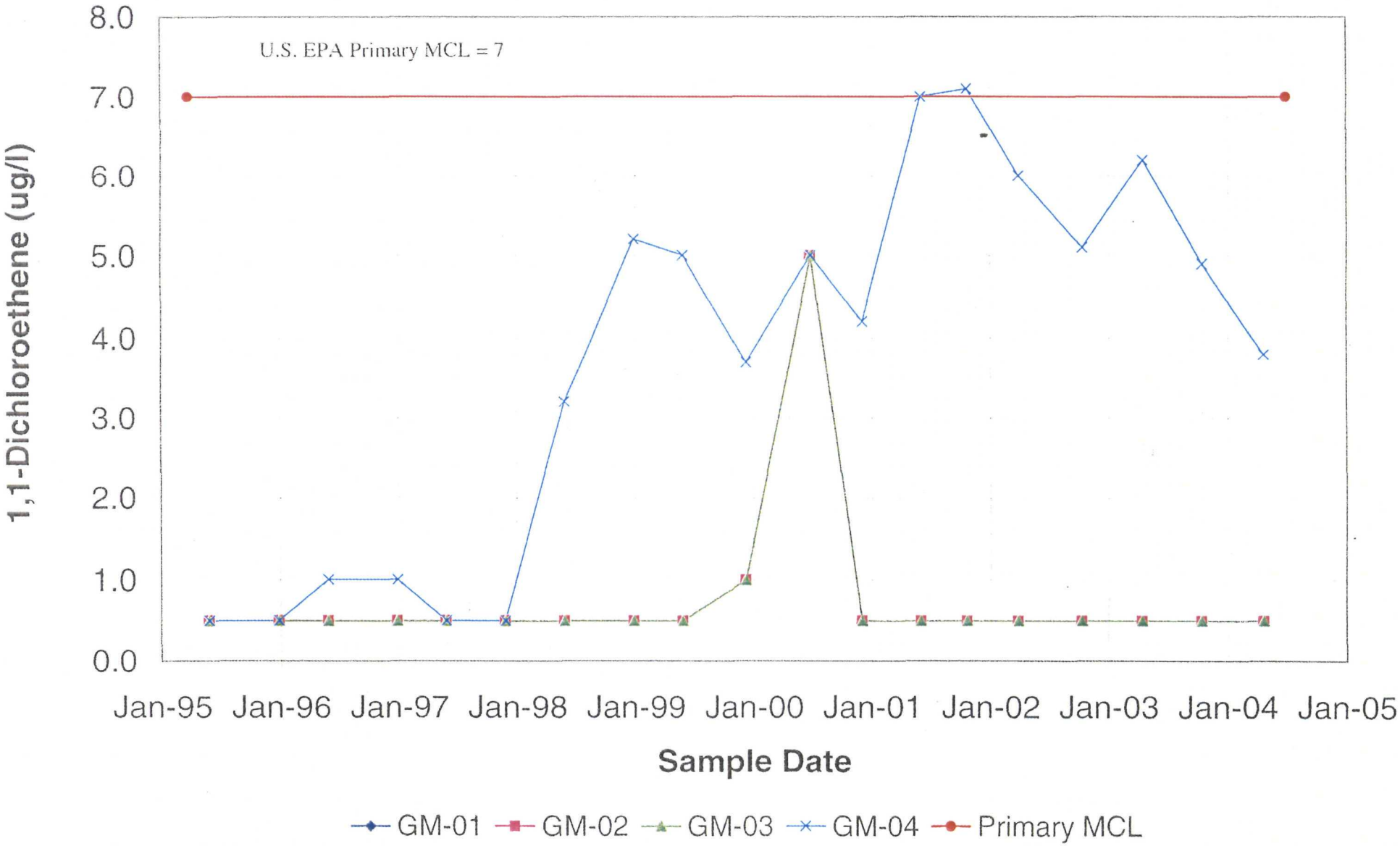
2-Butanone (MEK) Groundwater Concentrations
WRR Facility, Columbia City, IN

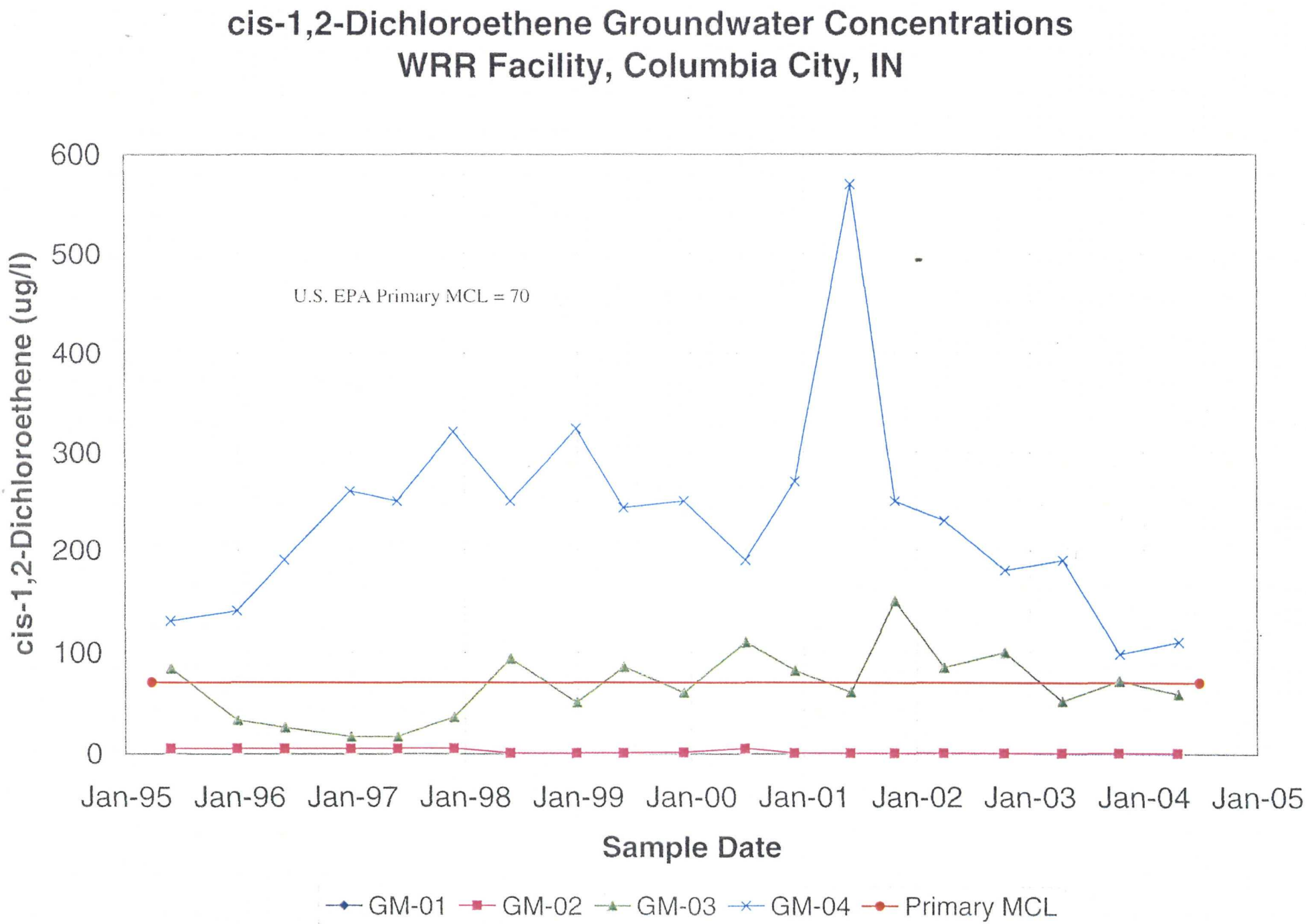


1,1-Dichloroethane Groundwater Concentrations
WRR Facility, Columbia City, IN

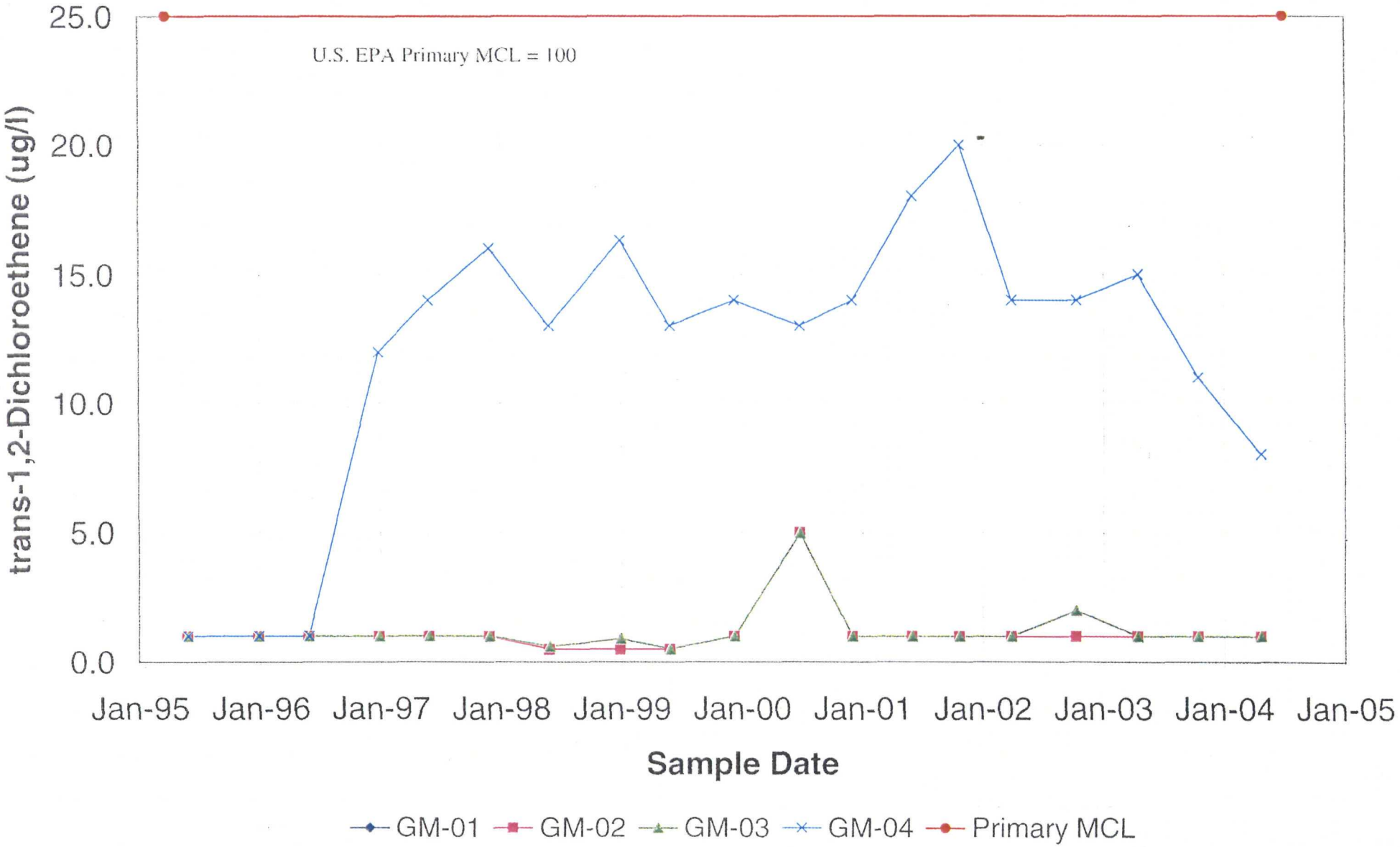


1,1-Dichloroethene Groundwater Concentrations
WRR Facility, Columbia City, IN

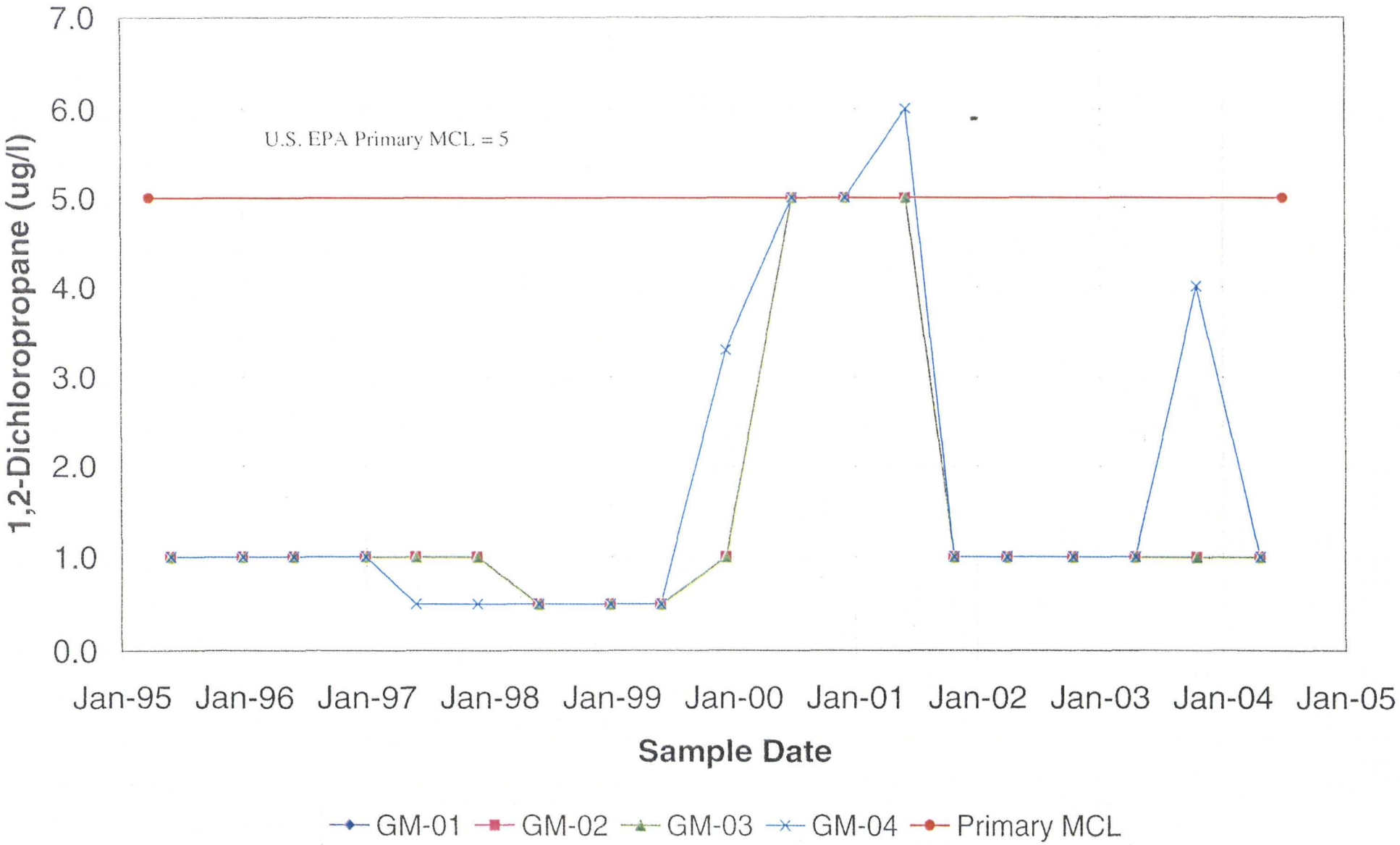



cis-1,2-Dichloroethene Groundwater Concentrations
WRR Facility, Columbia City, IN
U.S. EPA Primary MCL = 70
cis-1,2-Dichloroethene (ug/l)
600
500
400
300
200
100
0
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Sample Date
GM-01
GM-02
GM-03
GM-04
Primary MCL

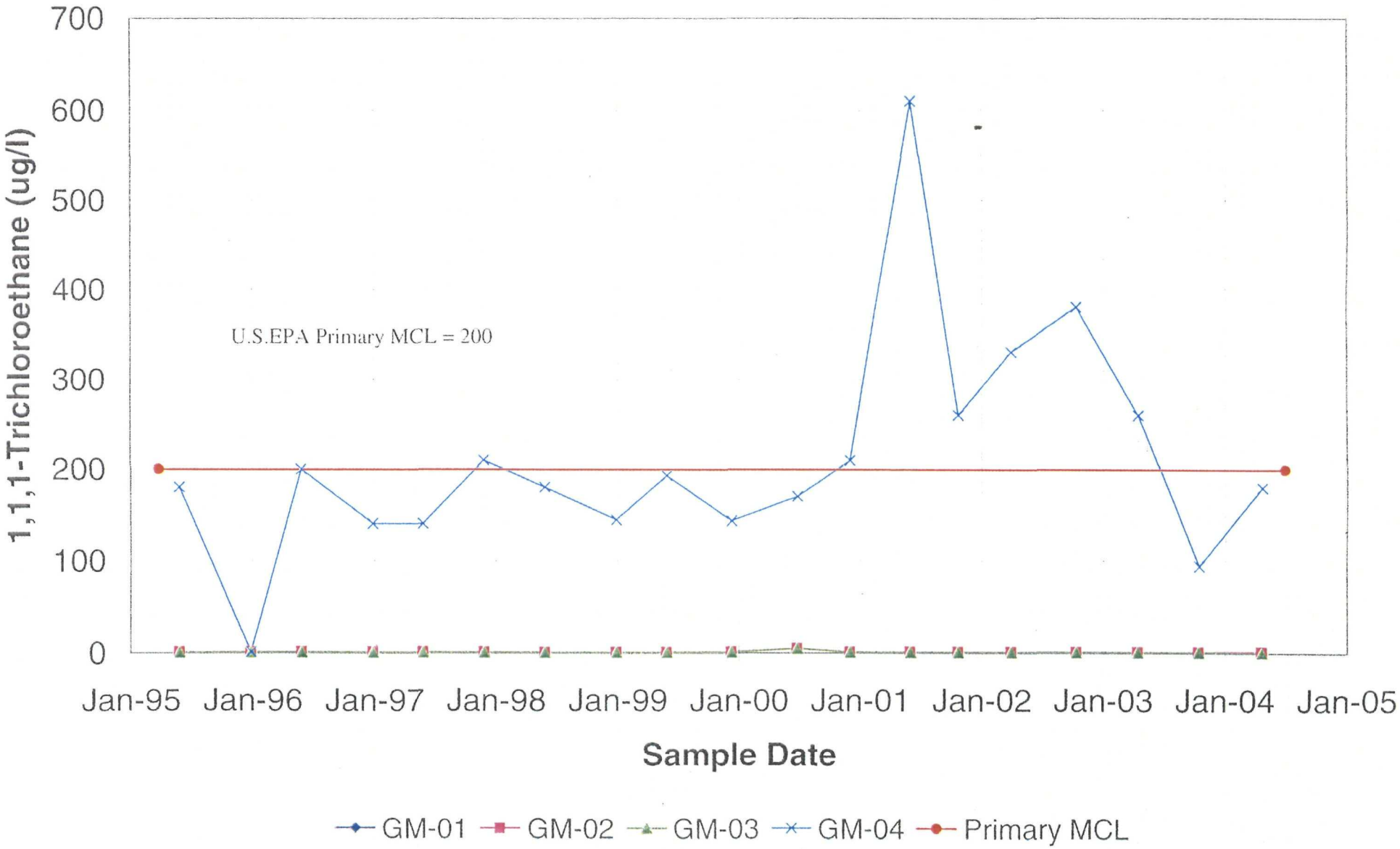
trans-1,2-Dichloroethene Groundwater Concentrations
WRR Facility, Columbia City, IN



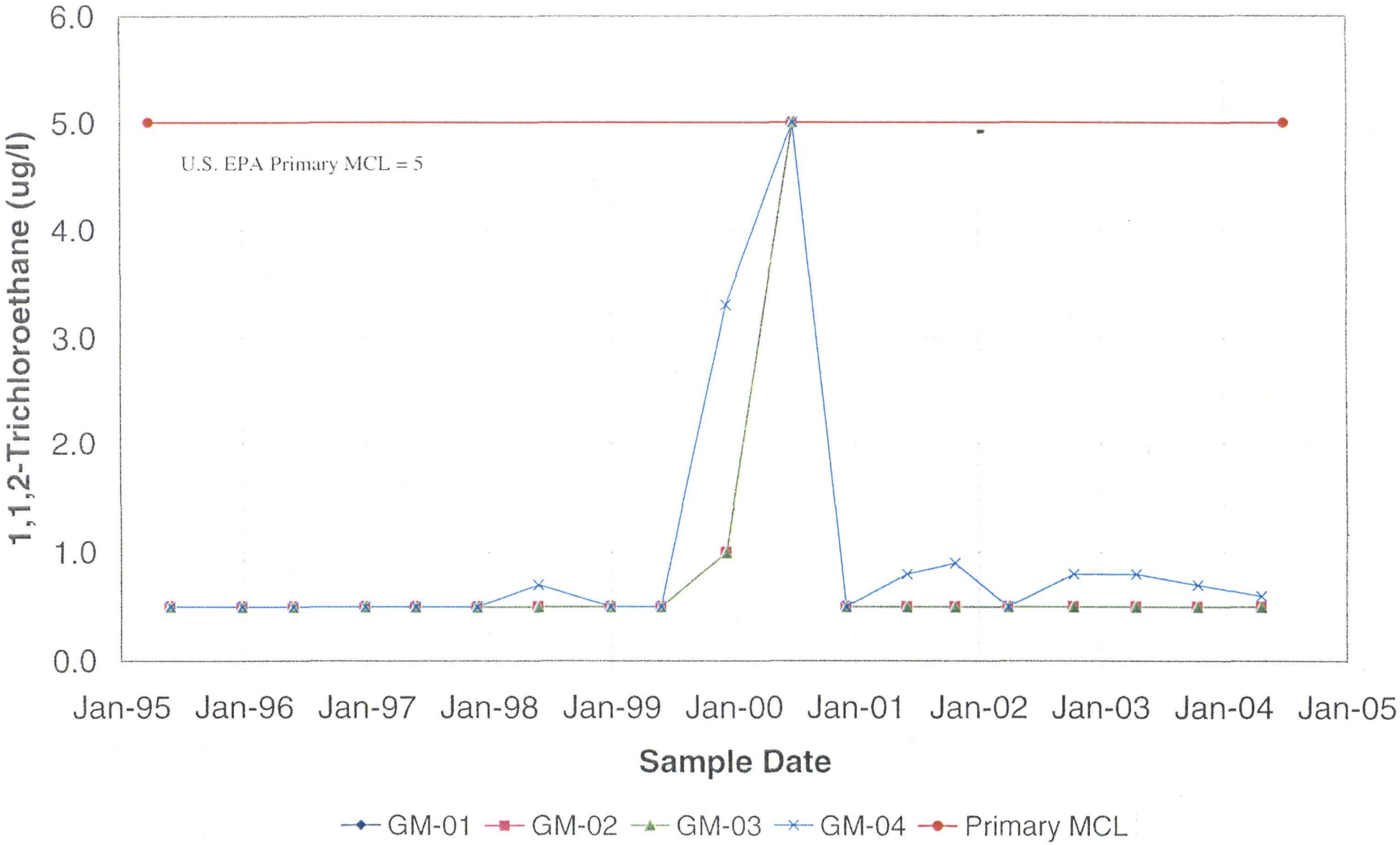
1,2-Dichloropropane Groundwater Concentrations
WRR Facility, Columbia City, IN

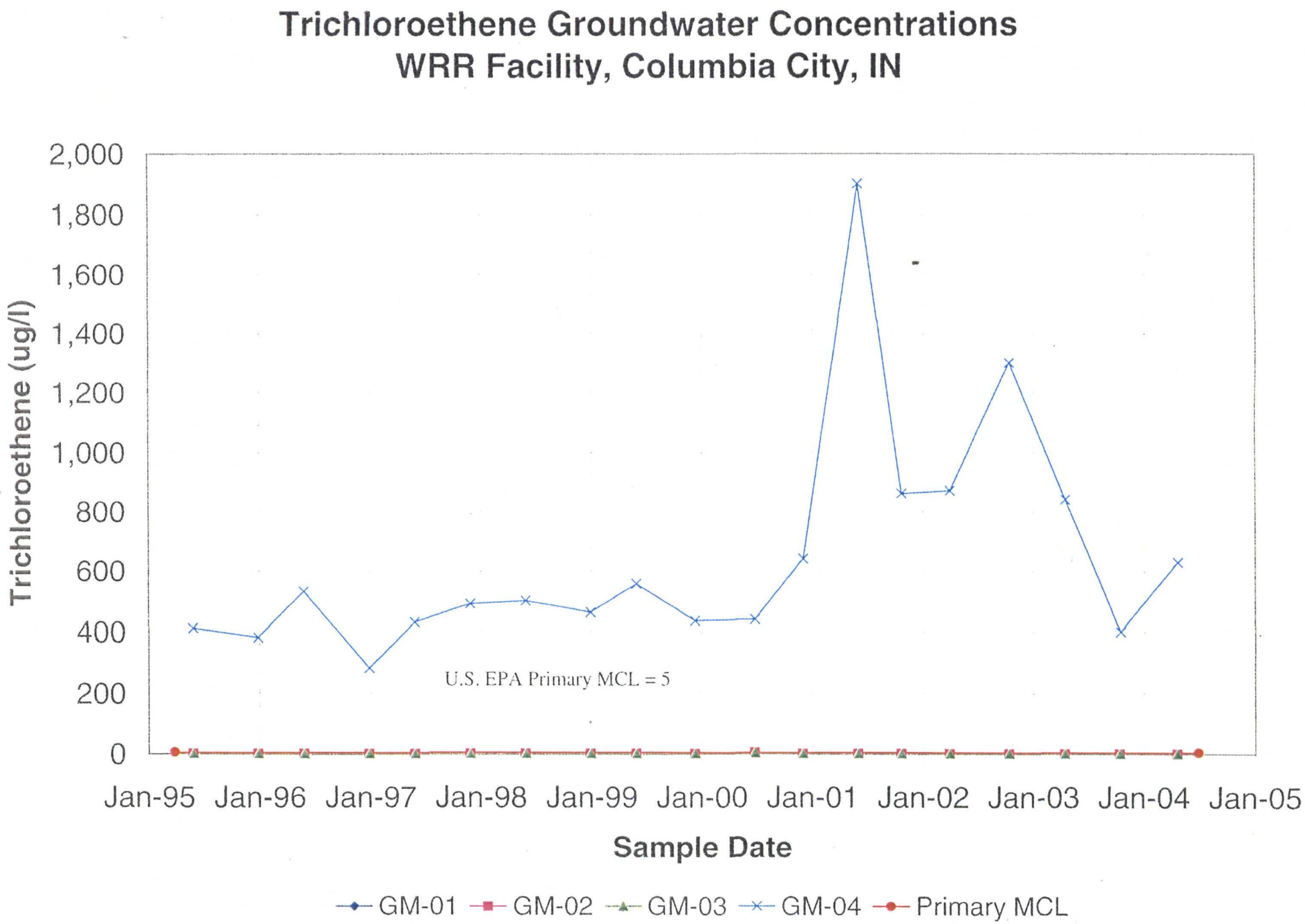


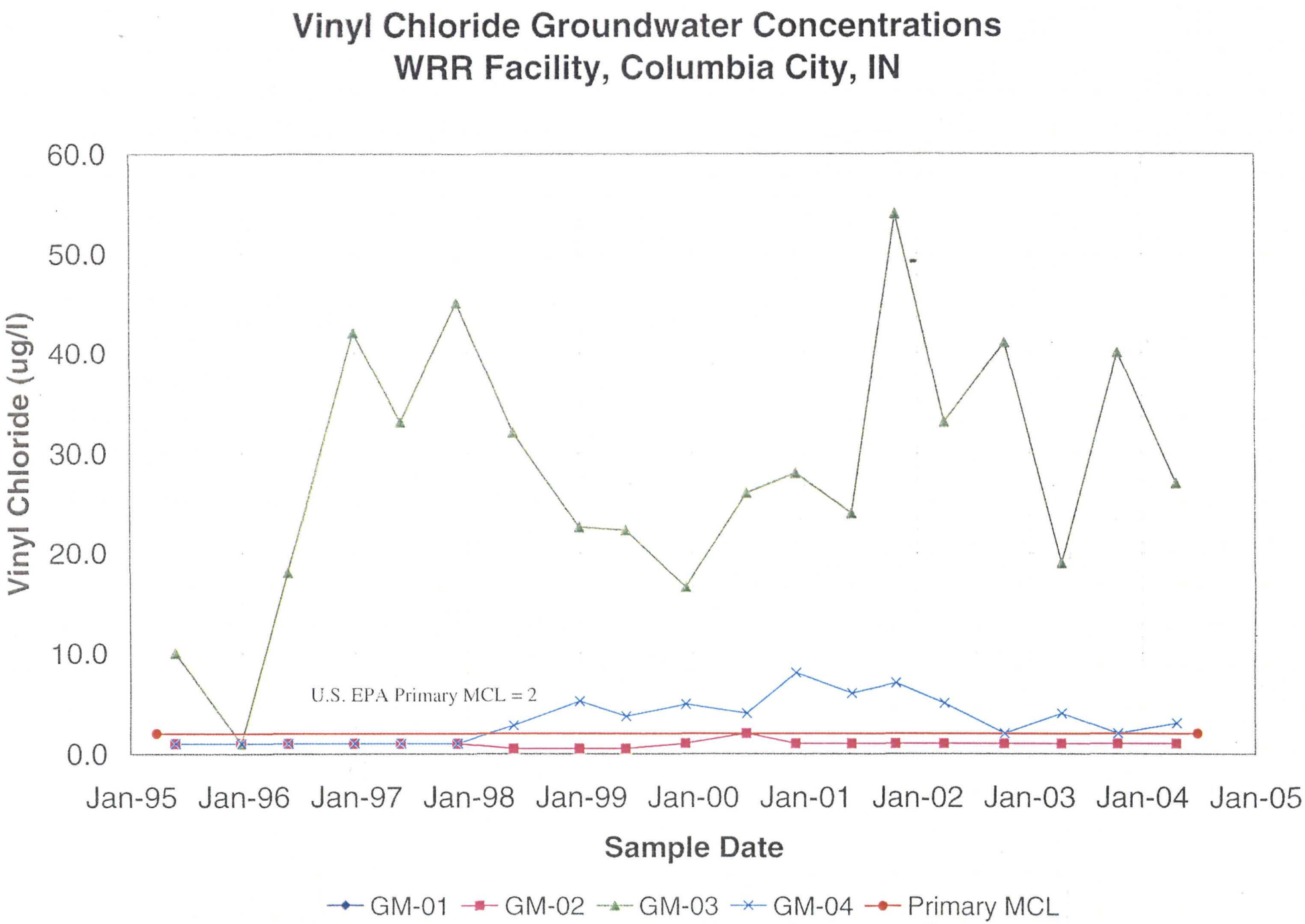
1,1,1-Trichloroethane Groundwater Concentrations
WRR Facility, Columbia City, IN



1,1,2-Trichloroethane Groundwater Concentrations
WRR Facility, Columbia City, IN




Trichloroethene Groundwater Concentrations
WRR Facility, Columbia City, IN
Trichloroethene (ug/l)
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
U.S. EPA Primary MCL = 5
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Sample Date
GM-01
GM-02
GM-03
GM-04
Primary MCL


Vinyl Chloride Groundwater Concentrations
WRR Facility, Columbia City, IN
Vinyl Chloride (ug/l)
60.0
50.0
40.0
30.0
20.0
10.0
0.0
U.S. EPA Primary MCL = 2
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Sample Date
GM-01
GM-02
GM-03
GM-04
Primary MCL

APPENDIX B

DATA VALIDATION REPORT

APPENDIX B

DATA VALIDATION REPORT
SEMI-ANNUAL PROGRESS REPORT 18
AUGUST 2004

Wayne Reclamation & Recycling

Groundwater, air, and associated quality control (QC) samples were collected from the Wayne Reclamation & Recycling Site in Columbia City, Indiana between January and June 2004. The water samples were analyzed through April 2004 by Test America Laboratories, Inc. of Indianapolis, Indiana for one or more of the following parameters: volatile organic compounds (VOCs) via United States Environmental Protection Agency (U.S. EPA) Method SW846 8260B; total cyanide by U.S. EPA Method 335.3; and dissolved metals (arsenic, barium, cadmium, chromium, lead, nickel, and zinc) via U.S. EPA Method 6010B. The water samples for May and June 2004 were analyzed by Pace Analytical Services, Inc. (Pace), of Minneapolis, Minnesota for VOCs via U.S. EPA Method SW846 8260. Air samples for the entire reporting period were analyzed for VOCs by Pace via U.S. EPA Method TO-14.

Laboratory analytical results were evaluated in accordance with the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic Data Review (October 1999), U.S. EPA CLP NFG for Inorganic Data Review (July 2002), and the analytical methods. The analytical data were reviewed and qualified based on the results of the data evaluation parameters and/or the QC sample results provided by the laboratory.

The following summarizes the review of the analytical data that did not meet the QC criteria:

- The laboratory indicated that the initial calibration (IC) associated with the VOC analysis of air sample EFFLUENT AIR #494 indicated percent recoveries outside the acceptance criteria for 1,2-dichlorobenzene, 1,2,4-trichlorobenzene, and hexachloro-1,3-butadiene, and that the results should be considered estimations. Therefore, the validator flagged the associated samples "J" as estimated for these compounds.

- The laboratory control sample (LCS) associated with the VOC analysis of air sample EFFLUENT AIR #494 indicated percent

recoveries outside the acceptance criteria (70-130%) with high biases for dichlorodifluoromethane (135%), 1,2-dibromoethane (131%), o-xylene (132%), styrene (135%), 1,3,5-trimethylbenzene (174%), 1,2,3-trimethylbenzene (189%), 1,4-dichlorobenzene (159%), 1,2-dichlorobenzene (376%), and hexachloro-1,3-butadiene (1,660%). Since this reflects a high bias, and no detections of the associated compounds were reported, no flags were issued. The same LCS indicated a percent recovery of zero for 1,2,4-trichlorobenzene. Therefore, the result for 1,2,4-trichlorobenzene was flagged "R" as rejected.

- The laboratory indicated that the IC associated with the VOC analysis of air samples EFFLUENT AIR #547 and EFFLUENT AIR #62 indicated percent recoveries outside the acceptance criteria for 1,2,4-trichlorobenzene and hexachloro-1,3-butadiene, and that the results should be considered estimations. Therefore, the validator flagged the associated samples "J" as estimated for these compounds.

- The LCS associated with the VOC analysis of air sample EFFLUENT AIR #62 indicated percent recoveries outside the acceptance criteria with a low bias for hexachloro-1,3-butadiene (29%). Since this reflects a low bias, the associated compound was flagged "J" as estimated for this sample. The same LCS indicated a percent recovery of zero for 1,2,4-trichlorobenzene. Therefore, the result for 1,2,4-trichlorobenzene was flagged "R" as rejected.

- The LCS associated with the VOC analysis of groundwater samples MW-4S, MW-9S, MW-10S, MW-14S, MW-83AS, MW-14S-DUPLICATE, INFLUENT GROUND WATER, and TREATMENT PLANT EFFLUENT indicated percent recoveries outside the acceptance criteria with low biases for dichlorodifluoromethane (56%), chloromethane (52%), and chloroethane (48%). Since this reflects a low bias, the associated samples were flagged "J" as estimated for these compounds.

- The LCS associated with the VOC analysis of groundwater samples MW-14S-FIELD BLANK, TRIP BLANK, INFLUENT GROUND WATER-DUP, and TREATMENT PLANT EFF-DUP indicated percent recoveries outside the acceptance criteria with low biases for 1,2,4-trichlorobenzene (58%) and 1,2,3-trichlorobenzene (50%). Since this reflects a low bias, the associated samples were flagged "J"

as estimated for these compounds. The same LCS indicated a percent recovery of zero for naphthalene. Therefore, the associated samples were flagged "R" as rejected for naphthalene. The same LCS indicated a percent recovery outside the acceptance criteria with a high bias for n-butylbenzene (140%). Since this reflects a high bias, and there were no detections of n-butylbenzene in the associated compounds, no flags were issued.

- The method blank associated with the VOC analysis of groundwater samples MW-4S, MW-9S, MW-10S, MW-14S, MW-83AS, MW-14S-DUPLICATE, INFLUENT GROUND WATER, and TREATMENT PLANT EFFLUENT indicated detections of 1,2,4-trichlorobenzene (1.2 micrograms per liter [µg/L]), naphthalene (9.1 µg/L), and 1,2,3-trichlorobenzene (5.8 µg/L). Since there were no detections of these compounds in the associated samples, no flags were issued.

- The laboratory indicated that the IC associated with the VOC analysis of air samples EFFLUENT AIR, EFFLUENT AIR DUPLICATE, AST-EAST, and SOUTHEAST AREA COMPOSITE indicated percent recoveries outside the acceptance criteria for methylene chloride, 1,2,4-trichlorobenzene, and hexachloro-1,3-butadiene, and that the results should be considered estimations. Therefore, the validator flagged the associated samples "J" as estimated for these compounds.

- The LCS associated with the VOC analysis of air samples EFFLUENT AIR, EFFLUENT AIR DUPLICATE, AST-EAST, and SOUTHEAST AREA COMPOSITE indicated percent recoveries outside the acceptance criteria with low biases for methylene chloride (45%), styrene (63%), 1,1,2,2-trichloroethane (59%), 1,3,5-trimethylbenzene (48%), 1,2,4-trimethylbenzene (46%), 1,3-dichlorobenzene (48%), 1,4-dichlorobenzene (46%), 1,2-dichlorobenzene (40%), 1,2,4-trichlorobenzene (6%), and hexachloro-1,3-butadiene (17%). Since this reflects a low bias, the associated samples were flagged "J" as estimated for these compounds.

- The method blank associated with the VOC analysis of air samples EFFLUENT AIR, EFFLUENT AIR DUPLICATE, AST-EAST, and SOUTHEAST AREA COMPOSITE indicated a detection of methylene chloride (0.8 parts per billion by volume). Samples with

detections of methylene chloride at concentrations less than five times the method blank concentration were flagged "B" to indicate blank contamination.

- The laboratory indicated that the IC associated with the VOC analysis of air samples SOUTHEAST AREA COMPOSITE and AIR SAMPLING BLANK indicated percent recoveries outside the acceptance criteria for 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, and hexachloro-1,3-butadiene, and that the results should be considered estimations. Therefore, the validator flagged the associated samples "J" as estimated for these compounds.

- The LCS associated with the VOC analysis of air samples SOUTHEAST AREA COMPOSITE and AIR SAMPLING BLANK indicated percent recoveries outside the acceptance criteria with low biases for 1,2,4-trichlorobenzene (3%) and hexachloro-1,3-butadiene (32%). The associated samples were flagged "J" as estimated for these compounds.

- The LCS associated with the VOC analysis of air sample EFFLUENT AIR (5/18/2004) had percent recoveries outside the acceptance criteria with low biases for 1,2,4-trichlorobenzene (2%) and 1,3-trichlorobenzene (63%). The associated sample was flagged "J" as estimated for these compounds.

- The laboratory indicated that the IC associated with the VOC analysis of the air sample EFFLUENT AIR (5/18/2004) had percent recoveries outside the acceptance criteria for 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, and hexachloro-1,3-butadiene, and that the results should be considered estimations. Therefore, the associated sample was flagged "J" as estimated for these compounds.

- The laboratory indicated that the continuing calibration verification (CCV) associated with the VOC analysis of the air sample EFFLUENT AIR (5/18/2004) had a percent recovery outside the acceptance criteria for 1,3-dichlorobenzene, and that the result should be considered an estimation. Therefore, this compound was flagged "J" as estimated.

- The method blank associated with the VOC analysis of groundwater samples INFLUENT GROUND WATER (5/18/2004) and

TREATMENT PLANT EFFLUENT (5/18/2004) had detections of naphthalene (2.8 µg/L) and 1,2,3-trichlorobenzene (1.5 µg/L). Since there were no detections of these compounds in the associated samples, no flags were issued.

- The LCS associated with the VOC analysis of air sample EFFLUENT AIR (6/23/2004) indicated percent recoveries outside the acceptance criteria with low biases for 1,2,4-trichlorobenzene (64%) and carbon tetrachloride (58%). The associated sample was flagged "J" as estimated for these compounds.

- The laboratory indicated that the CCV associated with the VOC analysis of the air sample EFFLUENT AIR (6/23/2004) had percent recoveries outside the acceptance criteria for 1,2,4-trichlorobezene and carbon tetrachloride, and that the results should be considered estimations. Therefore, these compounds were flagged "J" as estimated.

- The LCS associated with the VOC analysis of groundwater samples INFLUENT GROUND WATER (6/23/2004) and TREATMENT PLANT EFFLUENT (6/23/2004) indicated percent recoveries outside the acceptance criteria with a high bias methyl-tert-butyl ether (141%). Since this reflects a high bias and the compound was not detected in the associated samples, no flags were issued.

- The method blank associated with the VOC analysis of groundwater samples INFLUENT GROUND WATER (6/23/2004) and TREATMENT PLANT EFFLUENT (6/23/2004) indicated detections of 1,2,4-trichlorobenzene (1.1 µg/L), naphthalene (2.3 µg/L), and 1,2,3-trichlorobenzene (1.5 µg/L). Since there were no detections of these compounds in the associated samples, no flags were issued.

- The laboratory indicated that the 5-times analysis of TREATMENT PLANT EFFLUENT (6/23/2004) for cis 1,2-dichlorobenzene was run outside of hold time. Therefore, the validator flagged the associated sample "J" as estimated for this compound.

Based on the results of this data validation, all data are considered valid and complete as qualified, with the exception of the rejected sample result.

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APPENDIX C

SUMMARY OF MAJOR FIELD ACTIVITIES, JANUARY THROUGH JUNE 2004

APPENDIX C

SUMMARY OF MAJOR FIELD ACTIVITIES
JANUARY THROUGH JUNE 2004

Wayne Reclamation & Recycling

Date	Description of Field Activities and Events
January 2004	• Monthly groundwater treatment system VOC influent and effluent and treatment system air sampling conducted, groundwater level measurements collected, and SVE air flow rates measured in SE and AST Areas. • Replaced fuse in air compressor AC-2. • Observed seal leak at influent pump P-1. • Maintenance activities conducted: removed flow meters at RW-3 and RW-5; serviced transducer and positioner for air stripper; cleaned main SVE filter; worked on air control for stripper; cleaned Drexelbrook level control in T-1; cleaned SE Area collection line to RW-7 and RW-9; installed shelters at RW-3 and RW-5; drained knockout tank; pulled pump at RW-3 for cleaning; and made software modifications. • Installed modified influent piping for RW-1, RW-2, and RW-3; and revised influent piping for RW-5 and RW-10.
February 2004	• Monthly groundwater treatment system VOC influent and effluent and treatment system air sampling conducted, groundwater level measurements collected, and SVE air flow rates measured in SE and AST Areas. • Observed heaters to be off at RW-3 and RW-5. • Rewired RW-3 and RW-5 heaters to separate the circuits. • RW-5 sent off for repair of piping leak. • Calibrated flow meters for AST and SE Areas. • Maintenance activities conducted: manually drained knockout tank and made software modifications.
March 2004	• Monthly groundwater treatment system VOC influent and effluent and treatment system air sampling conducted, groundwater level measurements collected, and SVE air flow rates measured in SE and AST Areas. • Maintenance activities conducted: scaled FT-2; revised code and checked Sparling flow meter; pulled pumps at RW-3 and RW-6 for cleaning; removed solids from RW-6; installed new transducer at RW-8; calibrated transducers in wells; drained knockout tank; blew out collection lines at RW-3 and RW-10; and pulled pumps at RW-1 and RW-2. • Observed an apparent bad motor of RW-2 pump.

APPENDIX C

SUMMARY OF MAJOR FIELD ACTIVITIES
JANUARY THROUGH JUNE 2004

Wayne Reclamation & Recycling

Date	Description of Field Activities and Events (continued)
April 2004	• Monthly groundwater treatment system VOC influent and effluent and treatment system air sampling conducted. • Site-wide groundwater level measurements collected. • Expanded semi-annual groundwater and groundwater treatment system effluent sampling conducted. • *Semi-annual air sampling conducted.* • Test and repairs conducted: conducted high voltage test of feed to RW-2; repaired drop cable for pumps at RW-2 and RW-10; built and installed tapered PVC plug for broken sampling tap at RW-1; repaired SE Area condensate pump and reinstalled it; installed new pumps at RW-5 and RW-9; installed new circuit breakers at RW-6 and RW-8; installed new pump end and transducer in RW-10 pump; and swapped pumps and motors at RW-5 and RW-6. • Maintenance activities conducted: removed solids from RW-1 and RW-2 and reinstalled pumps; pulled pumps at RW-4 through RW-10 for cleaning; cleaned collection line from SE Area to treatment plant; removed solids from RW-4, RW-5, RW-7, RW-9, and RW-10; SE Area sump maintenance and cleaning of SE Area collection lines, pumps, and wells; and installed new filter in B-2.
May 2004	• Monthly groundwater treatment system VOC influent and effluent and treatment system air sampling conducted, groundwater level measurements collected, and SVE air flow rates measured in SE and AST Areas. • Site mowed. • Repairs conducted: installed new transducer at RW-6; installed new pump at RW-4; replace bad fuse in AC-2; drained condensate in air lines; changed FT-1 transducer to FT-3 (possible bad transducer at FT-3).
June 2004	• Monthly groundwater treatment system VOC influent and effluent and treatment system air sampling conducted, groundwater level measurements collected, and SVE air flow rates measured in SE and AST Areas. • SE Area pump pulled, drop shortened and pumped cleaned. • Cleaned stick in stripper air control valve of T-1. • Mowed front lane of Site.

APPENDIX D

SUMMARY OF AIR DISPERSION MODELING AND CUMULATIVE CANCER RISK CALCULATIONS

APPENDIX D

SUMMARY OF AIR DISPERSION MODELING AND CUMULATIVE CANCER RISK CALCULATIONS

Wayne Reclamation & Recycling

The following summarizes the air modeling conducted by MWH Americas, Inc. for the Wayne Reclamation & Recycling (WRR) site in Columbia City, Indiana to assess the maximum annual average ground-level concentration (GLC) that could occur at any point outside the perimeter of the WRR site. Descriptions of the model, modeling procedures, and the results are provided below.

AIR DISPERSION MODELING PROCEDURES

The modeling was performed by utilizing the United States Environmental Protection Agency (U.S. EPA) model Industrial Source Complex – Long-Term (ISC-LT) to evaluate the ambient air impact of emissions from the site. Dispersion modeling was conducted on both the air treatment system influent and effluent in order to compare the risks associated with both treated and untreated air.

Meteorological Data

Meteorological data from 1985 was entered into the model for the Columbia City, Indiana region. Model output is highly sensitive to such data, as changes in atmospheric conditions will directly affect the ability of a discharged pollutant to disperse in the surrounding air. Meteorological data such as wind speed, wind direction, urban and rural mixing heights, Pasquill Stability Classifications (rated A to G, with G being the most stable), and ambient air temperature were converted into a binary data package. The package was then loaded into the ISC-LT model. The model then evaluated these conditions with the remaining model input parameters to identify which combinations of these conditions would result in maximum GLC of pollutants.

Emissions Source Data

The following data represents the emissions parameters at the WRR site that were entered into the model:

Stack Height	9.1 meters
Stack Diameter	0.4064 meters
Stack Base Elevation	6.1 meters
Exhaust Temperature	73° C
Gas Exit Velocity	13.08 meters per second
Volumetric Flow Rate	1.7 cubic meters per second
Influent/Effluent Concentrations	Sampling events (See Table 14, Progress Rpt. 3. Current data is provided in Table 13 of this report.)
Terrain	Flat
Dispersion Coefficients	Rural
Final Plume Rise	On
Stack-tip Downwash	On
Receptor Height	0 meters

Modeling Procedure

A grid was established to describe the relationship of the emission source with its surroundings, including the location of the site boundaries and any potential receptors. A cartesian grid was established around the site to determine GLC locations.

HUMAN HEALTH RISK ASSESSMENT

The maximum concentrations determined by the air modeling study were multiplied by unit risk factors (URFs) to obtain the excess carcinogenic risk posed by the emissions through the inhalation route. The URFs used in this study were developed from toxicity values included in U.S. EPA's Integrated Risk Information System (IRIS), U.S. EPA's "Health Assessment Summary Tables" (HEAST, Annual FY-1995), and information provided by the U.S. EPA Environmental Criteria Assessment Office. The URFs assume a chronic exposure to the carcinogenic chemicals for 24 hours a day, 365 days a year, for 70 years. The URFs for the constituents of concern are:

Vinyl chloride -	7.80E-05
1,1-Dichloroethane -	1.63E-08
Trichloroethene -	2.00E-06
Tetrachloroethene -	5.90E-06

The excess cancer risk (ECR) to the maximally exposed individual can be calculated by multiplying the URF by the ambient concentration of the chemical in question. In a residential zone, the maximally-exposed individual is assumed to be continuously exposed to the chemical for 70 years.

The maximum individual excess cancer risk (MICR) to the maximally-exposed individual due to air toxic emissions from the WRR site was calculated by multiplying the appropriate risk factor (URF) by the maximum annual GLC at the maximally-exposed individual:

$$MICR = URF * GLC$$

A summary of these calculations using concentrations generated from the model output is provided in Table 14 of Progress Report 3, and current calculations are provided in Table 14 of this progress report. An example model input/output is attached.

On June 24, 1999, air treatment was discontinued; however, monthly air sampling continues to be conducted on the effluent air stream as a means of monitoring potential risk levels associated with the untreated air stream. Effluent air sampling conducted since discontinuation of air treatment indicates the $1x10^{-6}$ action level has not been exceeded, with one minor exception of February 2002. This was due to a slight increase in the vinyl chloride concentration noted in the system effluent air stream during that month's sampling.

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ME UAIRDATA 13840 1985    UAIRNAME
ME STARDATA ANNUAL
ME AVESPEED 1.54 3.09 3.95 5.14 8.23 10.80
ME AVETEMPS ANNUAL 280 280 280 280 280 280
ME AVEMIXHT ANNUAL A 440 440 440 440 440 440
ME AVEMIXHT ANNUAL B 440 440 440 440 440 440
ME AVEMIXHT ANNUAL C 440 440 440 440 440 440
ME AVEMIXHT ANNUAL D 440 440 440 440 440 440
ME AVEMIXHT ANNUAL E 440 440 440 440 440 440
ME AVEMIXHT ANNUAL F 440 440 440 440 440 440
ME FINISHED

OU STARTING
OU RECTABLE SRCGRP
OU FINISHED

***********************************
*** SETUP Finishes Successfully ***
***********************************
```

```
*** ISCLT3 - VERSION 95250 ***     *** Fort Wayne Reclamation Site, 30 ft stack
                                   ***

*** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

                                         ***     MODEL SETUP OPTIONS SUMMARY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Model Is Setup For Calculation of Average CONCentration Values.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses NO plume DEPLETION.

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
          1. Final Plume Rise.
          2. Stack-tip Downwash.
          3. Buoyancy-induced Dispersion.
          4. Default Wind Profile Exponents.
          5. Default Vertical Potential Temperature Gradients.
          6. "Upper Bound" Values For Supersquat Buildings.
          7. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes NO FLAGPOLE Receptor Heights.

**Model Calculates   1 STAR Average(s) for the Following Months:  0  0  0  0  0
                                                Seasons/Quarters:  0  0  0  0
                                                      and Annual:  1

**Data File Includes  1 STAR Summaries for the Following Months:  0  0  0  0  0
                                                Seasons/Quarters:  0  0  0  0
                                                      and Annual:  1

**This Run Includes:    1 Source(s);      1 Source Group(s); and    386 Recepto

**The Model Assumes A Pollutant Type of:  OTHER

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
         Model Outputs Tables of Long Term Values by Receptor (RECTABLE Keyword

**Misc. Inputs:  Anem. Hgt. (m) =    10.00 ;    Decay Coef. =    .0000     ;
                 Emission Units = (GRAMS/SEC)                               ;  E
                 Output Units   = (MICROGRAMS/CUBIC-METER)

**Input Runstream File: INPUT.FIL                                  ;  **Output Pri
**Error Message File: ERRORS.OUT
```

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	E
1	0	.70000E-02	.0	.0	.0	9.14	293.15	

```
*** ISCLT3 - VERSION 95250 ***     *** Fort Wayne Reclamation Site, 30 ft stack
                                   ***

*** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT


                                          *** SOURCE IDs DEFINING SOURCE GROUPS

GROUP ID                                                 SOURCE IDs


 ALL        1        ,
```

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DISCRETE CARTESIAN RECEPTORS **
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(-241.0,	116.0,	.0,	.0);	(-239.0,	-85.
(-239.0,	-45.0,	.0,	.0);	(-239.0,	-5.
(-239.0,	35.0,	.0,	.0);	(-239.0,	75.
(-204.0,	-86.0,	.0,	.0);	(-198.0,	114.
(-169.0,	-86.0,	.0,	.0);	(-155.0,	112.
(-134.0,	-86.0,	.0,	.0);	(-112.0,	110.
(-89.0,	-91.0,	.0,	.0);	(-70.0,	181.
(-69.0,	144.0,	.0,	.0);	(-68.0,	107.
(-45.0,	-95.0,	.0,	.0);	(-27.0,	181.
(-1.0,	-99.0,	.0,	.0);	(16.0,	181.
(43.0,	-103.0,	.0,	.0);	(59.0,	181.
(70.0,	-111.0,	.0,	.0);	(97.0,	-119.
(102.0,	183.0,	.0,	.0);	(102.0,	231.
(123.0,	-133.0,	.0,	.0);	(142.0,	231.
(149.0,	-146.0,	.0,	.0);	(182.0,	231.
(184.0,	-145.0,	.0,	.0);	(202.0,	-137.
(209.0,	-116.0,	.0,	.0);	(215.0,	-69.
(221.0,	-31.0,	.0,	.0);	(222.0,	231.
(227.0,	7.0,	.0,	.0);	(223.0,	45.
(242.0,	91.0,	.0,	.0);	(251.0,	136.
(260.0,	181.0,	.0,	.0);	(262.0,	207.
(264.0,	232.0,	.0,	.0);	(-900.0,	-800.
(-900.0,	-700.0,	.0,	.0);	(-900.0,	-600.
(-900.0,	-500.0,	.0,	.0);	(-900.0,	-400.
(-900.0,	-300.0,	.0,	.0);	(-900.0,	-200.
(-900.0,	-100.0,	.0,	.0);	(-900.0,	.
(-900.0,	100.0,	.0,	.0);	(-900.0,	200.
(-900.0,	300.0,	.0,	.0);	(-900.0,	400.
(-900.0,	500.0,	.0,	.0);	(-900.0,	600.
(-900.0,	700.0,	.0,	.0);	(-900.0,	800.
(-900.0,	900.0,	.0,	.0);	(-800.0,	-800.
(-800.0,	-700.0,	.0,	.0);	(-800.0,	-600.
(-800.0,	-500.0,	.0,	.0);	(-800.0,	-400.
(-800.0,	-300.0,	.0,	.0);	(-800.0,	-200.
(-800.0,	-100.0,	.0,	.0);	(-800.0,	.
(-800.0,	100.0,	.0,	.0);	(-800.0,	200.
(-800.0,	300.0,	.0,	.0);	(-800.0,	400.
(-800.0,	500.0,	.0,	.0);	(-800.0,	600.
(-800.0,	700.0,	.0,	.0);	(-800.0,	800.
(-800.0,	900.0,	.0,	.0);	(-700.0,	-800.
(-700.0,	-700.0,	.0,	.0);	(-700.0,	-600.
(-700.0,	-500.0,	.0,	.0);	(-700.0,	-400.
(-700.0,	-300.0,	.0,	.0);	(-700.0,	-200
(-700.0,	-100.0,	.0,	.0);	(-700.0,	
(-700.0,	100.0,	.0,	.0);	(-700.0,	200

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DISCRETE CARTESIAN RECEPTORS **
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	-700.0,	300.0,	.0,	.0);	(-700.0,	400.
(	-700.0,	500.0,	.0,	.0);	(-700.0,	600.
(	-700.0,	700.0,	.0,	.0);	(-700.0,	800.
(	-700.0,	900.0,	.0,	.0);	(-600.0,	-800.
(	-600.0,	-700.0,	.0,	.0);	(-600.0,	-600.
(	-600.0,	-500.0,	.0,	.0);	(-600.0,	-400.
(	-600.0,	-300.0,	.0,	.0);	(-600.0,	-200.
(	-600.0,	-100.0,	.0,	.0);	(-600.0,	.
(	-600.0,	100.0,	.0,	.0);	(-600.0,	200.
(	-600.0,	300.0,	.0,	.0);	(-600.0,	400.
(	-600.0,	500.0,	.0,	.0);	(-600.0,	400.
(	-600.0,	300.0,	.0,	.0);	(-600.0,	500.
(	-600.0,	600.0,	.0,	.0);	(-600.0,	700.
(	-600.0,	800.0,	.0,	.0);	(-600.0,	900.
(	-500.0,	-800.0,	.0,	.0);	(-500.0,	-700.
(	-500.0,	-600.0,	.0,	.0);	(-500.0,	-500.
(	-500.0,	-400.0,	.0,	.0);	(-500.0,	-300.
(	-500.0,	-200.0,	.0,	.0);	(-500.0,	-100.
(	-500.0,	.0,	.0,	.0);	(-500.0,	100.
(	-500.0,	200.0,	.0,	.0);	(-500.0,	300.
(	-500.0,	400.0,	.0,	.0);	(-500.0,	300.
(	-500.0,	200.0,	.0,	.0);	(-500.0,	100.
(	-500.0,	200.0,	.0,	.0);	(-500.0,	300.
(	-500.0,	400.0,	.0,	.0);	(-500.0,	500.
(	-500.0,	600.0,	.0,	.0);	(-500.0,	700.
(	-500.0,	800.0,	.0,	.0);	(-500.0,	900.
(	-400.0,	-800.0,	.0,	.0);	(-400.0,	-700.
(	-400.0,	-600.0,	.0,	.0);	(-400.0,	-500.
(	-400.0,	-400.0,	.0,	.0);	(-400.0,	-300.
(	-400.0,	-200.0,	.0,	.0);	(-400.0,	-100.
(	-400.0,	.0,	.0,	.0);	(-400.0,	100.
(	-400.0,	200.0,	.0,	.0);	(-400.0,	300.
(	-400.0,	400.0,	.0,	.0);	(-400.0,	500.
(	-400.0,	600.0,	.0,	.0);	(-400.0,	700.
(	-400.0,	800.0,	.0,	.0);	(-400.0,	900.
(	-300.0,	-800.0,	.0,	.0);	(-300.0,	-700.
(	-300.0,	-600.0,	.0,	.0);	(-300.0,	-500.
(	-300.0,	-400.0,	.0,	.0);	(-300.0,	-300.
(	-300.0,	-200.0,	.0,	.0);	(-300.0,	-100.
(	-300.0,	.0,	.0,	.0);	(-300.0,	100
(	-300.0,	200.0,	.0,	.0);	(-300.0,	300
(	-300.0,	400.0,	.0,	.0);	(-300.0,	500
(	-300.0,	600.0,	.0,	.0);	(-300.0,	700
(	-300.0,	800.0,	.0,	.0);	(-300.0,	900
(	-200.0,	-800.0,	.0,	.0);	(-200.0,	-700

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DISCRETE CARTESIAN RECEPTORS **
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	-200.0,	-600.0,	.0,	.0);	(-200.0,	-500.
(	-200.0,	-400.0,	.0,	.0);	(-200.0,	-300.
(	-200.0,	-200.0,	.0,	.0);	(-200.0,	-100.
(	-200.0,	.0,	.0,	.0);	(-200.0,	100.
(	-200.0,	200.0,	.0,	.0);	(-200.0,	300.
(	-200.0,	400.0,	.0,	.0);	(-200.0,	500.
(	-200.0,	600.0,	.0,	.0);	(-200.0,	700.
(	-200.0,	800.0,	.0,	.0);	(-200.0,	900.
(	-100.0,	-800.0,	.0,	.0);	(-100.0,	-700.
(	-100.0,	-600.0,	.0,	.0);	(-100.0,	-500.
(	-100.0,	-400.0,	.0,	.0);	(-100.0,	-300.
(	-100.0,	-200.0,	.0,	.0);	(-100.0,	-100.
(	-100.0,	.0,	.0,	.0);	(-100.0,	100.
(	-100.0,	200.0,	.0,	.0);	(-100.0,	300.
(	-100.0,	400.0,	.0,	.0);	(-100.0,	500.
(	-100.0,	600.0,	.0,	.0);	(-100.0,	700.
(	-100.0,	800.0,	.0,	.0);	(-100.0,	900.
(	.0,	-800.0,	.0,	.0);	(.0,	-700.
(	.0,	-600.0,	.0,	.0);	(.0,	-500.
(	.0,	-400.0,	.0,	.0);	(.0,	-300.
(	.0,	-200.0,	.0,	.0);	(.0,	-100.
(	.0,	-200.0,	.0,	.0);	(.0,	-100.
(	.0,	.0,	.0,	.0);	(.0,	100.
(	.0,	200.0,	.0,	.0);	(.0,	300.
(	.0,	400.0,	.0,	.0);	(.0,	500.
(	.0,	600.0,	.0,	.0);	(.0,	700.
(	.0,	800.0,	.0,	.0);	(.0,	900.
(	100.0,	-800.0,	.0,	.0);	(100.0,	-700.
(	100.0,	-600.0,	.0,	.0);	(100.0,	-500.
(	100.0,	-400.0,	.0,	.0);	(100.0,	-300.
(	100.0,	-200.0,	.0,	.0);	(100.0,	-100.
(	100.0,	.0,	.0,	.0);	(100.0,	100.
(	100.0,	200.0,	.0,	.0);	(100.0,	300.
(	100.0,	400.0,	.0,	.0);	(100.0,	500.
(	100.0,	600.0,	.0,	.0);	(100.0,	700.
(	100.0,	800.0,	.0,	.0);	(100.0,	900.
(	200.0,	-800.0,	.0,	.0);	(200.0,	-700.
(	200.0,	-600.0,	.0,	.0);	(200.0,	-500.
(	200.0,	-400.0,	.0,	.0);	(200.0,	-300.
(	200.0,	-200.0,	.0,	.0);	(200.0,	-100.
(	200.0,	.0,	.0,	.0);	(200.0,	100.
(	200.0,	200.0,	.0,	.0);	(200.0,	300.
(	200.0,	400.0,	.0,	.0);	(200.0,	500.
(	200.0,	600.0,	.0,	.0);	(200.0,	700.
(	200.0,	800.0,	.0,	.0);	(200.0,	900.

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DISCRETE CARTESIAN RECEPTORS **
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	300.0,	-800.0,	.0,	.0);	(300.0,	-700.
(	300.0,	-600.0,	.0,	.0);	(300.0,	-500.
(	300.0,	-400.0,	.0,	.0);	(300.0,	-300.
(	300.0,	-200.0,	.0,	.0);	(300.0,	-100.
(	300.0,	.0,	.0,	.0);	(300.0,	100.
(	300.0,	200.0,	.0,	.0);	(300.0,	300.
(	300.0,	400.0,	.0,	.0);	(300.0,	500.
(	300.0,	600.0,	.0,	.0);	(300.0,	700.
(	300.0,	800.0,	.0,	.0);	(300.0,	900.
(	400.0,	-800.0,	.0,	.0);	(400.0,	-700.
(	400.0,	-600.0,	.0,	.0);	(400.0,	-500.
(	400.0,	-600.0,	.0,	.0);	(400.0,	-500.
(	400.0,	-400.0,	.0,	.0);	(400.0,	-300.
(	400.0,	-200.0,	.0,	.0);	(400.0,	-100.
(	400.0,	.0,	.0,	.0);	(400.0,	100.
(	400.0,	200.0,	.0,	.0);	(400.0,	300.
(	400.0,	400.0,	.0,	.0);	(400.0,	500.
(	400.0,	600.0,	.0,	.0);	(400.0,	700.
(	400.0,	800.0,	.0,	.0);	(400.0,	900.
(	500.0,	-800.0,	.0,	.0);	(500.0,	-700.
(	500.0,	-600.0,	.0,	.0);	(500.0,	-500.
(	500.0,	-400.0,	.0,	.0);	(500.0,	-300.
(	500.0,	-200.0,	.0,	.0);	(500.0,	-100.
(	500.0,	.0,	.0,	.0);	(500.0,	100.
(	500.0,	200.0,	.0,	.0);	(500.0,	300.
(	500.0,	400.0,	.0,	.0);	(500.0,	500.
(	500.0,	600.0,	.0,	.0);	(500.0,	700.
(	500.0,	800.0,	.0,	.0);	(500.0,	900.
(	600.0,	-800.0,	.0,	.0);	(600.0,	-700.
(	600.0,	-600.0,	.0,	.0);	(600.0,	-500.
(	600.0,	-400.0,	.0,	.0);	(600.0,	-300.
(	600.0,	-200.0,	.0,	.0);	(600.0,	-100.
(	600.0,	.0,	.0,	.0);	(600.0,	100.
(	600.0,	200.0,	.0,	.0);	(600.0,	300.
(	600.0,	400.0,	.0,	.0);	(600.0,	500.
(	600.0,	600.0,	.0,	.0);	(600.0,	700.
(	600.0,	800.0,	.0,	.0);	(600.0,	900.
(	700.0,	-700.0,	.0,	.0);	(700.0,	-600
(	700.0,	-500.0,	.0,	.0);	(700.0,	-400
(	700.0,	-300.0,	.0,	.0);	(700.0,	-200
(	700.0,	-100.0,	.0,	.0);	(700.0,	
(	700.0,	100.0,	.0,	.0);	(700.0,	200
(	700.0,	300.0,	.0,	.0);	(700.0,	400
(	700.0,	500.0,	.0,	.0);	(700.0,	600
(	700.0,	700.0,	.0,	.0);	(700.0,	800

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DISCRETE CARTESIAN RECEPTORS **
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(	700.0,	900.0,	.0,	.0);	(	800.0,	-600.
(	800.0,	-500.0,	.0,	.0);	(	800.0,	-400.
(	800.0,	-300.0,	.0,	.0);	(	800.0,	-200.
(	800.0,	-100.0,	.0,	.0);	(	800.0,	.
(	800.0,	100.0,	.0,	.0);	(	800.0,	200.
(	800.0,	300.0,	.0,	.0);	(	800.0,	400.
(	800.0,	500.0,	.0,	.0);	(	800.0,	600.
(	800.0,	700.0,	.0,	.0);	(	800.0,	800.
(	900.0,	-300.0,	.0,	.0);	(	900.0,	-200.
(	900.0,	-100.0,	.0,	.0);	(	900.0,	.
(	900.0,	100.0,	.0,	.0);	(	900.0,	200.
(	900.0,	300.0,	.0,	.0);	(	900.0,	400.
(	900.0,	500.0,	.0,	.0);	(	900.0,	600.

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack
***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY
LESS THAN 1.0 METER OR 3*ZLB IN DISTANCE, OR WITHIN 0

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)
1	.0	.0

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** AVERAGE SPEED FOR EACH WIND SPEED CA
(METERS/SEC)

1.54, 3.09, 3.95, 5.14, 8.2

*** WIND PROFILE EXPONENTS **

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4
A	.70000E-01	.70000E-01	.70000E-01	.700
B	.70000E-01	.70000E-01	.70000E-01	.700
C	.10000E+00	.10000E+00	.10000E+00	.100
D	.15000E+00	.15000E+00	.15000E+00	.150
E	.35000E+00	.35000E+00	.35000E+00	.350
F	.55000E+00	.55000E+00	.55000E+00	.550

*** VERTICAL POTENTIAL TEMPERATURE GRA
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4
A	.00000E+00	.00000E+00	.00000E+00	.000
B	.00000E+00	.00000E+00	.00000E+00	.000
C	.00000E+00	.00000E+00	.00000E+00	.000
D	.00000E+00	.00000E+00	.00000E+00	.000
E	.20000E-01	.20000E-01	.20000E-01	.200
F	.35000E-01	.35000E-01	.35000E-01	.350

*** AVERAGE AMBIENT AIR TEMPERATURE (KEI

	STABILITY CATEGORY A	STABILITY CATEGORY B	STABILITY CATEGORY C	STABILITY CATEGORY D	C
ANNUAL	280.0000	280.0000	280.0000	280.0000	

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** AVERAGE MIXING LAYER HEIGHT (METERS) **

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	ANNUAL WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4
STABILITY CATEGORY A	440.0000	440.0000	440.0000	440.0000
STABILITY CATEGORY B	440.0000	440.0000	440.0000	440.0000
STABILITY CATEGORY C	440.0000	440.0000	440.0000	440.0000
STABILITY CATEGORY D	440.0000	440.0000	440.0000	440.0000
STABILITY CATEGORY E	440.0000	440.0000	440.0000	440.0000
STABILITY CATEGORY F	440.0000	440.0000	440.0000	440.0000

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY *

FILE: METFIL.STR FORMAT: FREE
SURFACE STATION NO.: 14827 UPPER AIR STATION NO.
NAME: SURFNAME NAME
YEAR: 1985 YEAR

ANNUAL: STABILITY CATEGORY A

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.540 M/S)	WIND SPEED CATEGORY 2 (3.090 M/S)	WIND SPEED CATEGORY 3 (3.950 M/S)	WIND SPEED CATEGORY 4 (5.140 M/S)	WIND SPEED CATEGORY 5 (8.230 M/S)	W C (1 -
.000	.00000000	.00000000	.00000000	.00000000	.00000000	
22.500	.00000000	.00000000	.00000000	.00000000	.00000000	
45.000	.00000000	.00000000	.00000000	.00000000	.00000000	
67.500	.00000000	.00000000	.00000000	.00000000	.00000000	
90.000	.00000000	.00000000	.00000000	.00000000	.00000000	
112.500	.00000000	.00000000	.00000000	.00000000	.00000000	
135.000	.00000000	.00000000	.00000000	.00000000	.00000000	
157.500	.00000000	.00000000	.00000000	.00000000	.00000000	
180.000	.00000000	.00000000	.00000000	.00000000	.00000000	
202.500	.00000000	.00000000	.00000000	.00000000	.00000000	
225.000	.00000000	.00000000	.00000000	.00000000	.00000000	
247.500	.00000000	.00000000	.00000000	.00000000	.00000000	
270.000	.00000000	.00000000	.00000000	.00000000	.00000000	
292.500	.00000000	.00000000	.00000000	.00000000	.00000000	
315.000	.00000000	.00000000	.00000000	.00000000	.00000000	
337.500	.00000000	.00000000	.00000000	.00000000	.00000000	

ANNUAL: STABILITY CATEGORY B

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.540 M/S)	WIND SPEED CATEGORY 2 (3.090 M/S)	WIND SPEED CATEGORY 3 (3.950 M/S)	WIND SPEED CATEGORY 4 (5.140 M/S)	WIND SPEED CATEGORY 5 (8.230 M/S)	W C (1 -
.000	.00000000	.00000000	.00000000	.00000000	.00000000	
22.500	.00000000	.00000000	.00000000	.00000000	.00000000	
45.000	.00000000	.00000000	.00000000	.00000000	.00000000	
67.500	.00000000	.00000000	.00000000	.00000000	.00000000	
90.000	.00000000	.00000000	.00000000	.00000000	.00000000	
112.500	.00000000	.00000000	.00000000	.00000000	.00000000	
135.000	.00000000	.00000000	.00000000	.00000000	.00000000	
157.500	.00000000	.00000000	.00000000	.00000000	.00000000	
180.000	.00000000	.00000000	.00000000	.00000000	.00000000	
202.500	.00000000	.00000000	.00000000	.00000000	.00000000	
225.000	.00000000	.00000000	.00000000	.00000000	.00000000	
247.500	.00000000	.00000000	.00000000	.00000000	.00000000	
270.000	.00000000	.00000000	.00000000	.00000000	.00000000	
292.500	.00000000	.00000000	.00000000	.00000000	.00000000	
315.000	.00000000	.00000000	.00000000	.00000000	.00000000	
337.500	.00000000	.00000000	.00000000	.00000000	.00000000	

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY *

FILE: METFIL.STR FORMAT: FREE
SURFACE STATION NO.: 14827 UPPER AIR STATION NO.
NAME: SURFNAME NAME
YEAR: 1985 YEAR

ANNUAL: STABILITY CATEGORY C

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.540 M/S)	WIND SPEED CATEGORY 2 (3.090 M/S)	WIND SPEED CATEGORY 3 (3.950 M/S)	WIND SPEED CATEGORY 4 (5.140 M/S)	WIND SPEED CATEGORY 5 (8.230 M/S)	W C (1
.000	.00000000	.00000000	.00000000	.00000000	.00000000	
22.500	.00000000	.00000000	.00000000	.00000000	.00000000	
45.000	.00000000	.00000000	.00000000	.00000000	.00000000	
67.500	.00000000	.00000000	.00000000	.00000000	.00000000	
90.000	.00000000	.00000000	.00000000	.00000000	.00000000	
112.500	.00000000	.00000000	.00000000	.00000000	.00000000	
135.000	.00000000	.00000000	.00000000	.00000000	.00000000	
157.500	.00000000	.00000000	.00000000	.00000000	.00000000	
180.000	.00000000	.00000000	.00000000	.00000000	.00000000	
202.500	.00000000	.00000000	.00000000	.00000000	.00000000	
225.000	.00000000	.00000000	.00000000	.00000000	.00000000	
247.500	.00000000	.00000000	.00000000	.00000000	.00000000	
270.000	.00000000	.00000000	.00000000	.00000000	.00000000	
292.500	.00000000	.00000000	.00000000	.00000000	.00000000	
315.000	.00000000	.00000000	.00000000	.00000000	.00000000	
337.500	.00000000	.00000000	.00000000	.00000000	.00000000	

ANNUAL: STABILITY CATEGORY D

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.540 M/S)	WIND SPEED CATEGORY 2 (3.090 M/S)	WIND SPEED CATEGORY 3 (3.950 M/S)	WIND SPEED CATEGORY 4 (5.140 M/S)	WIND SPEED CATEGORY 5 (8.230 M/S)	W C (1
.000	.00067300	.00807100	.01059300	.00588500	.00000000	
22.500	.00056000	.00739800	.00420300	.00218600	.00000000	
45.000	.00056000	.00504400	.00689400	.00353100	.00000000	
67.500	.00056000	.00739800	.01193800	.00655700	.00067300	
90.000	.00201800	.01412300	.02135300	.01227400	.00100900	
112.500	.00168100	.00739800	.00723000	.00252200	.00000000	
135.000	.00302600	.00874300	.00588500	.00151300	.00000000	
157.500	.00302600	.01008800	.00674200	.00151300	.00000000	
180.000	.00403500	.01345100	.01462800	.00689400	.00050400	
202.500	.00269000	.01244200	.01368600	.00790200	.00084100	
225.000	.00336300	.01513200	.02377400	.01731800	.00302600	
247.500	.00201800	.01042400	.01704900	.01395500	.00336300	
270.000	.00168100	.01412300	.02209300	.02471600	.00605300	
292.500	.00067300	.00773400	.01025600	.00790200	.00067300	
315.000	.00067300	.00739800	.01025600	.00823900	.00067300	
337.500	.00067300	.00739800	.00958400	.00622100	.00033600	

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY *

FILE: METFIL.STR FORMAT: FREE
SURFACE STATION NO.: 14827 UPPER AIR STATION NO.
NAME: SURFNAME NAME
YEAR: 1985 YEAR

ANNUAL: STABILITY CATEGORY E

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.540 M/S)	WIND SPEED CATEGORY 2 (3.090 M/S)	WIND SPEED CATEGORY 3 (3.950 M/S)	WIND SPEED CATEGORY 4 (5.140 M/S)	WIND SPEED CATEGORY 5 (8.230 M/S)	W C (1 -
.000	.00029200	.00350200	.00459700	.00255400	.00000000	
22.500	.00024300	.00321000	.00182400	.00094900	.00000000	
45.000	.00024300	.00218900	.00299200	.00153200	.00000000	
67.500	.00024300	.00321000	.00518000	.00284600	.00029200	
90.000	.00087600	.00612900	.00926700	.00532600	.00043800	
112.500	.00073000	.00321000	.00313700	.00109400	.00000000	
135.000	.00131300	.00379400	.00255400	.00065700	.00000000	
157.500	.00131300	.00437800	.00292600	.00065700	.00000000	
180.000	.00175100	.00583700	.00634800	.00299200	.00021900	
202.500	.00116700	.00539900	.00593900	.00342900	.00036500	
225.000	.00145900	.00656700	.01031700	.00751500	.00131300	
247.500	.00087600	.00452400	.00739900	.00605600	.00145900	
270.000	.00073000	.00612900	.00958800	.01072600	.00262700	
292.500	.00029200	.00335600	.00445100	.00342900	.00029200	
315.000	.00029200	.00321000	.00445100	.00357500	.00029200	
337.500	.00029200	.00321000	.00415900	.00270000	.00014600	

ANNUAL: STABILITY CATEGORY F

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.540 M/S)	WIND SPEED CATEGORY 2 (3.090 M/S)	WIND SPEED CATEGORY 3 (3.950 M/S)	WIND SPEED CATEGORY 4 (5.140 M/S)	WIND SPEED CATEGORY 5 (8.230 M/S)	W C (1 -
.000	.00030500	.00365500	.00479700	.00266500	.00000000	
22.500	.00025400	.00335000	.00190300	.00099000	.00000000	
45.000	.00025400	.00228400	.00312200	.00159900	.00000000	
67.500	.00025400	.00335000	.00540600	.00296900	.00030500	
90.000	.00091400	.00639600	.00966900	.00555800	.00045700	
112.500	.00076100	.00335000	.00327400	.00114200	.00000000	
135.000	.00137000	.00395900	.00266500	.00068500	.00000000	
157.500	.00137000	.00456800	.00305300	.00068500	.00000000	
180.000	.00182700	.00609100	.00662400	.00312200	.00022800	
202.500	.00121800	.00563400	.00619800	.00357800	.00038100	
225.000	.00152300	.00685200	.01076600	.00784200	.00137000	
247.500	.00091400	.00472000	.00772000	.00631900	.00152300	
270.000	.00076100	.00639600	.01000400	.01119200	.00274100	
292.500	.00030500	.00350200	.00464400	.00357800	.00030500	
315.000	.00030500	.00335000	.00464400	.00373100	.00030500	
337.500	.00030500	.00335000	.00434000	.00281700	.00015200	

SUM OF FREQUENCIES, FTOTAL = .99381

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR
INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POI

** CONC OF OTHER IN (MICROGRAMS/CUBIC

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)
-241.00	116.00	.009316	-239.00
-239.00	-45.00	.019247	-239.00
-239.00	35.00	.018958	-239.00
-204.00	-86.00	.013180	-198.00
-169.00	-86.00	.010928	-155.00
-134.00	-86.00	.007475	-112.00
-89.00	-91.00	.003213	-70.00
-69.00	144.00	.006313	-68.00
-45.00	-95.00	.001210	-27.00
-1.00	-99.00	.001800	16.00
43.00	-103.00	.003187	59.00
70.00	-111.00	.005509	97.00
102.00	183.00	.020349	102.00
123.00	-133.00	.011355	142.00
149.00	-146.00	.012918	182.00
184.00	-145.00	.013191	202.00
209.00	-116.00	.013247	215.00
221.00	-31.00	.025667	222.00
227.00	7.00	.032258	223.00
242.00	91.00	.023422	251.00
260.00	181.00	.025157	262.00
264.00	232.00	.025917	-900.00
-900.00	-700.00	.002927	-900.00
-900.00	-500.00	.003943	-900.00
-900.00	-300.00	.005665	-900.00
-900.00	-100.00	.008457	-900.00
-900.00	100.00	.008129	-900.00
-900.00	300.00	.004771	-900.00
-900.00	500.00	.003555	-900.00
-900.00	700.00	.003315	-900.00
-900.00	900.00	.003028	-800.00
-800.00	-700.00	.002913	-800.00
-800.00	-500.00	.004093	-800.00
-800.00	-300.00	.005869	-800.00
-800.00	-100.00	.009370	-800.00
-800.00	100.00	.008947	-800.00
-800.00	300.00	.004738	-800.00
-800.00	500.00	.003946	-800.00
-800.00	700.00	.003616	-800.00
-800.00	900.00	.003270	-700.00

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack
***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR
INCLUDING SOURCE(S): 1

*** DISCRETE CARTESIAN RECEPTOR POI

** CONC OF OTHER IN (MICROGRAMS/CUBIC

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)
-700.00	-700.00	.002837	-700.00
-700.00	-500.00	.004189	-700.00
-700.00	-300.00	.006057	-700.00
-700.00	-100.00	.010420	-700.00
-700.00	100.00	.009859	-700.00
-700.00	300.00	.004724	-700.00
-700.00	500.00	.004397	-700.00
-700.00	700.00	.003949	-700.00
-700.00	900.00	.003527	-600.00
-600.00	-700.00	.003036	-600.00
-600.00	-500.00	.004188	-600.00
-600.00	-300.00	.006458	-600.00
-600.00	-100.00	.011580	-600.00
-600.00	100.00	.010808	-600.00
-600.00	300.00	.005380	-600.00
-600.00	500.00	.004911	-600.00
-600.00	300.00	.005380	-600.00
-600.00	600.00	.004621	-600.00
-600.00	800.00	.004060	-600.00
-500.00	-800.00	.002900	-500.00
-500.00	-600.00	.003601	-500.00
-500.00	-400.00	.005218	-500.00
-500.00	-200.00	.008743	-500.00
-500.00	.00	.017213	-500.00
-500.00	200.00	.006715	-500.00
-500.00	400.00	.005846	-500.00
-500.00	200.00	.006715	-500.00
-500.00	200.00	.006715	-500.00
-500.00	400.00	.005846	-500.00
-500.00	600.00	.005127	-500.00
-500.00	800.00	.004408	-500.00
-400.00	-800.00	.003025	-400.00
-400.00	-600.00	.003835	-400.00
-400.00	-400.00	.004952	-400.00
-400.00	-200.00	.009255	-400.00
-400.00	.00	.020561	-400.00
-400.00	200.00	.007474	-400.00
-400.00	400.00	.006624	-400.00
-400.00	600.00	.005677	-400.00
-400.00	800.00	.004765	-400.00

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POI

** CONC OF OTHER IN (MICROGRAMS/CUBIC

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)
-300.00	-800.00	.003316	-300.00
-300.00	-600.00	.004027	-300.00
-300.00	-400.00	.005368	-300.00
-300.00	-200.00	.009348	-300.00
-300.00	.00	.024357	-300.00
-300.00	200.00	.008639	-300.00
-300.00	400.00	.007534	-300.00
-300.00	600.00	.006251	-300.00
-300.00	800.00	.005392	-300.00
-200.00	-800.00	.004059	-200.00
-200.00	-600.00	.004703	-200.00
-200.00	-400.00	.005696	-200.00
-200.00	-200.00	.007920	-200.00
-200.00	.00	.023386	-200.00
-200.00	200.00	.009527	-200.00
-200.00	400.00	.008564	-200.00
-200.00	600.00	.007572	-200.00
-200.00	800.00	.006679	-200.00
-100.00	-800.00	.004824	-100.00
-100.00	-600.00	.006024	-100.00
-100.00	400.00	.007492	-100.00
-100.00	-200.00	.007056	-100.00
-100.00	.00	.004122	-100.00
-100.00	200.00	.009661	-100.00
-100.00	400.00	.011791	-100.00
-100.00	600.00	.009842	-100.00
-100.00	800.00	.008017	-100.00
.00	-800.00	.005559	.00
.00	-600.00	.007343	.00
.00	-400.00	.010323	.00
.00	-200.00	.011686	.00
.00	-200.00	.011686	.00
.00	.00	.000000	.00
.00	200.00	.017497	.00
.00	400.00	.016600	.00
.00	600.00	.012147	.00
.00	800.00	.009317	.00
100.00	-800.00	.005428	100.00
100.00	-600.00	.007086	100.00
100.00	-400.00	.009733	100.00

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POI

** CONC OF OTHER IN (MICROGRAMS/CUBIC

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)
100.00	-200.00	.011923	100.00
100.00	.00	.007042	100.00
100.00	200.00	.019802	100.00
100.00	400.00	.015498	100.00
100.00	600.00	.011588	100.00
100.00	800.00	.009006	100.00
200.00	-800.00	.005219	200.00
200.00	-600.00	.006699	200.00
200.00	-400.00	.009144	200.00
200.00	-200.00	.013223	200.00
200.00	.00	.031916	200.00
200.00	200.00	.030070	200.00
200.00	400.00	.015798	200.00
200.00	600.00	.010848	200.00
200.00	800.00	.008577	200.00
300.00	-800.00	.004950	300.00
300.00	-600.00	.006397	300.00
300.00	-400.00	.008718	300.00
300.00	-200.00	.011626	300.00
300.00	.00	.031605	300.00
300.00	200.00	.023039	300.00
300.00	400.00	.018028	300.00
300.00	600.00	.011207	300.00
300.00	800.00	.008063	300.00
400.00	-800.00	.004780	400.00
400.00	-600.00	.006156	400.00
400.00	-600.00	.006156	400.00
400.00	-400.00	.008112	400.00
400.00	-200.00	.009952	400.00
400.00	.00	.026241	400.00
400.00	200.00	.017838	400.00
400.00	400.00	.018785	400.00
400.00	600.00	.012226	400.00
400.00	800.00	.008431	400.00
500.00	-800.00	.004623	500.00
500.00	-600.00	.005829	500.00
500.00	-400.00	.007239	500.00
500.00	-200.00	.008877	500.00
500.00	.00	.021792	500.00
500.00	200.00	.014526	500.00

*** ISCLT3 - VERSION 95250 *** *** Fort Wayne Reclamation Site, 30 ft stack ***

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR INCLUDING SOURCE(S): 1 ,

*** DISCRETE CARTESIAN RECEPTOR POI

** CONC OF OTHER IN (MICROGRAMS/CUBIC

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)
500.00	400.00	.015504	500.00
500.00	600.00	.012684	500.00
500.00	800.00	.008978	500.00
600.00	-800.00	.004424	600.00
600.00	-600.00	.005460	600.00
600.00	-400.00	.006470	600.00
600.00	-200.00	.009191	600.00
600.00	.00	.018475	600.00
600.00	200.00	.013327	600.00
600.00	400.00	.012965	600.00
600.00	600.00	.012726	600.00
600.00	800.00	.009268	600.00
700.00	-700.00	.004617	700.00
700.00	-500.00	.005398	700.00
700.00	-300.00	.006136	700.00
700.00	-100.00	.012475	700.00
700.00	100.00	.014116	700.00
700.00	300.00	.010481	700.00
700.00	500.00	.011119	700.00
700.00	700.00	.010780	700.00
700.00	900.00	.008193	800.00
800.00	-500.00	.004892	800.00
800.00	-300.00	.006101	800.00
800.00	-100.00	.011270	800.00
800.00	100.00	.012533	800.00
800.00	300.00	.009528	800.00
800.00	500.00	.009592	800.00
800.00	700.00	.009529	800.00
900.00	-300.00	.006089	900.00
900.00	-100.00	.010204	900.00
900.00	100.00	.011200	900.00
900.00	300.00	.008836	900.00
900.00	500.00	.008345	900.00