SEMI-ANNUAL PROGRESS REPORT NUMBER 32

(Operating Period January 1 through June 30, 2011)

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

AST	Aboveground Storage Tank
B&N	Burgess & Niple, Incorporated
CD	Consent Decree
CLP	Contract Laboratory Program
DCE	dichloroethene
gpd	gallons per day
gpm	gallons per minute
HDPE	high-density polyethylene
ICs	Institutional Controls
IDEM	Indiana Department of Environmental Management
InSite	InSite, Incorporated
ISC-LT	Industrial Source Complex – Long-Term
MGD	million gallons per day
MWH	MWH Americas, Inc.
NFG	National Functional Guidelines
O&M	operation and maintenance
OM&M	operation, maintenance, and monitoring
Pace	Pace Analytical Services, Inc.
PAH	polynuclear aromatic hydrocarbons
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, 2011. Included in this document is a description of the system operation, assessment, and testing activities that have occurred during the reporting period. This document is organized as follows:

- *Section 2 Monitoring, Data Validation, and Field Work*
- *Section 3 Soil Vapor Extraction System*
- *Section 4 Groundwater Extraction System*
- *Section 5 Groundwater Pre-Treatment System*
- *Section 6 Off-Gas Treatment System*
- *Section 7 Institutional Controls*
- *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). The air sparge system has met its design goals, and operation of the deep and shallow injection wells was suspended in September 2001 and November 2006, respectively.
- A 3,200-scfm off-gas treatment system, which was removed from service effective June 24, 1999.
- In addition to the remediation system, institutional controls have been designated to restrict property use.

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

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

- *Final Design Evaluation* (November 19, 1993)
- *Interim Remedial Action Report* (August 1995)
- *Final Operation, Maintenance, and Monitoring (OM&M) Plan* (September 1995) and *Addendum* (July 1999)
- *Final Operations and Maintenance Quality Assurance Project Plan (O&M QAPjP)* (September 1995) and *Addendum* (July 1999)
- *Technical Memorandum Number One* (February 12, 1996)
- *Technical Memorandum Number Two* (November 1996)
- *Hydrological Assessment Letter Report, January through July 2003* (August 2003)

- *Hydrological Assessment Letter Report, July through December 2003* (January 2004)
- *Semi-Annual Progress Report Numbers 3 through 31* (August 1997 through February 2011)

2.0 MONITORING, DATA VALIDATION, AND FIELD WORK

Summaries of the monitoring activities conducted, data validation report, and 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 Preliminary Remediation Goals (PRGs) is 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 of the Site. 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 in the following table were noted in the *Final OM&M Plan* to be the principal constituents of concern necessitating groundwater and soil remediation at the WRR Site. The table also lists the most conservative groundwater PRGs and soil PRGs for the entire soil column for the principal constituents of concern.

Principal Constituent of Concern	**Groundwater PRG (µg/L)**	**Soil PRG for Entire Soil Column [1] (µg/kg)**			
		SE Area - North	SE Area - South	AST Area	MW-7S
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, Total (1,2-DCE)	--	186.3	8,578.4	184.7	4,219.0

Notes: µg/L = Micrograms per liter.
µg/kg = Micrograms per kilogram.
SE = Southeast.
AST = Aboveground Storage Tank.
-- = 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 SUMMARY

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

- The SVE system effluent 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.
- Samples of both the influent and effluent from the groundwater treatment system are collected monthly and analyzed for VOCs. The 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 for VOCs on a periodic basis. Recovery wells RW-1, RW-3, RW-4, and RW-5 are sampled annually in October. 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. Typically, the semi-annual sampling is conducted in April and October of each year. Samples are analyzed for VOCs and metals. 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 2011, samples were

collected from four WRR Site monitoring wells for analysis of 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 ten WRR Site recovery wells. Typically, the semi-annual groundwater elevations are collected in April and October of each year. These data are used to evaluate groundwater flow patterns across the site. During April 2011, 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 SE Area.
- The *Sampling and Analysis Plan for Environmental Monitoring* (July 1999), which is Appendix A of the *O&M QAPjP Addendum* (July 1999) requires that municipal wells are sampled annually, unless the pumping rate of the wells increases by a factor of two when compared to the average pumping rate in 1993. If the pumping rate increases by a factor of two, the wells are to be sampled semi-annually. The average pumping rate in 1993 was approximately 0.9 million gallons per day (MGD). The average pumping rate in 2010 was 1.1 MGD. The pumping rate has not doubled; therefore, the wells will continue to be sampled annually in October. These wells include Municipal Well Numbers 7 and 8 (referred to as PW-7 and PW-8, respectively). These wells were not sampled during this reporting period.
- During this reporting period, monitoring wells located on or adjacent to the landfill (GM-1 through GM-4) were sampled by Burgess & Niple,

Incorporated (B&N) of Columbus, Ohio. Their report (***Appendix A***) provides 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 2011. The water samples were analyzed by Pace Analytical Services, Inc. (Pace) of Indianapolis, Indiana for one or more of the following parameters: VOCs by U.S. EPA Method SW-846 8260B; dissolved metals (arsenic, barium, cadmium, chromium, lead, nickel, and zinc) by U.S. EPA Method SW-846 6010B; and total cyanide by U.S. EPA Method 335.3. Additionally, air samples were analyzed for VOCs by Pace of Minneapolis, Minnesota by 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 Superfund Organic Methods Data Review (June 2008), U.S. EPA CLP NFG for Inorganic Data Review (October 2004), 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 complete data validation report is included as ***Appendix B***. The analytical data for those compounds that did not meet the QC criteria were flagged by a “J” (estimated) or “U” (non-detect).

Based on the results of this data validation, the data are considered usable as qualified with one exception. The SVE system effluent sample for February 2011 was initially reported by the laboratory as non-detect for VOCs. Based on historical information, these results were considered unlikely, and the laboratory was asked to further evaluate these results. After further review, the laboratory found that the multiport valve channel, to which the

sample was connected, was defective and, the sample was not admitted to the instrument. Consequently, the February 2011 SVE system effluent sample was not analyzed.

2.4 FIELD WORK SUMMARY

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, calibration, 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 AST Area. Operation of the SVE wells in the SE Area was reduced in November 2006 and suspended in April 2007. SVE wells in the AST Area are connected via underground piping to one of two branch lines (Branches G and H; ***Figure 2***) that convey extracted vapors to the treatment building. Operation of Branch Line H was suspended in October 2002. Only Branch Line G is presently operated.

3.2 MONITORING RESULTS

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

- During the period of January 1 through June 30, 2011, the SVE system was operational for approximately 97.7 percent of the time (i.e., percent of total hours available). Downtime events were related to standard, regularly scheduled OM&M activities, and maintenance and repairs.
- Air flow rates were collected each month from January through June 2011. The flow rate in Branch Line G averaged approximately 1,122 scfm while operating. Flow rate measurements collected during this reporting period are summarized in ***Table 1***.
- Laboratory analytical data from the Summa canister sample collected in April 2011 are summarized in ***Table 2***; historical data from Summa canister samples are summarized in ***Appendix D, Table D-1***.

3.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

Based on laboratory analytical results from SVE system effluent air samples collected during the reporting period, an estimated 12,109 pounds of VOCs have been removed via the SVE system from vadose zone soils to date, with 4.4 pounds removed from January through June 2011. The main VOC constituents removed in the AST Area are TCE and cis-1,2-DCE. For this reporting period, the removal rate for the SVE system was approximately 0.02 pounds of total VOCs per day. The trend in VOC concentrations for the combined effluent air of the SVE, air sparge, and groundwater treatment systems from 1995 through the present is relatively stable, as shown in ***Figure 4***.

Semi-annual groundwater monitoring is conducted in April and October of each year. During April 2011, samples were collected from four WRR Site monitoring wells and analyzed for VOCs and metals. Groundwater monitoring results for samples collected in April 2011 are presented in ***Table 3***; historical groundwater monitoring data are presented in ***Appendix D, Table D-2***. Groundwater monitoring data are discussed in Section 4.3. As discussed in Section 4.3, constituents in groundwater are still present at concentrations greater than site-specific PRGs, and the SVE system typically removes VOCs at less than 0.5 percent of the initial removal rates. This trend has been stable for approximately 15 years (***Figure 4***).

4.0 GROUNDWATER EXTRACTION SYSTEM

4.1 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 (RW-1 through RW-3) in the AST Area, one recovery well (RW-4) in the monitoring well MW-7S area, and six recovery wells (RW-5 through RW-10) in the SE Area (***Figure 1***). The extraction system also uses a soil-bentonite cut-off wall (i.e., a slurry wall), constructed to reduce the pumping rate necessary to control groundwater flow in the SE Area. The slurry wall encircles the SE Area near the Blue River. Extracted groundwater is pumped to the on-site treatment building through underground HDPE piping.

4.2 MONITORING RESULTS

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

- During the period of January through June 2011, the groundwater extraction system was operational for approximately 97.7 percent of the time (i.e., percent of total hours available). Primary downtime events were related to routine cleaning of recovery pumps, routine and annual plant maintenance, and cleaning and repair of the pumps and flow meters.
- A summary of system flow rates during this reporting period is included in ***Table 4***. The average sustained groundwater recovery rate during the reporting period was approximately 57 gpm. During this reporting period, a total of 14,462,283 gallons of groundwater were recovered and treated. The largest total monthly flow was reported at 2,858,076 gallons for the month of April. The highest average daily recovery rate

during the reporting period was 95,300 gallons per day (gpd), which was reported during April. ***Figure 5*** is a summary of the cumulative and average daily groundwater recovery rates from October 1995 through June 2011. As of June 30, 2011, a cumulative total of 433,122,246 gallons of groundwater had been recovered, treated, and discharged to the Columbia City POTW.

- 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 were used to evaluate the configuration of the water table under pumping conditions, January through June, 2011. Water table elevation data are provided in ***Table 5***. Groundwater contour maps for January through June 2011 are presented as ***Figures 7-1*** through ***7-4***, ***7-6***, and ***7-7***. Because groundwater elevations were measured in all monitoring wells in April, ***Figure 7-4*** reflects groundwater elevations observed across the entire WRR Site. The influence of the recovery wells in the southeast corner is apparent, and the general groundwater flow direction across the property is southeast. The April 2011 groundwater elevations in the landfill wells discussed in the B&N report (see ***Table 2*** of the B&N report, included as ***Appendix A***) were consistent with the elevations observed on the WRR Site.
- ***Figure 7-5*** summarizes recent groundwater sampling analytical results from monitoring wells for April 2011.
- Columbia City municipal drinking water wells located to the north of the WRR Site are sampled annually in October. Recent and historical laboratory analytical results from these wells are presented in ***Appendix D, Tables D-3*** and ***D-4***. Constituents associated with the WRR Site have never been detected in samples collected from the municipal wells.

The average pumping rate for these wells in 2010 was 1.1 MGD. The pumping rate for these wells was 0.9 MGD in 1993.

- Groundwater from the recovery wells is sampled and analyzed for VOCs on an annual basis. The most recent sample results for these recovery wells (October 2010) are provided in ***Table 6***; historical data from the recovery well samples are provided in ***Appendix D, Table D-5***.

4.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

The primary remedial objective of the groundwater extraction system is to remove dissolved-phase constituents 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 ranged from approximately 0.53 to 1.28 pounds of total VOCs removed per day during this reporting period.

Groundwater elevation data indicate 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 were lower inside the slurry wall when compared to the head levels outside the wall. For example, during the April 2011 event, the elevation within the confines of the slurry wall were 3.7 feet lower than water elevation immediately outside the slurry wall (based on monitoring wells MW-11S and MW-13S, ***Table 5***).

OM&M activities, including on-going recovery pump cleaning, are conducted to maintain the extraction system recovery rates and thereby to maintain an upward vertical hydraulic gradient in the SE Area. Based on the historical observations of groundwater extraction system performance, maintenance of the groundwater extraction system is 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 (based on elevation data from MW-83AD and MW-83AS).

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-4S, MW-7S, MW-9S, 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 program per the July 11, 2002, Site Progress Meeting. During this reporting period, groundwater samples were collected from the following monitoring wells in accordance with the *Sampling and Analysis Plan for Environmental Monitoring - Revision 1* (July 1999): MW-4S, MW-9S, MW-14S, and MW-83AS.

A summary of monitoring well VOC and metals analytical data collected during this reporting period is included in ***Table 3***; historical data are provided in ***Appendix D, Table D-2***. Recent monitoring well VOC analytical results from April 2011 are also included in ***Figure 7-5***. The most recent recovery well VOCs analytical data (October 2010) are included in ***Table 6***; historical data are provided in ***Appendix D, Table D-5***. Copies of laboratory analytical reports are available upon request. The sample results for each area are summarized below:

<u>SE Area</u>

- MW-83AS – The April 2011 concentrations of cis-1,2-DCE (321 micrograms per liter [µg/L]) and VC (316 µg/L) exceeded PRGs (70 µg/L and 0.0283 µg/L, respectively). The cis-1,2-DCE concentration was consistent with historical samples. The VC sample result was generally less than historical sample results, but consistent with the results obtained since April 2009.

AST Area

- MW-9S – The concentrations of cis-1,2-DCE (10,300 µg/L), TCE (894 µg/L), and VC (117 µg/L) exceeded PRGs (70 µg/L, 2.54 µg/L, and 0.0283 µg/L, respectively). The cis-1,2-DCE and VC sample results from this reporting period appear to be generally consistent with historical sample results. The TCE concentrations observed during this reporting period are generally consistent with the results obtained over the last three years, which are lower than the results observed during the previous 20 years of monitoring.
- MW-14S – 1,1-Dichloroethane (1,1-DCA, 25.5 µg/L) and 1,1,1-trichloroethane (1,1,1-TCA, 4.9 µg/L) were detected in the sample collected from MW-14S. These results did not exceed PRGs. The results obtained during this sampling event are generally consistent with the results obtained since October 2009.

Recovery Well RW-4 Area:

- MW-4S – In April 2011, VOCs were not detected in MW-4S. These results are consistent with the results obtained during the previous sampling event. Historically, VC has been detected in this well at relatively low concentrations (e.g., less than 10 µg/L since 2005).

5.0 GROUNDWATER PRE-TREATMENT SYSTEM

5.1 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.

5.2 MONITORING RESULTS

During the period of January through June 2011, the groundwater pretreatment system was operational 97.7 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, non-routine maintenance, and repairs.

Monthly groundwater treatment system sampling consists of influent and effluent sampling for VOCs; detailed VOC results for this monitoring period are provided in ***Table 7,*** and historical results for influent are summarized in ***Figure 6***. The air stripping tower has consistently removed VOCs prior to discharge of treated groundwater to the Columbia City POTW. As shown on ***Figure 6***, total VOC concentrations in air stripping tower influent have fluctuated from as low as 273 µg/L to as high as 3,274 µg/L (in September 2003 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

1,264 µg/L in January 2011 and ended at 1,097 µg/L in June 2011 (***Table 7***). The average total VOC concentration removed during the reporting period was approximately 1,157 µg/L. For this reporting period, the average groundwater constituent mass removal rate was 0.78 pounds of total VOCs per day, based on an average flow rate of 79,750 gpd, and an average total VOC concentration removed of 1,157 µg/L.

Average groundwater constituent mass removal rates since the commencement of remediation system operations have ranged from approximately 0.13 to 13.2 pounds per day of total VOCs. Historical mass removal rates for specific VOCs from April 1998 through April 2011 are provided in ***Appendix D***, ***Table D-6***. The total mass removed during the period of January through June 2011 and attributable to the groundwater pre-treatment system is approximately 138 pounds; the total mass to date is an estimated 4,744 pounds.

Groundwater treatment system effluent samples are collected during the October sampling events and analyzed for non-VOC parameters. Consequently, non-VOC parameters were not collected during this reporting period. The historical results for non-VOC parameters are provided in ***Appendix D, Table D-7***.

5.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

Laboratory analytical results for the groundwater treatment system monthly effluent sampling for this monitoring period, 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 ***Table 7***. Analytical results (from the current monitoring period and historically) have indicated that low levels of both VOCs and inorganic compounds are present in the treated groundwater discharged to the Columbia City POTW.

6.0 OFF-GAS TREATMENT SYSTEM

6.1 SYSTEM DESCRIPTION

The off-gas treatment system was operated until June 1999 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.

Currently, 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.

6.2 MONITORING RESULTS

The SVE system effluent (equivalent to the former air treatment system influent) samples are collected and analyzed for VOCs on a monthly basis. ***Table 8*** presents the monthly effluent sample results collected during this reporting period; historical results are provided in ***Appendix D, Table D-8***.

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

- Calculations were conducted using the VOC concentrations of off-gas vapor concentrations to assess hypothetical risk levels; a more detailed discussion of the risk calculations is provided in Section 6.3. Results of the effluent sample analyses indicate hypothetical risk levels did not exceed the cumulative risk action level of $1x10^{-6}$ (representing an increased cancer risk of one in one million exposed). The results for

this reporting period are presented in ***Table 9***. Current and historical air risk calculations are provided in ***Appendix D, Table D-9.***

6.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

The primary objective of the 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 estimate 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 E***).

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 the $1x10^{-6}$ action level was not exceeded 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 $1x10^{-6}$.

7.0 INSTITUTIONAL CONTROLS

The following institutional controls (ICs) were specified in the RD/RA Consent Decree (CD) to supplement the remedial actions.

1. There shall be no interference of any sort, by any person, with construction, operation, maintenance, monitoring, and efficacy of all components and structures and improvements resulting from or relating to the response actions implemented pursuant to the RD/RA CD.

2. There shall be no operations on the facility which extract, consume, or otherwise use the groundwater underlying the facility property or adjoining property, except as provided for in the course of carrying out the terms of the RD/RA CD without prior written U.S. EPA approval and notification to the Indiana Department of Environmental Management (IDEM).

3. There shall be no agricultural, recreational, residential, commercial, or industrial use of the facility, including but not limited to any excavation, grading or other activity involving movement of soils at the facility, and any construction or placement of any residence, buildings, or structures - fixtures or otherwise - other than for the purpose of implementing, monitoring, and maintaining the response action required by the RD/RA CD without prior written U.S. EPA approval and notification to IDEM.

4. There shall be no construction, installation, or use of any buildings, wells, pipes, roads, ditches or any other structures - fixtures or otherwise - on the facility property that may interfere with the construction, physical integrity, operation and maintenance, or efficacy of the work undertaken pursuant to the RD/RA CD, including without limitation the facility's: security fence; municipal landfill

cap; soil cover(s) related to polynuclear aromatic hydrocarbons (PAH) impacted soil; groundwater extraction, treatment, and discharge system; soil vapor extraction system; air, groundwater and surface water monitoring systems; and soil immobilization or washing systems and locations, unless such construction, installation or use is approved in advance, in writing, by U.S. EPA and IDEM has been notified.

During this reporting period, onsite personnel have not observed or performed activities that would be considered inconsistent with these ICs.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Overall remediation system mass removal calculations indicate that, since inception of treatment system operations, approximately 16,853 pounds of total VOCs have been removed by the SVE and groundwater treatment systems (***Figure 8***). Of this, approximately 72 percent (or 12,109 pounds) is attributed to operation of the SVE and air sparging system, and approximately 28 percent (or 4,744 pounds) is attributed to the groundwater extraction system. Currently, most of the mass removal is being accomplished via the groundwater extraction system.

As shown on ***Figure 9*** (which illustrates VOC removal rates in pounds per day since 1995), initial constituent mass removal rates from the entire remediation system were approximately 88 pounds of total VOCs per day during the startup phase of system operations. This removal rate has decreased to approximately 0.81 pounds of total VOCs per day, as of this reporting period.

The pumping rate of the municipal wells has not doubled since 1993. Therefore, the municipal wells will continue to be sampled annually in October.

Current operation, maintenance and monitoring activities will continue during the next reporting period. No recommendations for changes or enhancements to the system are being made at this time.

TABLES

Table 1
Summary of Soil Vapor Extraction Air Flow Rates - AST Area
January through June 2011
Wayne Reclamation & Recycling

Measurement Date	Air Flow AST Area (scfm)
1/13/11	1,300
2/7/11	1,270
3/21/11	1,120
4/12/11	1,000
5/18/11	1,040
6/16/11	1,000
Average Flow	1,122
Maximum Flow	1,300
Minimum Flow	1,000

Notes:

Average Flow is based on operating flow rates while the air stripper is operating.

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.

The operation of SVE wells in the Southeast Area was decreased in November 2006 and suspended in April 2007.

Table 2
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
April 2011
Wayne Reclamation & Recycling

Constituent (ppb[v/v])	AST Area Branch G (East Branch)
1,1-Dichloroethane	<0.92
cis-1,2-Dichloroethene	**19**
trans-1,2-Dichloroethene	<0.92
Methylene chloride	**31**
Tetrachloroethene	**5.4**
1,1,1-Trichloroethane	**1.2**
Trichloroethene	**24**
1,2,4-Trimethylbenzene	<0.92
1,3,5-Trimethylbenzene	<0.92
Vinyl Chloride	<0.92
Xylenes, Total	<1.8

Notes: Soil Vapor Extraction Wells: 41 - 43, 50, and 53 - 58
Bold = Analyte detected greater than the laboratory reporting limit.
< = Not detected greater than the reporting limit provided.
AST = Above ground storage tank
ppb[v/v] = parts per billion (volume)

Table 3
Monitoring Well Analytical Results
April 2011
Wayne Reclamation & Recycling

Constituent	MW-4S (RW-4 Area) 4/11/11	MW-9S (AST Area) 4/11/11	MW-14S (AST Area) 4/11/11	MW-83AS (Southeast Area) 4/11/11	PRG (µg/L)
VOCs (µg/L)					
Acetone	<20.0	<200.0	<20.0	<20.0	**3,650**
Benzene	*<1.0*	*<10.0*	*<1.0*	*<1.0*	**0.617**
Bromomethane	<1.0	<20.0	<1.0	<1.0	--
2-Butanone (MEK)	<20.0	<200.0	<20.0	<20.0	--
n-Butylbenzene	<1.0	<10.0	<1.0	<1.0	--
Carbon Disulfide	<5.0	<50.0	<5.0	<5.0	**768**
Chloroethane	<2.0	<20.0	<2.0	<2.0	--
Chloroform	*<1.0*	*<10.0*	*<1.0*	*<1.0*	**0.274**
Dibromomethane	<1.0	<10.0	<1.0	<1.0	--
1,1-Dichloroethane	<1.0	<10.0	**25.5**	**14**	**973**
1,2-Dichloroethane	<1.0	<10.0	<1.0	<1.0	--
1,1-Dichloroethene	*<1.0*	*<10.0*	*<1.0*	*<1.0*	**0.0167**
cis-1,2-Dichloroethene	<1.0	**10,300**	<1.0	**321**	**70**
trans-1,2-Dichloroethene	<1.0	**79**	<1.0	<1.0	**100**
1,2-Dichloroethene, Total	<1.0	**10,379**	<1.0	**321**	(170)
1,2-Dichloropropane	<1.0	*<10.0*	<1.0	<1.0	**1.25**
Ethylbenzene	<1.0	<200.0	<1.0	<1.0	**700**
4-Methyl-2-pentanone (MIBK)	<20.0	<200.0	<20.0	<20.0	**487**
Tetrachloroethene	<1.0	*<10.0*	<1.0	<1.0	**1.43**
Toluene	<1.0	<10.0	<1.0	<1.0	**1,000**
1,1,1-Trichloroethane	<1.0	<10.0	**4.9**	<1.0	**200**
1,1,2-Trichloroethane	*<1.0*	*<10.0*	*<1.0*	*<1.0*	**0.314**
Trichloroethene	<1.0	**894**	<1.0	<1.0	**2.54**
1,2,4-Trimethylbenzene	<1.0	<10.0	<1.0	<1.0	--
Vinyl Chloride	*<1.0*	**117**	*<1.0*	**316**	**0.0283**
Xylenes, Total	<1.0	<10.0	<1.0	<1.0	**828**
Total VOCs	**0**	**11,390**	**30.4**	**651**	--
Metals (mg/L)					
Arsenic, Dissolved	<0.10	<0.10	<0.10	<0.10	--
Barium, Dissolved	**0.12**	**0.037**	**0.037**	**0.066**	--
Cadmium, Dissolved	<0.030	<0.030	<0.030	<0.030	--
Chromium, Dissolved total	<0.04	<0.04	<0.040	<0.040	--
Cyanide, Total	<0.005	<0.005	<0.005	<0.005	--
Lead, Dissolved	<0.08	<0.08	<0.08	<0.08	--
Nickel, Dissolved	<0.01	<0.01	<0.01	<0.01	--
Zinc, Dissolved	<0.05	<0.05	<0.05	<0.05	--

Notes:

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).
Metals reported in milligrams per liter (mg/L).
< = Not detected greater than the reporting limit provided.
-- = No PRG assigned
(170) = The PRG for 1,2-Dichloroethene, Total is the sum of the PRGs for cis-1,2-Dichloroethene and trans-1,2-Dichloroethene.
AST = Above ground storage tank

Bold = Analyte detected greater than the laboratory reporting limit.
Italics = Reporting limit greater than the corresponding PRG.
Shaded = Analyte detected greater than the corresponding PRG.

Table 4
Groundwater Treatment System Flow Summary
Wayne Reclamation & Recycling

January 2011		February 2011		March 2011		April 2011		May 2011		June 2011	
DATE	FLOW (gpd)	DATE	FLOW (gpd)	DATE	FLOW (gpd)	DATE	FLOW (gpd)	DATE	FLOW (gpd)	DATE	FLOW (gpd)
1	91,008	1	67,392	1	80,496	1	112,320	1	49,104	1	85,824
2	91,008	2	67,392	2	80,496	2	112,320	2	49,104	2	85,824
3	91,008	3	67,392	3	80,496	3	112,320	3	76,032	3	85,824
4	91,008	4	67,392	4	80,496	4	112,320	4	76,032	4	85,824
5	91,008	5	67,392	5	80,496	5	112,320	5	76,032	5	85,824
6	64,085	6	67,392	6	80,496	6	112,320	6	76,032	6	85,824
7	22,620	7	63,792	7	80,496	7	112,320	7	76,032	7	85,824
8	20,358	8	63,792	8	80,496	8	101,520	8	76,032	8	85,824
9	54,288	9	63,792	9	71,568	9	101,520	9	76,032	9	89,568
10	54,288	10	63,792	10	71,568	10	101,520	10	82,944	10	89,568
11	49,010	11	63,792	11	71,568	11	101,520	11	62,496	11	89,568
12	54,288	12	63,792	12	71,568	12	101,520	12	82,944	12	89,568
13	65,373	13	63,792	13	71,568	13	101,520	13	82,944	13	89,568
14	66,528	14	63,792	14	71,568	14	88,992	14	82,944	14	89,568
15	66,528	15	63,792	15	71,568	15	88,992	15	82,944	15	89,568
16	66,528	16	63,792	16	71,568	16	88,992	16	82,944	16	118,656
17	66,528	17	57,888	17	84,816	17	88,992	17	82,944	17	118,656
18	64,772	18	57,888	18	84,816	18	88,992	18	54,438	18	118,656
19	66,528	19	57,888	19	84,816	19	88,992	19	60,768	19	118,656
20	112,896	20	57,888	20	84,816	20	88,992	20	60,768	20	118,656
21	112,896	21	57,888	21	84,816	21	88,992	21	60,768	21	78,912
22	112,896	22	57,888	22	83,579	22	83,808	22	60,768	22	78,912
23	112,896	23	57,888	23	84,816	23	83,808	23	87333	23	78912
24	112,896	24	56,481	24	84,816	24	83,808	24	92880	24	78912
25	112,896	25	63,360	25	100,944	25	83,808	25	92880	25	78912
26	112,896	26	63,360	26	100,944	26	80,316	26	69144	26	78912
27	55,500	27	63,360	27	100,944	27	83,808	27	47537	27	78912
28	58,464	28	63,360	28	100,944	28	83,808	28	92880	28	33209
29	58,464			29	100,944	29	83,808	29	92880	29	26304
30	58,464			30	100,944	30	83,808	30	92880	30	78912
31	58,464			31	100,944			31	92880		
Total Monthly Flow (gallons)											
	2,316,390		1,757,409		2,600,411		2,858,076		2,332,340		2,597,657
Average Daily Flow (gallons)											
	74,700		62,800		83,900		95,300		75,200		86,600
Total Plant Run Time (minutes)											
	42,198		40,285		44,619		43,140		42,978		41,406
Average Flow during Plant Run Time (gpm)											
	55		**44**		**58**		**66**		**54**		**63**

Notes:

gpd = Gallons per day. gpm = Gallons per minute.

Average Daily Flow is calculated by dividing the total monthly flow by the total number of operational days for the given month, then rounded to the nearest 100 gallons.

Average Flow during Plant Run Time is calculated by dividing the total monthly flow by the total plant run time for the given month, then rounded to the nearest gallon.

Period	Total Gallons Treated
6 Months	14,462,283
12 Months	29,719,739
Since 1995	433,122,246

Table 5
Summary of Groundwater Elevations
Wayne Reclamation & Recycling

Well Identification	TOIC Elevation 2001 - 2003	Groundwater Elevation (feet above mean sea level)					
	Date:	01/18/2011	02/17/2011	03/21/2011	04/12/2011	05/18/2011	06/16/2011
MW-1D	826.08	--	--	--	809.45	--	--
MW-2S	825.34	808.11	807.02	807.70	808.89	810.47	810.79
MW-3S	824.06	808.08	807.36	807.87	807.97	810.34	810.63
MW-4S	843.06	--	--	--	810.17	--	--
MW-5S	833.02	--	--	--	812.03	--	--
MW-7S	836.12	--	--	--	810.31	--	--
MW-8S	835.52	--	--	--	811.47	--	--
MW-8D	834.11	--	--	--	809.46	--	--
MW-9S	825.44	--	--	--	811.63	--	--
MW-10S	823.15	807.92	807.45	807.81	807.91	810.51	810.79
MW-11S	825.08	808.24	807.34	807.90	808.24	810.34	810.49
MW-13S	826.40	810.83	811.21	811.55	811.95	812.57	811.87
MW-13D	826.44	--	--	--	810.74	--	--
MW-14S	821.30	--	--	--	811.62	--	--
MW-15S	827.64	--	--	--	811.74	--	--
MW-16S	827.41	--	--	--	811.55	--	--
MW-17S	826.56	--	--	--	811.84	--	--
MW-18S	824.16	--	--	--	811.77	--	--
MW-19S	832.07	--	--	--	811.70	--	--
P-1	834.28	--	--	--	811.09	--	--
P-2	825.49	--	--	--	811.49	--	--
P-3	823.48	--	--	--	811.59	--	--
P-4	822.67	--	--	--	811.52	--	--
MW-83AD	826.15	809.02	809.06	809.18	809.86	811.47	811.15
MW-83AS	826.13	808.02	806.98	807.65	807.85	810.40	810.72
MW-83B	840.55	--	--	--	809.45	--	--
MW-83DD	825.30	--	--	--	811.08	--	--
MW-83DS	825.21	809.92	810.21	810.57	811.19	812.09	811.57
GM-3	822.87	--	--	--	--	--	--
GM-4	827.40	--	--	--	--	--	--
PZ-1	823.66	--	--	--	--	--	--
PZ-2	825.73	--	--	--	--	--	--
PZ-3	826.46	--	--	--	--	--	--
PZ-4	825.52	--	--	--	--	--	--
G-1	808.82	--	--	--	--	--	--
G-2	810.10	--	--	--	--	--	--
G-3	809.91	--	--	--	--	--	--
G-4	810.21	--	--	--	--	--	--
RW-1	818.45	--	--	--	--	--	--
RW-2	824.29	--	--	--	--	--	--
RW-3	822.71	--	--	--	--	--	--
RW-4	833.24	--	--	--	--	--	--
RW-5	823.94	--	--	--	--	--	--
RW-6	820.71	--	--	--	--	--	--
RW-7	820.21	--	--	--	--	--	--
RW-8	821.86	--	--	--	--	--	--
RW-9	821.69	--	--	--	--	--	--
RW-10	822.55	--	--	--	--	--	--

Notes:

TOIC = Top of inner well casing; MW = monitoring well; P and PZ = piezometer; GM = landfill well; G = river gauge point; RW = recovery well.

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
Recovery Well Analytical Results
October 2010
Wayne Reclamation & Recycling

Constituent	RW-1 10/22/2010	RW-3 10/22/2010	RW-4 10/22/2010	RW-5 10/22/2010	PRG (µg/L)
VOCs (µg/L)					
Acetone	< 20	< 20	< 20	< 20	**3,650**
Benzene	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	< 2	< 2	< 2	< 1	--
2-Butanone (MEK)	< 20	< 20	< 20	< 20	--
n-Butylbenzene	< 1	< 1	< 1	< 1	--
Carbon Disulfide	< 20	< 20	< 20	< 20	**768**
Chloroethane	**22**	< 2	< 2	< 2	--
Chloroform	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	**40**	< 1	< 1	< 1	**973**
1,2-Dichloroethane	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	*< 1*	*< 1*	*< 1*	*<1*	**0.0167**
cis-1,2-Dichloroethene	**24**	**135**	**137**	**626**	**70**
trans-1,2-Dichloroethene	< 1	**5.1**	**13**	**5.8**	**100**
1,2-Dichloroethene, Total	**24**	**140**	**150**	**632**	(170)
1,2-Dichloropropane	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	< 1	< 1	< 1	< 1	**1.43**
Toluene	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	**8.3**	**8.9**	< 1	< 1	**200**
1,1,2-Trichloroethane	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene	**2.4**	**78**	< 1	**11**	**2.54**
1,2,4-Trimethylbenzene	< 5	< 5	< 5	< 5	--
Vinyl Chloride	**18**	**7.7**	*< 1*	**215**	**0.0283**
Xylenes, Total	< 2	< 2	< 2	< 2	**828**
Total VOCs	**115**	**235**	**150**	**858**	--

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

(170) = The PRG for 1,2-Dichloroethene, Total is the sum of the PRGs for cis-1,2-Dichloroethene and trans-1,2-Dichloroethene

Bold = Analyte detected above laboratory reporting limit

Italics = Reporting limit above the corresponding PRG

Shaded = Analyte detected above the corresponding PRG.

Table 7
Summary of Groundwater Treatment System Volatile Organic Compound
Influent and Effluent Sampling
Wayne Reclamation & Recycling

	1/13/2011		2/7/2011		3/21/2011	
Constituent (ug/L)	**IN**	**EFF**	**IN**	**EFF**	**IN**	**EFF**
1,1-Dichloroethane	<1.0	<1.0	**5.5**	<1.0	**13**	<1.0
1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	**834**	**34**	**475**	**13**	**1,250**	**47**
trans-1,2-Dichloroethene	**12**	<1.0	**3.3**	<1.0	**16**	<1.0
Trichloroethene	**288**	**4.3**	**49**	<1.0	**410**	**6.1**
Vinyl Chloride	**130**	<1.0	**103**	<1.0	**158**	<1.0
Total VOC Concentration	**1,264**	**38**	**636**	**13**	**1,847**	**53**

	4/12/2011		5/18/2011		6/16/2011	
Constituent (ug/L)	**IN**	**EFF**	**IN**	**EFF**	**IN**	**EFF**
1,1-Dichloroethane	**12**	<1.0	**8.3**	<1.0	**11**	<1.0
1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	<1.0	<1.0	**1.9**	<1.0	**1.9**	<1.0
cis-1,2-Dichloroethene	**1,010**	**59**	**636**	**87**	**713**	**92**
trans-1,2-Dichloroethene	**16**	<1.0	**9.3**	<1.0	**11**	<1.0
Trichloroethene	**343**	**8**	**173**	**11**	**235**	**12**
Vinyl Chloride	**161**	<1.0	**99**	<1.0	**125**	<1.0
Total VOC Concentration	**1,542**	**66**	**928**	**98**	**1,097**	**104**

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.
Results indicated for primary detected constituents.

IN = Influent water sample.
EFF = Effluent water sample.

Table 8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Constituent (ppb[v/v])	EFFLUENT SAMPLE					
	1/13/2011	**2/01/2011**	**3/21/2011**	**4/12/2011**	**5/18/2011**	**6/16/2011**
1,1-Dichloroethane	<0.69	NA	<13.8	<14.3	<19.2	**16**
1,1-Dichloroethene	**0.71**	NA	<13.8	<14.3	<19.2	**3.3**
cis-1,2-Dichloroethene	**553**	NA	**3,580**	**2,540**	**903**	**1,900**
trans-1,2-Dichloroethene	**4.9**	NA	**19**	<14.3	<19.2	**15**
Tetrachloroethene	**5.8**	NA	<13.8	<14.3	<19.2	**6.4**
Toluene	**3.3**	NA	<13.8	<14.3	<19.2	<0.72
1,1,1-Trichloroethane	**4.1**	NA	<13.8	<14.3	<19.2	**2.2**
Trichloroethene	**118**	NA	**484**	**388**	**205**	**455**
Vinyl Chloride	**142**	NA	**327**	**290**	**244**	**427**
Cumulative Cancer Risk (1)	**4.00E-08**	**--**	**9.47E-08**	**8.98E-08**	**7.02E-08**	**1.24E-07**

Notes:

(1) Cumulative Cancer Risk calculation is indicated on Table 9.

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.

NA = The February 2011 SVE system effluent sample was collected and submitted to the laboratory; however, the sample results were rejected because the sample was not analyzed due to a malfunction of laboratory instrumentation.

< = 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 9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	**TCE** *Carcinogen*	**1,1-DCE** *Non-Carcinogen*	**cis-1,2-DCE** *Non-Carcinogen*	**trans-1,2-DCE** *Non-Carcinogen*	**VC** *Carcinogen*	**1,1,1-TCA** *Non-Carcinogen*	**1,1-DCA** *Carcinogen*	**Toluene** *Non-Carcinogen*	
EFF	(ppb[v/v])	6	118	1	553	5	142	4	1	3	
1/13/2011	(g/s)	0.0000	0.0007	0.0000	0.0031	0.0000	0.0008	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.003	0.000	0.015	0.000	0.004	0.000	0.000	0.000	
	ECR	9.00E-10	6.21E-09				3.29E-08		3.04E-13		4.00E-08
EFF	(ppb[v/v])	14	484	14	3580	19	290	14	14	14	
3/21/2011	(g/s)	0.0001	0.0027	0.0001	0.0200	0.0001	0.0016	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.013	0.000	0.094	0.000	0.008	0.000	0.000	0.000	
	ECR	2.14E-09	2.55E-08				6.71E-08		5.92E-12		9.47E-08
EFF	(ppb[v/v])	14	388	14	2540	14	290	14	14	14	
4/12/2011	(g/s)	0.0001	0.0022	0.0001	0.0142	0.0001	0.0016	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.010	0.000	0.067	0.000	0.008	0.000	0.000	0.000	
	ECR	2.22E-09	2.04E-08				6.71E-08		6.13E-12		8.98E-08
EFF	(ppb[v/v])	19	205	19	903	19	244	19	19	19	
5/18/2011	(g/s)	0.0001	0.0011	0.0001	0.0051	0.0001	0.0014	0.0001	0.0001	0.0001	
	Max.Conc.	0.001	0.005	0.001	0.024	0.001	0.006	0.001	0.001	0.001	
	ECR	2.98E-09	1.08E-08				5.65E-08		8.23E-12		7.02E-08
EFF	(ppb[v/v])	6	455	3	1900	15	427	2	16	1	
6/16/2011	(g/s)	0.0000	0.0025	0.0000	0.0106	0.0001	0.0024	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.012	0.000	0.050	0.000	0.011	0.000	0.000	0.000	
	ECR	9.93E-10	2.39E-08				9.88E-08		6.86E-12		1.24E-07

Notes:

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

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.

Bold = Cumulative Cancer Risk above action level.

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

PCE - Tetrachloroethene
TCE - Trichloroethene
1,1-DCE - 1,1-Dichloroethene
cis-1,2-DCE - cis-1,2-Dichloroethene
trans-1,2-DCE - trans-1,2-Dichloroethene
VC - Vinyl chloride
1,1,1-TCA - 1,1,1-Trichloroethane
1,1-DCA - 1,1-Dichloroethane

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, 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.
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
- RIVER GAUGE POINT LOCATION
- RIVER WATER SAMPLING LOCATION
- SYSTEM PIPING

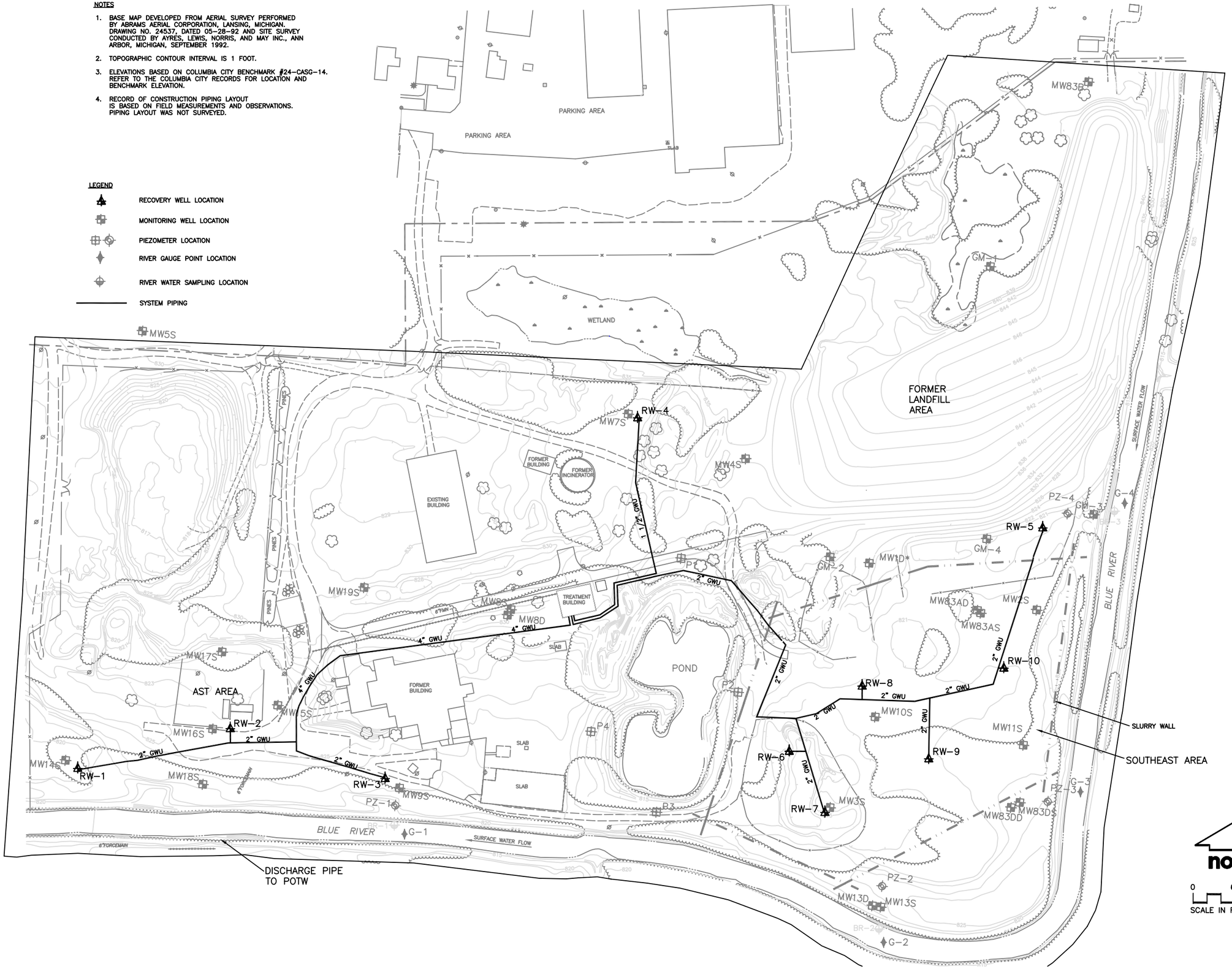

FIGURE 1

Developed By	BRT
Approved By	BRT
Drawn By	DTM
Date	6/7/11
Reference	
Consultants	

Approvd.	By	Date	Issuance/Revisions	Releases

SITE PLAN – GROUNDWATER EXTRACTION & TREATMENT SYSTEM AND SLURRY WALL

SEMI-ANNUAL PROGRESS REPORT 32
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

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1008811
010102 D1

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J:\01_INDUSTRIAL-OTHER\3668-Wayne RR\5-CADD\SAPR 32\Fig 01 Grdwtr Ext Treat Sys.dwg Jun/13/11

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.
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
- RIVER GAUGE POINT LOCATION
- RIVER WATER SAMPLING LOCATION
- SYSTEM PIPING

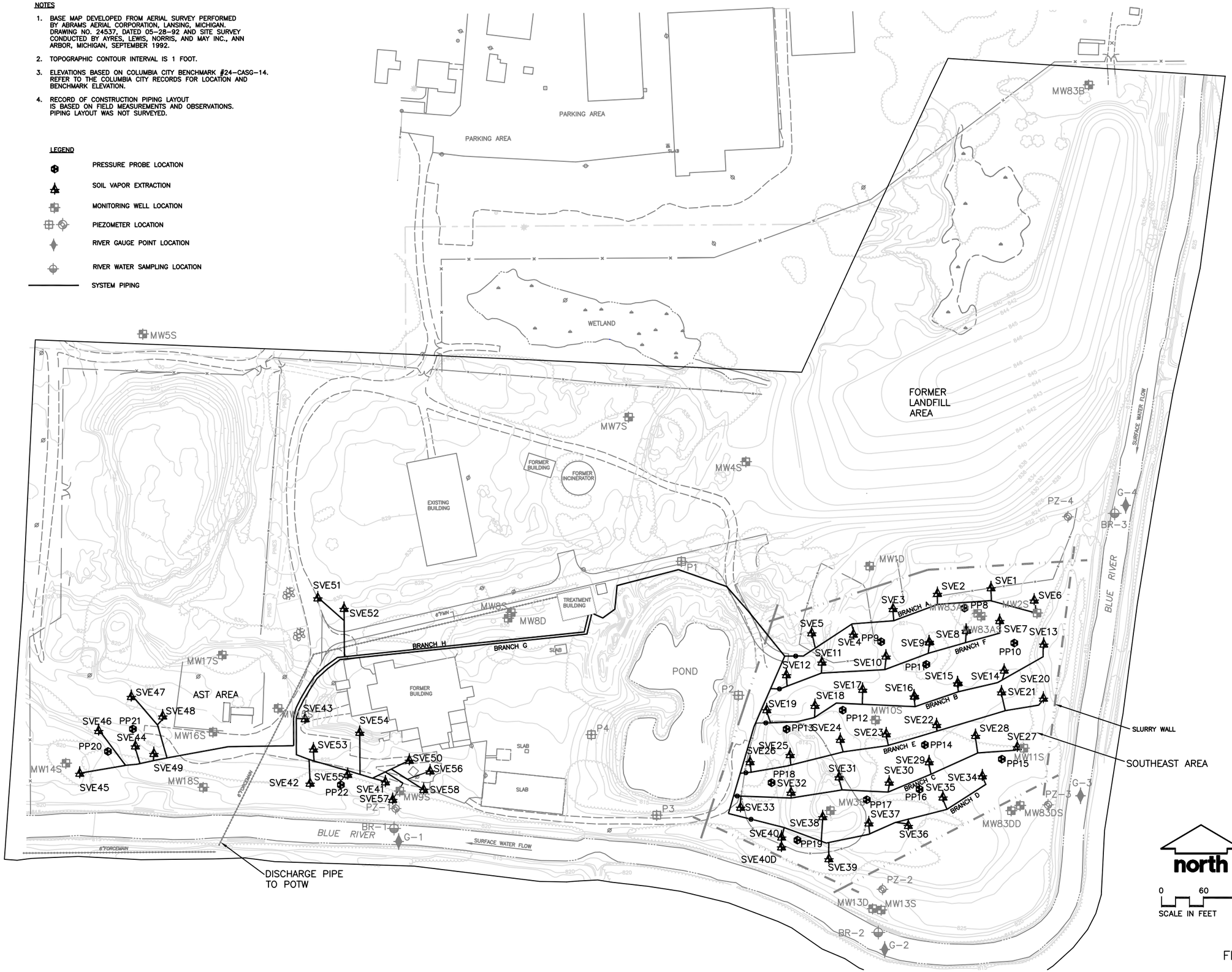

FIGURE 2

Releases	Issuance/Revisions	Date	By	Apprvd.

Developed By BRT
Approved By BRT
Drawn By DTM
Date 1/19/11
Reference
Consultants

SITE PLAN - SOIL VAPOR EXTRACTION SYSTEM

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J:\01_INDUSTRIAL-OTHER\3868-Wayne RR\5-CADD\SAPR 32\Fig 02 Soil Vap Ext Sys.dwg Jul/28/11

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.
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
- RIVER GAUGE POINT LOCATION
- RIVER WATER SAMPLING LOCATION
- SYSTEM PIPING

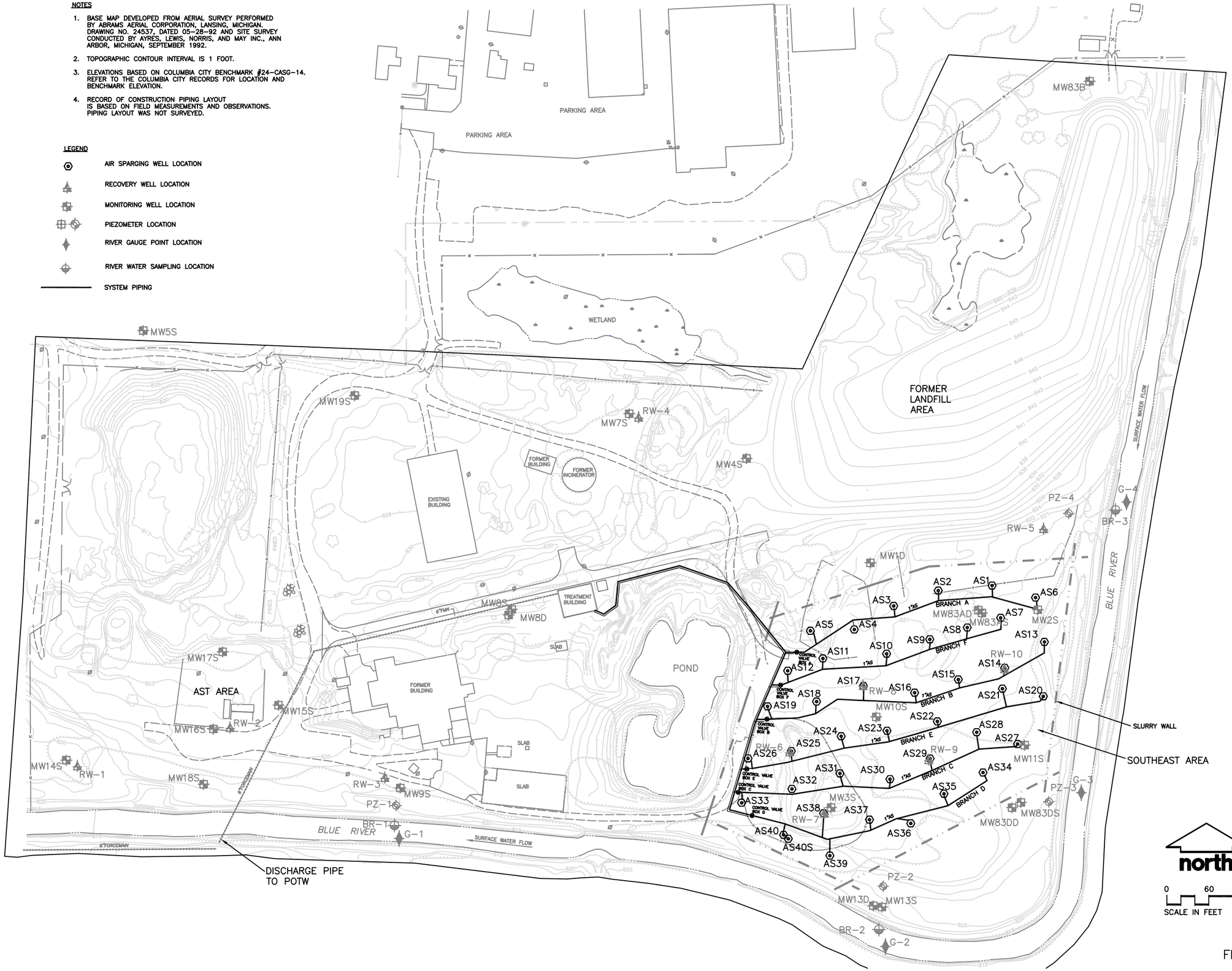

FIGURE 3

Developed By	BRT
Approved By	BRT
Drawn By	DTM
Date	1/19/11
Reference	
Consultants	

Releases	Issuance/Revisions	Date	By	Apprvd.

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

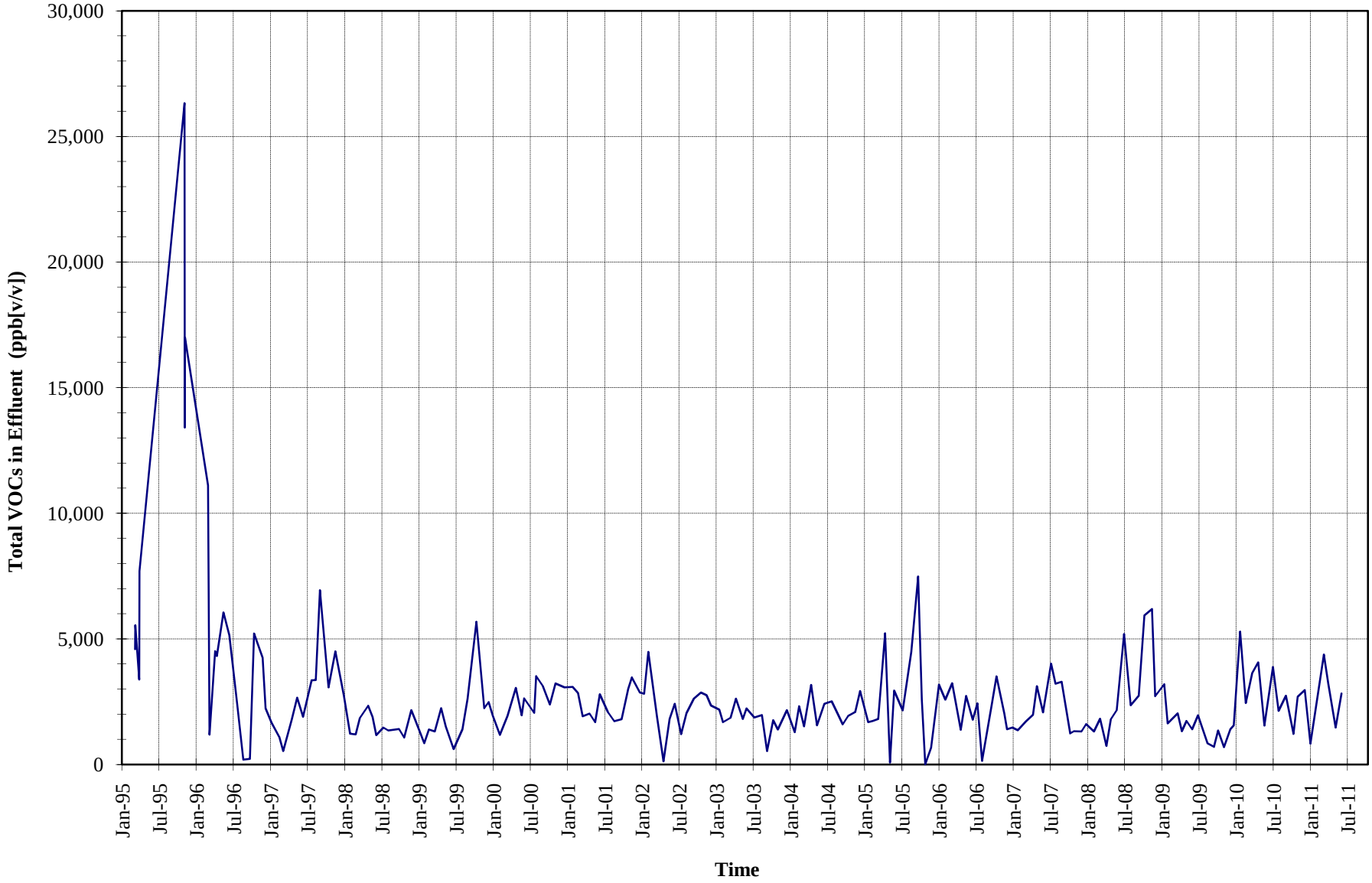


Figure 5
Cumulative and Sustained Groundwater Recovery
Wayne Reclamation & Recycling

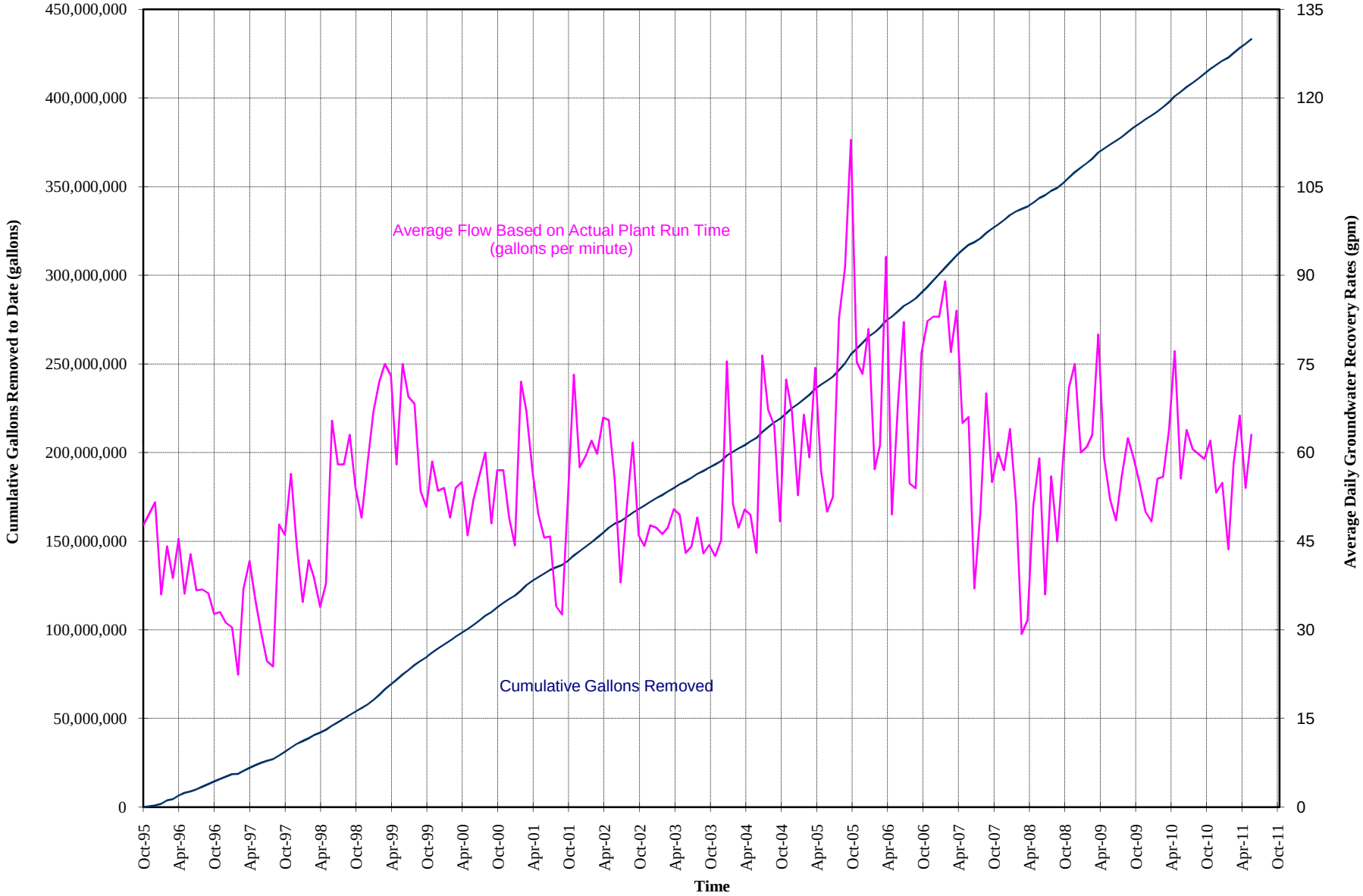
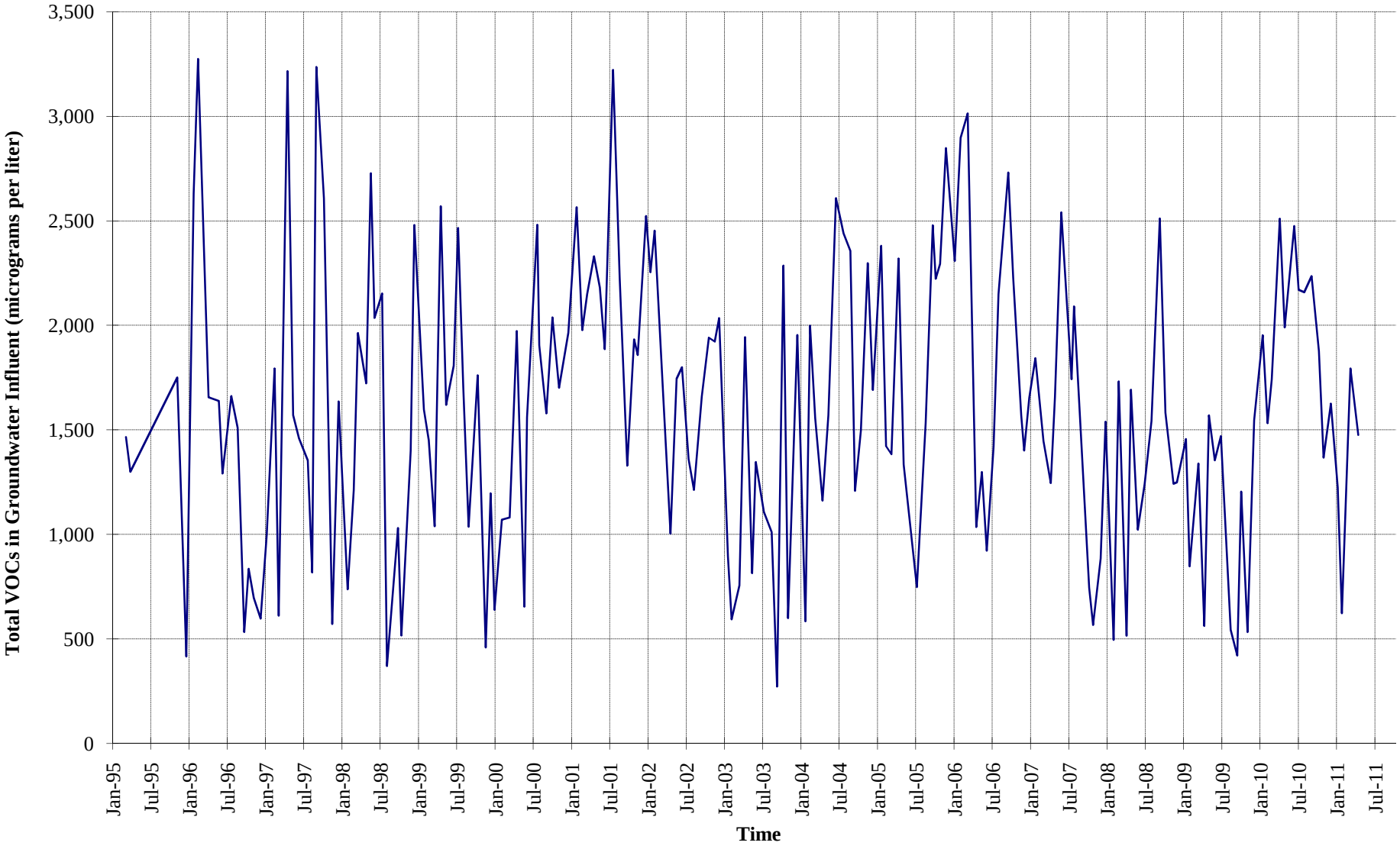


Figure 6
Summary of Groundwater Treatment System Influent Data
Wayne Reclamation & Recycling



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.
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
- GAUGE POINT LOCATION
- * NOT USED IN CONTOURING
- 808.0 GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 1.0 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION

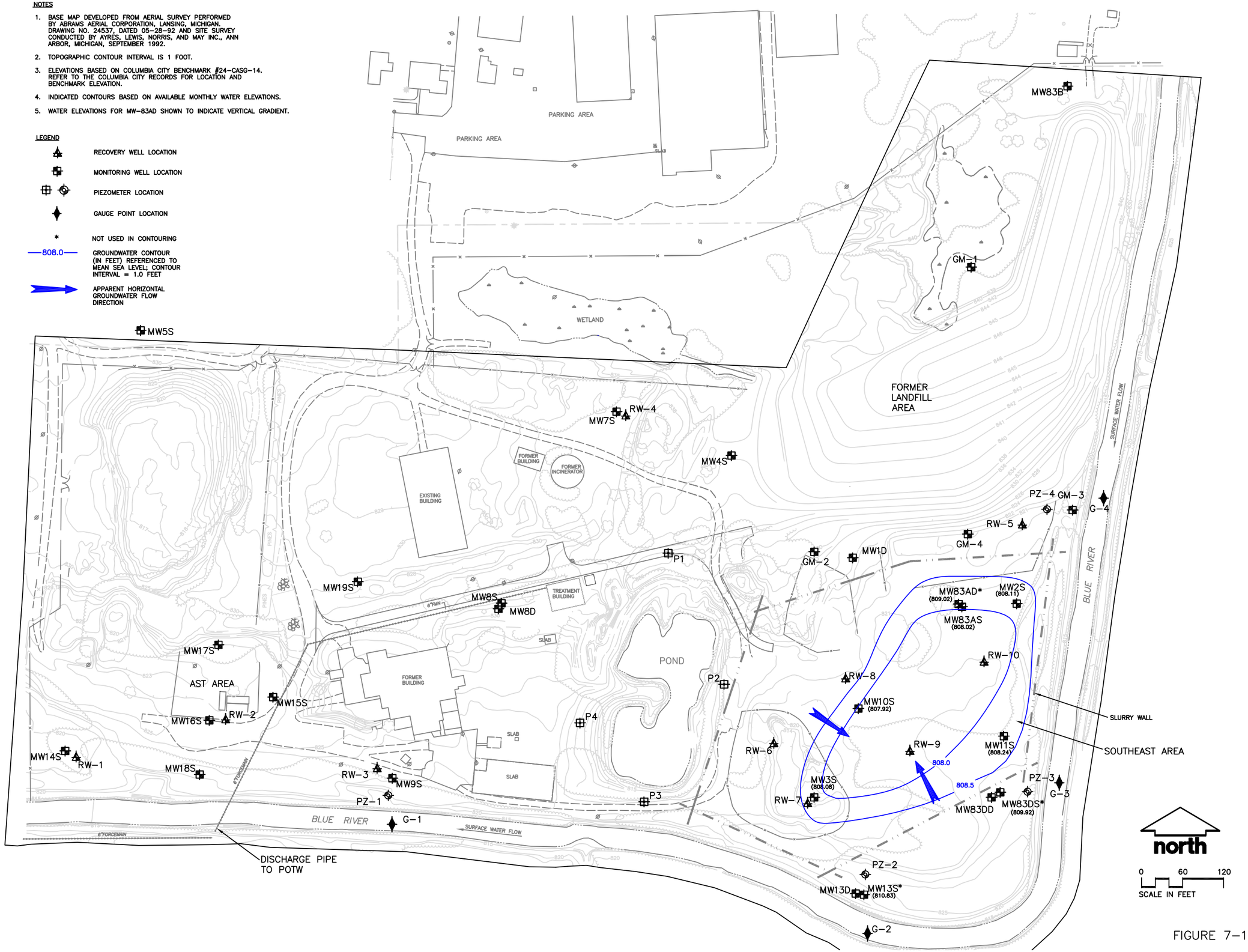


FIGURE 7-1

Releases	Issuance/Revisions	Date	By	Apprvd.

Developed By BRT
Approved By BRT
Drawn By JCW
Date 6/7/11
Reference
Consultants

GROUNDWATER CONTOURS - JANUARY 2011

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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.
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
- GAUGE POINT LOCATION
- * NOT USED IN CONTOURING
- —808.0— GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 1.0 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION

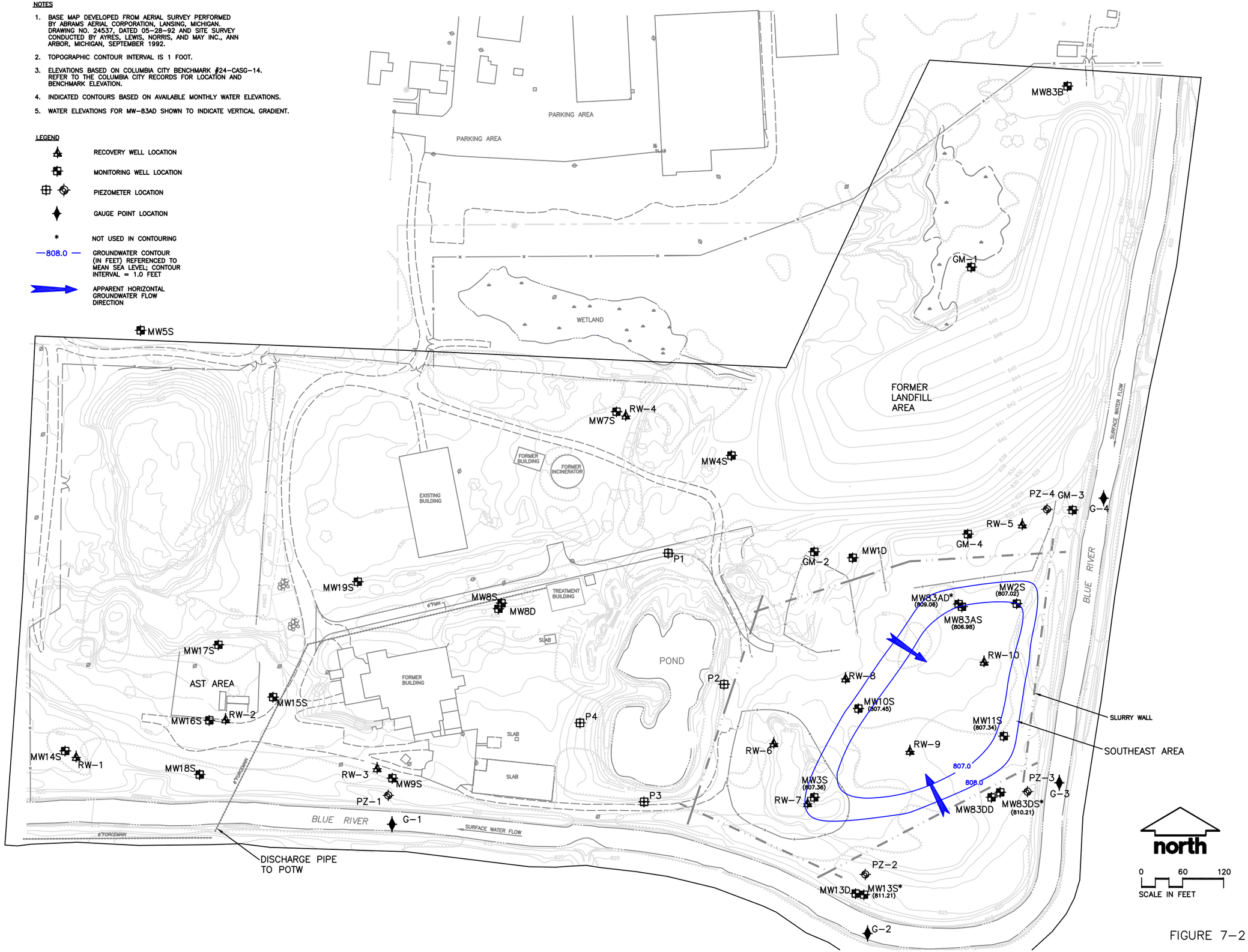

FIGURE 7-2

Developed By	BRT	Drawn By	ATF
Approved By	BRT	Date	7/26/10
Reference			
Consultants			

Releases	Issuance/Revisions	Date	By	Apprvd.

GROUNDWATER CONTOURS – FEBRUARY 2011

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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.
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
- GAUGE POINT LOCATION
- * NOT USED IN CONTOURING
- —807.0— GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 1.0 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION

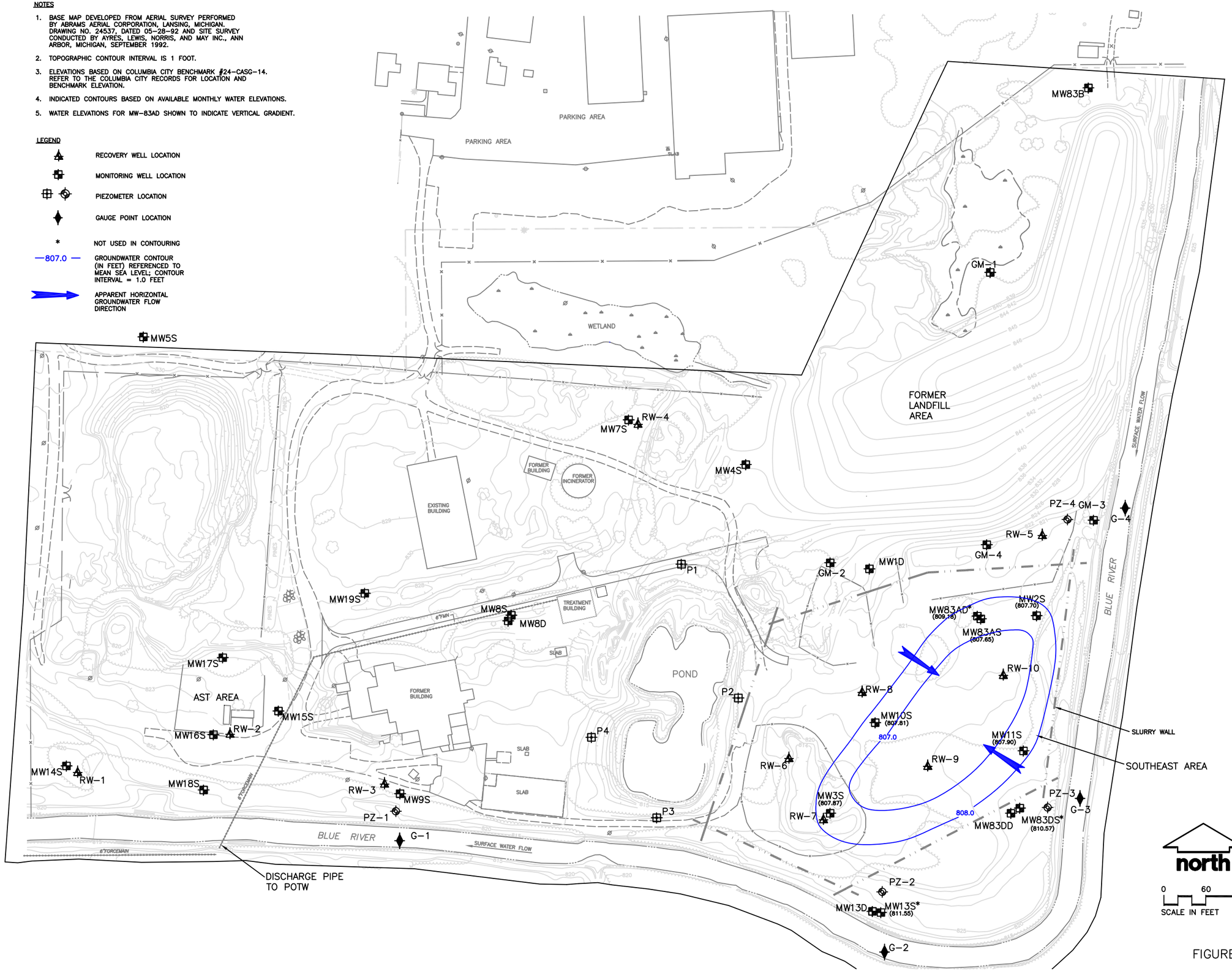

FIGURE 7-3

Drawn By	JCW
Developed By	BRT
Approved By	BRT
Date	6/7/11
Reference	
Consultants	

Releases	Issuance/Revisions	Date	By	Apprvd.

GROUNDWATER CONTOURS - MARCH 2011

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WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

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J:\01_INDUSTRIAL-OTHER\3868-Wayne RR\5-CADD\SAPR 32\Fig 07_3 Cont 07.dwg Jul/27/11

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.
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
- GAUGE POINT LOCATION
- * NOT USED IN CONTOURING
- —807.5— GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 0.5 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION

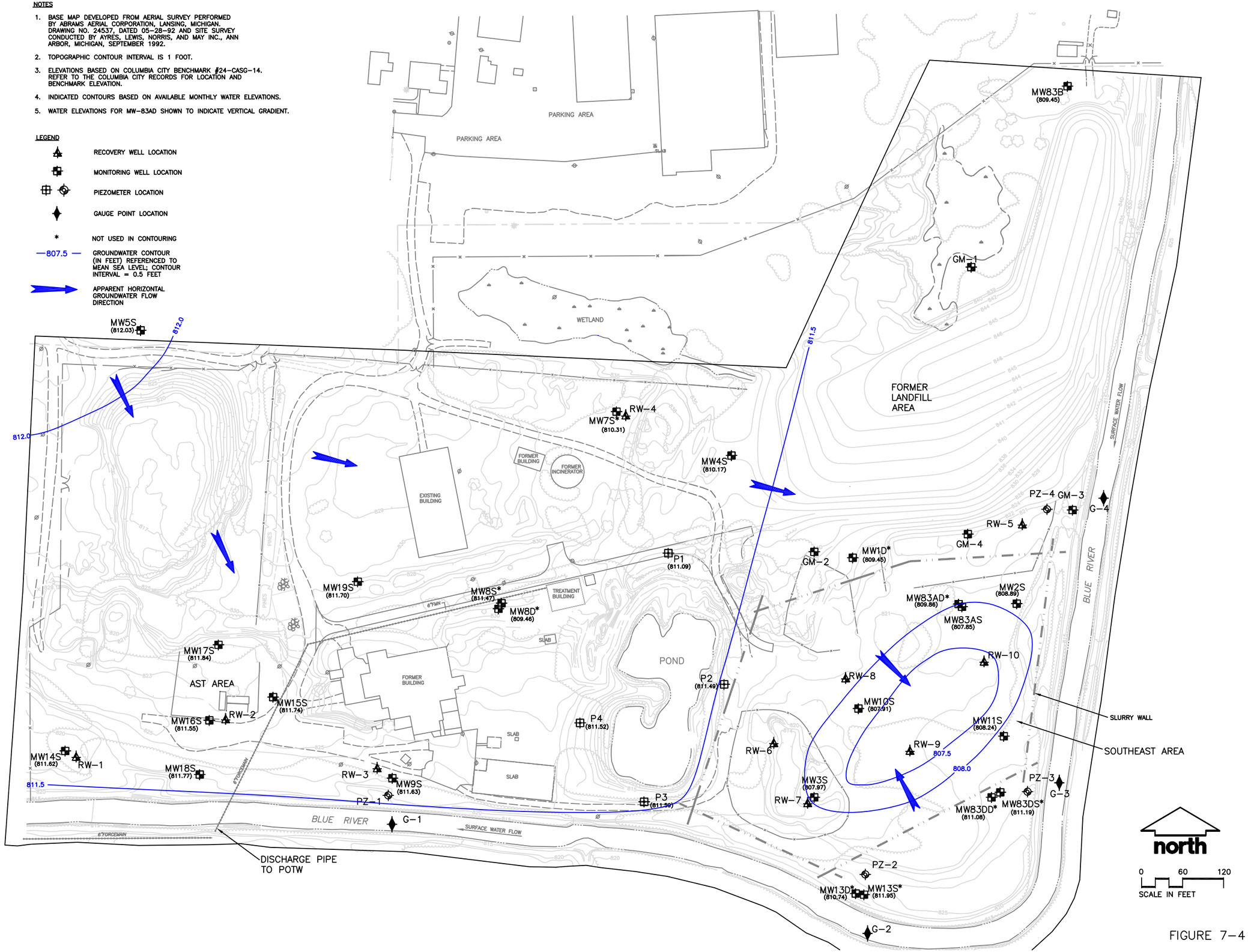

FIGURE 7-4

Drawn By	JCW
Developed By	BRT
Approved By	BRT
Date	6/7/2011
Reference	
Consultants	
Approvd.	
By	
Date	
Issuance/Revisions	
Releases	

GROUNDWATER CONTOURS - APRIL 2011

SEMI-ANNUAL PROGRESS REPORT 32
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

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NOTES

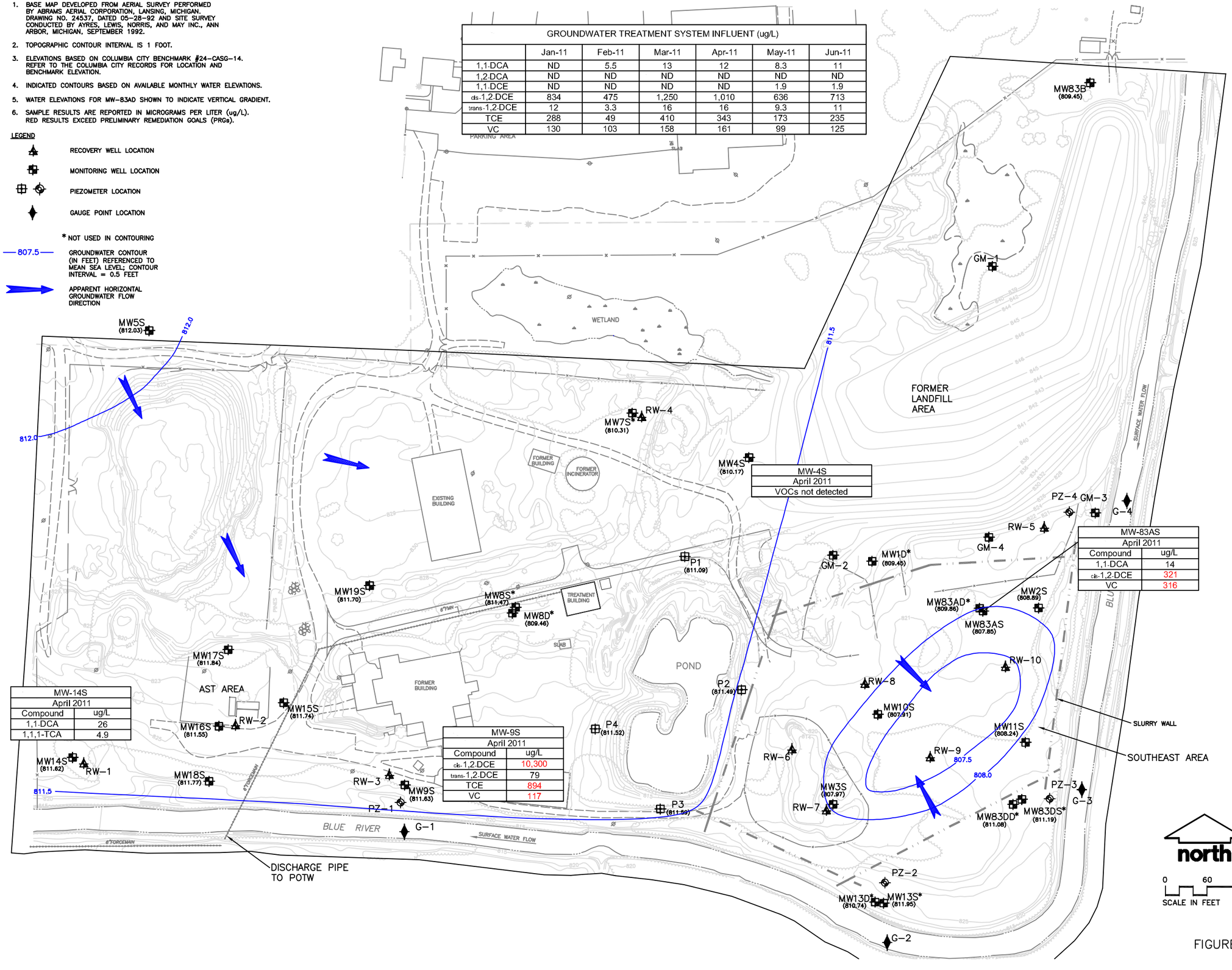
1. BASE MAP DEVELOPED FROM AERIAL SURVEY PERFORMED BY ABRAMS AERIAL CORPORATION, LANSING, MICHIGAN. DRAWING NO. 24537, DATED 05-28-92 AND SITE SURVEY CONDUCTED BY AYRES, LEWIS, NORRIS, AND MAY INC., ANN ARBOR, MICHIGAN, SEPTEMBER 1992.
2. TOPOGRAPHIC CONTOUR INTERVAL IS 1 FOOT.
3. ELEVATIONS BASED ON COLUMBIA CITY BENCHMARK #24-CASG-14. REFER TO THE COLUMBIA CITY RECORDS FOR LOCATION AND BENCHMARK ELEVATION.
4. INDICATED CONTOURS BASED ON AVAILABLE MONTHLY WATER ELEVATIONS.
5. WATER ELEVATIONS FOR MW-83AD SHOWN TO INDICATE VERTICAL GRADIENT.
6. SAMPLE RESULTS ARE REPORTED IN MICROGRAMS PER LITER (ug/L). RED RESULTS EXCEED PRELIMINARY REMEDIATION GOALS (PRGs).

LEGEND

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

GROUNDWATER TREATMENT SYSTEM INFLUENT (ug/L)

	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11
1,1-DCA	ND	5.5	13	12	8.3	11
1,2-DCA	ND	ND	ND	ND	ND	ND
1,1-DCE	ND	ND	ND	ND	1.9	1.9
cis-1,2-DCE	834	475	1,250	1,010	636	713
trans-1,2-DCE	12	3.3	16	16	9.3	11
TCE	288	49	410	343	173	235
VC	130	103	158	161	99	125



MW-4S
April 2011
VOCs not detected

MW-83AS	
April 2011	
Compound	ug/L
1,1-DCA	14
cis-1,2-DCE	321
VC	316

MW-14S	
April 2011	
Compound	ug/L
1,1-DCA	26
1,1,1-TCA	4.9

MW-9S	
April 2011	
Compound	ug/L
cis-1,2-DCE	10,300
trans-1,2-DCE	79
TCE	894
VC	117

FIGURE 7-5

Developed By BRT
Approved By BRT
Drawn By JCW
Date 6/7/11
Reference
Consultants

Approvd. By Date Issuance/Revisions Releases

ANALYTICAL RESULTS SUMMARY - APRIL 2011
SEMI-ANNUAL PROGRESS REPORT 32
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\\Usdet1s02\Jobs\01_INDUSTRIAL-OTHER\3868-Wayne RR\5-CADD\SAPR 32\Fig 07_5 Cont 07.dwg Aug/29/11

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.
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
- GAUGE POINT LOCATION
- * 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

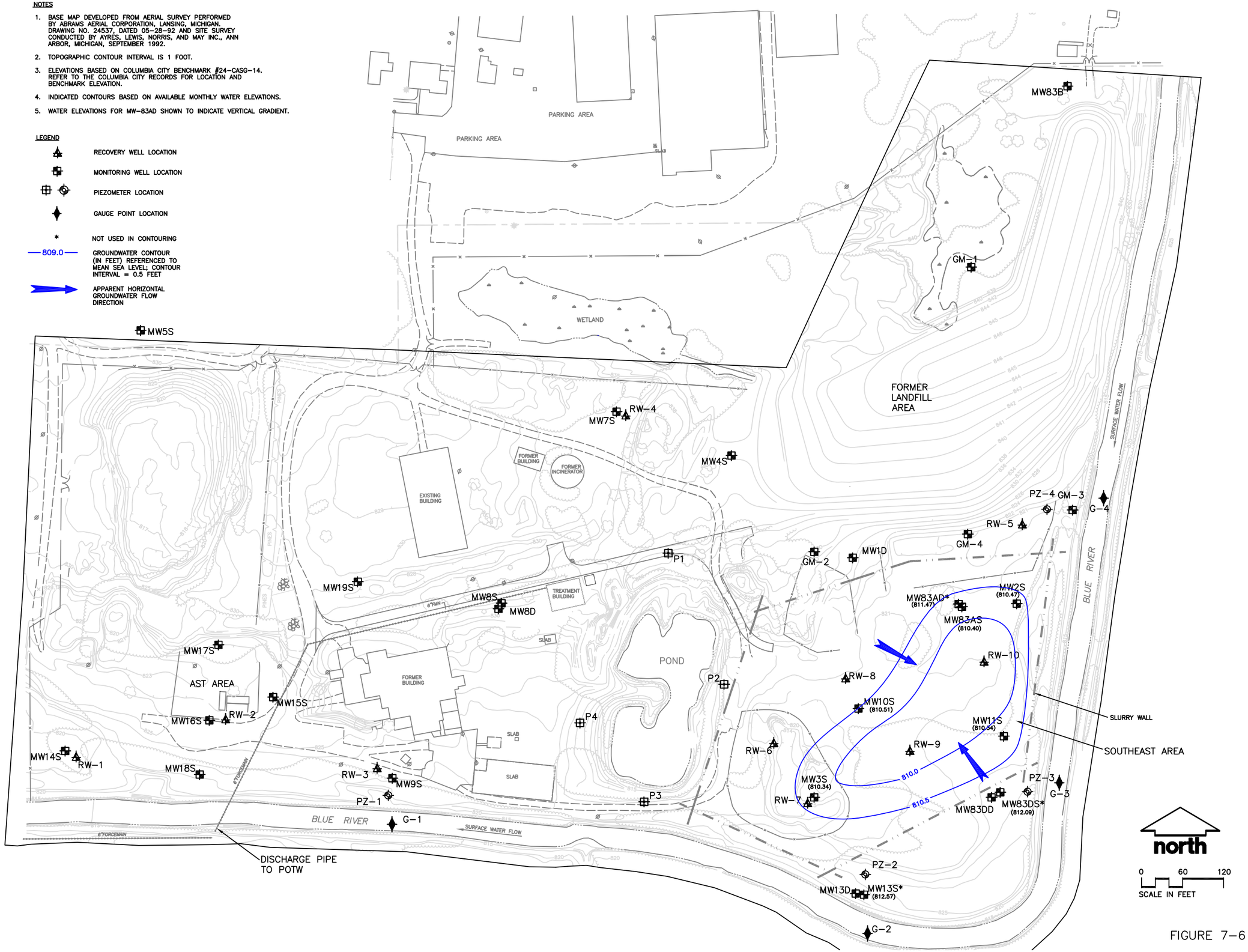


FIGURE 7-6

Developed By	BRT
Approved By	BRT
Drawn By	DTM
Date	01/24/11
Reference	
Consultants	

Releases	Issuance/Revisions	Date	By	Apprvd.

GROUNDWATER CONTOURS - MAY 2011

SEMI-ANNUAL PROGRESS REPORT 32
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

Printed

Sheet Number
6 of 7

Drawing Number
1008811
010101 D9

MWH

J:\01_INDUSTRIAL-OTHER\3868-Wayne RR\5-CADD\SAPR 32\Fig 07_6 Cont 07.dwg Jul/27/11

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.
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
- GAUGE POINT LOCATION
- * NOT USED IN CONTOURING
- 808.5 GROUNDWATER CONTOUR (IN FEET) REFERENCED TO MEAN SEA LEVEL; CONTOUR INTERVAL = 1.0 FEET
- APPARENT HORIZONTAL GROUNDWATER FLOW DIRECTION

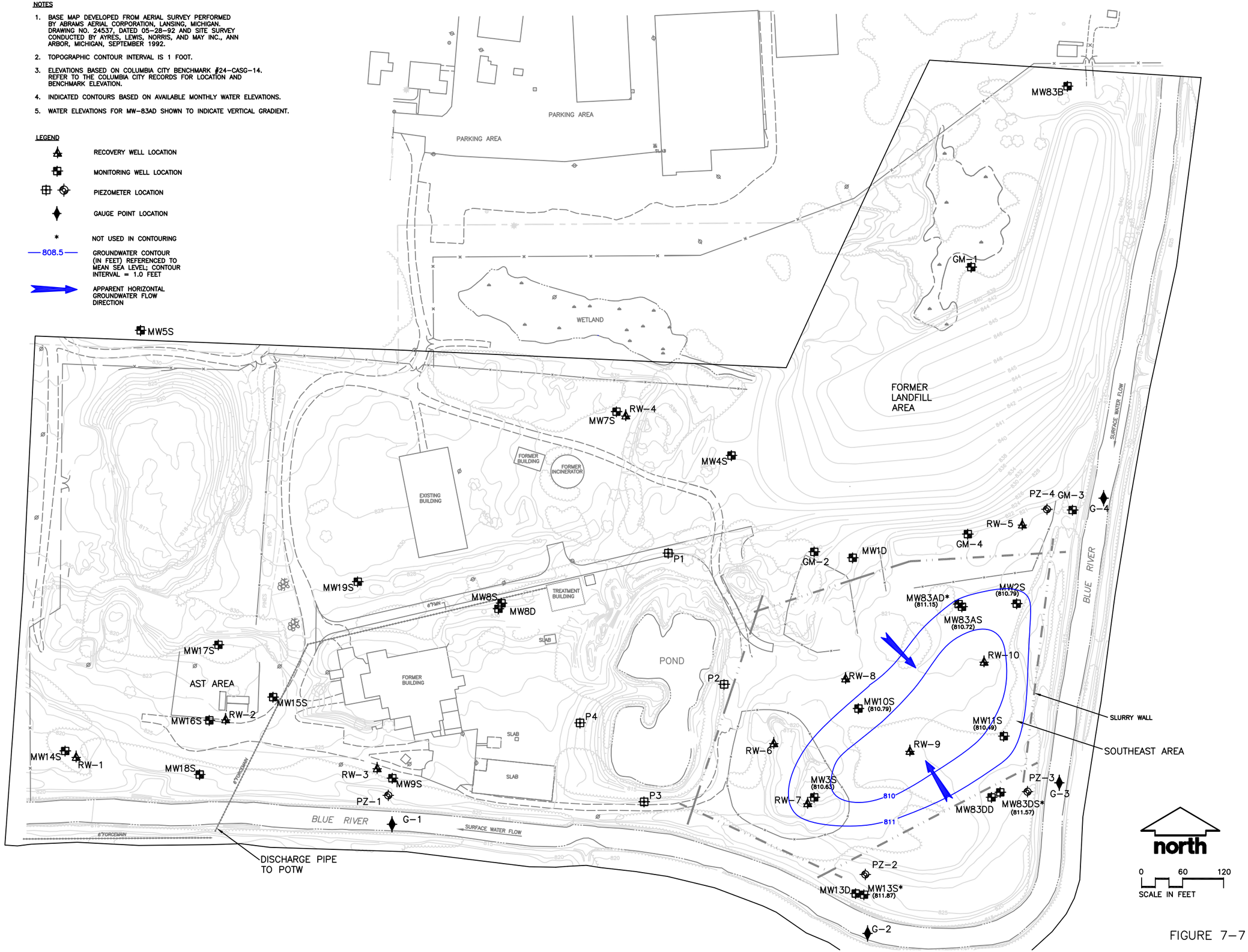


FIGURE 7-7

Developed By	BRT
Approved By	BRT
Drawn By	DTM
Date	01/24/11
Reference	
Consultants	

Releases	Issuance/Revisions	Date	By	Apprvd.

GROUNDWATER CONTOURS - JUNE 2011

SEMI-ANNUAL PROGRESS REPORT 32
WAYNE RECLAMATION & RECYCLING, INC.
COLUMBIA CITY, INDIANA

Printed

Sheet Number
7 of 7

Drawing Number
1008811
010101 D10

MWH

J:\01_INDUSTRIAL-OTHER\3868-Wayne RR\5-CADD\SAPR 32\Fig 07_7 Cont 07.dwg Jul/27/11

Figure 8
Cumulative Volatile Organic Compounds Removed From Site - Soil and Groundwater Remediation Systems
Wayne Reclamation & Recycling

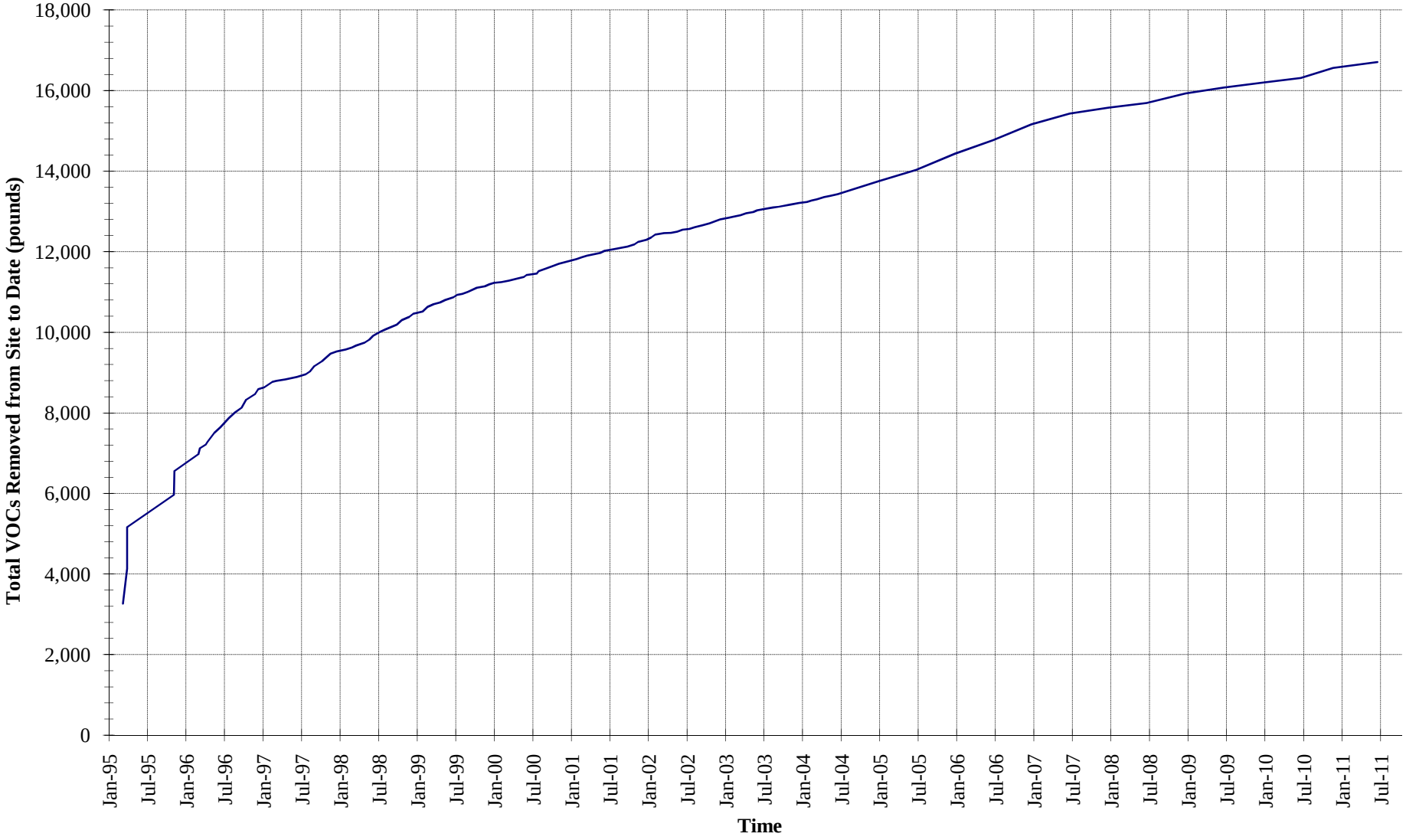
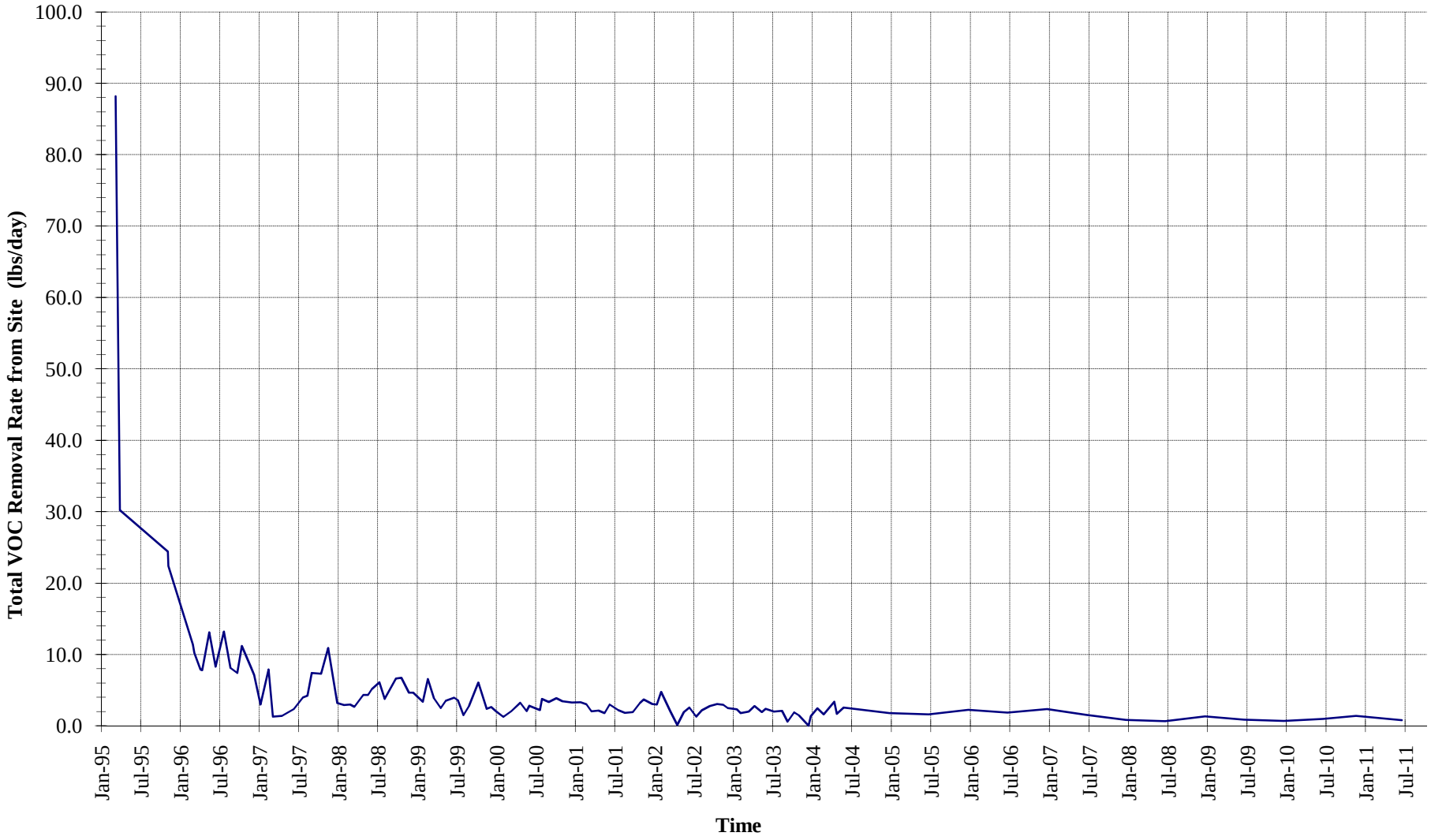


Figure 9
Summary of Site Volatile Organic Compound Removal Rates - Soil and Groundwater Remediation Systems
Wayne Reclamation & Recycling



APPENDIX A

LANDFILL SAMPLING DATA, APRIL 2011 SAMPLING EVENT

BURGESS & NIPLE

Mr. Jeffrey P. Walker
Outside Operations Manager
City of Columbia City
316 S. Towerview Drive
Columbia City, IN 46725

Re: City of Columbia City
Wayne Reclamation & Recycling Facility
April 2011 Groundwater Sampling Event

May 17, 2011

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 12, 2011. 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 TestAmerica Analytical Testing Corporation (TestAmerica). 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. Information from this evaluation is included on the field-sampling sheets included in Attachment 1.

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.

Groundwater samples were collected from the four monitoring wells (GM-1, GM-2, GM-3, and GM-4). Field personnel filled the sample containers and placed them in a cooler that was chilled with ice to 4 degrees Celsius (°C) or less. 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 contamination from the field-sampling equipment. Distilled water was poured into a clean and unused 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. Groundwater samples were delivered to TestAmerica for analysis.

TestAmerica analyzed the groundwater samples from the four monitoring wells, the duplicate sample, and the equipment blank for:

- ammonia (Method 350.1/SM 18 4500 NH3 H);
- chloride (Method 9056A);
- chemical oxygen demand (COD) (Hach 8000);
- sodium (Method 6010B); and
- volatile organic compounds (VOCs) (Method 8260B).

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 12, 2011 groundwater sampling event. VOCs included in Table 1 are only those parameters historically detected in monitoring wells GM-1, GM-2, GM-3, and GM-4. All other VOCs have been reported below laboratory detection limits.

All but one 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 chloride concentration of 1.49 milligrams per liter (mg/l) is the lowest detected historical concentration for GM-4.

There were no VOCs reported above the laboratory detection limits in either GM-1 or GM-2 during the April 2011 sampling event. This is consistent with historical results for these two wells. The April 2011 cis-1,2-dichloroethene concentration of 8.23 micrograms per liter (μg/l) for GM-3 is historically the lowest concentrations reported within this well. The April 2011 vinyl chloride concentration for GM-4 of 54.4 μg/l is the highest historical vinyl chloride concentration reported within this well. All other 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. Currently no increasing trends in inorganic constituents are evident. A temporary increasing trend for COD in GM-3 was observed from April 2008 through October 2009. However, COD concentrations within GM-3 show a decreasing trend since October 2009.

Since the year 2000, it appears that each of the detected VOCs in GM-3 and GM-4 have stabilized, or depict a decreasing trend in concentration, with the exception of vinyl chloride in GM-4.

The following comments are made for the organic chemicals of concern (COCs) in wells GM-3 and GM-4 that have been historically detected above U.S. EPA Maximum Contaminant Levels (MCLs):

- GM-3 (cis-1,2-DCE) – Since October 2001, concentrations have shown an overall decreasing trend. The April 2011 concentration of 8.23 μg/l is historically the lowest concentration reported for this well and is below the primary MCL of 70 μg/l for cis-1,2-DCE.

- GM-3 (vinyl chloride) – concentrations have been reported above the MCL of 2 μg/l for each sampling event since June 1995, with the exception of the January 1996 sampling event which reported a non-detect value of <1.0 μg/l. The historical maximum concentration of 54 μg/l was reported in October 2001. Since then, concentrations of vinyl chloride have indicated an overall decreasing trend with the latest concentration reported at 6.74 μg/l in April 2011.

- GM-4 (cis-1,2-DCE) – concentrations spiked to a maximum of 570 μg/l in June 2001. Since then, concentrations have shown a decreasing trend with latest result of 173 μg/l reported for April 2011, which is above the primary MCL of 70 μg/l. Concentrations appear to have stabilized since April 2007.

- GM-4 (1,1,1-trichloroethane [TCA]) – in June 2001 concentrations spiked to 610 μg/l. Since 2001, concentrations appear to show an overall decreasing trend with the latest concentration detected at 172 μg/l which is below the primary MCL of 200 μg/l.

- GM-4 (trichloroethene [TCE]) – concentrations for the past nine semiannual sampling events overall appear to have stabilized as concentrations have ranged between 953 micrograms per liter (μg/l) in April 2007 to 844 μg/l in October 2008. The April 2011 TCE concentration is 940 μg/l. The TCE concentration continues to be above the U.S. Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL) of 5 μg/l for TCE.

- GM-4 (vinyl chloride) – concentrations indicate an increasing trend since October 2005. The April 2011 laboratory result of 54.4 μg/l is the highest concentration reported for this well. The MCL for vinyl chloride is 2 μg/l.

- 0.389 milligrams per liter [mg/l] of ammonia was detected in the equipment blank sample. As stated previously, the equipment blank sample is collected by pouring distilled water into a clean and unused disposable polyethylene bailer and transferred into the laboratory prepared sample containers. The equipment blank sample was collected prior to purging groundwater from GM-3 (see remarks and field parameter measurement times documented on the field sampling sheets for GM-3 in Attachment 1). GM-3 was purged and sampled with the same bailer as the equipment blank sample was collected from. The April 2011 ammonia concentration reported for GM-3 (0.446 mg/l) is within the historical concentration

range for this well, therefore ammonia concentrations within this well don't appear to be biased. Based on this information, B&N concludes the detected concentration of ammonia in the equipment blank sample to be anomalous and does not to have an adverse effect on the sample collected from GM-3.

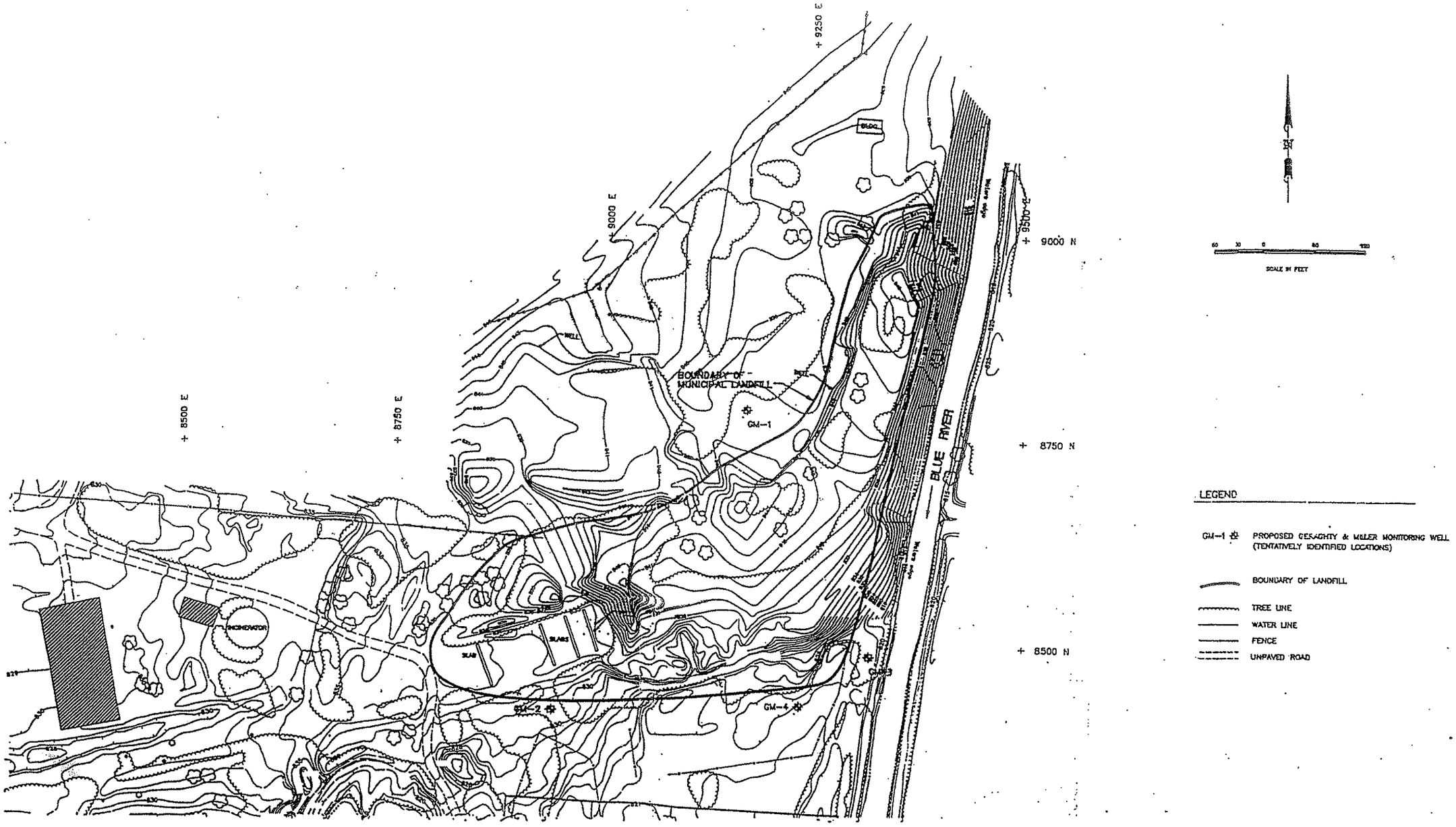
Table 2 includes historical groundwater elevations and other well data recorded at the facility. Groundwater elevation data prior to December 1999 was not available. Groundwater elevations increased between October 2010 and April 2011 from a minimum of 0.28 feet at GM-1 to a maximum of 0.91 feet at GM-3.

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

Sincerely,

Michael R. Akins
Project Geologist

MRA:cmc
Attachments
copy: Mr. Mike Cook, Columbia City (w/att)
Mr. Bruce Hamilton, Indiana Dept. of Environmental Management (w/att)
Ms. Diane McCausland, Engineering Management, Inc. (w/att)



SOURCES: BONAR SURVEYORS AND WARZYN ENGINEERING, INC.

GERAGHTY & MILLER, INC.
Environmental Services

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CHECKED BY: | DATE:
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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]	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	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10	Oct-10	Apr-11
Inorganics																																				
Ammonia	mg/l	30 (HHA)	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	0.83	0.59	0.83	0.71	0.702	0.809	0.705	0.660	0.708	0.666	0.870	0.662	0.666	0.736
Chloride	mg/l	250 (S)	130	120	80	48	39	35	80	64	31	37	26	23	46	39	44	31	31	37	51	51	43	43.6	50	38.0	53.0	64.3	42.4	45.4	37.7	58.4	47.8	55.0	45.1
Chemical Oxygen Demand (COD)	mg/l	--	130	55	87	100	39	25	38	74	22	36	27	45	13	29	52	37	<5	14	5	31	9	30	24	17.6	<50.0	27.2	20.8	<50.0	<50.0	<50.0	28.1	13.2	17.3
Sodium	mg/l	--	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	25.5	22.3	17.7	21.3	17.6	26.2	37.9	24.5	25.4	18.4	27.0	21.2	25.4	23.4
Volatile Organic Compounds																																				
2-Butanone (Methyl ethyl ketone)	ug/l	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<2	<10	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5
1,1-Dichloroethane	ug/l	--	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	ug/l	7	<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	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,2-Dichloroethene	ug/l	70	<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	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,2-Dichloroethene	ug/l	100	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/l	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	<2	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/l	200	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
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	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Trichloroethene	ug/l	5	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Vinyl Chloride	ug/l	2	<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	<1	<2	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
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	6.91	7.24	7.14	7.31	6.84	6.76	7.42	7.34	6.98	6.85	6.85	6.64	6.72	7.13
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	700	832	784	541	730	605	487	667	431	762	686	614	604	833	640	982	722	761	700	640	903	331	793	696
Temperature	°C	--	--	--	--	--	--	--	--	--	--	11.1	12.9	10.2	11.9	11.3	11.3	11.7	11.7	11.5	12.0	11.8	11.7	12.4	6.7	12.8	6.4	12.5	12.4	11.2	11.7	12.7	11.3	11.8	11.3
Turbidity	NTU	5 (AL)	--	--	--	--	--	--	--	--	--	--	111	455	133	182	140	664	55	258	44	134	282	105	113	75	228	86	165	59	156	76	207	54.0	51.0

All other VOCs have been historically below laboratory detection limits.
[1] = U.S. EPA Maximum Contaminant Level
(HHA) = U.S. EPA Lifetime Human Health Advisory
(S) = Secondary U.S. EPA MCL
(AL) = U.S. EPA Action Level
Duplicate samples collected at GM-4.
-- = Not Applicable
* = MEK contaminated deionized water.

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

Parameter	Units	MCL[1]	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	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10	Oct-10	Apr-11
Inorganics																																				
Ammonia	mg/l	30 (HHA)	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	1.18	1.13	1.09	0.98	0.958	1.08	0.973	1.06	1.10	0.886	0.954	0.928	1.09	0.920
Chloride	mg/l	250 (S)	18	15	19	16	16	22	19	10	7	12	16	10	12	14	20	14	15	50	11	11	15	20.1	13	12.0	10.0	10.2	10.9	7.93	12.2	7.94	8.27	8.35	10.7
Chemical Oxygen Demand (COD)	mg/l	--	30	<20	<20	<20	<20	<20	20	38	15	<15	17	8	<1	18	26	12	<5	<5	15	36	<5	28	14	10.1	100	11.1	14.5	<50.0	<50.0	<50.0	<10.0	<10.0	<10.0
Sodium	mg/l	--	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	9.12	10.2	10.0	10.7	10.5	11.1	10.9	10.5	9.06	11.5	8.38	8.15	8.64	8.61
Volatile Organic Compounds																																				
2-Butanone (Methyl ethyl ketone)	ug/l	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<2	<10	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5
1,1-Dichloroethane	ug/l	--	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	ug/l	7	<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	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,2-Dichloroethene	ug/l	70	<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	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,2-Dichloroethene	ug/l	100	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/l	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	<2	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/l	200	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
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	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Trichloroethene	ug/l	5	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Vinyl Chloride	ug/l	2	<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	<1	<2	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
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	6.83	7.33	7.04	7.24	6.78	6.89	7.26	7.17	6.99	6.99	6.93	6.61	6.79	7.10
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	700	818	715	524	936	804	586	826	458	723	667	776	744	863	896	905	756	891	696	716	698	167	672	683
Temperature	°C	--	--	--	--	--	--	--	--	--	--	11.3	12.9	10.6	11.4	10.2	10.6	11.5	12.1	12.7	12.0	12.3	11.9	12.3	6.1	12.4	10.0	12.5	12.1	11.1	10.9	12.6	11.0	11.7	11.0
Turbidity	NTU	5 (AL)	--	--	--	--	--	--	--	--	--	--	9	13	22	10.5	7.44	16.0	13	10	12	11	11	16	15	13	12	13	9.0	20	1.0	0.27	9.00	12.0	8.0

All other VOCs have been historically below laboratory detection lim
[1] = U.S. EPA Maximum Contaminant Level
(HHA) = U.S. EPA Lifetime Human Health Advisory
(S) = Secondary U.S. EPA MCL
(AL) = U.S. EPA Action Level
Duplicate samples collected at GM-4.
-- = Not Applicable
* = MEK contaminated deionized water.

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

Parameter	Units	MCL[1]	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	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10	Oct-10	Apr-11
Inorganics																																				
Ammonia	mg/l	30 (HHA)	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	0.50	0.42	0.46	0.46	0.433	0.393	0.408	0.759	0.439	0.356	0.662	0.341	0.489	0.446
Chloride	mg/l	250 (S)	23	14	25	32	20	40	25	42	24	20	29	44	22	28	24	32	67	27	42	21	24	51.7	35	27.0	25.0	26.2	21.7	21.4	38.5	24.4	37.1	18.0	35.0
Chemical Oxygen Demand (COD)	mg/l	--	120	80	38	33	<20	<20	25	24	22	<15	28	10	14	18	22	15	5	20	33	43	37	46	109	33.0	<50.0	50	49.3	59.6	74.8	92.9	25.9	23.0	<10.0
Sodium	mg/l	--	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	17.2	12.5	21.8	22.3	19.9	17.2	17.8	19.4	14.4	25.5	19.2	17.5	19.1	29.2
Volatile Organic Compounds																																				
2-Butanone (Methyl ethyl ketone)	ug/l	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<2	<10	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5
1,1-Dichloroethane	ug/l	--	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	ug/l	7	<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	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,2-Dichloroethene	ug/l	70	84	33	26	17	17	36	94	51	85.6	60.7	110	82	61	150	85	100	52	72	59	17	57	55	34.4	41.1	27.0	32.3	15.4	22.3	12.6	13.4	10.8	14.1	8.23
trans-1,2-Dichloroethene	ug/l	100	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/l	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	<2	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/l	200	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
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	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Trichloroethene	ug/l	5	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Vinyl Chloride	ug/l	2	10	<1.0	18	42	33	45	32	22.6	22.3	16.6	26	28	24	54	33	41	19	40	27	31	17	20	12.6	32.2	19.9	26.8	14.4	22.7	9.78	10.7	8.53	12.6	6.74
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	7.19	7.72	7.51	7.53	6.96	7.38	7.79	7.87	7.41	7.24	7.36	7.20	7.29	7.82
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	650	615	767	382	635	410	445	739	356	560	579	416	602	548	636	612	568	504	578	528	661	132	547	485
Temperature	°C	--	--	--	--	--	--	--	--	--	--	16.9	13.4	12	8.5	14.6	8.6	16.7	6.7	14.3	8.4	15.7	7.7	17.7	3.4	12.7	6.5	17.4	8.3	15.0	7.5	15.4	8.10	15.6	6.60
Turbidity	NTU	5 (AL)	--	--	--	--	--	--	--	--	--	--	45	34	13	30.8	29.2	28.0	16	140	45	299	555	334	>1,000	726	1,000	907	1,000	1,000	686	470	901	592	1,000

All other VOCs have been historically below laboratory detection lim
[1] = U.S. EPA Maximum Contaminant Level
(HHA) = U.S. EPA Lifetime Human Health Advisory
(S) = Secondary U.S. EPA MCL
(AL) = U.S. EPA Action Level
Duplicate samples collected at GM-4.
-- = Not Applicable
* = MEK contaminated deionized water.

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

Parameter	Units	MCL[1]	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	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10	Oct-10	Apr-11
Inorganics																																			
Ammonia	mg/l	30 (HHA)	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	0.19	0.30	0.35	0.37	0.546	0.554	0.277	0.262	0.208	0.279	0.360	0.261	0.269	0.389
Chloride	mg/l	250 (S)	23	41	12	8.3	11	11	12	16	4.5	19	7	8	5	6	9	4	7	6	5	5	4	4.2	<5	14.0	5.00	2.22	2.46	2.62	2.85	2.65	2.51	2.00	1.49
Chemical Oxygen Demand (COD)	mg/l	--	220	65	47	55	20	<20	20	20	20	<15	13	2	6	28	13	8	<5	<5	10	22	<5	39	24	18.6	<50.0	18	13.6	<50.0	<50.0	<50.0	<10.0	16.0	13.8
Sodium	mg/l	--	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	8.43	7.86	16.0	13.7	21.2	9.16	8.9	7.12	7.18	7.43	9.64	7.54	7.31	8.24
Volatile Organic Compounds																																			
2-Butanone (Methyl ethyl ketone)	ug/l	--	<10	150	<10	<10	<10	<10	<10	<10	<10	<33.3	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<2	<10	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5
1,1-Dichloroethane	ug/l	--	<1.0	<1.0	<1.0	10	12	13	11	16	14	13	19	18	21	25	17	20	26	20	15	14	14	21	20.6	23.8	17.2	18.5	14.5	17.0	15.6	14.9	17.9	14.9	19.9
1,1-Dichloroethene	ug/l	7	<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	6.1	<2	4.0	4.2	4.92	4.22	3.48	3.03	3.77	2.99	2.40	3.59	2.61	3.96
cis-1,2-Dichloroethene	ug/l	70	130	140	190	260	250	320	250	323	243	250	190	270	570	250	230	180	190	98	110	100	110	110	173	228	141	143	120	117	122	115	149	122	173
trans-1,2-Dichloroethene	ug/l	100	<1.0	<1.0	<1.0	12	14	16	13	16.3	13	14	13	14	18	20	14	14	15	11	8	8	6.9	11	11.6	14.9	12.0	9.44	8.64	9.72	8.45	7.91	10.3	8.05	12.1
1,2-Dichloropropane	ug/l	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	<2	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/l	200	180	<1.0	200	140	140	210	180	144	193	143	170	210	610	260	330	380	260	94	180	180	180	180	229	248	216	220	188	191	169	137	150	171	172
1,1,2-Trichloroethane	ug/l	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	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Trichloroethene	ug/l	5	410	380	530	280	430	490	500	462	556	435	440	640	1,900	860	870	1,300	840	400	630	740	730	830	980	1,080	953	939	851	844	891	898	952	858	940
Vinyl Chloride	ug/l	2	<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	3	3.6	<1	11.2	11.0	14.3	13.6	19.0	34.6	26.8	28.5	46.7	37.4	54.4
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	6.92	7.45	7.10	7.24	6.75	7.07	7.36	7.29	7.13	7.18	6.97	6.71	6.84	7.08
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	690	964	1,141	553	880	660	471	729	413	732	619	618	827	922	1,199	964	794	720	664	584	724	155	686	731
Temperature	°C	--	--	--	--	--	--	--	--	--	--	15.2	12.9	11.9	10.8	12.1	9.9	13.1	11.1	12.4	10.8	13.3	11.3	13.7	5.4	10.7	9.5	13.7	11.3	12.0	10.3	13.3	10.2	12.8	10.1
Turbidity	NTU	5 (AL)	--	--	--	--	--	--	--	--	--	--	13	21	29	22.9	17.4	37.0	25	51	30	56	67	118	116	58	133	157	47	81	39	51	27	92.0	70.0

All other VOCs have been historically below laboratory detection lim

[1] = U.S. EPA Maximum Contaminant Level
(HHA) = U.S. EPA Lifetime Human Health Advisory
(S) = Secondary U.S. EPA MCL
(AL) = U.S. EPA Action Level
Duplicate samples collected at GM-4.
-- = Not Applicable
* = MEK contaminated deionized water.

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

Parameter	Units	MCL[1]	Duplicate (GM-4)																							
			Dec-99	Jun-00	Dec-00	Jun-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10	Oct-10	Apr-11
Inorganics																										
Ammonia	mg/l	30 (HHA)	0.25	0.31	0.40	0.34	0.34	0.29	0.26	0.36	0.26	0.22	0.20	0.27	0.36	0.38	0.542	0.444	0.274	0.293	0.267	0.295	0.301	0.305	0.286	0.119
Chloride	mg/l	250 (S)	19	7	7	5	8	8	4	7	5	5	5	4	4.9	<5	7.00	<5.00	2.31	2.25	2.43	2.88	2.67	2.52	2.04	1.48
Chemical Oxygen Demand (COD)	mg/l	--	<15	24	4	8	22	16	11	<5	<5	10	26	7	26	20	17.6	<50.0	21.2	11.1	<50.0	61.5	<50.0	<10.0	20.2	10.3
Sodium	mg/l	--	12.8	21.5	28.1	14.0	15.8	10.5	7.32	11.1	7.80	8.76	8.67	7.86	16.9	14.6	21.5	8.70	8.8	7.23	7.02	7.33	7.99	8.06	7.35	8.04
Volatile Organic Compounds																										
2-Butanone (Methyl ethyl ketone)	ug/l	--	<33.3	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<2	<10	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5
1,1-Dichloroethane	ug/l	--	15	19	19	21	24	18	27	28	20	14	14	15	20	22.4	24.2	16.9	20.8	14.3	18.2	15.5	16.2	17.1	18.9	20.4
1,1-Dichloroethene	ug/l	7	4.5	<5	4.4	6.2	6.9	6.6	5.1	6.2	5.0	3.7	6.1	72.0	3.7	4.4	5.31	4.06	4.12	3.04	3.66	2.92	2.37	3.32	3.10	4.12
cis-1,2-Dichloroethene	ug/l	70	246	190	290	540	180	280	260	210	110	110	110	100	110	175	212	142	139	115	121	119	120	142	147	177
trans-1,2-Dichloroethene	ug/l	100	13	13	14	17	20	15	15	15	11	8	8	7.7	10.0	12.3	15.5	11.5	10.9	8.47	10.4	8.40	8.17	9.81	9.58	12.60
1,2-Dichloropropane	ug/l	5	<3.3	<5.0	<5.0	6	<1.0	<1.0	<1.0	<1	<1	<1	<1	<2	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/l	200	143	170	230	580	180	410	410	270	99	170	190	170	180	237	249	205	231	187	201	192	134	142	156	173
1,1,2-Trichloroethane	ug/l	5	<3.3	<5	<0.5	0.8	0.9	<0.5	0.9	0.8	0.6	0.5	<0.5	<2.0	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Trichloroethene	ug/l	5	434	440	650	1,800	610	840	1,400	820	440	620	780	710	860	1,030	1,070	884	971	833	926	1,000	843	890	778	973
Vinyl Chloride	ug/l	2	4.3	4	9	5	6	5	2	4	2	2	3	4.2	<1	12.1	11.8	13.8	16.8	18.9	33.7	26.3	29.0	44.6	43.0	55.3
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	6.92	7.45	7.10	7.24	6.75	7.07	7.36	7.29	7.13	7.18	6.97	6.71	6.84	7.08
Specific Conductance	umhos/cm	--	690	964	1,141	553	880	660	471	729	413	732	619	618	827	922	1,199	964	794	720	664	584	724	155	686	731
Temperature	°C	--	15.2	12.9	11.9	10.8	12.1	9.9	13.1	11.1	12.4	10.8	13.3	11.3	13.7	5.4	10.7	9.5	13.7	11.3	12.0	10.3	13.3	10.2	12.8	10.1
Turbidity	NTU	5 (AL)	--	13	21	29	22.9	17.4	37.0	25	51	30	56	67	118	116	58	133	157	47	81	39	51	27	92.0	70.0

All other VOCs have been historically below laboratory detection lim
[1] = U.S. EPA Maximum Contaminant Level
(HHA) = U.S. EPA Lifetime Human Health Advisory
(S) = Secondary U.S. EPA MCL
(AL) = U.S. EPA Action Level
Duplicate samples collected at GM-4.
-- = Not Applicable
* = MEK contaminated deionized water.

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

Parameter	Units	MCL[1]	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	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10	Oct-10	Apr-11
Inorganics																																				
Ammonia	mg/l	30 (HHA)	<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	<0.05	<0.05	<0.05	<0.05	<0.05	<0.0500	<0.0500	0.0910	<0.05	<0.05	0.235	0.0580	0.0720	0.389
Chloride	mg/l	250 (S)	<1.0	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	<1.0	19	<1.0	<1.0	<1.0	1	<1	1	2	<1.0	<1.0	<1	<1	<1	<5	<5	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Chemical Oxygen Demand (COD)	mg/l	--	<20	<20	<20	<20	<20	<20	115	33	<15	<15	4	<1.0	<1.0	3	<5	<5	<5	<5	7	39	<5	<5	<10	<10	<50.0	<10.0	<10.0	<50.0	<50.0	<50.0	<10.0	<10.0	<10.0
Sodium	mg/l	--	<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	<0.10	<0.10	0.11	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00
Volatile Organic Compounds																																				
2-Butanone (Methyl ethyl ketone)	ug/l	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<2	<10	<12.5	<12.5	612 *	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5
1,1-Dichloroethane	ug/l	--	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	ug/l	7	<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	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,2-Dichloroethene	ug/l	70	<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	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,2-Dichloroethene	ug/l	100	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/l	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	<2	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/l	200	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
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	<1.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Trichloroethene	ug/l	5	<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	<1	<2	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Vinyl Chloride	ug/l	2	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Field Parameters																																				
pH	S.U	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Temperature	°C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Turbidity	NTU	5 (AL)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

All other VOCs have been historically below laboratory detection lim
[1] = U.S. EPA Maximum Contaminant Level
(HHA) = U.S. EPA Lifetime Human Health Advisory
(S) = Secondary U.S. EPA MCL
(AL) = U.S. EPA Action Level
Duplicate samples collected at GM-4.
-- = Not Applicable
* = MEK contaminated deionized water

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

Parameter	Units	MCL[1]	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	Oct-04	Apr-05	Oct-05	Apr-06	Oct-06	Apr-07	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10	Oct-10	Apr-11
Inorganics																																				
Ammonia	mg/l	30 (HHA)	<0.030	<0.030	<0.030	<0.030	--	--	<0.010	<0.010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	250 (S)	<1.0	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand (COD)	mg/l	--	<20	<20	<20	<20	--	--	<5	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium	mg/l	--	<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	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<2	<10	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5
1,1-Dichloroethane	ug/l	--	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1-Dichloroethene	ug/l	7	<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	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
cis-1,2-Dichloroethene	ug/l	70	<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	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
trans-1,2-Dichloroethene	ug/l	100	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-Dichloropropane	ug/l	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	<2	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,1-Trichloroethane	ug/l	200	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,1,2-Trichloroethane	ug/l	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	<0.5	<2	<0.5	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Trichloroethene	ug/l	5	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Vinyl Chloride	ug/l	2	<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	<1	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Field Parameters																																				
pH	S.U.	6.5-8.5 (S)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Specific Conductance	umhos/cm	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Temperature	°C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Turbidity	NTU	5 (AL)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

All other VOCs have been historically below laboratory detection lim
[1] = U.S. EPA Maximum Contaminant Level
(HHA) = U.S. EPA Lifetime Human Health Advisory
(S) = Secondary U.S. EPA MCL
(AL) = U.S. EPA Action Level
Duplicate samples collected at GM-4.
-- = Not Applicable
* = MEK contaminated deionized water.

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	10/22/04	4/15/05	10/14/05	4/25/06	10/13/06	4/12/07
GM-1	841.03	31.26	30.19	31.61	30.31	29.54	29.24	31.64	31.51	30.22	30.68	31.07	29.84	31.70	31.04	30.66	29.03
GM-2	833.24	23.65	22.08	23.60	22.18	21.45	21.12	23.75	23.32	22.20	22.69	23.21	21.67	24.05	23.08	22.76	21.05
GM-3	822.86	11.74	10.69	12.45	11.73	8.46	10.51	12.40	12.08	11.16	11.95	12.37	11.79	12.97	12.42	11.67	10.28
GM-4	827.37	16.54	15.33	17.18	16.39	13.51	15.17	17.21	16.79	15.78	16.59	17.14	16.56	17.99	17.30	16.32	15.16
MW-4S	842.94	--	--	33.43	32.03	31.52	30.92	33.55	33.17	32.02	32.42	32.90	31.48	33.76	32.80	32.49	30.89

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	10/22/04	4/15/05	10/14/05	4/25/06	10/13/06	4/12/07
GM-1	841.03	809.77	810.84	809.42	810.72	811.49	811.79	809.39	809.52	810.81	810.35	809.96	811.19	809.33	809.99	810.37	812.00
GM-2	833.24	809.59	811.16	809.64	811.06	811.79	812.12	809.49	809.92	811.04	810.55	810.03	811.57	809.19	810.16	810.48	812.19
GM-3	822.86	811.12	812.17	810.41	811.13	814.40	812.35	810.46	810.78	811.70	810.91	810.49	811.07	809.89	810.44	811.19	812.58
GM-4	827.37	810.83	812.04	810.19	810.98	813.86	812.20	810.16	810.58	811.59	810.78	810.23	810.81	809.38	810.07	811.05	812.21
MW-4S	842.94	--	--	809.51	810.91	811.42	812.02	809.39	809.77	810.92	810.52	810.04	811.46	809.18	810.14	810.45	812.05

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	10/22/2004	4/15/2005	10/14/2005	4/25/2006	10/13/2006	4/12/07
GM-1	841.03	2.1	--	1.9	1.9	2.1	1.8	2.1	1.8	1.8	1.8	2.0	2.0	2.1	2.0	2.1	2.0
GM-2	833.24	2.5	--	2.2	2.2	2.5	2.2	2.5	2.2	2.2	2.2	2.4	2.5	2.5	2.4	2.5	2.4
GM-3	822.86	2.2	--	2.0	2.0	2.3	1.9	2.3	1.9	2.0	2.0	2.2	2.2	2.2	2.3	2.3	2.3
GM-4	827.37	3.3	--	2.6	2.6	3.0	2.5	3.0	2.6	2.7	2.6	2.9	2.9	2.9	2.9	3.4	3.0
MW-4S	842.94	--	--	--	--	3.0	2.6	--	--	--	1.5	2.8	2.7	2.8	2.7	2.7	2.7

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	10/22/2004	4/15/2005	10/14/2005	4/25/2006	10/13/2006	4/12/07
GM-1	841.03	35.10	34.84	34.84	34.84	34.86	34.81	34.81	34.91	35.05	34.96	34.97	34.97	35.00	35.02	35.01	34.99
GM-2	833.24	39.08	38.87	38.86	38.86	38.88	38.83	38.83	38.80	38.85	38.82	38.82	38.82	38.85	38.81	38.82	38.81
GM-3	822.86	27.95	27.72	27.75	27.75	27.74	27.71	27.71	27.68	27.72	27.68	27.68	27.68	27.68	27.65	27.66	27.65
GM-4	827.37	28.17	27.93	27.95	27.95	27.95	27.91	27.91	27.89	27.92	27.90	27.90	27.90	27.90	27.88	27.90	27.88
MW-4S	842.94	--	--	39.74	39.74	40.93	40.88	--	--	--	40.85	40.85	40.85	40.88	40.84	40.85	40.83

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

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

Well No.	TOC Elevation (feet amsl)	10/12/07	4/18/08	10/17/08	4/23/09	10/22/09	4/27/10	10/14/10	4/12/11
GM-1	841.03	31.20	28.01	31.29	27.63	30.62	29.64	31.14	30.86
GM-2	833.24	23.23	19.77	23.43	19.42	22.84	21.70	23.15	22.65
GM-3	822.86	12.61	10.21	12.72	9.41	12.44	9.77	12.54	11.63
GM-4	827.37	17.48	14.76	17.63	13.97	17.24	14.69	17.39	16.59
MW-4S	842.94	32.95	29.51	33.21	29.27	32.56	31.52	32.94	32.56

Well No.	TOC Elevation (feet amsl)	10/12/07	4/18/08	10/17/08	4/23/09	10/22/09	4/27/10	10/14/10	4/12/11
GM-1	841.03	809.83	813.02	809.74	813.40	810.41	811.39	809.89	810.17
GM-2	833.24	810.01	813.47	809.81	813.82	810.40	811.54	810.09	810.59
GM-3	822.86	810.25	812.65	810.14	813.45	810.42	813.09	810.32	811.23
GM-4	827.37	809.89	812.61	809.74	813.40	810.13	812.68	809.98	810.78
MW-4S	842.94	809.99	813.43	809.73	813.67	810.38	811.42	810.00	810.38

Well No.	TOC Elevation (feet amsl)	10/12/07	4/18/08	10/17/08	4/23/09	10/22/09	4/27/10	10/14/10	4/12/11
GM-1	841.03	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0
GM-2	833.24	2.5	2.4	2.4	2.5	2.4	2.4	2.5	2.5
GM-3	822.86	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
GM-4	827.37	2.9	2.9	2.9	2.9	3.0	2.9	3.0	2.9
MW-4S	842.94	2.6	2.8	2.8	3.0	2.8	2.8	2.8	2.8

Well No.	TOC Elevation (feet amsl)	10/12/07	4/18/08	10/17/08	4/23/09	10/22/09	4/27/10	10/14/10	4/12/11
GM-1	841.03	34.98	35.00	35.00	35.03	35.06	35.05	35.04	35.05
GM-2	833.24	38.83	38.83	38.84	38.83	38.90	38.89	38.89	38.88
GM-3	822.86	27.67	27.67	27.61	27.65	27.65	27.63	27.63	27.65
GM-4	827.37	27.90	27.90	27.90	27.89	27.93	27.93	27.92	27.92
MW-4S	842.94	40.86	40.85	40.86	40.85	40.90	40.90	40.91	40.90

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-2 DATE: 4-12-11 PROJECT NO.: 50071

FIELD BOOK NO.: N/A WEATHER: Sunny Windy Cool 45-50°

SAMPLING CREW: Bailey

WELLHEAD INSPECTION:

Evidence of Activities at Well: No ✓ Yes ____ Comment: Canadian Goose nest wedge next to well.
Well Protector Condition: Good ✓ Poor ____ Comment: ____
Insect/Rodent Intrusion: No ✓ Yes ____ Comment: ____
Other: NONE

FIELD EQUIPMENT USED:

Date Calibrated:

Water Level Indicator: Solinst ✓ Soiltest ____ Plopper ____
pH Meter: Hanna ____ Orion ____ Oakton ✓ — 4-12-11
Conductivity Meter: YSI ____ Oakton ✓ Myron L ____
Thermometer: YSI ____ Hanna ____ Oakton ✓
Turbidity: Hach ✓ HF Scientific ____
Dissolved Oxygen: Corning No. 1 ____ Corning No. 2 ____
Other: NONE

STATIC WATER LEVEL:

Reference Point (RP) Elevation: Top Casing ✓ Top Protector ____ Well Stick-up 2.04

Measured Level:	1st	2nd	3rd	Average
Time/Depth:	1100AM/ 30.86	1100AM/ 30.86	1100AM/ 30.86	30.86

Well Bottom: Measured Distance from RP: TD: 35.05 HW: .68 SWV: 3.41

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: 5.04 Gallons

MEASUREMENTS	TIME (IN MINUTES)							
	1107AM	1110AM	1112AM	1115AM	1117AM	1119AM	1121AM	
Amount of Water Removed (mls.)	1	1.0	2.0	3.0	4.0	4.5	5.0	
pH (S.U.)	7.16	7.16	7.14	7.14	7.12	7.13	7.13	
Conductivity (umhos/cm)	743	704	707	700	702	694	696	
Temperature (°C)	11.5	11.4	11.3	11.4	11.4	11.4	11.3	
Turbidity (NTU)	253	99	76	64	64	56	51	
TDS (ppm)	-	-	-	-	-	-	-	
Dissolved Oxygen (mg/l)	-	-	-	-	-	-	-	

SAMPLING:

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

Time Sampling Began: 1125AM Time Completed: 1130AM

Characteristics of Water: Odor NONE Color Clear
Turbidity Clear Other NONE

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

REMARKS:

* Initially water very orangish in color for ~ first Gallon then cleared during purging.

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

WELL NO.: GM-2 DATE: 4-12-11 PROJECT NO.: 50071

FIELD BOOK NO.: N/A WEATHER: Sunny very Windy Cool 50°

SAMPLING CREW: Bailey

WELLHEAD INSPECTION:

Evidence of Activities at Well: No ✓ Yes ____ Comment: ____
Well Protector Condition: Good ✓ Poor ____ Comment: ____
Insect/Rodent Intrusion: No ✓ Yes ____ Comment: ____
Other: NONE

FIELD EQUIPMENT USED: Date Calibrated:

Water Level Indicator: Solinst ✓ Soiltest ____ Plopper ____
pH Meter: Hanna ____ Orion ____ Oakton ✓ 4-12-11
Conductivity Meter: YSI ____ Oakton ✓ Myron L ____
Thermometer: YSI ____ Hanna ____ Oakton ✓
Turbidity: Hach ✓ HF Scientific ____
Dissolved Oxygen: Corning No. 1 ____ Corning No. 2 ____
Other: NONE

STATIC WATER LEVEL:

Reference Point (RP) Elevation: Top Casing ✓ Top Protector ____ Well Stick-up 2.45

Measured Level:	1st	2nd	3rd	Average
Time/Depth:	1140AM/ 22.65	1140AM/ 22.65	1140AM/ 22.65	22.65

Well Bottom: Measured Distance from RP: TD: 36.88 LWV: 2.65 SWV: 13.23

PURGING:

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

Time Elapsed During Purging (mins.): 23 Total Gallons Removed During Purging: 14.0 Gallons

MEASUREMENTS	TIME (IN MINUTES)							
	1146AM	1148AM	1151AM	1155AM	1158AM	1201PM	1205PM	1209PM
Amount of Water Removed (mls.)	I	1.0	3.0	5.0	7.0	9.0	12.0	14.0
pH (S.U.)	7.28	7.26	7.11	7.09	7.10	7.10	7.10	7.10
Conductivity (umhos/cm)	595	598	661	678	678	681	681	683
Temperature (°C)	9.9	10.3	10.9	11.0	11.1	11.0	11.1	11.0
Turbidity (NTU)	27	67	62	22	12	9	7	8
TDS (ppm)	–	–	–	–	–	–	–	–
Dissolved Oxygen (mg/l)	–	–	–	–	–	–	–	–

SAMPLING:

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

Time Sampling Began: 1210PM Time Completed: 1215PM

Characteristics of Water: Odor NONE Color Clear
Turbidity Clear Other NONE

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

REMARKS:

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

WELL NO.: GM-3 DATE: 4-12-11 PROJECT NO.: 50071

FIELD BOOK NO.: N/A WEATHER: Sunny Clear very Windy Mild 55-60°

SAMPLING CREW: Betley

WELLHEAD INSPECTION:

Evidence of Activities at Well: No ✓ Yes ____ Comment: ____
Well Protector Condition: Good ✓ Poor ____ Comment: ____
Insect/Rodent Intrusion: No ✓ Yes ____ Comment: ____
Other: NONE

FIELD EQUIPMENT USED: Date Calibrated:

Water Level Indicator: Solinst ✓ Soiltest ____ Plopper ____
pH Meter: Hanna ____ Orion ____ Oakton ✓ 4-12-11
Conductivity Meter: YSI ____ Oakton ✓ Myron L ____
Thermometer: YSI ____ Hanna ____ Oakton ✓
Turbidity: Hach ✓ HF Scientific ____
Dissolved Oxygen: Corning No. 1 ____ Corning No. 2 ____
Other: NONE

STATIC WATER LEVEL:

Reference Point (RP) Elevation: Top Casing ✓ Top Protector ____ Well Stick-up 2.32

Measured Level:	1st	2nd	3rd	Average
Time/Depth:	132PM / 11.63	132PM / 11.63	132PM / 11.63	11.63

Well Bottom: Measured Distance from RP: TD: 27.65 1WV: 2.61 3WV: 13.06

PURGING:

Purging Device: Dedicated Pump ____ Dedicated Pump ____ Disposable Bailer ✓
Grundfos Pump ____ Bladder Pump ____ Other ____
Time Elapsed During Purging (mins.): 33 Total Gallons Removed During Purging: 14.0 Gallons

MEASUREMENTS	TIME (IN MINUTES)							
	138 PM	141PM	150PM	158PM	201PM	204PM	208PM	211PM
Amount of Water Removed (mls.)	1	1.0	3.0	5.0	7.0	9.0	12.0	14.0
pH (S.U.)	7.83	7.77	7.81	7.83	7.82	7.82	7.83	7.82
Conductivity (umhos/cm)	572	552	508	499	490	489	489	485
Temperature (°C)	5.3	5.9	6.3	6.9	6.8	6.6	6.6	6.6
Turbidity (NTU)	140	215	253	420	569	645	837	1000
TDS (ppm)	-	-	-	-	-	-	-	-
Dissolved Oxygen (mg/l)	-	-	-	-	-	-	-	-

SAMPLING:

Sampling Device: Dedicated Pump ____ Dedicated Pump ____ Disposable Bailer ✓
Grundfos Pump ____ Bladder Pump ____ Other ____
Time Sampling Began: 215PM Time Completed: 225PM
Characteristics of Water: Odor NONE Color Brown
Turbidity very Silty Other NONE
QA/QC Sample Collected: Duplicate ___ Replicate ___ Matrix Spike/Matrix Spike Duplicate ___ None ✓

REMARKS:

* Equipment Blank Taken at 110 PM Before Purging & Sampling of this well. (Used Distilled Water)

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

WELL NO.: GM-4 DATE: 4-12-11 PROJECT NO.: 50071

FIELD BOOK NO.: N/A WEATHER: Sunny Clear very Windy Cool 50°

SAMPLING CREW: Bailey

WELLHEAD INSPECTION:

Evidence of Activities at Well: No ✓ Yes ____ Comment: ____
Well Protector Condition: Good ✓ Poor ____ Comment: ____
Insect/Rodent Intrusion: No ✓ Yes ____ Comment: ____
Other: NONE

FIELD EQUIPMENT USED: Date Calibrated:

Water Level Indicator: Solinst ✓ Soiltest ____ Plopper ____
pH Meter: Hanna ____ Orion ____ Oakton ✓ — 4-12-11
Conductivity Meter: YSI ____ Oakton ✓ Myron L ____
Thermometer: YSI ____ Hanna ____ Oakton ✓
Turbidity: Hach ✓ HF Scientific ____
Dissolved Oxygen: Corning No. 1 ____ Corning No. 2 ____
Other: NONE

STATIC WATER LEVEL:

Reference Point (RP) Elevation: Top Casing ✓ Top Protector ____ Well Stick-up 2.94

Measured Level:	1st	2nd	3rd	Average
Time/Depth:	1223PM/ 16.59	1223PM/ 16.59	1223PM/ 16.59	16.59

Well Bottom: Measured Distance from RP: TD: 27.92 LWV: 1.85 SWV: 9.23

PURGING:

Purging Device: Dedicated Pump ____ Dedicated Pump ____ Disposable Bailer ✓
Grundfos Pump ____ Bladder Pump ____ Other ____
Time Elapsed During Purging (mins.): 19 Total Gallons Removed During Purging: 10.0 Gallons

MEASUREMENTS	TIME (IN MINUTES)							
	1229 PM	1232 PM	1235 PM	1238 PM	1242 PM	1244 PM	1246 PM	1248 PM
Amount of Water Removed (mls.)	1	1.0	3.0	5.0	7.0	8.0	9.0	10.0
pH (S.U.)	7.45	7.06	7.06	7.07	7.08	7.08	7.08	7.08
Conductivity (umhos/cm)	683	747	746	740	737	732	733	731
Temperature (°C)	9.3	10.0	10.2	10.3	10.3	10.2	10.2	10.1
Turbidity (NTU)	54	216	104	73	62	52	62	70
TDS (ppm)	-	-	-	-	-	-	-	-
Dissolved Oxygen (mg/l)	-	-	-	-	-	-	-	-

SAMPLING:

Sampling Device: Dedicated Pump ____ Dedicated Pump ____ Disposable Bailer ✓
Grundfos Pump ____ Bladder Pump ____ Other ____
Time Sampling Began: 1250PM Time Completed: 100 PM
Characteristics of Water: Odor NONE Color Clear with a Slight Brownish Tint
Turbidity Cloudy Other NONE
QA/QC Sample Collected: Duplicate ✓ Replicate ____ Matrix Spike/Matrix Spike Duplicate ____ None ____

REMARKS:

DUD0649

TestAmerica INCORPORATED

Dayton Division
3601 South Dixie Drive
Dayton Ohio 45439

Phone: 937-294-6856
Toll Free: 800-572-9839
Fax: 937-294-7816

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?

State in which sampling occurred: Indiana Landfill

Compliance Monitoring? Yes [No]

Enforcement Action? Yes [No]

Client Name: Burgess & Niple, Inc.

Address: 5085 Reed Road

City/State/Zip: Columbus, Ohio, 43220

Project Manager: Michael Akins

Telephone Number: 614-459-2050 Fax No.: 614-451-1385

Sampler Name: (Print) Craig Botley

Sampler Signature: Stephen C. Botley Jr.

Report To: Michael Akins

Invoice To: Michael Akins

QUOTE NO:

Client Email: makins@burnip.com

Project No & ID: Wayne RRF - Columbia City, Indiana 50071

Sample ID	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: HNO_3	HCl - 40 ml Vial	NaOH	H_2SO_4	H_2SO_4	None	Other	Matrix: SOIL	WATER	Analyze For: VOCs 8260B	COD	Sodium	Chloride	Ammonia	RUSH TAT (Pre-Schedule)	RUSH Due Date	Standard 7-10 Business Days	Email Results	Standard Level 2 QC	Electronic Deliverables	Temp.	PH	Cond.	Turb.
GM-1	4/12/11	1125AM	6	x			1	3		1		1			x	x	x	x	x	x			x	x	x	x	11.3	7.13	696	51
GM-2		1210PM	6	x			1	3		1		1			x	x	x	x	x	x							11.0	7.10	683	8
GM-3		215PM	6	x			1	3		1		1			x	x	x	x	x	x							6.6	7.82	485	1000
GM-4		1250PM	6	x			1	3		1		1			x	x	x	x	x	x							10.1	7.08	731	70
GM-Duplicate		-	6	x			1	3		1		1			x	x	x	x	x	x										
Equipment Blank		110PM	6	x			1	3		1		1			x	x	x	x	x	x										
Trip Blank	4/13/11	-	2	x				2							x	x														

Special Instructions:

Laboratory Comments:

Temperature Upon Receipt: 1.4°C

VOCs Free of Headspace? (Y) N NA

Sample Containers Intact? (Y) N

Relinquished by:	Date	Time	Received by:	Date	Time
Stephen C. Botley Jr	4-13-11	400pm			
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time
			[signature]	4/13/11	1820

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Cooler/Sample Receipt

☐ MSDS or Known Hazard Information Supplied by Client
☐ Bottle stickers applied ☐ ELEMENT comment entered ☐ MSDS/COC scanned/emailed to EH&S
☐ Discrepancies Client ID: Burgess
☐ Short Hold Work Order #: DUD0649
☐ Rush ☐24hr ☐2day ☐3day ☐5day ☐other
Receipt evaluation performed by - Initials: SJO Date: 4/13/11 Time: 1820

Method of Shipment:
☐ Walk-In Client ☐ TestAmerica Field/Courier
☐ Other Client/3rd Party Courier
☐ Fed Ex Tracking #
☐ UPS Tracking #
☐ Other

Shipping Container Type:
☑ Cooler ☐ Box
☐ None ☐ Other

Packing Materials:
☑ Plastic Bags ☐ Foam
☑ Bubble Wrap ☐ Paper
☐ Packing Peanuts ☐ None
☐ Other

Custody Seals Intact:
☑ Yes ☐ No
☐ N/A (not used or required)

Cooling Materials:
☑ Ice *(solid)* ☐ Ice *(Melted)*
☐ Blue Ice ☐ None
☐ Other

Are there any soil samples from areas requiring USDA quarantine? *(AL, AR, AZ, CA, FL, GA, HI, ID, LA MS, NC, NM, NY, OK, SC, TN, TX, VA, Puerto Rico, Virgin Islands, any other Non-Domestic area)* ☑ **No** ☐ **Yes** (If Yes, *Project Manager must be notified*).

☐ Check if Additional Sheets Required

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Received on same day sampled?	Acceptable?*	Cooler ID	Note Affected Samples if temperature not acceptable
G	10.2	14	☑	☐	☐Yes ☑No	☑Yes ☐No		
			☐	☐	☐Yes ☐No	☐Yes ☐No		
			☐	☐	☐Yes ☐No	☐Yes ☐No		

* Receipt temperatures are considered acceptable if the samples are received on the same day they were collected & show signs that the cooling process has started. Temperature acceptance for most tests is ≤6.0°C, **but not frozen**. For additional information, please refer to SOP DT-SCA-004 *Sample Receipt and Login, Attachment 2 – Holding Times, Preservation and Container Requirements.*

Receipt Questions**	Y	N	n/a	"No" answers require additional comment
COC present & TA receipt signature, date, & time properly documented?	✓			
Containers & labels in good condition? *(unbroken, not leaking, appropriately filled, labels legible & attached)*	✓			
Appropriate containers used & adequate volume provided?	✓			
Number of sample containers match COC?	✓			
Samples received within hold time?	✓			
Samples submitted for GRO and Volatiles analyses (8260, 624, 524) received without headspace?	✓			
Was a Trip Blank received with VOA samples?	✓			
Were the samples free of any questionable physical conformities? For example, field duplicates or multiple bottles of the same sample do not significantly vary in appearance (color, proportion of solids, etc.)	✓			
Were the COC, bottle labels, and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	✓			

** May not be applicable if samples are not for compliance testing

Client Contact Record
Contact via: ☐ Phone ☐ Email ☐ Other **Person Contacted:** **Date/Time:**
☐ Discrepancy allowance agreement is on record in the client project file.
Discussion/Resolution:

Any additional documentation and clarification from client must be noted in the narrative and/or scanned into the COC directory.

Reviewed by PM Signature Date

WI No. DT-SCA-WI-001.9
effective 10/18/10

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Cooler/Sample Receipt

☐ MSDS or Known Hazard Information Supplied by Client
☐ Bottle stickers applied ☐ ELEMENT comment entered ☐ MSDS/COC scanned/emailed to EH&S
☐ Discrepancies Client ID Burgess
☐ Short Hold Work Order # DUD0649
☐ Rush ☐24hr ☐2day ☐3day ☐5day ☐other
Receipt evaluation performed by - Initials SSO Date: 4/13/11 Time: 1820

Method of Shipment:
☐ Walk-In Client ☐ TestAmerica Field/Courier
☐ Other Client/3rd Party Courier
☐ Fed Ex Tracking #
☐ UPS Tracking #
☐ Other

Shipping Container Type:
☑ Cooler ☐ Box
☐ None ☐ Other

Packing Materials:
☑ Plastic Bags ☐ Foam
☑ Bubble Wrap ☐ Paper
☐ Packing Peanuts ☐ None
☐ Other

Custody Seals Intact:
☑ Yes ☐ No
☐ N/A (not used or required)

Cooling Materials:
☑ Ice *(solid)* ☐ Ice *(Melted)*
☐ Blue Ice ☐ None
☐ Other

Are there any soil samples from areas requiring USDA quarantine? *(AL, AR, AZ, CA, FL, GA, HI, ID, LA MS, NC, NM, NY, OK, SC, TN, TX, VA, Puerto Rico, Virgin Islands, any other Non-Domestic area)* ☑ **No** ☐ **Yes** (If Yes, *Project Manager must be notified*).

Receipt Temperatures ☐ Check if Additional Sheets Required

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Received on same day sampled?	Acceptable?*	Cooler ID	Note Affected Samples if temperature not acceptable
6	16	16.4	☑	☐	☐Yes ☑No	☑Yes ☐No		
			☐	☐	☐Yes ☐No	☐Yes ☐No		
			☐	☐	☐Yes ☐No	☐Yes ☐No		

* Receipt temperatures are considered acceptable if the samples are received on the same day they were collected & show signs that the cooling process has started. Temperature acceptance for most tests is ≤6.0°C, but not frozen. For additional information, please refer to SOP DT-SCA-004 *Sample Receipt and Login, Attachment 2 – Holding Times, Preservation and Container Requirements*.

Receipt Questions**	Y	N	n/a	"No" answers require additional comment
COC present & TA receipt signature, date, & time properly documented?	✓			
Containers & labels in good condition? *(unbroken, not leaking, appropriately filled, labels legible & attached)*	✓			
Appropriate containers used & adequate volume provided?	✓			
Number of sample containers match COC?	✓			
Samples received within hold time?	✓			
Samples submitted for GRO and Volatiles analyses (8260, 624, 524) received without headspace?	✓			
Was a Trip Blank received with VOA samples?	✓			
Were the samples free of any questionable physical conformities? For example, field duplicates or multiple bottles of the same sample do not significantly vary in appearance (color, proportion of solids, etc.)	✓			
Were the COC, bottle labels, and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	✓			

** May not be applicable if samples are not for compliance testing

Client Contact Record
Contact via: ☐ Phone ☐ Email ☐ Other **Person Contacted:** **Date/Time:**
☐ Discrepancy allowance agreement is on record in the client project file.
Discussion/Resolution:

Any additional documentation and clarification from client must be noted in the narrative and/or scanned into the COC directory.

TM 4/13/11
Reviewed by PM Signature Date

WI No. DT-SCA-WI-001.9
effective 10/18/10

ATTACHMENT 2

LABORATORY REPORT

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4738 Gateway Circle Dayton, OH 45440 (800) 572-9839
339 W. Walton Blvd Pontiac, MI 48340 (800) 526-4951

April 27, 2011

Client:

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220

Attn: Michael Akins

Work Order: DUD0649
Project Name: Wayne Reclamation & Recycling (Indiana)
Project Number: 50071

Date Received: 04/13/11

Samples logged in at Dayton laboratory.

An executed copy of the Chain of Custody is also included as an addendum to this report.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at the number shown above.

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
GM-1	DUD0649-01	04/12/11 11:25
GM-2	DUD0649-02	04/12/11 12:10
GM-3	DUD0649-03	04/12/11 14:15
GM-4	DUD0649-04	04/12/11 12:50
GM-Duplicate	DUD0649-05	04/12/11
Equipment Blank	DUD0649-06	04/12/11 13:10
Trip Blank	DUD0649-07	04/12/11

Ohio Certification Number: 4074, 857

Reproduction of this analytical report is permitted only in its entirety. This report shall not be reproduced except in full without the written approval of the laboratory.

TestAmerica Laboratories, Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our Laboratory.

Report Approved By:

SAHoward

This report has been electronically signed.

TestAmerica Dayton
Shelly A. Howard
Dayton Project Manager

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DUD0649
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: 50071

Received: 04/13/11
Reported: 04/27/11 16:20

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-01 (GM-1 - Water - NonPotable)					**Sampled: 04/12/11 11:25**			**Recvd: 04/13/11 18:20**	
Client Supplied Field Data									
pH	**7.13**		S.U.	0.10	1	04/12/11 11:25	TMM	11D1037	NA
Specific Conductance	**696**		umhos/cm	10	1	04/12/11 11:25	TMM	11D1037	NA
Temperature	**11.3**		°C	0.100	1	04/12/11 11:25	TMM	11D1037	NA
Turbidity - Client Supplied	**51.0**		NTU	NA	1	04/12/11 11:25	TMM	11D1037	NA
General Chemistry Parameters									
Chloride	**45.1**		mg/L	2.00	2	04/15/11 14:42	DGR	11D0634	SW 9056A
Ammonia, Undistilled as N	**0.736**		mg/L	0.0500	1	04/14/11 12:25	KKH	11D0549	EPA 350.1/SM18 4500 NH3 H
Chemical Oxygen Demand	**17.3**		mg/L	10.0	1	04/15/11 13:30	AKM	11D0577	Hach 8000
Total Metals									
Sodium	**23.4**		mg/L	1.00	1	04/21/11 14:24	MJW	11D0642	SW 6010B
Volatile Organic Compounds by GC/MS									
Acetone	<20.0		ug/L	20.0	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Benzene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,1-Dichloroethane	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
cis-1,2-Dichloroethene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,1-Dichloroethene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-01 (GM-1 - Water - NonPotable) - cont.					**Sampled: 04/12/11 11:25**			**Recvd: 04/13/11 18:20**	
Volatile Organic Compounds by GC/MS - cont.									
Ethylbenzene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Styrene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Toluene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Trichloroethene	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	04/20/11 15:50	jdt	11D0804	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	*101 %*					04/20/11 15:50	jdt	11D0804	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*94 %*					04/20/11 15:50	jdt	11D0804	SW 8260B
Surr: Toluene-d8 (80-120%)	*103 %*					04/20/11 15:50	jdt	11D0804	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	*99 %*					04/20/11 15:50	jdt	11D0804	SW 8260B

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DUD0649
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: 50071

Received: 04/13/11
Reported: 04/27/11 16:20

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-02 (GM-2 - Water - NonPotable)					**Sampled: 04/12/11 12:10**			**Recvd: 04/13/11 18:20**	
Client Supplied Field Data									
pH	**7.10**		S.U.	0.10	1	04/12/11 12:10	TMM	11D1037	NA
Specific Conductance	**683**		umhos/cm	10	1	04/12/11 12:10	TMM	11D1037	NA
Temperature	**11.0**		°C	0.100	1	04/12/11 12:10	TMM	11D1037	NA
Turbidity - Client Supplied	**8.00**		NTU	NA	1	04/12/11 12:10	TMM	11D1037	NA
General Chemistry Parameters									
Chloride	**10.7**		mg/L	1.00	1	04/15/11 15:17	DGR	11D0634	SW 9056A
Ammonia, Undistilled as N	**0.920**		mg/L	0.100	2	04/14/11 12:25	KKH	11D0549	EPA 350.1/SM18 4500 NH3 H
Chemical Oxygen Demand	<10.0		mg/L	10.0	1	04/15/11 13:30	AKM	11D0577	Hach 8000
Total Metals									
Sodium	**8.61**		mg/L	1.00	1	04/21/11 14:27	MJW	11D0642	SW 6010B
Volatile Organic Compounds by GC/MS									
Acetone	<20.0		ug/L	20.0	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Benzene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,1-Dichloroethane	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
cis-1,2-Dichloroethene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,1-Dichloroethene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-02 (GM-2 - Water - NonPotable) - cont.					**Sampled: 04/12/11 12:10**			**Recvd: 04/13/11 18:20**	
Volatile Organic Compounds by GC/MS - cont.									
Ethylbenzene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Styrene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Toluene	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Trichloroethene	<1.00		ug/L	1.00	1	04/21/11 14:32	jdt	11D0871	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	04/21/11 02:33	jdt	11D0826	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	*102 %*					04/21/11 02:33	jdt	11D0826	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	*107 %*					04/21/11 14:32	jdt	11D0871	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*95 %*					04/21/11 02:33	jdt	11D0826	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*102 %*					04/21/11 14:32	jdt	11D0871	SW 8260B
Surr: Toluene-d8 (80-120%)	*100 %*					04/21/11 02:33	jdt	11D0826	SW 8260B
Surr: Toluene-d8 (80-120%)	*106 %*					04/21/11 14:32	jdt	11D0871	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	*101 %*					04/21/11 02:33	jdt	11D0826	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	*100 %*					04/21/11 14:32	jdt	11D0871	SW 8260B

Burgess & Niple (Landfill)	Work Order:	DUD0649	Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)	Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071		
Michael Akins				

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-03 (GM-3 - Water - NonPotable)					**Sampled: 04/12/11 14:15**			**Recvd: 04/13/11 18:20**	
Client Supplied Field Data									
pH	**7.82**		S.U.	0.10	1	04/12/11 14:15	TMM	11D1037	NA
Specific Conductance	**485**		umhos/cm	10	1	04/12/11 14:15	TMM	11D1037	NA
Temperature	**6.60**		°C	0.100	1	04/12/11 14:15	TMM	11D1037	NA
Turbidity - Client Supplied	**1000**		NTU	NA	1	04/12/11 14:15	TMM	11D1037	NA
General Chemistry Parameters									
Chloride	**35.0**		mg/L	1.00	1	04/15/11 15:35	DGR	11D0634	SW 9056A
Ammonia, Undistilled as N	**0.446**		mg/L	0.0500	1	04/14/11 12:25	KKH	11D0549	EPA 350.1/SM18 4500 NH3 H
Chemical Oxygen Demand	<10.0		mg/L	10.0	1	04/15/11 13:30	AKM	11D0577	Hach 8000
Total Metals									
Sodium	**29.2**		mg/L	1.00	1	04/21/11 14:42	MJW	11D0642	SW 6010B
Volatile Organic Compounds by GC/MS									
Acetone	<20.0		ug/L	20.0	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Benzene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,1-Dichloroethane	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
cis-1,2-Dichloroethene	**8.23**		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,1-Dichloroethene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-03 (GM-3 - Water - NonPotable) - cont.					**Sampled: 04/12/11 14:15**			**Recvd: 04/13/11 18:20**	
Volatile Organic Compounds by GC/MS - cont.									
Ethylbenzene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Styrene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Toluene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Trichloroethene	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Vinyl chloride	**6.74**		ug/L	1.00	1	04/21/11 15:00	jdt	11D0871	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	04/21/11 03:01	jdt	11D0826	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	*102 %*					04/21/11 03:01	jdt	11D0826	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	*107 %*					04/21/11 15:00	jdt	11D0871	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*96 %*					04/21/11 03:01	jdt	11D0826	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*97 %*					04/21/11 15:00	jdt	11D0871	SW 8260B
Surr: Toluene-d8 (80-120%)	*100 %*					04/21/11 03:01	jdt	11D0826	SW 8260B
Surr: Toluene-d8 (80-120%)	*107 %*					04/21/11 15:00	jdt	11D0871	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	*101 %*					04/21/11 03:01	jdt	11D0826	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	*105 %*					04/21/11 15:00	jdt	11D0871	SW 8260B

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DUD0649
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: 50071

Received: 04/13/11
Reported: 04/27/11 16:20

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-04 (GM-4 - Water - NonPotable)					**Sampled: 04/12/11 12:50**			**Recvd: 04/13/11 18:20**	
Client Supplied Field Data									
pH	**7.08**		S.U.	0.10	1	04/12/11 12:50	TMM	11D1037	NA
Specific Conductance	**731**		umhos/cm	10	1	04/12/11 12:50	TMM	11D1037	NA
Temperature	**10.1**		°C	0.100	1	04/12/11 12:50	TMM	11D1037	NA
Turbidity - Client Supplied	**70.0**		NTU	NA	1	04/12/11 12:50	TMM	11D1037	NA
General Chemistry Parameters									
Chloride	**1.49**		mg/L	1.00	1	04/15/11 15:52	DGR	11D0634	SW 9056A
Ammonia, Undistilled as N	**0.389**		mg/L	0.0500	1	04/14/11 12:25	KKH	11D0549	EPA 350.1/SM18 4500 NH3 H
Chemical Oxygen Demand	**13.8**		mg/L	10.0	1	04/15/11 13:30	AKM	11D0577	Hach 8000
Total Metals									
Sodium	**8.24**		mg/L	1.00	1	04/21/11 14:45	MJW	11D0642	SW 6010B
Volatile Organic Compounds by GC/MS									
Acetone	<20.0		ug/L	20.0	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Benzene	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
1,1-Dichloroethane	**19.9**		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
cis-1,2-Dichloroethene	**173**		ug/L	10.0	10	04/21/11 19:37	jdt	11D0871	SW 8260B
trans-1,2-Dichloroethene	**12.1**		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
1,1-Dichloroethene	**3.96**		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DUD0649
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: 50071

Received: 04/13/11
Reported: 04/27/11 16:20

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-04 (GM-4 - Water - NonPotable) - cont.					**Sampled: 04/12/11 12:50**		**Recvd: 04/13/11 18:20**		
Volatile Organic Compounds by GC/MS - cont.									
Ethylbenzene	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Styrene	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Toluene	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
1,1,1-Trichloroethane	**172**		ug/L	10.0	10	04/21/11 19:37	jdt	11D0871	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Trichloroethene	**940**		ug/L	10.0	10	04/21/11 19:37	jdt	11D0871	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Vinyl chloride	**54.4**		ug/L	10.0	10	04/21/11 19:37	jdt	11D0871	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	04/21/11 03:30	jdt	11D0826	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	*103 %*					04/21/11 03:30	jdt	11D0826	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	*106 %*					04/21/11 19:37	jdt	11D0871	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*100 %*					04/21/11 03:30	jdt	11D0826	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*89 %*					04/21/11 19:37	jdt	11D0871	SW 8260B
Surr: Toluene-d8 (80-120%)	*101 %*					04/21/11 03:30	jdt	11D0826	SW 8260B
Surr: Toluene-d8 (80-120%)	*103 %*					04/21/11 19:37	jdt	11D0871	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	*101 %*					04/21/11 03:30	jdt	11D0826	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	*98 %*					04/21/11 19:37	jdt	11D0871	SW 8260B

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-05 (GM-Duplicate - Water - NonPotable)					**Sampled: 04/12/11**			**Recvd: 04/13/11 18:20**	
General Chemistry Parameters									
Chloride	**1.48**		mg/L	1.00	1	04/15/11 16:09	DGR	11D0634	SW 9056A
Ammonia, Undistilled as N	**0.119**		mg/L	0.0500	1	04/14/11 12:25	KKH	11D0549	EPA 350.1/SM18 4500 NH3 H
Chemical Oxygen Demand	**10.3**		mg/L	10.0	1	04/15/11 13:30	AKM	11D0577	Hach 8000
Total Metals									
Sodium	**8.04**		mg/L	1.00	1	04/21/11 14:48	MJW	11D0642	SW 6010B
Volatile Organic Compounds by GC/MS									
Acetone	<20.0		ug/L	20.0	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Benzene	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
1,1-Dichloroethane	**20.4**		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
cis-1,2-Dichloroethene	**177**		ug/L	10.0	10	04/21/11 20:05	jdt	11D0871	SW 8260B
trans-1,2-Dichloroethene	**12.6**		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
1,1-Dichloroethene	**4.12**		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Ethylbenzene	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-05 (GM-Duplicate - Water - NonPotable) - cont.					**Sampled: 04/12/11**			**Recvd: 04/13/11 18:20**	
Volatile Organic Compounds by GC/MS - cont.									
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Styrene	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Toluene	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
1,1,1-Trichloroethane	**173**	M	ug/L	10.0	10	04/21/11 20:05	jdt	11D0871	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Trichloroethene	**973**		ug/L	10.0	10	04/21/11 20:05	jdt	11D0871	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Vinyl chloride	**55.3**		ug/L	10.0	10	04/21/11 20:05	jdt	11D0871	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	04/21/11 02:04	jdt	11D0826	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	*104 %*					04/21/11 02:04	jdt	11D0826	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	*105 %*					04/21/11 20:05	jdt	11D0871	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*99 %*					04/21/11 02:04	jdt	11D0826	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*97 %*					04/21/11 20:05	jdt	11D0871	SW 8260B
Surr: Toluene-d8 (80-120%)	*101 %*					04/21/11 02:04	jdt	11D0826	SW 8260B
Surr: Toluene-d8 (80-120%)	*102 %*					04/21/11 20:05	jdt	11D0871	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	*100 %*					04/21/11 02:04	jdt	11D0826	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	*102 %*					04/21/11 20:05	jdt	11D0871	SW 8260B

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-06 (Equipment Blank - Water - NonPotable)					**Sampled: 04/12/11 13:10**			**Recvd: 04/13/11 18:20**	
General Chemistry Parameters									
Chloride	<1.00		mg/L	1.00	1	04/15/11 16:27	DGR	11D0634	SW 9056A
Ammonia, Undistilled as N	**0.389**		mg/L	0.0500	1	04/14/11 12:25	KKH	11D0549	EPA 350.1/SM18 4500 NH3 H
Chemical Oxygen Demand	<10.0		mg/L	10.0	1	04/15/11 13:30	AKM	11D0577	Hach 8000
Total Metals									
Sodium	<1.00		mg/L	1.00	1	04/21/11 14:51	MJW	11D0642	SW 6010B
Volatile Organic Compounds by GC/MS									
Acetone	<20.0		ug/L	20.0	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Benzene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,1-Dichloroethane	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
cis-1,2-Dichloroethene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,1-Dichloroethene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Ethylbenzene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-06 (Equipment Blank - Water - NonPotable) - cont.					**Sampled:**	**04/12/11 13:10**		**Recvd: 04/13/11 18:20**	
Volatile Organic Compounds by GC/MS - cont.									
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Styrene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Toluene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Trichloroethene	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	04/20/11 15:21	jdt	11D0804	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	*101 %*					04/20/11 15:21	jdt	11D0804	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*94 %*					04/20/11 15:21	jdt	11D0804	SW 8260B
Surr: Toluene-d8 (80-120%)	*102 %*					04/20/11 15:21	jdt	11D0804	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	*100 %*					04/20/11 15:21	jdt	11D0804	SW 8260B

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-07 (Trip Blank - Water - NonPotable)					**Sampled: 04/12/11**			**Recvd: 04/13/11 18:20**	
Volatile Organic Compounds by GC/MS									
Acetone	<20.0		ug/L	20.0	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Acrylonitrile	<50.0		ug/L	50.0	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Benzene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Bromochloromethane	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Bromodichloromethane (Dichlorobromomethane)	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Bromoform	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Bromomethane (Methyl bromide)	<5.00		ug/L	5.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
2-Butanone (MEK)	<12.5		ug/L	12.5	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Carbon disulfide	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Carbon tetrachloride	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Chlorobenzene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Chloroethane	<5.00		ug/L	5.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Chloroform	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Chloromethane (Methyl chloride)	<5.00		ug/L	5.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Dibromochloromethane (Chlorodibromomethane)	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
1,2-Dibromo-3-chloropropane	<5.00		ug/L	5.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
1,2-Dibromoethane (EDB)	<5.00		ug/L	5.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Dibromomethane	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
trans-1,4-Dichloro-2-butene	<5.00		ug/L	5.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
1,2-Dichlorobenzene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
1,4-Dichlorobenzene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
1,1-Dichloroethane	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
1,2-Dichloroethane	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
cis-1,2-Dichloroethene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
trans-1,2-Dichloroethene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
1,1-Dichloroethene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
1,2-Dichloropropane	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
cis-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
trans-1,3-Dichloropropene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Ethylbenzene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Hexachlorobutadiene	<5.00		ug/L	5.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
2-Hexanone	<10.0		ug/L	10.0	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Iodomethane	<5.00		ug/L	5.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Methylene chloride	<5.00		ug/L	5.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5		ug/L	12.5	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Styrene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
1,1,1,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
1,1,2,2-Tetrachloroethane	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Tetrachloroethene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Toluene	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
1,1,1-Trichloroethane	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	RL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: DUD0649-07 (Trip Blank - Water - NonPotable) - cont.					**Sampled: 04/12/11**			**Recvd: 04/13/11 18:20**	
Volatile Organic Compounds by GC/MS - cont.									
1,1,2-Trichloroethane	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Trichloroethene	<1.00		ug/L	1.00	1	04/21/11 14:04	jdt	11D0871	SW 8260B
Trichlorofluoromethane	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
1,2,3-Trichloropropane	<5.00		ug/L	5.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Vinyl Acetate	<5.00		ug/L	5.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Vinyl chloride	<1.00		ug/L	1.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Xylenes, Total	<2.00		ug/L	2.00	1	04/21/11 03:59	jdt	11D0826	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	*102 %*					04/21/11 03:59	jdt	11D0826	SW 8260B
Surr: 1,2-Dichloroethane-d4 (80-120%)	*106 %*					04/21/11 14:04	jdt	11D0871	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*96 %*					04/21/11 03:59	jdt	11D0826	SW 8260B
Surr: Dibromofluoromethane (80-120%)	*105 %*					04/21/11 14:04	jdt	11D0871	SW 8260B
Surr: Toluene-d8 (80-120%)	*100 %*					04/21/11 03:59	jdt	11D0826	SW 8260B
Surr: Toluene-d8 (80-120%)	*108 %*					04/21/11 14:04	jdt	11D0871	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	*100 %*					04/21/11 03:59	jdt	11D0826	SW 8260B
Surr: 4-Bromofluorobenzene (80-120%)	*103 %*					04/21/11 14:04	jdt	11D0871	SW 8260B

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DUD0649
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: 50071

Received: 04/13/11
Reported: 04/27/11 16:20

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters														
Ammonia, Undistilled as N	11D0549			mg/L	N/A	0.0500	<0.0500							
Chemical Oxygen Demand	11D0577			mg/L	N/A	10.0	<10.0							
Chloride	11D0634			mg/L	N/A	1.00	<1.00							
Total Metals														
Sodium	11D0642			mg/L	N/A	1.00	<1.00							
Volatile Organic Compounds by GC/MS														
Benzene	11D0804			ug/L	N/A	1.00	<1.00							
Bromodichloromethane (Dichlorobromomethane)	11D0804			ug/L	N/A	1.00	<1.00							
Bromoform	11D0804			ug/L	N/A	1.00	<1.00							
Bromomethane (Methyl bromide)	11D0804			ug/L	N/A	5.00	<5.00							
Carbon tetrachloride	11D0804			ug/L	N/A	1.00	<1.00							
Chlorobenzene	11D0804			ug/L	N/A	1.00	<1.00							
Chloroethane	11D0804			ug/L	N/A	5.00	<5.00							
2-Chloroethylvinyl ether	11D0804			ug/L	N/A	5.00	<5.00							
Chloroform	11D0804			ug/L	N/A	1.00	<1.00							
Chloromethane (Methyl chloride)	11D0804			ug/L	N/A	5.00	<5.00							
Dibromochloromethane (Chlorodibromomethane)	11D0804			ug/L	N/A	1.00	<1.00							
1,2-Dichlorobenzene	11D0804			ug/L	N/A	1.00	<1.00							
1,4-Dichlorobenzene	11D0804			ug/L	N/A	1.00	<1.00							
1,3-Dichlorobenzene	11D0804			ug/L	N/A	1.00	<1.00							
1,1-Dichloroethane	11D0804			ug/L	N/A	1.00	<1.00							
1,2-Dichloroethane	11D0804			ug/L	N/A	1.00	<1.00							
trans-1,2-Dichloroethene	11D0804			ug/L	N/A	1.00	<1.00							
1,1-Dichloroethene	11D0804			ug/L	N/A	1.00	<1.00							
1,2-Dichloropropane	11D0804			ug/L	N/A	1.00	<1.00							
cis-1,3-Dichloropropene	11D0804			ug/L	N/A	1.00	<1.00							
trans-1,3-Dichloropropene	11D0804			ug/L	N/A	1.00	<1.00							
Ethylbenzene	11D0804			ug/L	N/A	1.00	<1.00							
n-Hexane	11D0804			ug/L	N/A	5.00	<5.00							
Methylene chloride	11D0804			ug/L	N/A	5.00	<5.00							
1,1,2,2-Tetrachloroethane	11D0804			ug/L	N/A	1.00	<1.00							
Tetrachloroethene	11D0804			ug/L	N/A	1.00	<1.00							
Toluene	11D0804			ug/L	N/A	1.00	<1.00							
1,1,1-Trichloroethane	11D0804			ug/L	N/A	1.00	<1.00							
1,1,2-Trichloroethane	11D0804			ug/L	N/A	1.00	<1.00							
Trichloroethene	11D0804			ug/L	N/A	1.00	<1.00							
Trichlorofluoromethane	11D0804			ug/L	N/A	1.00	<1.00							
Vinyl chloride	11D0804			ug/L	N/A	1.00	<1.00							

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS														
Benzene	11D0826			ug/L	N/A	1.00	<1.00							
Bromodichloromethane (Dichlorobromomethane)	11D0826			ug/L	N/A	1.00	<1.00							
Bromoform	11D0826			ug/L	N/A	1.00	<1.00							
Bromomethane (Methyl bromide)	11D0826			ug/L	N/A	5.00	<5.00							
Carbon tetrachloride	11D0826			ug/L	N/A	1.00	<1.00							
Chlorobenzene	11D0826			ug/L	N/A	1.00	<1.00							
Chloroethane	11D0826			ug/L	N/A	5.00	<5.00							
2-Chloroethylvinyl ether	11D0826			ug/L	N/A	5.00	<5.00							
Chloroform	11D0826			ug/L	N/A	1.00	<1.00							
Chloromethane (Methyl chloride)	11D0826			ug/L	N/A	5.00	<5.00							
Dibromochloromethane (Chlorodibromomethane)	11D0826			ug/L	N/A	1.00	<1.00							
1,2-Dichlorobenzene	11D0826			ug/L	N/A	1.00	<1.00							
1,4-Dichlorobenzene	11D0826			ug/L	N/A	1.00	<1.00							
1,3-Dichlorobenzene	11D0826			ug/L	N/A	1.00	<1.00							
1,1-Dichloroethane	11D0826			ug/L	N/A	1.00	<1.00							
1,2-Dichloroethane	11D0826			ug/L	N/A	1.00	<1.00							
trans-1,2-Dichloroethene	11D0826			ug/L	N/A	1.00	<1.00							
1,1-Dichloroethene	11D0826			ug/L	N/A	1.00	<1.00							
1,2-Dichloropropane	11D0826			ug/L	N/A	1.00	<1.00							
cis-1,3-Dichloropropene	11D0826			ug/L	N/A	1.00	<1.00							
trans-1,3-Dichloropropene	11D0826			ug/L	N/A	1.00	<1.00							
Ethylbenzene	11D0826			ug/L	N/A	1.00	<1.00							
n-Hexane	11D0826			ug/L	N/A	5.00	<5.00							
Methylene chloride	11D0826			ug/L	N/A	5.00	<5.00							
1,1,2,2-Tetrachloroethane	11D0826			ug/L	N/A	1.00	<1.00							
Tetrachloroethene	11D0826			ug/L	N/A	1.00	<1.00							
Toluene	11D0826			ug/L	N/A	1.00	<1.00							
1,1,1-Trichloroethane	11D0826			ug/L	N/A	1.00	<1.00							
1,1,2-Trichloroethane	11D0826			ug/L	N/A	1.00	<1.00							
Trichloroethene	11D0826			ug/L	N/A	1.00	<1.00							
Trichlorofluoromethane	11D0826			ug/L	N/A	1.00	<1.00							
Vinyl chloride	11D0826			ug/L	N/A	1.00	<1.00							
Benzene	11D0871			ug/L	N/A	1.00	<1.00							
Bromodichloromethane (Dichlorobromomethane)	11D0871			ug/L	N/A	1.00	<1.00							
Bromoform	11D0871			ug/L	N/A	1.00	<1.00							
Bromomethane (Methyl bromide)	11D0871			ug/L	N/A	5.00	<5.00							
Carbon tetrachloride	11D0871			ug/L	N/A	1.00	<1.00							
Chlorobenzene	11D0871			ug/L	N/A	1.00	<1.00							
Chloroethane	11D0871			ug/L	N/A	5.00	<5.00							
Chloroform	11D0871			ug/L	N/A	1.00	<1.00							
Chloromethane (Methyl chloride)	11D0871			ug/L	N/A	5.00	<5.00							
1,2-Dichlorobenzene	11D0871			ug/L	N/A	1.00	<1.00							
1,4-Dichlorobenzene	11D0871			ug/L	N/A	1.00	<1.00							
1,3-Dichlorobenzene	11D0871			ug/L	N/A	1.00	<1.00							

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS														
1,1-Dichloroethane	11D0871			ug/L	N/A	1.00	<1.00							
1,2-Dichloroethane	11D0871			ug/L	N/A	1.00	<1.00							
trans-1,2-Dichloroethene	11D0871			ug/L	N/A	1.00	<1.00							
1,1-Dichloroethene	11D0871			ug/L	N/A	1.00	<1.00							
1,2-Dichloropropane	11D0871			ug/L	N/A	1.00	<1.00							
cis-1,3-Dichloropropene	11D0871			ug/L	N/A	1.00	<1.00							
trans-1,3-Dichloropropene	11D0871			ug/L	N/A	1.00	<1.00							
Ethylbenzene	11D0871			ug/L	N/A	1.00	<1.00							
Methylene chloride	11D0871			ug/L	N/A	5.00	<5.00							
1,1,2,2-Tetrachloroethane	11D0871			ug/L	N/A	1.00	<1.00							
Tetrachloroethene	11D0871			ug/L	N/A	1.00	<1.00							
Toluene	11D0871			ug/L	N/A	1.00	<1.00							
1,1,1-Trichloroethane	11D0871			ug/L	N/A	1.00	<1.00							
1,1,2-Trichloroethane	11D0871			ug/L	N/A	1.00	<1.00							
Trichloroethene	11D0871			ug/L	N/A	1.00	<1.00							
Trichlorofluoromethane	11D0871			ug/L	N/A	1.00	<1.00							
Vinyl chloride	11D0871			ug/L	N/A	1.00	<1.00							

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters													
QC Source Sample: DUD0469-01													
Ammonia, Undistilled as N	11D0549	1320		mg/L	N/A	100	1340				1	20	
QC Source Sample: DUD0530-01													
Chemical Oxygen Demand	11D0577	16.7		mg/L	N/A	10.0	11.6				36	30	R2
QC Source Sample: DUD0649-01													
Chloride	11D0634	45.1		mg/L	N/A	2.00	45.0				0	20	
Total Metals													
QC Source Sample: DUD0649-01													
Sodium	11D0642	23.4		mg/L	N/A	5.00	23.3				0	20	

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DUD0649
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: 50071

Received: 04/13/11
Reported: 04/27/11 16:20

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters														
Ammonia, Undistilled as N	11D0549		0.500	mg/L	N/A	0.0500	0.494		99		90-110			
Chemical Oxygen Demand	11D0577		30.0	mg/L	N/A	10.0	32.8		109		90-110			
Chloride	11D0634		20.0	mg/L	N/A	1.00	20.1		100		90-110			
Total Metals														
Sodium	11D0642		21.0	mg/L	N/A	1.00	20.9		99		80-120			
Volatile Organic Compounds by GC/MS														
Benzene	11D0804		20.0	ug/L	N/A	1.00	19.1		96		79-120			
Bromodichloromethane (Dichlorobromomethane)	11D0804		20.0	ug/L	N/A	1.00	18.0		90		76-121			
Bromoform	11D0804		20.0	ug/L	N/A	1.00	17.2		86		69-120			
Bromomethane (Methyl bromide)	11D0804		20.0	ug/L	N/A	5.00	21.8		109		64-120			
Carbon tetrachloride	11D0804		20.0	ug/L	N/A	1.00	17.4		87		70-129			
Chlorobenzene	11D0804		20.0	ug/L	N/A	1.00	18.6		93		78-120			
Chloroethane	11D0804		20.0	ug/L	N/A	5.00	21.5		108		67-120			
2-Chloroethylvinyl ether	11D0804		20.0	ug/L	N/A	5.00	17.6		88		10-212			
Chloroform	11D0804		20.0	ug/L	N/A	1.00	19.1		95		77-120			
Chloromethane (Methyl chloride)	11D0804		20.0	ug/L	N/A	5.00	20.0		100		58-120			
Dibromochloromethane (Chlorodibromomethane)	11D0804		20.0	ug/L	N/A	1.00	18.0		90		76-123			
1,2-Dichlorobenzene	11D0804		20.0	ug/L	N/A	1.00	19.2		96		78-123			
1,4-Dichlorobenzene	11D0804		20.0	ug/L	N/A	1.00	18.8		94		74-120			
1,3-Dichlorobenzene	11D0804		20.0	ug/L	N/A	1.00	19.0		95		76-121			
1,1-Dichloroethane	11D0804		20.0	ug/L	N/A	1.00	18.4		92		79-120			
1,2-Dichloroethane	11D0804		20.0	ug/L	N/A	1.00	18.6		93		75-120			
trans-1,2-Dichloroethene	11D0804		20.0	ug/L	N/A	1.00	18.9		95		79-120			
1,1-Dichloroethene	11D0804		20.0	ug/L	N/A	1.00	20.8		104		71-121			
1,2-Dichloropropane	11D0804		20.0	ug/L	N/A	1.00	19.1		95		80-120			
cis-1,3-Dichloropropene	11D0804		20.0	ug/L	N/A	1.00	18.2		91		80-120			
trans-1,3-Dichloropropene	11D0804		20.0	ug/L	N/A	1.00	17.5		87		74-120			
Ethylbenzene	11D0804		20.0	ug/L	N/A	1.00	18.3		91		79-120			
n-Hexane	11D0804		20.0	ug/L	N/A	5.00	23.7		118		57-180			
Methylene chloride	11D0804		20.0	ug/L	N/A	5.00	21.3		107		76-120			
1,1,2,2-Tetrachloroethane	11D0804		20.0	ug/L	N/A	1.00	21.0		105		74-120			
Tetrachloroethene	11D0804		20.0	ug/L	N/A	1.00	15.8		79		62-128			
Toluene	11D0804		20.0	ug/L	N/A	1.00	19.4		97		79-120			
1,1,1-Trichloroethane	11D0804		20.0	ug/L	N/A	1.00	18.2		91		74-121			
1,1,2-Trichloroethane	11D0804		20.0	ug/L	N/A	1.00	19.4		97		75-120			
Trichloroethene	11D0804		20.0	ug/L	N/A	1.00	18.2		91		77-120			
Trichlorofluoromethane	11D0804		20.0	ug/L	N/A	1.00	22.4		112		71-136			
Vinyl chloride	11D0804		20.0	ug/L	N/A	1.00	22.4		112		65-126			

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DUD0649
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: 50071

Received: 04/13/11
Reported: 04/27/11 16:20

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS														
Benzene	11D0826		20.0	ug/L	N/A	1.00	20.9		104		79-120			
Bromodichloromethane (Dichlorobromomethane)	11D0826		20.0	ug/L	N/A	1.00	19.5		98		76-121			
Bromoform	11D0826		20.0	ug/L	N/A	1.00	16.8		84		69-120			
Bromomethane (Methyl bromide)	11D0826		20.0	ug/L	N/A	5.00	26.8		134		64-120			L1
Carbon tetrachloride	11D0826		20.0	ug/L	N/A	1.00	18.8		94		70-129			
Chlorobenzene	11D0826		20.0	ug/L	N/A	1.00	20.5		102		78-120			
Chloroethane	11D0826		20.0	ug/L	N/A	5.00	24.9		124		67-120			L1
2-Chloroethylvinyl ether	11D0826		20.0	ug/L	N/A	5.00	18.2		91		10-212			
Chloroform	11D0826		20.0	ug/L	N/A	1.00	21.2		106		77-120			
Chloromethane (Methyl chloride)	11D0826		20.0	ug/L	N/A	5.00	23.0		115		58-120			
Dibromochloromethane (Chlorodibromomethane)	11D0826		20.0	ug/L	N/A	1.00	18.2		91		76-123			
1,2-Dichlorobenzene	11D0826		20.0	ug/L	N/A	1.00	20.7		104		78-123			
1,4-Dichlorobenzene	11D0826		20.0	ug/L	N/A	1.00	20.5		103		74-120			
1,3-Dichlorobenzene	11D0826		20.0	ug/L	N/A	1.00	20.8		104		76-121			
1,1-Dichloroethane	11D0826		20.0	ug/L	N/A	1.00	20.2		101		79-120			
1,2-Dichloroethane	11D0826		20.0	ug/L	N/A	1.00	20.5		102		75-120			
trans-1,2-Dichloroethene	11D0826		20.0	ug/L	N/A	1.00	20.9		105		79-120			
1,1-Dichloroethene	11D0826		20.0	ug/L	N/A	1.00	23.7		119		71-121			
1,2-Dichloropropane	11D0826		20.0	ug/L	N/A	1.00	20.5		103		80-120			
cis-1,3-Dichloropropene	11D0826		20.0	ug/L	N/A	1.00	19.2		96		80-120			
trans-1,3-Dichloropropene	11D0826		20.0	ug/L	N/A	1.00	17.4		87		74-120			
Ethylbenzene	11D0826		20.0	ug/L	N/A	1.00	20.2		101		79-120			
n-Hexane	11D0826		20.0	ug/L	N/A	5.00	23.4		117		57-180			
Methylene chloride	11D0826		20.0	ug/L	N/A	5.00	24.6		123		76-120			L1
1,1,2,2-Tetrachloroethane	11D0826		20.0	ug/L	N/A	1.00	21.7		109		74-120			
Tetrachloroethene	11D0826		20.0	ug/L	N/A	1.00	17.9		90		62-128			
Toluene	11D0826		20.0	ug/L	N/A	1.00	20.9		105		79-120			
1,1,1-Trichloroethane	11D0826		20.0	ug/L	N/A	1.00	19.8		99		74-121			
1,1,2-Trichloroethane	11D0826		20.0	ug/L	N/A	1.00	19.7		98		75-120			
Trichloroethene	11D0826		20.0	ug/L	N/A	1.00	19.7		99		77-120			
Trichlorofluoromethane	11D0826		20.0	ug/L	N/A	1.00	25.3		126		71-136			
Vinyl chloride	11D0826		20.0	ug/L	N/A	1.00	25.6		128		65-126			L1
Benzene	11D0871		20.0	ug/L	N/A	1.00	19.9		99		79-120			
Bromodichloromethane (Dichlorobromomethane)	11D0871		20.0	ug/L	N/A	1.00	19.2		96		76-121			
Bromoform	11D0871		20.0	ug/L	N/A	1.00	19.3		96		69-120			
Bromomethane (Methyl bromide)	11D0871		20.0	ug/L	N/A	5.00	19.8		99		64-120			
Carbon tetrachloride	11D0871		20.0	ug/L	N/A	1.00	21.2		106		70-129			
Chlorobenzene	11D0871		20.0	ug/L	N/A	1.00	20.7		103		78-120			
Chloroethane	11D0871		20.0	ug/L	N/A	5.00	20.0		100		67-120			
Chloroform	11D0871		20.0	ug/L	N/A	1.00	20.5		102		77-120			
Chloromethane (Methyl chloride)	11D0871		20.0	ug/L	N/A	5.00	17.0		85		58-120			
1,2-Dichlorobenzene	11D0871		20.0	ug/L	N/A	1.00	22.6		113		78-123			
1,4-Dichlorobenzene	11D0871		20.0	ug/L	N/A	1.00	22.4		112		74-120			
1,3-Dichlorobenzene	11D0871		20.0	ug/L	N/A	1.00	23.1		115		76-121			

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS														
1,1-Dichloroethane	11D0871		20.0	ug/L	N/A	1.00	21.4		107		79-120			
1,2-Dichloroethane	11D0871		20.0	ug/L	N/A	1.00	19.3		96		75-120			
trans-1,2-Dichloroethene	11D0871		20.0	ug/L	N/A	1.00	30.2		151		79-120			L1
1,1-Dichloroethene	11D0871		20.0	ug/L	N/A	1.00	29.0		145		71-121			L1
1,2-Dichloropropane	11D0871		20.0	ug/L	N/A	1.00	18.6		93		80-120			
cis-1,3-Dichloropropene	11D0871		20.0	ug/L	N/A	1.00	19.3		97		80-120			
trans-1,3-Dichloropropene	11D0871		20.0	ug/L	N/A	1.00	20.4		102		74-120			
Ethylbenzene	11D0871		20.0	ug/L	N/A	1.00	22.6		113		79-120			
Methylene chloride	11D0871		20.0	ug/L	N/A	5.00	31.7		158		76-120			L1
1,1,2,2-Tetrachloroethane	11D0871		20.0	ug/L	N/A	1.00	21.7		108		74-120			
Tetrachloroethene	11D0871		20.0	ug/L	N/A	1.00	7.09		35		62-128			L4
Toluene	11D0871		20.0	ug/L	N/A	1.00	21.2		106		79-120			
1,1,1-Trichloroethane	11D0871		20.0	ug/L	N/A	1.00	22.0		110		74-121			
1,1,2-Trichloroethane	11D0871		20.0	ug/L	N/A	1.00	21.1		105		75-120			
Trichloroethene	11D0871		20.0	ug/L	N/A	1.00	17.8		89		77-120			
Trichlorofluoromethane	11D0871		20.0	ug/L	N/A	1.00	21.8		109		71-136			
Vinyl chloride	11D0871		20.0	ug/L	N/A	1.00	19.8		99		65-126			

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DUD0649
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: 50071

Received: 04/13/11
Reported: 04/27/11 16:20

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters														
QC Source Sample: DUD0530-01														
Ammonia, Undistilled as N	11D0549	0.217	0.500	mg/L	N/A	0.0500	0.534		63		78-110			M14
QC Source Sample: DUD0649-04														
Ammonia, Undistilled as N	11D0549	0.389	0.500	mg/L	N/A	0.0500	0.837		90		78-110			
QC Source Sample: DUD0634-01														
Chemical Oxygen Demand	11D0577	17.6	20.0	mg/L	N/A	10.0	32.5		74		30-150			
QC Source Sample: DUD0649-06														
Chemical Oxygen Demand	11D0577	<10	20.0	mg/L	N/A	10.0	19.8		99		30-150			
QC Source Sample: DUD0651-02														
Chloride	11D0634	24.7	150	mg/L	N/A	10.0	189	188	110	109	94-127	1	25	
Total Metals														
QC Source Sample: DUD0649-01														
Sodium	11D0642	23.4	21.0	mg/L	N/A	1.00	43.3	44.6	95	101	75-125	3	20	
Volatile Organic Compounds by GC/MS														
QC Source Sample: DUD0400-01														
Benzene	11D0804	<200	4000	ug/L	N/A	200	4400	4370	110	109	79-120	1	25	
Bromodichloromethane (Dichlorobromomethane)	11D0804	<200	4000	ug/L	N/A	200	3660	3820	91	96	76-121	4	25	
Bromoform	11D0804	<200	4000	ug/L	N/A	200	2660	2940	66	74	69-120	10	25	M
Bromomethane (Methyl bromide)	11D0804	<1000	4000	ug/L	N/A	1000	5060	5470	127	137	64-120	8	25	M
Carbon tetrachloride	11D0804	<200	4000	ug/L	N/A	200	3500	3800	87	95	70-129	8	25	
Chlorobenzene	11D0804	<200	4000	ug/L	N/A	200	4150	4100	104	102	78-120	1	25	
Chloroethane	11D0804	<1000	4000	ug/L	N/A	1000	5260	5260	131	131	67-120	0	25	M
2-Chloroethylvinyl ether	11D0804	<1000	4000	ug/L	N/A	1000	3710	3690	93	92	10-212	1	25	
Chloroform	11D0804	<200	4000	ug/L	N/A	200	4300	4320	108	108	77-120	1	25	
Chloromethane (Methyl chloride)	11D0804	<1000	4000	ug/L	N/A	1000	4840	4830	121	121	58-120	0	25	M
Dibromochloromethane (Chlorodibromomethane)	11D0804	<200	4000	ug/L	N/A	200	3200	3360	80	84	76-123	5	25	
1,2-Dichlorobenzene	11D0804	<200	4000	ug/L	N/A	200	4060	3990	102	100	78-123	2	25	
1,4-Dichlorobenzene	11D0804	<200	4000	ug/L	N/A	200	4050	4020	101	100	74-120	1	25	
1,3-Dichlorobenzene	11D0804	<200	4000	ug/L	N/A	200	4070	4050	102	101	76-121	0	25	
1,1-Dichloroethane	11D0804	<200	4000	ug/L	N/A	200	4180	4170	104	104	79-120	0	25	
1,2-Dichloroethane	11D0804	<200	4000	ug/L	N/A	200	4170	4070	104	102	75-120	2	25	
trans-1,2-Dichloroethene	11D0804	<200	4000	ug/L	N/A	200	4350	4340	109	108	79-120	0	25	
1,1-Dichloroethene	11D0804	<200	4000	ug/L	N/A	200	5000	4980	125	125	71-121	0	25	M
1,2-Dichloropropane	11D0804	<200	4000	ug/L	N/A	200	4200	4160	105	104	80-120	1	25	
cis-1,3-Dichloropropene	11D0804	<200	4000	ug/L	N/A	200	3630	3790	91	95	80-120	4	25	
trans-1,3-Dichloropropene	11D0804	<200	4000	ug/L	N/A	200	3190	3270	80	82	74-120	3	25	
Ethylbenzene	11D0804	<200	4000	ug/L	N/A	200	4140	4140	104	103	79-120	0	25	
n-Hexane	11D0804	<1000	4000	ug/L	N/A	1000	5010	4980	125	125	57-180	1	25	
Methylene chloride	11D0804	<1000	4000	ug/L	N/A	1000	5010	4930	125	123	76-120	2	25	M
1,1,2,2-Tetrachloroethane	11D0804	<200	4000	ug/L	N/A	200	4270	4200	107	105	74-120	2	25	
Tetrachloroethene	11D0804	<200	4000	ug/L	N/A	200	3580	3590	89	90	62-128	0	25	
Toluene	11D0804	<200	4000	ug/L	N/A	200	4330	4260	108	106	79-120	2	25	
1,1,1-Trichloroethane	11D0804	<200	4000	ug/L	N/A	200	4000	4120	100	103	74-121	3	25	
1,1,2-Trichloroethane	11D0804	<200	4000	ug/L	N/A	200	3990	3980	100	100	75-120	0	25	
Trichloroethene	11D0804	<200	4000	ug/L	N/A	200	4140	4150	104	104	77-120	0	25	
Trichlorofluoromethane	11D0804	<200	4000	ug/L	N/A	200	5400	5420	135	135	71-136	0	25	
Vinyl chloride	11D0804	<200	4000	ug/L	N/A	200	5560	5570	139	139	65-126	0	25	M

Burgess & Niple (Landfill)
5085 Reed Rd.
Columbus, OH 43220
Michael Akins

Work Order: DUD0649
Project: Wayne Reclamation & Recycling (Indiana)
Project Number: 50071

Received: 04/13/11
Reported: 04/27/11 16:20

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS														
QC Source Sample: DUD0673-05														
Benzene	11D0826	<50	1000	ug/L	N/A	50.0	1080	1080	108	108	79-120	1	25	
Bromodichloromethane (Dichlorobromomethane)	11D0826	<50	1000	ug/L	N/A	50.0	950	966	95	97	76-121	2	25	
Bromoform	11D0826	<50	1000	ug/L	N/A	50.0	784	824	78	82	69-120	5	25	
Bromomethane (Methyl bromide)	11D0826	<250	1000	ug/L	N/A	250	1220	1320	122	132	64-120	8	25	M
Carbon tetrachloride	11D0826	34.0	1000	ug/L	N/A	50.0	1010	1030	97	99	70-129	2	25	
Chlorobenzene	11D0826	<50	1000	ug/L	N/A	50.0	1010	1000	101	100	78-120	1	25	
Chloroethane	11D0826	<250	1000	ug/L	N/A	250	1280	1300	128	130	67-120	2	25	M
2-Chloroethylvinyl ether	11D0826	<250	1000	ug/L	N/A	250	862	864	86	86	10-212	0	25	
Chloroform	11D0826	<50	1000	ug/L	N/A	50.0	1050	1050	105	105	77-120	0	25	
Chloromethane (Methyl chloride)	11D0826	<250	1000	ug/L	N/A	250	1190	1200	119	120	58-120	1	25	
Dibromochloromethane (Chlorodibromomethane)	11D0826	<50	1000	ug/L	N/A	50.0	884	908	88	91	76-123	3	25	
1,2-Dichlorobenzene	11D0826	<50	1000	ug/L	N/A	50.0	992	1010	99	101	78-123	1	25	
1,4-Dichlorobenzene	11D0826	<50	1000	ug/L	N/A	50.0	994	1000	99	100	74-120	1	25	
1,3-Dichlorobenzene	11D0826	<50	1000	ug/L	N/A	50.0	992	1020	99	102	76-121	2	25	
1,1-Dichloroethane	11D0826	<50	1000	ug/L	N/A	50.0	1020	1030	102	103	79-120	1	25	
1,2-Dichloroethane	11D0826	<50	1000	ug/L	N/A	50.0	993	998	99	100	75-120	1	25	
trans-1,2-Dichloroethene	11D0826	<50	1000	ug/L	N/A	50.0	1060	1060	106	106	79-120	1	25	
1,1-Dichloroethene	11D0826	<50	1000	ug/L	N/A	50.0	1210	1220	121	122	71-121	1	25	M
1,2-Dichloropropane	11D0826	<50	1000	ug/L	N/A	50.0	1020	1030	102	103	80-120	1	25	
cis-1,3-Dichloropropene	11D0826	<50	1000	ug/L	N/A	50.0	920	926	92	93	80-120	1	25	
trans-1,3-Dichloropropene	11D0826	<50	1000	ug/L	N/A	50.0	824	848	82	85	74-120	3	25	
Ethylbenzene	11D0826	<50	1000	ug/L	N/A	50.0	1010	1010	101	101	79-120	0	25	
n-Hexane	11D0826	<250	1000	ug/L	N/A	250	1100	1060	110	106	57-180	4	25	
Methylene chloride	11D0826	<250	1000	ug/L	N/A	250	1220	1200	122	120	76-120	2	25	M
1,1,2,2-Tetrachloroethane	11D0826	<50	1000	ug/L	N/A	50.0	1040	1070	104	107	74-120	3	25	
Tetrachloroethene	11D0826	<50	1000	ug/L	N/A	50.0	843	852	84	85	62-128	1	25	
Toluene	11D0826	<50	1000	ug/L	N/A	50.0	1070	1070	107	107	79-120	1	25	
1,1,1-Trichloroethane	11D0826	<50	1000	ug/L	N/A	50.0	1010	1030	101	103	74-121	1	25	
1,1,2-Trichloroethane	11D0826	<50	1000	ug/L	N/A	50.0	976	985	98	98	75-120	1	25	
Trichloroethene	11D0826	<50	1000	ug/L	N/A	50.0	999	1000	100	100	77-120	0	25	
Trichlorofluoromethane	11D0826	<50	1000	ug/L	N/A	50.0	1320	1310	132	131	71-136	0	25	
Vinyl chloride	11D0826	<50	1000	ug/L	N/A	50.0	1330	1350	133	135	65-126	2	25	M
QC Source Sample: DUD0649-05RE1														
Benzene	11D0871	<10	200	ug/L	N/A	10.0	200	219	100	109	79-120	9	25	
Bromodichloromethane (Dichlorobromomethane)	11D0871	<10	200	ug/L	N/A	10.0	179	209	90	104	76-121	15	25	
Bromoform	11D0871	<10	200	ug/L	N/A	10.0	173	158	87	79	69-120	9	25	
Bromomethane (Methyl bromide)	11D0871	<50	200	ug/L	N/A	50.0	166	211	83	105	64-120	24	25	
Carbon tetrachloride	11D0871	<10	200	ug/L	N/A	10.0	204	234	102	117	70-129	13	25	
Chlorobenzene	11D0871	<10	200	ug/L	N/A	10.0	202	218	101	109	78-120	8	25	
Chloroethane	11D0871	<50	200	ug/L	N/A	50.0	205	234	102	117	67-120	13	25	
Chloroform	11D0871	<10	200	ug/L	N/A	10.0	202	223	101	111	77-120	10	25	
Chloromethane (Methyl chloride)	11D0871	<50	200	ug/L	N/A	50.0	171	190	85	95	58-120	10	25	
1,2-Dichlorobenzene	11D0871	<10	200	ug/L	N/A	10.0	199	227	100	114	78-123	13	25	
1,4-Dichlorobenzene	11D0871	<10	200	ug/L	N/A	10.0	195	229	98	115	74-120	16	25	

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Volatile Organic Compounds by GC/MS														
QC Source Sample: DUD0649-05RE1														
1,3-Dichlorobenzene	11D0871	<10	200	ug/L	N/A	10.0	199	234	100	117	76-121	16	25	
1,1-Dichloroethane	11D0871	21.2	200	ug/L	N/A	10.0	233	255	106	117	79-120	9	25	
1,2-Dichloroethane	11D0871	<10	200	ug/L	N/A	10.0	179	201	90	100	75-120	11	25	
trans-1,2-Dichloroethene	11D0871	18.5	200	ug/L	N/A	10.0	322	345	152	163	79-120	7	25	M
1,1-Dichloroethene	11D0871	<10	200	ug/L	N/A	10.0	241	264	121	132	71-121	9	25	M
1,2-Dichloropropane	11D0871	<10	200	ug/L	N/A	10.0	180	199	90	100	80-120	10	25	
cis-1,3-Dichloropropene	11D0871	<10	200	ug/L	N/A	10.0	184	207	92	103	80-120	12	25	
trans-1,3-Dichloropropene	11D0871	<10	200	ug/L	N/A	10.0	193	205	96	103	74-120	6	25	
Ethylbenzene	11D0871	<10	200	ug/L	N/A	10.0	217	238	109	119	79-120	9	25	
Methylene chloride	11D0871	<50	200	ug/L	N/A	50.0	299	324	150	162	76-120	8	25	M
1,1,2,2-Tetrachloroethane	11D0871	<10	200	ug/L	N/A	10.0	207	233	104	116	74-120	12	25	
Tetrachloroethene	11D0871	<10	200	ug/L	N/A	10.0	173	43.9	86	22	62-128	119	25	M
Toluene	11D0871	<10	200	ug/L	N/A	10.0	210	219	105	110	79-120	4	25	
1,1,1-Trichloroethane	11D0871	173	200	ug/L	N/A	10.0	383	417	105	122	74-121	8	25	M
1,1,2-Trichloroethane	11D0871	<10	200	ug/L	N/A	10.0	195	206	98	103	75-120	5	25	
Trichloroethene	11D0871	973	200	ug/L	N/A	10.0	1130	1200	81	113	77-120	5	25	
Trichlorofluoromethane	11D0871	<10	200	ug/L	N/A	10.0	218	236	109	118	71-136	8	25	
Vinyl chloride	11D0871	55.3	200	ug/L	N/A	10.0	239	259	92	102	65-126	8	25	

Burgess & Niple (Landfill)	Work Order:	DUD0649	Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)	Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071		
Michael Akins				

OTHER

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Total Metals														
QC Source Sample: DUD0649-01														
Sodium	11D0642	4.67	120	mg/L	N/A	N/A	122		97		75-125			

Burgess & Niple (Landfill)	Work Order:	DUD0649		Received:	04/13/11
5085 Reed Rd.	Project:	Wayne Reclamation & Recycling (Indiana)		Reported:	04/27/11 16:20
Columbus, OH 43220	Project Number:	50071			
Michael Akins					

CERTIFICATION SUMMARY

Any abnormalities or departures from sample acceptance policy shall be documented on the Chain of Custody and/or Case Narrative included with this report.

For information concerning certifications of this facility or another TestAmerica facility, please visit our website at www.TestAmericaInc.com

Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) .

DATA QUALIFIERS AND DEFINITIONS

L1	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above acceptance limits.
L4	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below the acceptance limits. A low bias to sample results is indicated.
M	The MS, MSD, and/or RPD are outside of acceptance limits due to matrix interference. Please see Blank Spike (LCS).
M14	The MS/MSD recoveries are outside of laboratory established control limits.
R2	The RPD exceeded the acceptance limit.

ADDITIONAL COMMENTS

Results are reported on a wet weight basis unless otherwise noted in the units.

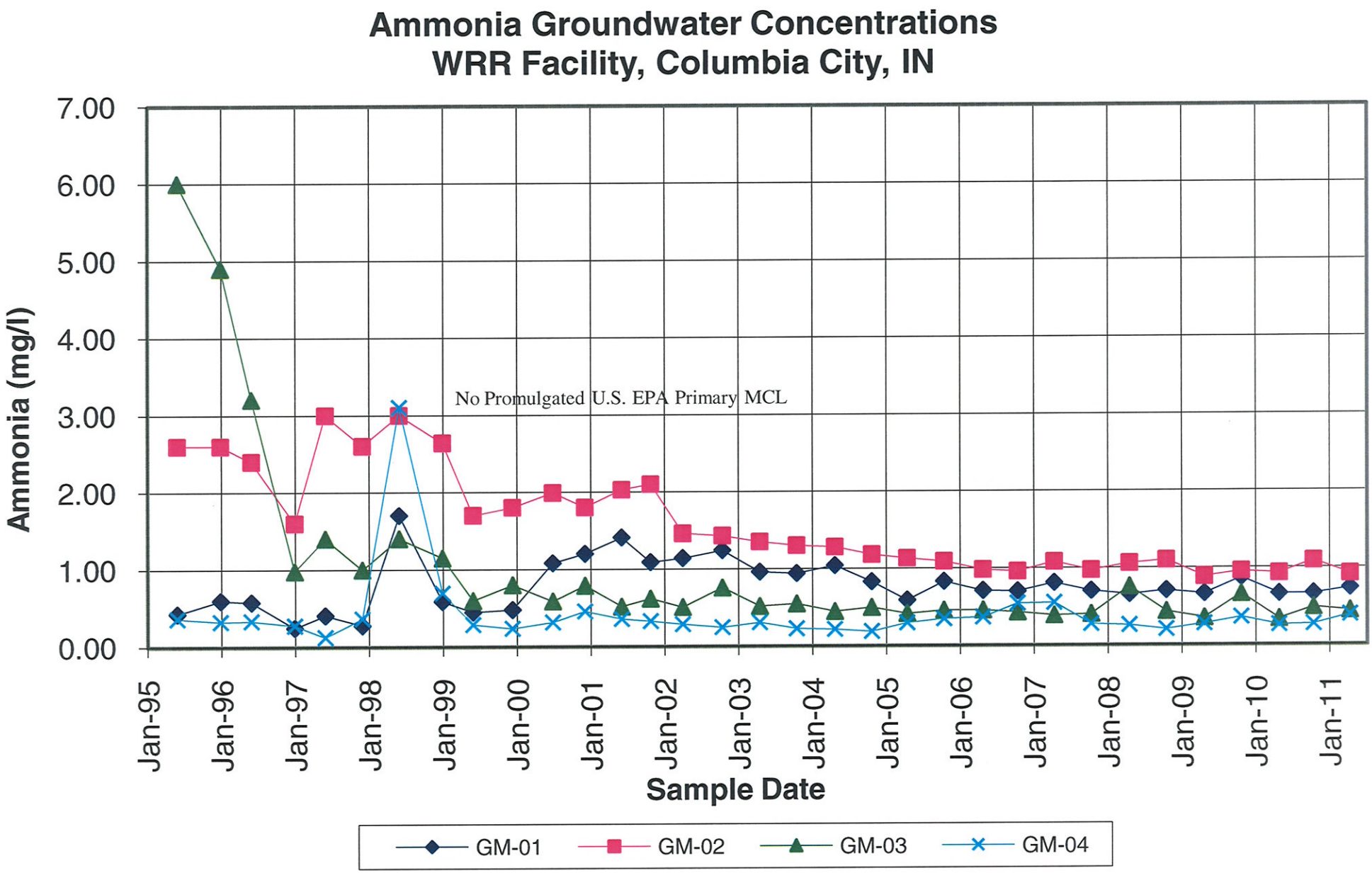
ANALYSIS LOCATIONS

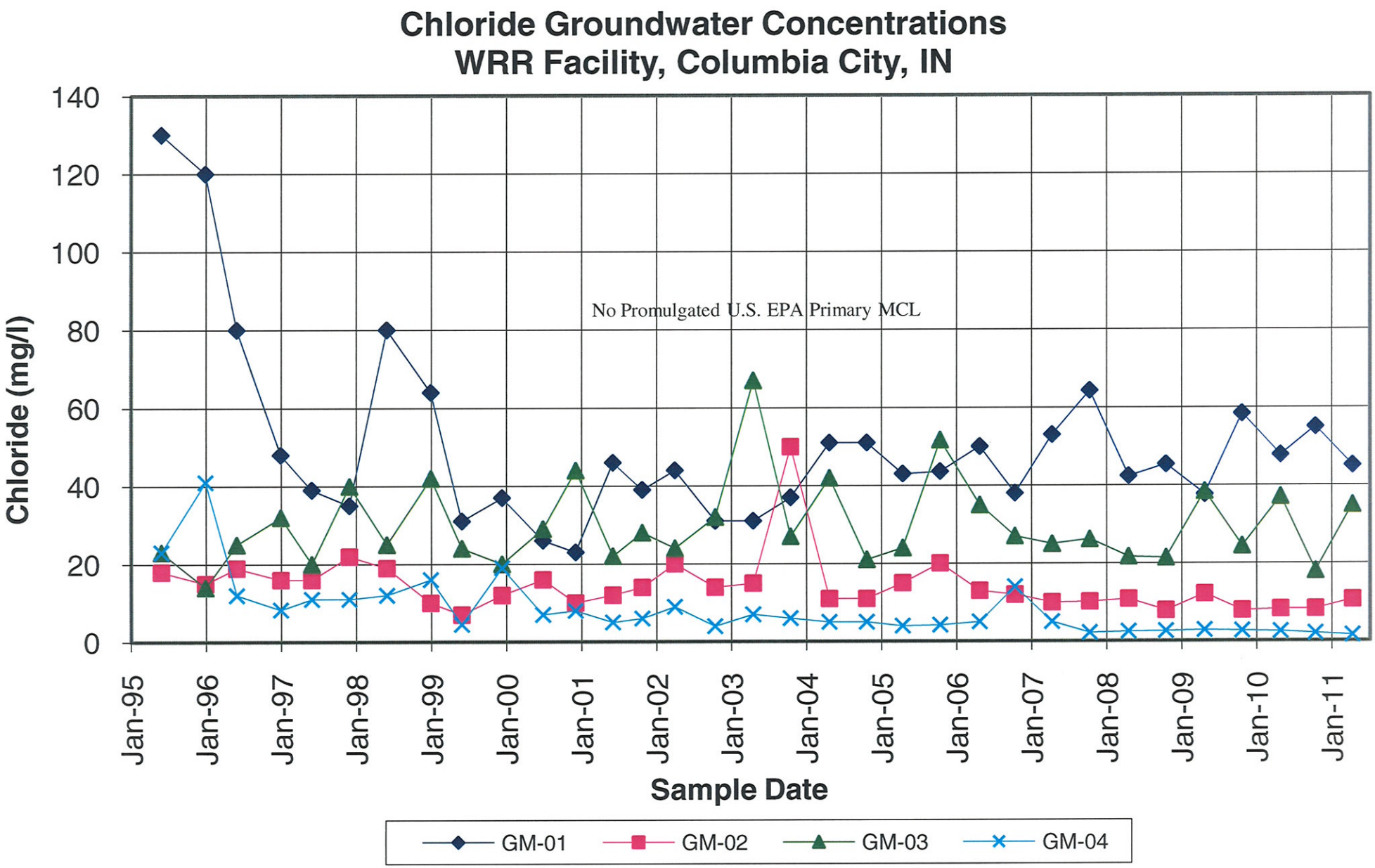
Any analyses listed below were analyzed in satellite facilities

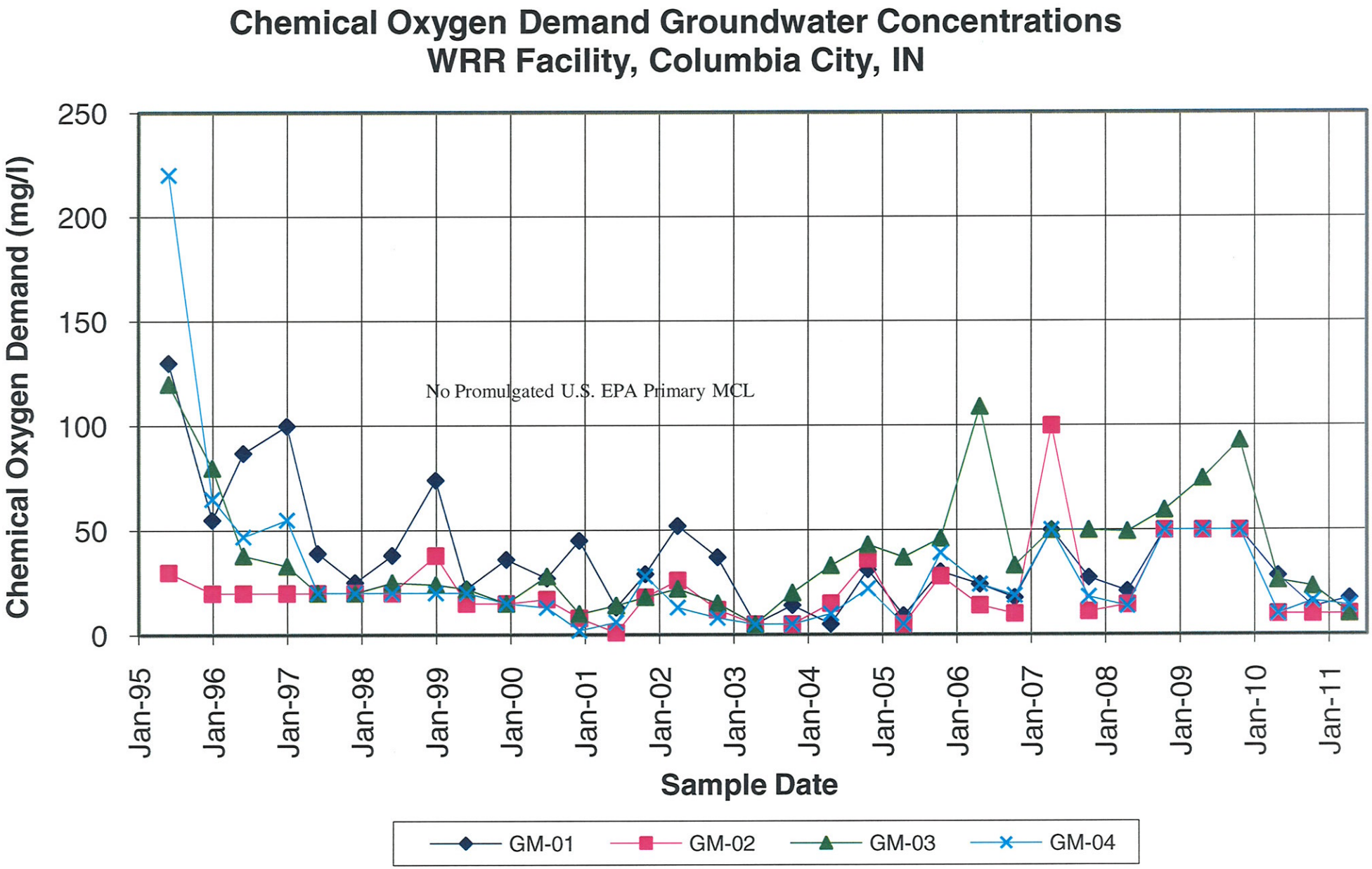
Turbidity - Client Supplied	Water - NonPotable
Temperature - Client Supplied	Water - NonPotable
pH - Client Supplied	Water - NonPotable
Conductance - Client Supplied	Water - NonPotable

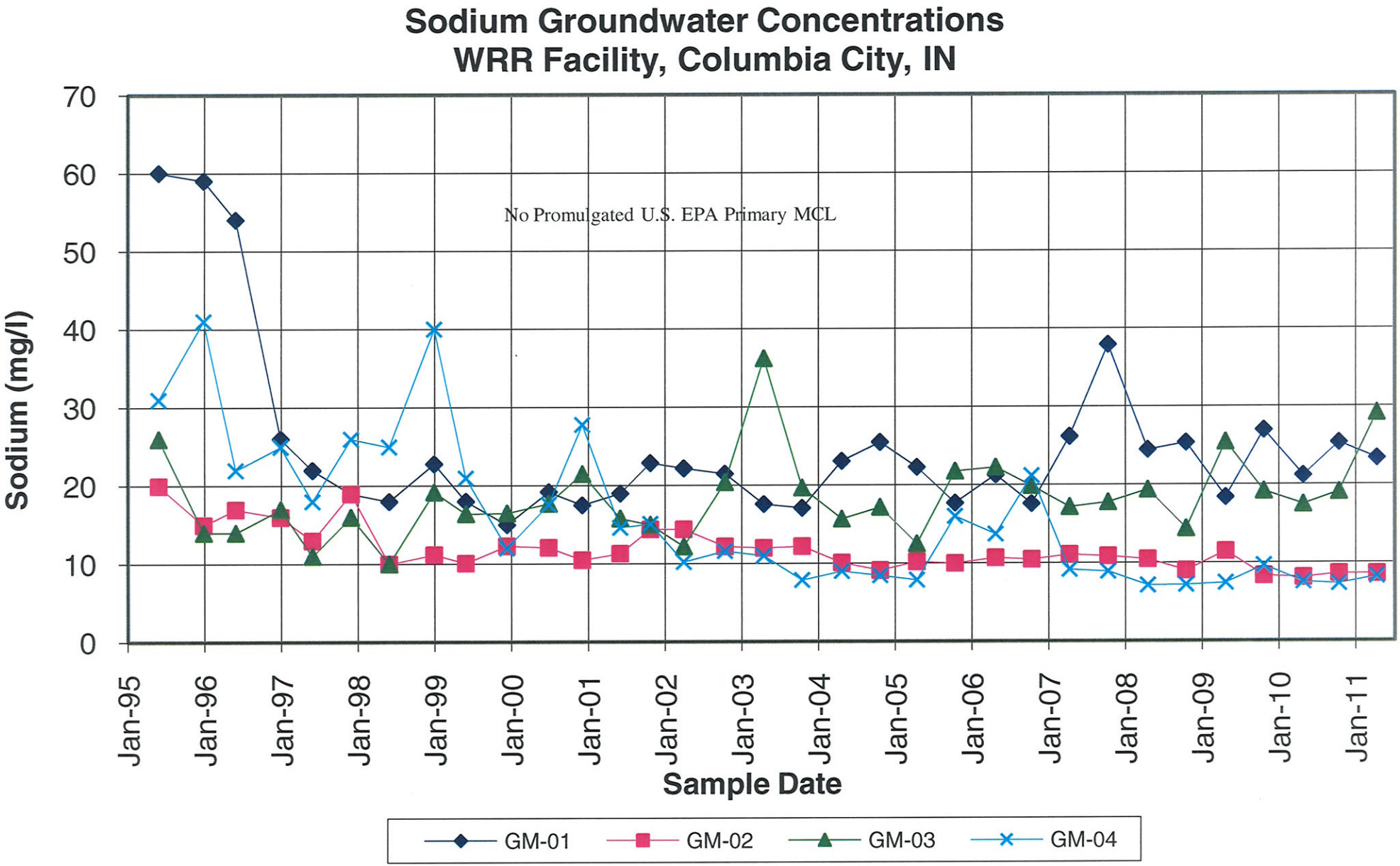
ATTACHMENT 3

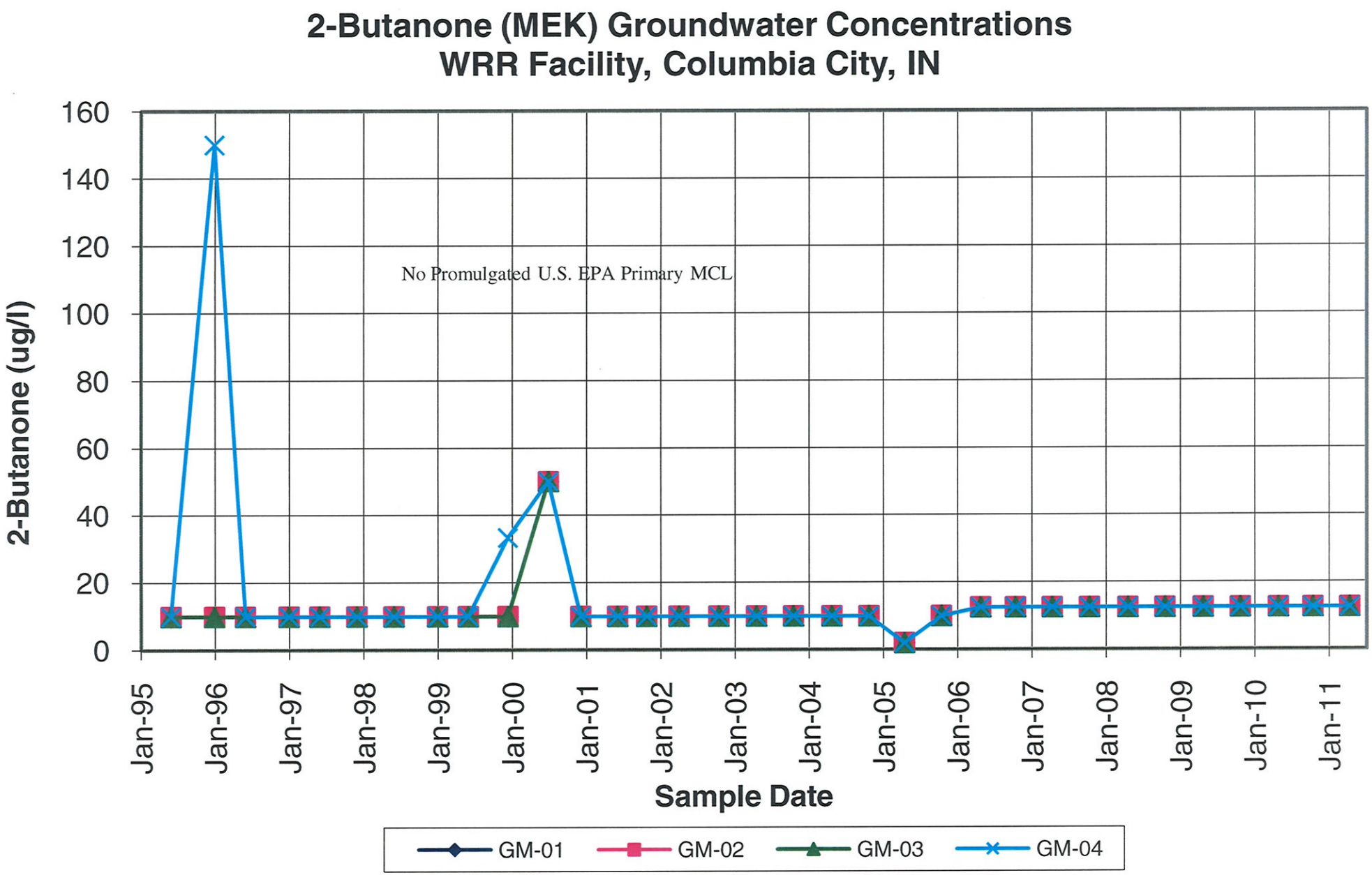
TIME-VERSUS-CONCENTRATION PLOTS

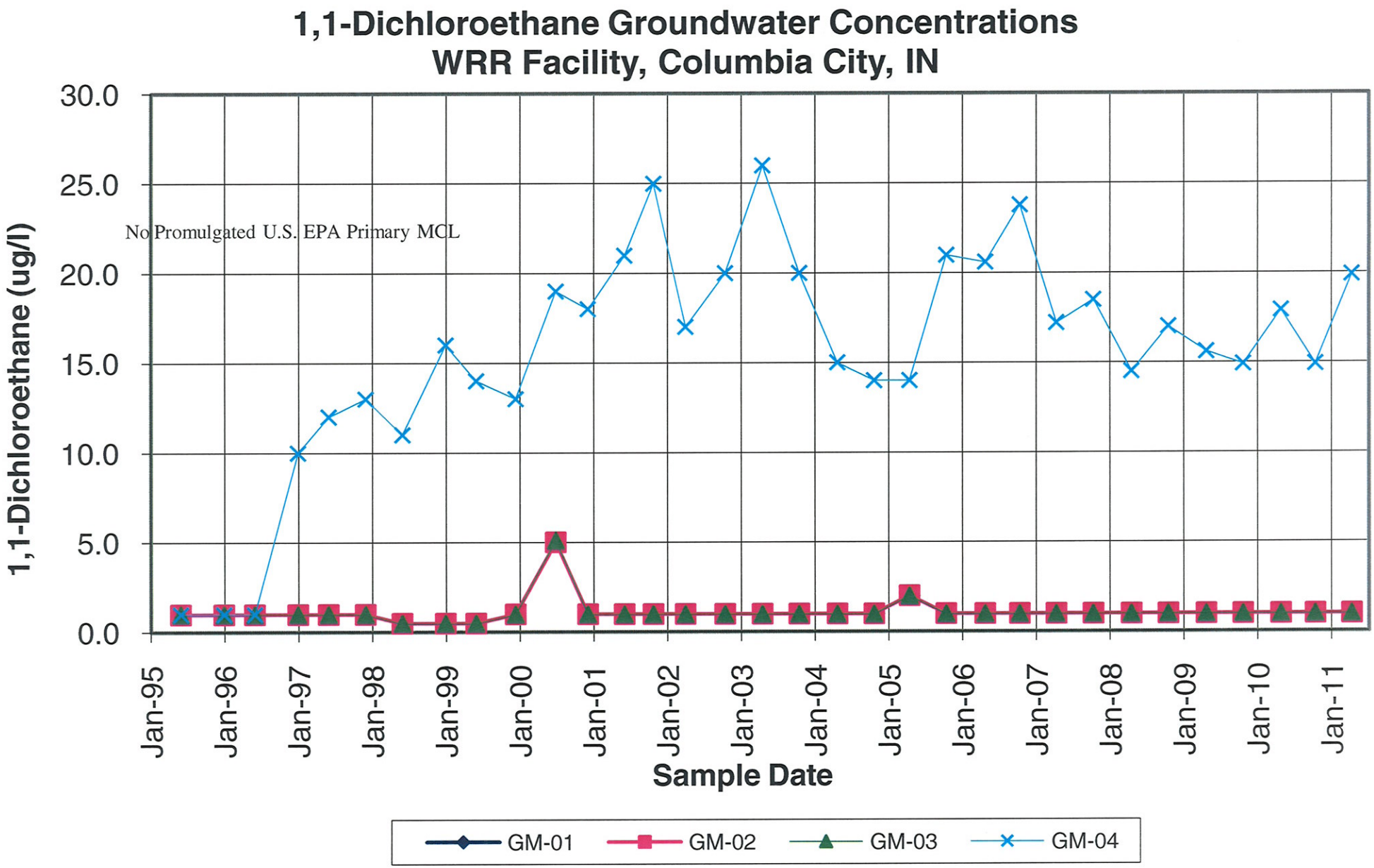

Ammonia Groundwater Concentrations
WRR Facility, Columbia City, IN
Ammonia (mg/l)
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
No Promulgated U.S. EPA Primary MCL
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04

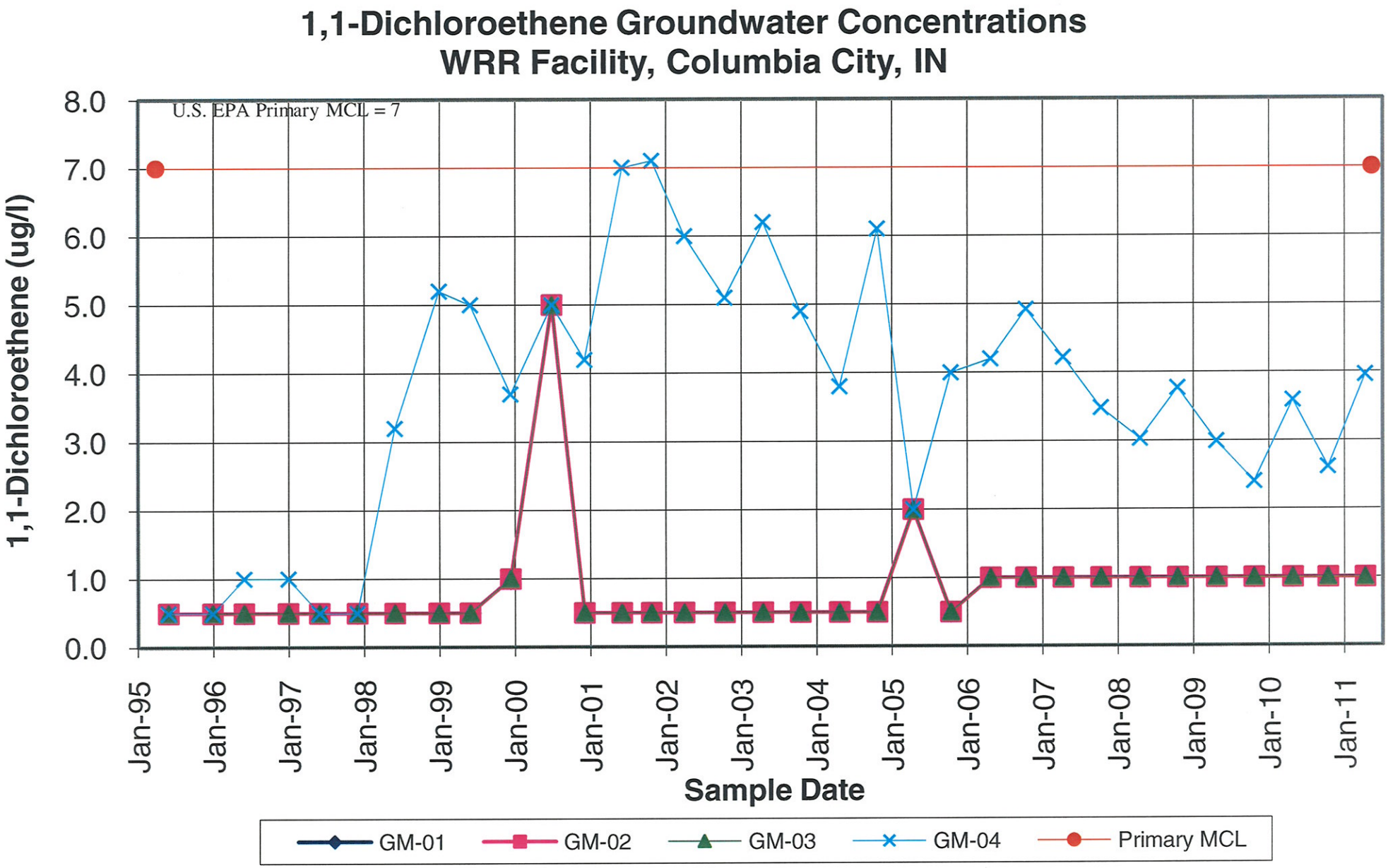

Chloride Groundwater Concentrations
WRR Facility, Columbia City, IN
Chloride (mg/l)
140
120
100
80
60
40
20
0
No Promulgated U.S. EPA Primary MCL
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04

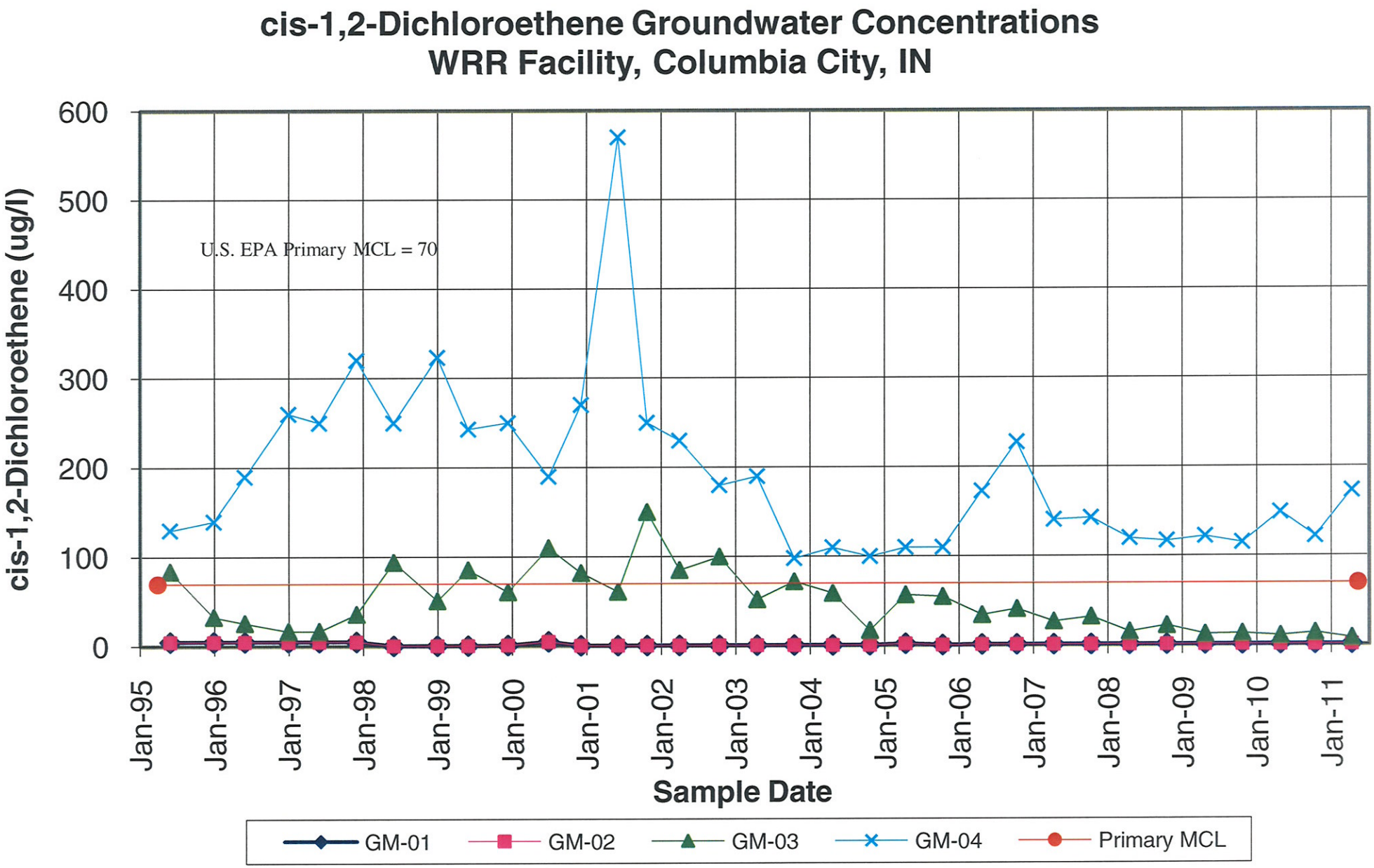

Chemical Oxygen Demand Groundwater Concentrations
WRR Facility, Columbia City, IN
Chemical Oxygen Demand (mg/l)
250
200
150
100
50
0
No Promulgated U.S. EPA Primary MCL
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04

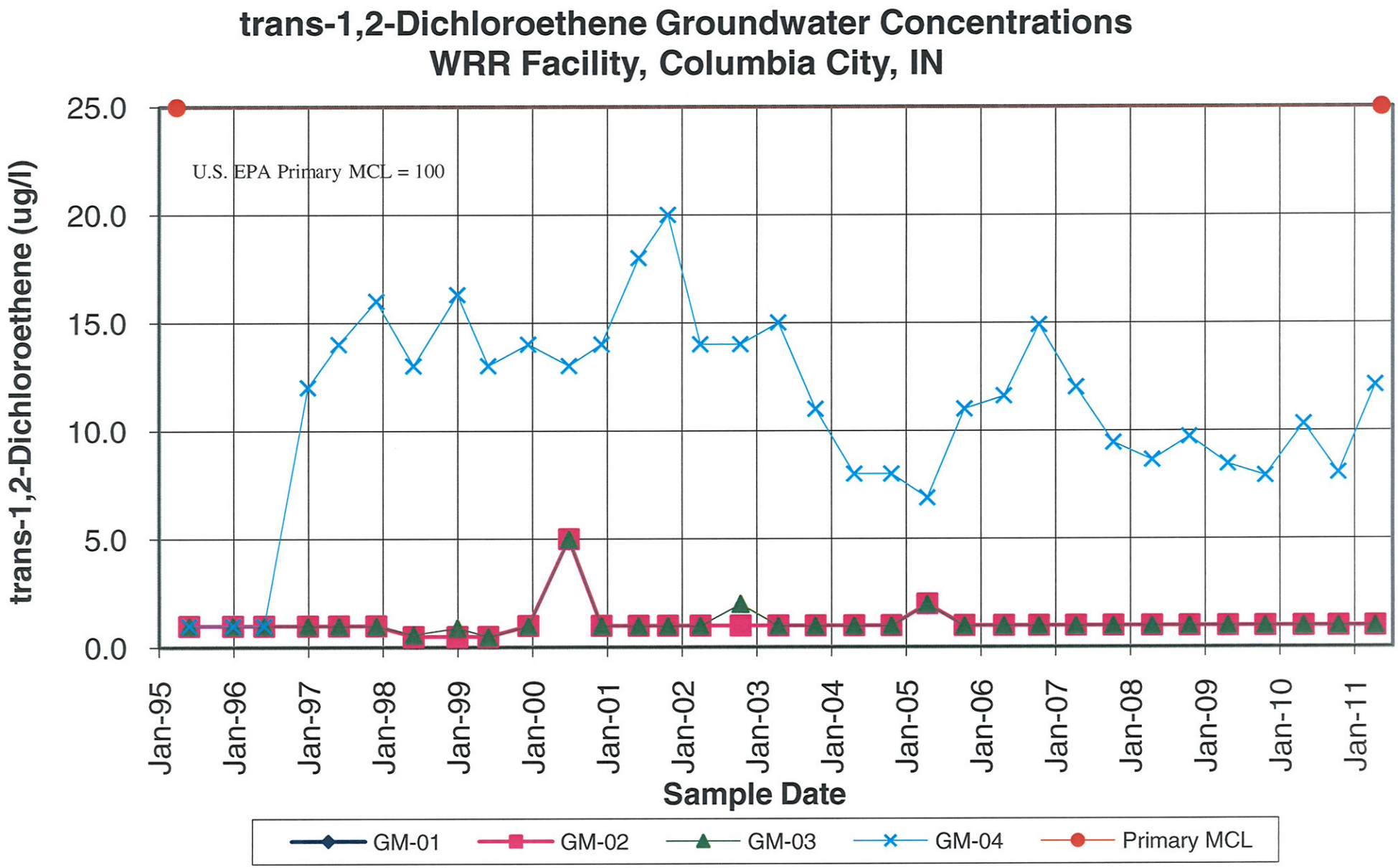

Sodium Groundwater Concentrations
WRR Facility, Columbia City, IN
No Promulgated U.S. EPA Primary MCL
Sodium (mg/l)
70
60
50
40
30
20
10
0
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04

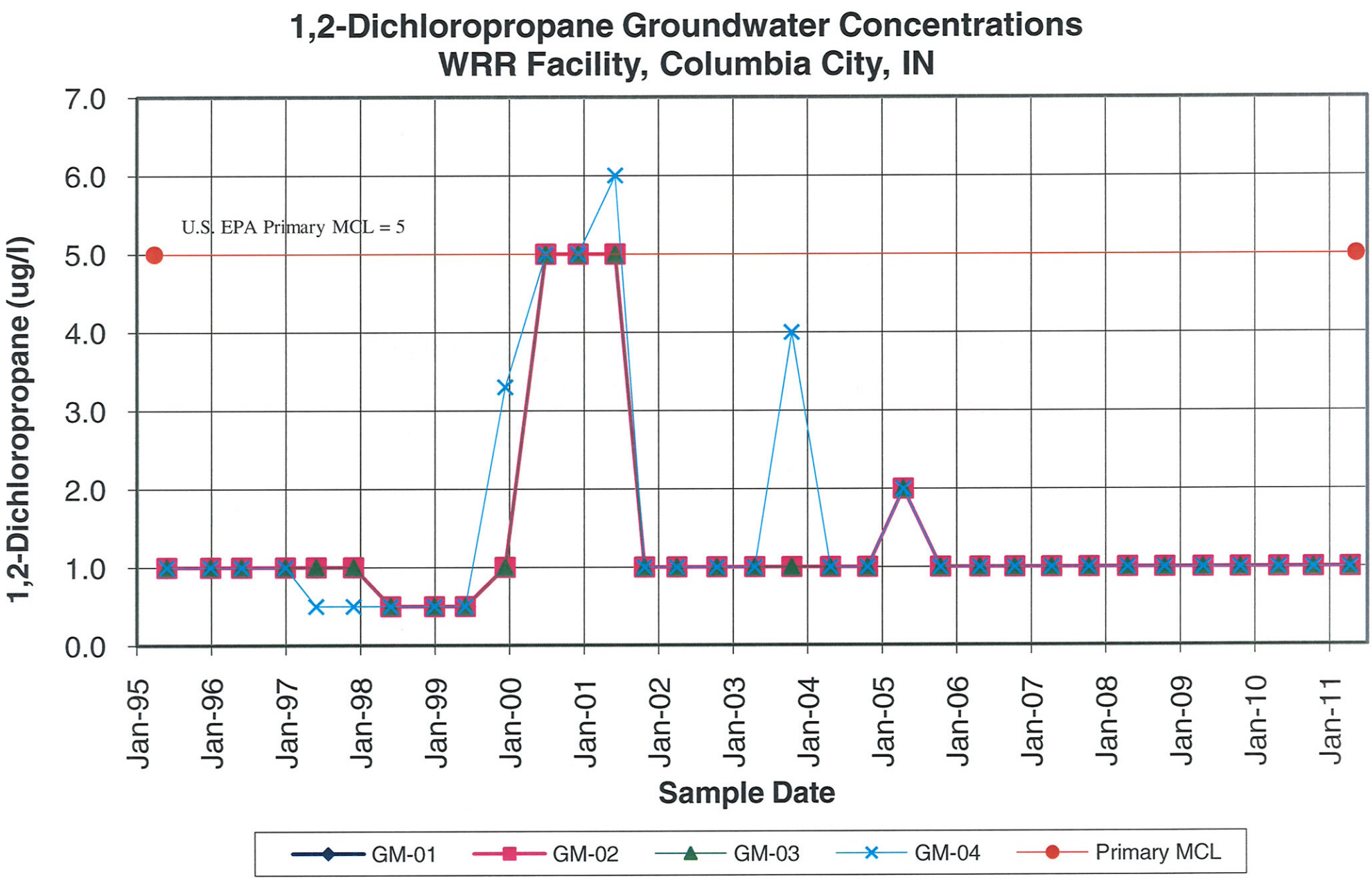

2-Butanone (MEK) Groundwater Concentrations
WRR Facility, Columbia City, IN
No Promulgated U.S. EPA Primary MCL
2-Butanone (ug/l)
160
140
120
100
80
60
40
20
0
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04

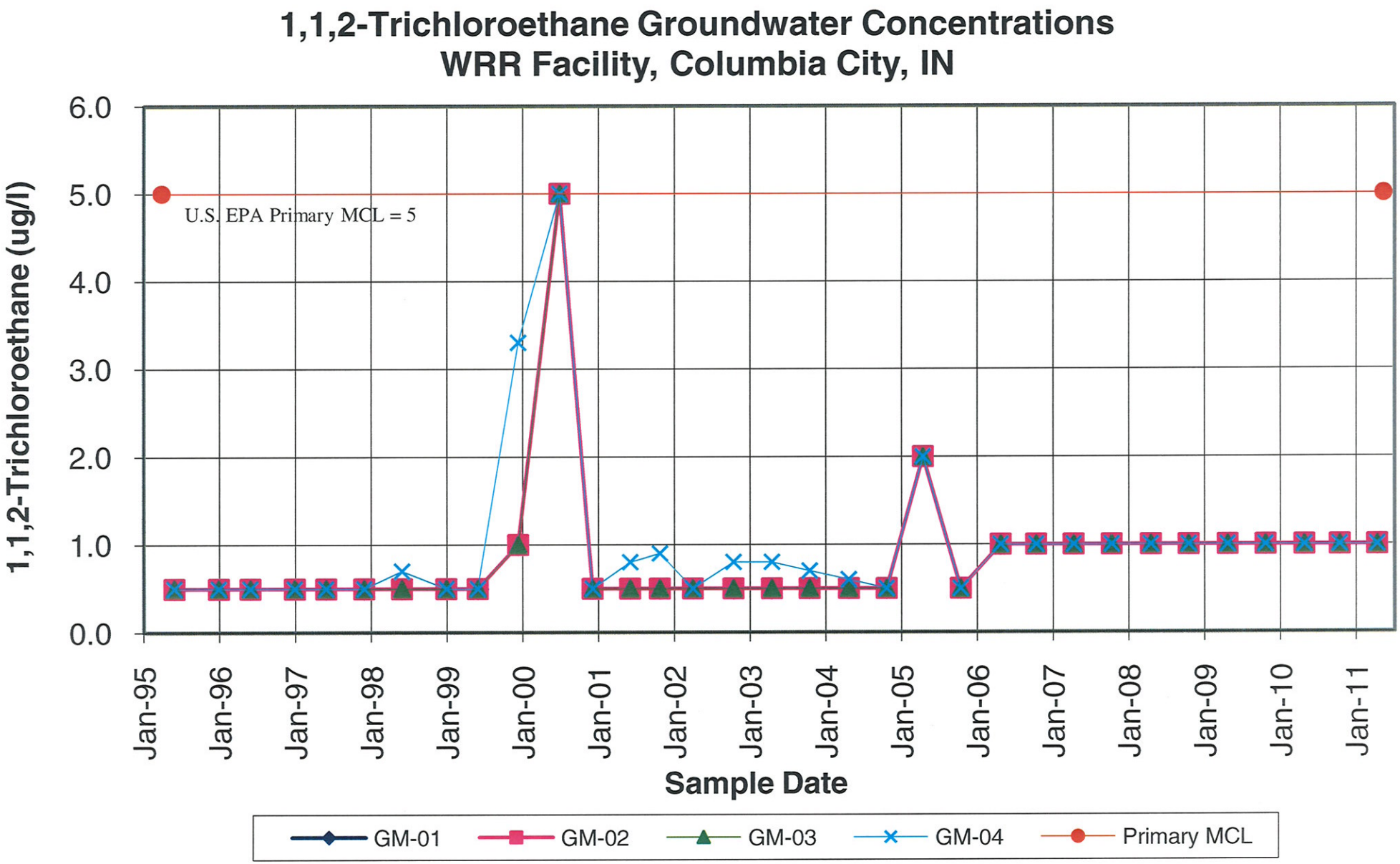

1,1-Dichloroethane Groundwater Concentrations
WRR Facility, Columbia City, IN
No Promulgated U.S. EPA Primary MCL
1,1-Dichloroethane (ug/l)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04

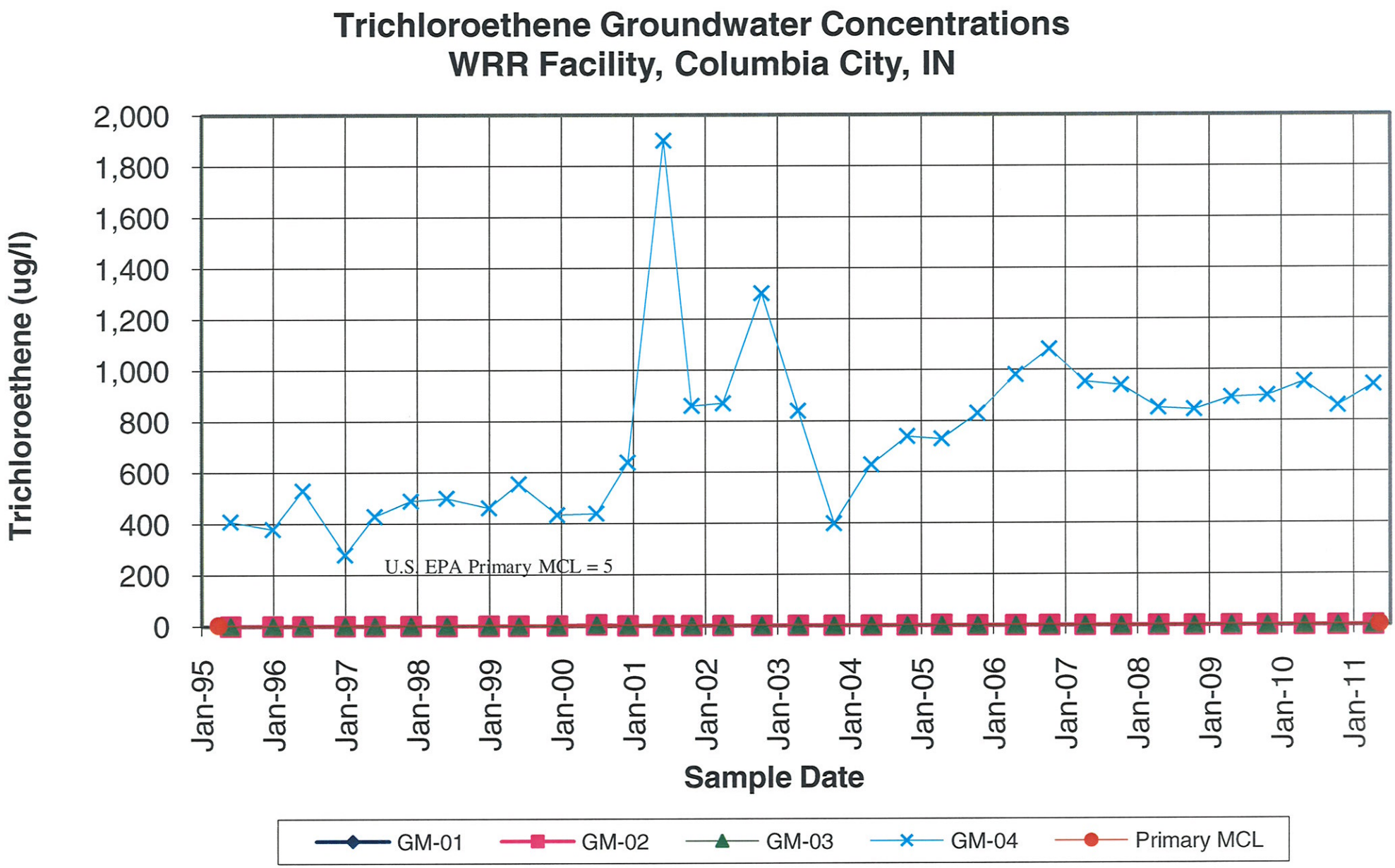

1,1-Dichloroethene Groundwater Concentrations
WRR Facility, Columbia City, IN
U.S. EPA Primary MCL = 7
1,1-Dichloroethene (ug/l)
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04
Primary MCL

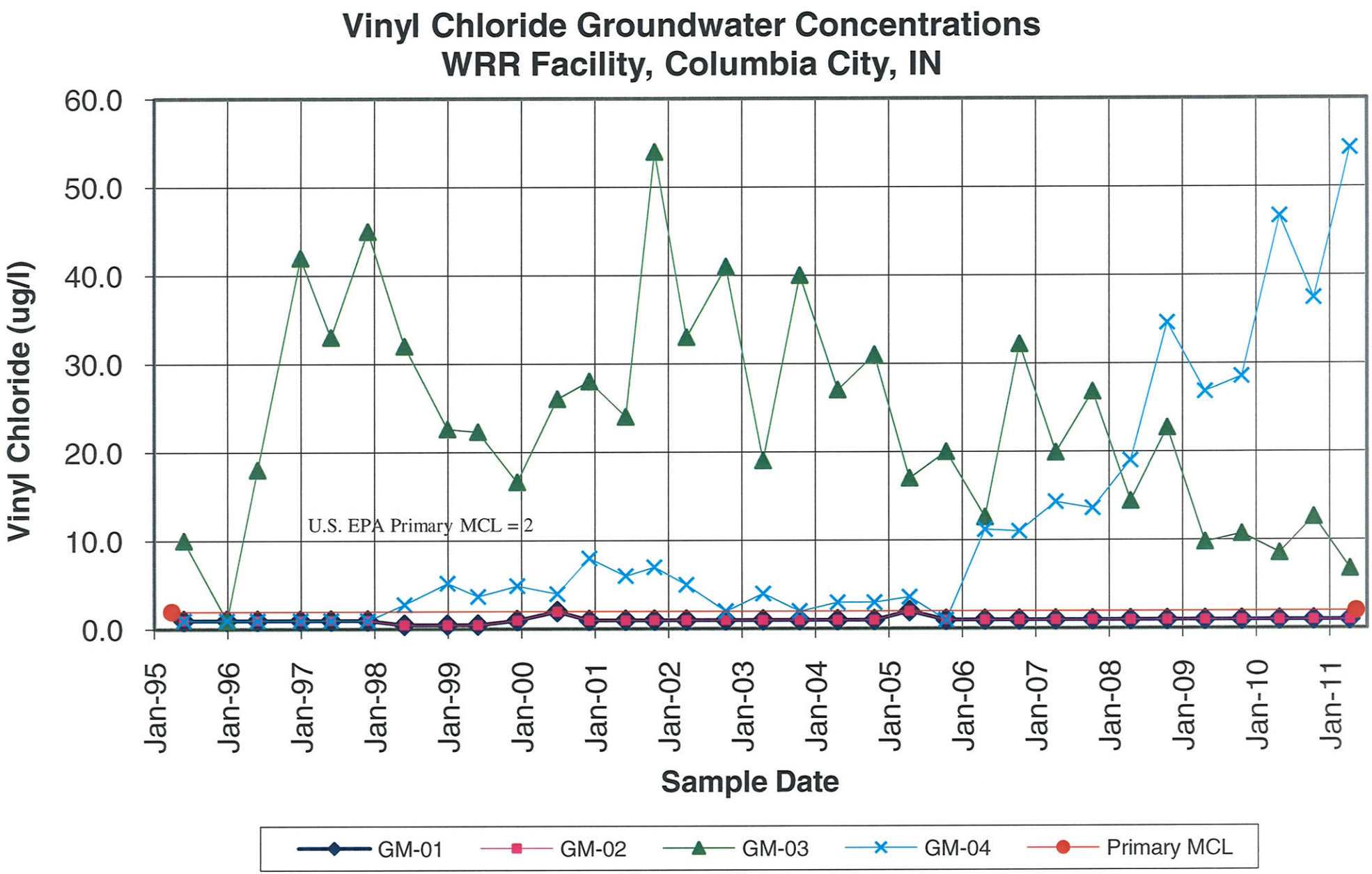

cis-1,2-Dichloroethene Groundwater Concentrations
WRR Facility, Columbia City, IN
cis-1,2-Dichloroethene (ug/l)
600
500
400
300
200
100
0
U.S. EPA Primary MCL = 70
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04
Primary MCL

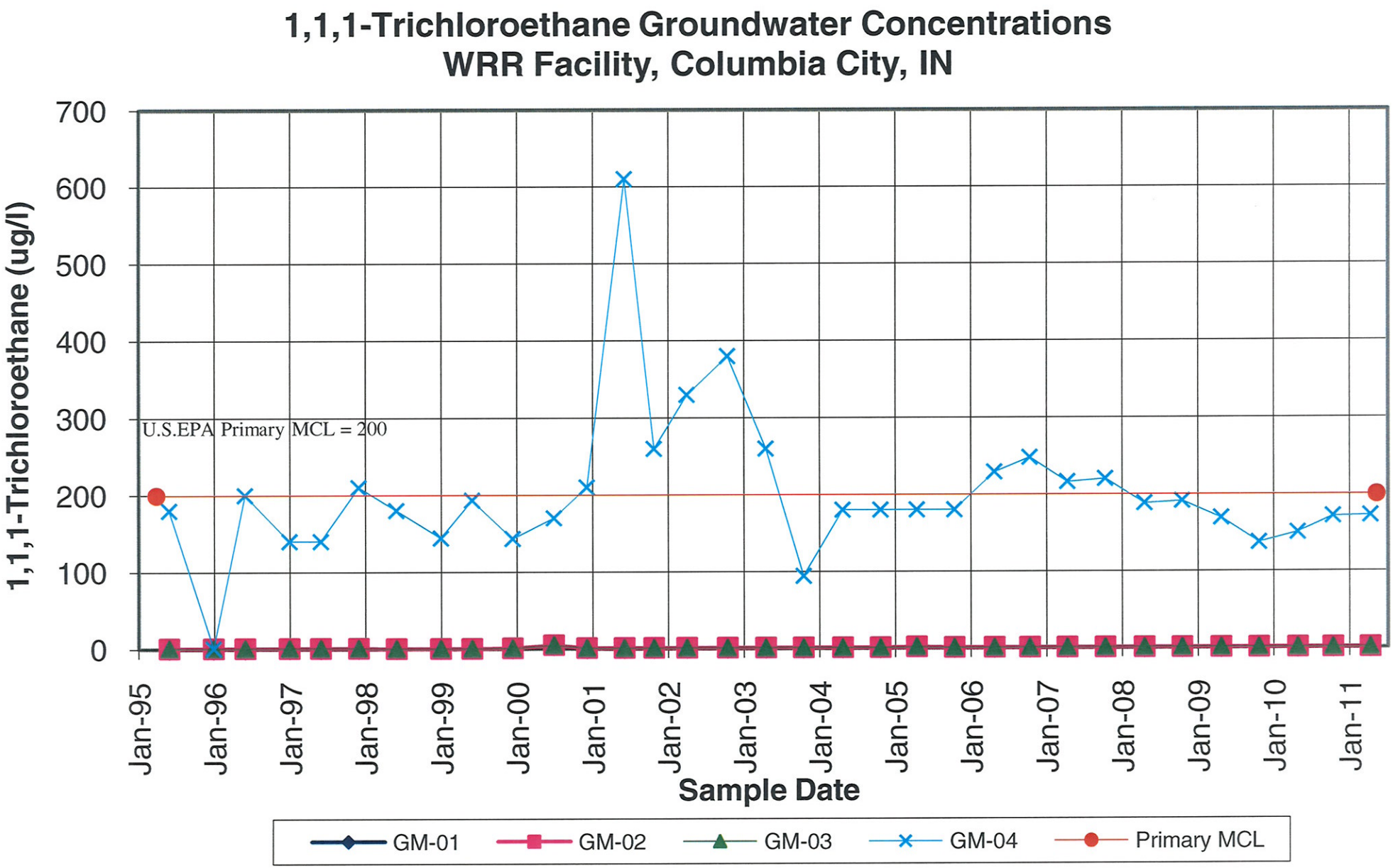

trans-1,2-Dichloroethene Groundwater Concentrations
WRR Facility, Columbia City, IN
U.S. EPA Primary MCL = 100
trans-1,2-Dichloroethene (ug/l)
25.0
20.0
15.0
10.0
5.0
0.0
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04
Primary MCL

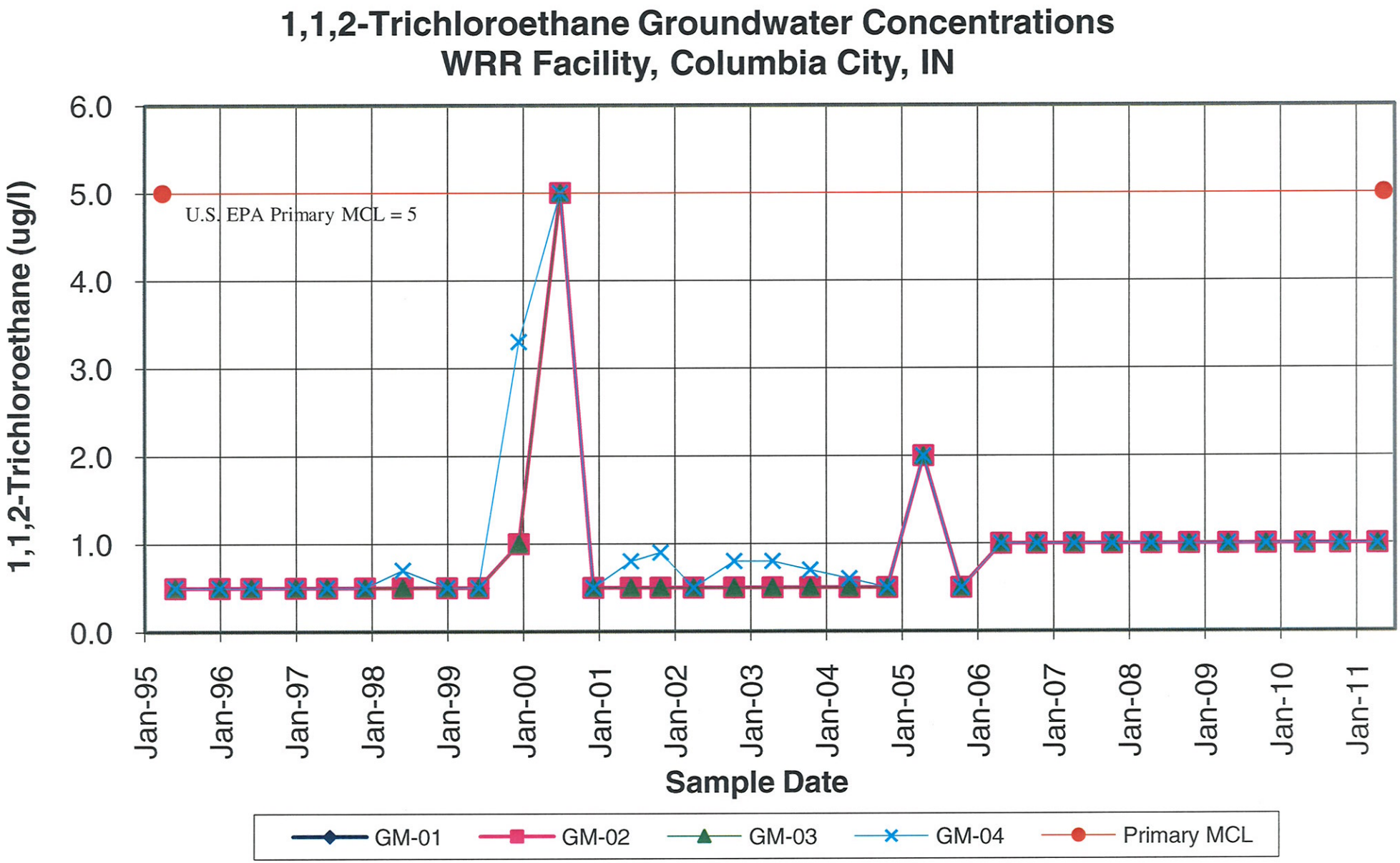

1,2-Dichloropropane Groundwater Concentrations
WRR Facility, Columbia City, IN
U.S. EPA Primary MCL = 5
1,2-Dichloropropane (ug/l)
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04
Primary MCL


1,1,2-Trichloroethane Groundwater Concentrations
WRR Facility, Columbia City, IN
1,1,2-Trichloroethane (ug/l)
6.0
5.0
4.0
3.0
2.0
1.0
0.0
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
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04
Primary MCL


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
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
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
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04
Primary MCL


1,1,1-Trichloroethane Groundwater Concentrations
WRR Facility, Columbia City, IN
1,1,1-Trichloroethane (ug/l)
700
600
500
400
300
200
100
0
U.S.EPA Primary MCL = 200
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Sample Date
GM-01
GM-02
GM-03
GM-04
Primary MCL


1,1,2-Trichloroethane Groundwater Concentrations
WRR Facility, Columbia City, IN
1,1,2-Trichloroethane (ug/l)
6.0
5.0
4.0
3.0
2.0
1.0
0.0
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
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
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 32

January through June 2011

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 2011. The water samples were analyzed by Pace Analytical Services, Inc. (Pace) of Indianapolis, Indiana for one or more of the following parameters: volatile organic compounds (VOCs) by United States Environmental Protection Agency (U.S. EPA) Method SW-846 8260B; dissolved metals (arsenic, barium, cadmium, chromium, lead, nickel, and zinc) by U.S. EPA Method SW-846 6010B; and total cyanide by U.S. EPA Method 335.3. Additionally, air samples were analyzed for VOCs by Pace of Minneapolis, Minnesota by 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 (June 2008), U.S. EPA CLP NFG for Inorganic Data Review (October 2004), and the laboratory-specific quality control parameters for each 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 per sample delivery group (SDG):

Air Samples

SDG 10147555 The following compounds were analyzed by serial dilution: cis-1,2-DCE, TCE, and VC.

SDG 10152648 The following compound was analyzed by serial dilution: cis-1,2-DCE.

The LCS %R for hexachloro-1,3-butadiene (154%) was above the quality control limits (30-150%). This compound was not detected in the associated sample. Therefore, qualifiers were not necessary.

SDG 10154991 The following compound was analyzed by serial dilution: cis-1,2-DCE. 1,2,4-Trichlorobenzene and hexachloro-1,3-butadiene did not meet the secondary source verification criteria for the initial calibration. Therefore, the reported results should be considered estimated values. The continuing calibration for hexachloro-1,3-butadiene was outside of the laboratory acceptance limits and the result may be biased high, and the analyte recovery in the LCS exceeded QC limits. The analyte was present below reporting limits in associated samples, but results are unaffected by high bias.

SDG 10158124 No comments

SDG 10161193 The following compounds were analyzed using serial dilution: cis-1,2-DCE, TCE, and VC.

The LCS %R for hexachloro-1,3-butadiene (166%) was above the quality control limits (30-150%). This compound was not detected in the associated sample. Therefore, qualifiers were not necessary.

Groundwater System Samples

SDG 5045195 Napthalene (1.0 µg/L) was detected in the method blank associated with this SDG. This compound was not detected in the investigative samples. Therefore, qualifiers were not necessary.

SDR 5045651 Napthalene (1.0 µg/L) was detected in the method blank associated with this SDG. This compound was not detected in the investigative samples. Therefore, qualifiers were not necessary.

The LCS %R for 1,2,3-TCB (54%), acrolein (16%), and napthalene were below the quality control limits. Although these compounds are not a site-specific compounds of concern, the results for these compounds for this SDG should be considered estimated.

SDG 5046958 No comments

SDG 5048853 No comments

SDG 5049958 The LCS %R for 1,2,3-TCP (124%) was above the quality control limits. This compound was not detected in the investigative samples; therefore, qualifiers were not necessary.

Groundwater Monitoring Well Samples

SDG 5047705 The LCS %R for EDB (125%), ethylbenzene (125%), styrene (127%), vinyl acetate (121%) were above the quality control limits. These compounds were not detected in the associated samples. Therefore, qualifiers were not necessary.

Sample GWINF was used for matrix spike/matrix spike duplicate sample (MS/MSD) analysis. The relative percent difference (RPD) for 1,3,5-TMB (21%) and bromomethane (29%) were greater than 20%. Because the %Rs for these compounds were acceptable, sample qualification was not necessary.

Based on the results of this data validation, the data are considered useable and complete as qualified.

BRT
\\Usdet1s02\J:\01_INDUSTRIAL-OTHER\3868-Wayne RR\6-Reports\SAPR 31\04 - Appendices\Appendix B - data valid rpt- Wayne Rec SAPR 32.doc

APPENDIX C

SUMMARY OF MAJOR FIELD ACTIVITIES
JANUARY THROUGH JUNE 2011

APPENDIX C

SUMMARY OF MAJOR FIELD ACTIVITIES
JANUARY THROUGH JUNE 2011

Wayne Reclamation & Recycling

Date	Description of Field Activities and Events as Provided by InSite
January 2011	• Thaw frozen discharge at RW-3; diagnose and repair fail-to-start problem at RW-1 and 2; check transducer at RW-10 (appears defective); adjust controls • Complete blower B-1 service and switch operation • Install clean air filter at AC-2; partial service B-2 (lube motor complete; drain bearing oil; exchange air filter and wash B-1. • Continue blower B-2 maintenance; drain and refill B-1 discharge end bearing reservoir due to observed foaming (suspect moisture); high pressure wash AC-2 and install guard
February 2011	• Check discharge bearing at B-1 (air in oil); service stripper air flow pitot tube • Check and repair problem with stripper air flow reporting (pitot obstruction) • Maintenance - blower B-1 discharge and bearing check. • Check blower B-1 discharge bearing oil (aerated), drain oil, cut off hose end and re-install; check knockout tank strainer and clean
March 2011	• Pull motor from RW-3 and quick test (motor defective); clean water level sensor at tank T-1; check stripper air flow issue; clean pitot • Remove and clean control electrodes in effluent sump • Check RW-2 control for low phase angle trip; install new connectors at stripper; adjust positioner for stripper air flow • Check stripper (pitot filled with ice); thaw and replace pitot; service check valve at P-1
April 2011	• Adjust AC-1 throttle controls • Routine maintenance • Reduce influent rate of flow (high pumping caused difficulty at stripper - high soil moisture and stream stage)
May 2011	• Clean stripper packing and force main to POTW. • Revise flow totalizer setup.
June 2011	• Clean Southeast Area groundwater collection line • Verify effluent flow meter calibration • Landscaping • Repair check valve and install at pump P-2 and take pump off line • Clean plant floor • Pump down effluent sump and clean; transfer sludge to drums

APPENDIX D

HISTORICAL MONITORING DATA

Table D-1
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

	SOUTHEAST AREA													
	BRANCHES A - F													
	AS-ON	AS-ON	AS-ON	AS-ON	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF
CONSTITUENT (ppb[v/v])	**1/9/96**	**2/15/96**	**2/16/96**	**2/18/96**	**11/25/96**	**11/27/96**	**9/3/97**	**9/5/97**	**11/18/97**	**11/21/97**	**4/21/98 ***	**4/28/98**	**10/14/98**	**10/16/98**
1,1-Dichloroethane	**230**	**230**	**300**	**180**	**120**	**81**	**88**	**82**	**98**	**92**	**20**	**19**	**70**	**73**
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**	**3,300**	**3,500**
trans-1,2-Dichloroethene	**850**	**460**	**540**	**480**	**490**	**340**	**370**	**380**	**460**	**460**	**71**	**74**	**280**	**360**
4-Ethyltoluene	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	<12	<12	<25	<25
Tetrachloroethene	**670**	**470**	**470**	**470**	**450**	**370**	**370**	**370**	**240**	**220**	**56**	**100**	**450**	**270**
1,1,1-Trichloroethane	**1,300**	**810**	**770**	**700**	**520**	**340**	**280**	**290**	**270**	**290**	**47**	**51**	**280**	**190**
Trichloroethene	**9,100**	**8,600**	**7,200**	**7,100**	**4,000**	**3,000**	**2,800**	**2,800**	**3,800**	**3,500**	**330**	**540**	**2,500**	**2,900**
1,2,4-Trimethylbenzene	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	**13**	<12	<25	<25
1,3,5-Trimethylbenzene	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	<12	<12	<25	<25
Vinyl Chloride	<84	<72	**240**	**230**	**61**	<34	**130**	**200**	**89**	**56**	**85**	<12	<25	<25
Xylenes, Total	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	**23**	**14**	<25	<25
Soil Vapor Extraction Wells:	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).

* As of May 1, 1998, began to cycle operation of soil vapor extraction branches.

Bold = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided.

The soil vapor extraction (SVE) and air sparge (AS) systems were temporarily shut down on November 13, 2005 for assessment of the vadose zone and were restarted in April 2006.

Table D-1
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

	SOUTHEAST AREA															
	BRANCHES A - F															
	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF
CONSTITUENT (ppb[v/v])	**4/26/99**	**4/13/99**	**12/14/99**	**12/21/99**	**4/18/00**	**4/29/00**	**10/6/00**	**10/10/00**	**4/27/01**	**4/23/01**	**9/29/01 ***	**10/31/01**	**4/23/02**	**4/26/02**	**10/23/02**	**10/28/02**
1,1-Dichloroethane	**14**	**5**	**47**	**38**	**17**	**29**	**49**	**32**	<6.9	<140	<140	<130	**14**	**10**	<140	<130
cis-1,2-Dichloroethene	**410**	**210**	**1,500**	**1,300**	**580**	**1,400**	**2,200**	**1,300**	**270**	**150**	**680**	**1,500**	**510**	**370**	**1,300**	**790**
trans-1,2-Dichloroethene	**40**	**22**	**180**	**160**	**59**	**130**	**160**	**130**	NA	NA	NA	NA	NA	NA	NA	NA
4-Ethyltoluene	**7**	<2	<9.7	<7.8	<6.7	<13	<18	<8.2	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	**53**	**5**	**54**	**58**	**52**	**79**	**52**	**95**	**20**	<140	<140	<130	**47**	**42**	<140	<130
1,1,1-Trichloroethane	**90**	**6**	**100**	**87**	**56**	**74**	**93**	**75**	**29**	<140	<140	<130	**27**	**19**	<140	<130
Trichloroethene	**250**	**94**	**650**	**540**	**400**	**710**	**920**	**750**	**150**	**140**	**280**	**410**	**300**	**330**	**720**	**430**
1,2,4-Trimethylbenzene	**14**	**2**	<9.7	<7.8	<6.7	<13	<18	<8.2	<6.9	<140	<140	<130	<1.3	<0.64	<140	<130
1,3,5-Trimethylbenzene	<2	<2	<9.7	<7.8	<6.7	<13	<18	<8.2	<6.9	<140	<140	<130	<1.3	<0.64	<140	<130
Vinyl Chloride	**12**	**15**	**180**	**29**	**12**	<13	**130**	<8.2	**60**	<140	<140	<260	**61**	**18**	<140	<130
Xylenes, Total	**29**	**5**	<9.7	<7.8	<6.7	<13	<18	<8.2	<5.7	<140	<280	<260	<2.2	<1.1	<280	<270
Soil Vapor Extraction Wells:	1 - 40D															

Notes: * As of September 15, 2001, began cycling of two soil vapor extraction branches with weekly rotation of branches.
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 D-1
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

	SOUTHEAST AREA																	
	BRANCHES A - F																	
	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF
CONSTITUENT (ppb[v/v])	**4/15/03**	**4/21/03**	**10/15/03**	**10/18/03**	**4/19/04**	**4/23/04**	**10/14/04**	**10/19/04**	**4/19/05**	**4/25/05**	**10/12/05**	**10/12/05**	**4/8/06**	**4/8/06**	**5/21/06**	**5/28/06**	**10/24/06**	**10/24/06**
1,1-Dichloroethane	<130	<130	<150	<150	<13	<140	<140	<150	**6.7**	< 12.9	< 130	< 130	<13.4	<14.3	<14.3	<14.8	**22**	<13.4
cis-1,2-Dichloroethene	**190**	**470**	**390**	**340**	**790**	**160**	**330 (UB)**	**330 (UB)**	**742**	**742**	**430**	**400**	**449**	**458**	**567**	**392**	**811**	**570**
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	< 0.7	< 13.7	< 130	< 130	**64**	**75**	**86**	**50**	**122**	**92**
4-Ethyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	<130	<130	<150	<150	**29**	<140	<140	<150	**19**	**40**	< 130	< 130	**26**	**22**	**38**	**34**	**36**	**34**
1,1,1-Trichloroethane	<130	<130	<150	<150	**21**	<140	<140	<150	**19**	**31**	< 130	< 130	**22**	**23**	**40**	**33**	**64**	**37**
Trichloroethene	<130	**270**	**260**	**240**	**390**	<140	**180 (UB)**	**180 (UB)**	**407**	**323**	**240**	**230**	**322**	**309**	**378**	**279**	**434**	**376**
1,2,4-Trimethylbenzene	<130	<130	<150	<150	<13	<140	<140	<150	**0.86**	< 12.9	< 130	< 130	<13.4	<14.3	<14.3	<14.8	<13.8	<13.4
1,3,5-Trimethylbenzene	<130	<130	<150	<150	<13	<140	<140	<150	< 0.66	< 12.9	< 130	< 130	<13.4	<14.3	<14.3	<14.8	<13.8	<13.4
Vinyl Chloride	<130	<130	<150	<150	**30**	<140	<140	<150	< 0.69	< 13.4	< 130	< 130	**31.2**	<14.3	**19.8**	<14.8	<13.8	<13.4
Xylenes, Total	<270	<270	<460	<450	**30**	<140	<140	<150	**1.8**	< 21.4	< 270	< 270	<40.2	<42.9	<42.9	<44.4	<41.4	<40.2
Soil Vapor Extraction Wells:	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.
Southeast

Table D-1
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

	ABOVEGROUND STORAGE TANK AREA												
	BRANCHES G and H [1]												
CONSTITUENT (ppb[v/v])	**1/11/96**	**11/25/96**	**9/3/97**	**11/18/97**	**4/21/98**	**10/16/98**	**4/21/99**	**11/22/99**	**4/18/00**	**10/2/00**	**4/23/01**	**11/2/01**	**4/23/02**
1,1-Dichloroethane	**39**	**270**	**11**	**6**	<2	<2.0	<2.0	<2.0	**9.1**	**10**	**1.3**	**4.6**	**0.77**
cis-1,2-Dichloroethene	**1,800**	**660**	**820**	**310**	**110**	**50**	**21**	**24**	**330**	**300**	**21**	**130**	**27**
trans-1,2-Dichloroethene	**120**	**63**	**59**	**24**	**4.8**	**2.2**	<2.0	<2.0	**28**	**27**	NA	<0.57	NA
4-Ethyltoluene	**190**	<22	**10**	**3**	**16**	<2.0	**4**	**2.1**	<7.3	<6.1	NA	NA	NA
Tetrachloroethene	**1,600**	<22	**460**	**67**	**21**	**6**	**2.8**	<2.0	**58**	**75**	**15**	**71**	**6.6**
1,1,1-Trichloroethane	**790**	**2,700**	**180**	**65**	**3.4**	**2**	<2.0	<2.0	**55**	**61**	**9.9**	**33**	**3.6**
Trichloroethene	**1,700**	**140**	**1,500**	**420**	**57**	**48**	**8.1**	**9**	**590**	**710**	**57**	**150**	**22**
1,2,4-Trimethylbenzene	**230**	<22	**12**	**4**	**22**	<2.0	**7.5**	**2.8**	<7.3	<6.1	<0.71	<0.69	<0.69
1,3,5-Trimethylbenzene	**120**	<22	**20**	**4**	**6.3**	<2.0	**2.2**	<2.0	<7.3	<6.1	<0.71	<0.69	<0.69
Vinyl Chloride	**130**	<22	<8.4	**22**	**7**	<2.0	**2.3**	**3.6**	<7.3	<6.1	<0.74	**2.5**	**0.92**
Xylenes, Total	**55**	<22	**25**	**46**	**57**	<2.0	**18**	**2.1**	<7.3	**31**	**3.49**	**41**	**2.79**
Soil Vapor Extraction Wells:	41 - 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.

[1] Branch H operations suspended as of the beginning of October 2002.

Bold = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided.

Table D-1
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

	ABOVEGROUND STORAGE TANK AREA																			
	BRANCH G (EAST BRANCH)																			
CONSTITUENT (ppb[v/v])	**10/23/02**	**12/18/02 ***	**4/17/03**	**10/15/03**	**4/19/04**	**10/19/04**	**4/19/05**	**10/12/05**	**4/7/06**	**5/30/06**	**10/20/06**	**4/23/07**	**10/18/07**	**4/14/08**	**10/17/08**	**4/20/09**	**10/15/09**	**4/21/10**	**10/27/10**	**4/12/11**
1,1-Dichloroethane	<140	<140	<130	<150	<13	**5.7**	< 13.2	< 140	<13.8	<14.3	<13.8	<3.4	<14.3	<13.4	<13.4	<0.67	**1.9**	<12.5	<12.5	<0.92
cis-1,2-Dichloroethene	<140	**580**	**190**	<150	**160**	**170 (UB)**	**65**	**290**	**805**	**132**	**222**	**11**	**33**	<13.4	**362**	**13**	**37**	**23**	**47**	**19**
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	< 14.1	< 140	<13.8	<14.3	**15**	<3.5	<14.3	<13.4	**50**	<0.67	**2.1**	<12.5	<12.5	<0.92
4-Ethyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5	**31**
Tetrachloroethene	<140	<140	<130	<150	**23**	**27**	**22**	< 140	**29**	**28**	**51**	**7.5**	<14.3	<13.4	**32**	**28**	**13**	<12.5	<12.5	**5**
1,1,1-Trichloroethane	<140	<140	<130	<150	<12	**17**	**74**	< 140	<13.8	<14.3	**17**	<3.4	<14.3	<13.4	**18**	<0.67	**2.9**	<12.5	<12.5	**1.2**
Trichloroethene	**180**	**440**	**280**	**260**	**360**	**350 (UB)**	**105**	**260**	**197**	**183**	**380**	**28**	**52**	<13.4	**559**	**9.5**	**98.9**	**40.3**	**97.7**	**24.3**
1,2,4-Trimethylbenzene	<140	<140	<130	<150	<13	**4.0**	< 13.2	< 140	<13.8	<14.3	<13.8	<3.4	<14.3	<13.4	<13.4	**2.4**	<0.67	<12.5	<12.5	<0.92
1,3,5-Trimethylbenzene	<140	<140	<130	<150	<13	**1.2**	< 13.2	< 140	<13.8	<14.3	<13.8	<3.4	<14.3	<13.4	<13.4	**1.6**	<0.67	<12.5	<12.5	<0.92
Vinyl Chloride	<140	<140	<130	<150	<14	**18.4 (UB)**	< 13.8	< 140	<13.8	<14.3	<13.8	<3.4	<14.3	<13.4	<13.4	<0.67	<0.67	<12.5	<12.5	<0.92
Xylenes, Total	<290	<290	<270	<450	**47**	**9.3**	< 22.1	< 290	<13.8	<14.3	<13.8	<3.4	<42.9	<40.2	<40.2	**1.0**	<2.0	<32.5	<32.5	<1.8
Soil Vapor Extraction Wells:	41 - 43, 50, and 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.

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

Bold = Analyte detected greater than the laboratory reporting limit.

(1) Branch H operations suspended as of the beginning of October 2002.

< = Not detected greater than the reporting limit provided.

NA = Not analyzed.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-1D (Southeast Area)																	PRG
CONSTITUENT **Date Sampled**	**8/1988**	**6/7/96**	**11/6/96**	**6/12/97**	**10/14/98**	**10/13/99**	**10/2/00**	**10/31/01**	**10/25/02**	**10/15/03**	**10/20/04**	**10/12/05**	**10/18/06**	**10/17/07**	**10/17/08**	**10/13/09**	**10/23/10**	**(µg/L)**
VOCs (µg/L)																		
Acetone	ND	ND	NA	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane	ND	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	<2	<2	--
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	**5**	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**973**
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**70**
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**100**
1,2-Dichloroethene, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)	ND	ND	NA	NA	NA	ND	ND	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**2.54**
1,2,4-Trimethylbenzene	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	<1.0	<1.0	**0.0283**
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 2	< 2	**828**
TOTAL VOCs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**	ND	ND	ND	--
Metals (mg/L)																		
Arsenic, Dissolved	**0.0059**	**0.005**	ND	ND	ND	ND	ND	ND	ND	<0.100	<0.0100	< 0.01	< 0.01	< 0.1	< 0.1	<0.10	<0.10	--
Barium, Dissolved	**0.132**	**0.13**	**0.13**	**0.12**	**0.16**	**0.68**	**0.14**	**0.18**	**0.226**	**0.147**	**0.140**	**0.175**	**0.170**	**0.160**	**0.230**	**0.14**	**0.14**	--
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.00500	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total	ND	ND	ND	ND	**0.013**	ND	ND	ND	ND	<0.040	**0.0207**	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total	**0.009**	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	<0.005	<0.005	--
Lead, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	<0.00500	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved	ND	ND	ND	**0.051**	ND	ND	ND	ND	**0.012**	**0.013**	**0.0117**	< 0.05	< 0.05	**0.16**	**0.1**	**0.013**	< 0.01	--
Zinc, Dissolved	**0.013**	**0.06**	ND	**0.025**	**0.031**	**0.13**	ND	**0.068**	**0.072**	**0.220**	<0.0200	**0.0358**	<0.020	**0.052**	<0.05	<0.05	< 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).
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
2003 and subsequent data were validated to Level II

-- = 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.
ND = Not detected greater than the method detection limit.
NA = Not analyzed.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-3S (Southeast Area)											PRG
CONSTITUENT **Date Sampled**	**3/1/88**	**8/1/88**	**11/29/95**	**8/27/96**	**11/6/96**	**6/13/97**	**10/14/98**	**10/13/99**	**10/2/00**	**10/31/01**	**10/15/03**	**(µg/L)**
VOCs (µg/L)												
Acetone	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	<20.0	**3,650**
Benzene	ND	**1.1**	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.617**
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	--
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	--
n-Butylbenzene	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	<1.0	--
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	--
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	**0.274**
Dibromomethane	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	<1.0	--
1,1-Dichloroethane	ND	**23**	ND	ND	**1.5**	ND	ND	ND	ND	ND	<1.0	**973**
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	--
1,1-Dichloroethene	ND	**16**	ND	ND	**1.9**	ND	ND	ND	ND	ND	*<1.0*	**0.0167**
cis-1,2-Dichloroethene	NA	NA	NA	**3,500**	**2,600**	**1,200**	**1,100**	**1,400**	**840**	**733**	**269**	**70**
trans-1,2-Dichloroethene	NA	NA	NA	**110**	**92**	**45**	**54**	**33**	**38**	**43**	**22**	**100**
1,2-Dichloroethene, Total	**24,000**	**6,900**	**2,200**	**3,610**	**2,692**	**1,245**	**1,154**	**1,433**	**878**	**776**	**291**	(170)
1,2-Dichloropropane	ND	**8.4**	ND	ND	**3.7**	ND	ND	ND	ND	**2**	<1.0	**1.25**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**700**
4-Methyl-2-pentanone (MIBK)	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	<12.5	**487**
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**1.43**
Toluene	ND	**3.4**	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**1,000**
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**
Trichloroethene	ND	**1.1**	ND	ND	ND	ND	ND	ND	ND	**5**	**2**	**2.54**
1,2,4-Trimethylbenzene	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	<1.0	--
Vinyl Chloride	**1,300**	**430**	**380**	**400**	**260**	**90**	**120**	**310**	**67**	**3**	**2**	**0.0283**
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**	**295**	--
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).
2003 and subsequent data were validated to Level II
October 2002 and October 2004 - dry conditions at the site; 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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-4S (Recovery Well RW-4 Area)																	
CONSTITUENT **Date Sampled**	**8/1/88**	**7/23/92**	**11/28/95**	**8/27/96**	**6/12/97**	**11/18/97**	**4/21/98**	**10/15/98**	**4/12/99**	**10/13/99**	**5/4/00**	**10/2/00**	**4/19/01**	**10/31/01**	**4/23/02**	**10/23/02**	**4/16/03**	**10/15/03**
VOCs (µg/L)																		
Acetone	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5
n-Butylbenzene	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Carbon Disulfide	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<5.0
Chloroform	**0.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*
Dibromomethane	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<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
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,2-Dichloroethene, Total	ND	ND	ND	**4.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
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
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Toluene	ND	ND	ND	**1.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*
Trichloroethene	ND	ND	ND	**11**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,2,4-Trimethylbenzene	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Vinyl Chloride	**2**	**1**	ND	ND	ND	ND	**12**	**15**	**17**	**29**	**33**	**23**	**13**	**7**	**6**	**15**	**18**	**25**
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
TOTAL VOCs	**2.7**	**1**	ND	**16.6**	ND	ND	**12**	**15**	**17**	**29**	**33**	**23**	**13**	**7**	**6**	**15**	**18**	**25**
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
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**
Cadmium, Dissolved	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.030
Chromium, Dissolved total	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.040
Cyanide, Total	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	**0.0071**
Lead, Dissolved	NA	ND	ND	**0.0032**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.16**	ND	<0.080	<0.080
Nickel, Dissolved	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.011**	ND	ND	ND	<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

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; no flags were required for the data in this table collected on that date.
2003 and subsequent data were 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.
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG.
NA = Not analyzed.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-4S (Recovery Well RW-4 Area)															PRG
CONSTITUENT **Date Sampled**	**4/20/04**	**10/19/04**	**4/19/05**	**10/13/05**	**4/26/06**	**10/18/06**	**4/17/07**	**10/17/07**	**4/14/08**	**10/16/08**	**4/20/09**	**10/13/09**	**4/20/10**	**10/20/10**	**4/11/11**	**(µg/L)**
VOCs (µg/L)																
Acetone	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	<2.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene	<1.0	<1.0	<1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane	<2.0 (J)	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	<2	<2	<2	<2	--
Chloroform	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**973**
1,2-Dichloroethane	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene	**68**	<1.0	< 1	**1**	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**70**
trans-1,2-Dichloroethene	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**100**
1,2-Dichloroethene, Total	**68**	<1.0	< 1	**1**	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	(170)
1,2-Dichloropropane	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene	**73**	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**2.54**
1,2,4-Trimethylbenzene	NA	NA	< 5	< 5	< 5	< 5	NA	NA	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride	**26**	**12**	**8.8**	**7.2**	**8.4**	**5.0**	**5.2**	*< 1*	**3.6**	**3.8**	**7.2**	**2.3**	*< 1*	*< 1*	*< 1*	**0.0283**
Xylenes, Total	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 2	< 2	< 2	< 2	**828**
TOTAL VOCs	**167**	**12**	**8.8**	**8.2**	**8.4**	**5.0**	**5.2**	**0**	**3.6**	**3.8**	**7.2**	**2.3**	**0**	**0**	**0**	--
Metals (mg/L)																
Arsenic, Dissolved	**0.0201**	**0.0126**	**0.0173**	**0.0173**	<0.100	**0.0105**	<0.100	<0.100	<0.100	<0.100	<0.100	< 0.1	< 0.1	< 0.1	< 0.1	--
Barium, Dissolved	**0.228**	**0.194**	**0.194**	**0.207**	**0.140**	**0.131**	**0.170**	**0.140**	**0.160**	**0.160**	**0.092**	**0.12**	**0.12**	**0.18**	**0.12**	--
Cadmium, Dissolved	<0.005	<0.00100	< 0.001	< 0.001	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total	<0.005	<0.0100	< 0.01	< 0.01	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	**0.0051**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--
Lead, Dissolved	**0.00597**	**<0.00500**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved	<0.010	<0.0500	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	<0.01	<0.01	<0.01	<0.01	--
Zinc, Dissolved	**0.0233**	**0.025**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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).
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
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Bold = Analyte detected greater than the laboratory reporting limit.
Italics = Reporting limit greater than the corresponding PRG.
ND = Not detected greater than the method detection limit.
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NA = Not analyzed.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT / Date Sampled	MONITORING WELL MW-7S (Recovery Well RW-4 Area)																			PRG
	3/1/88	8/1/88	11/29/95	8/27/96	11/6/96	6/12/97	10/15/98	10/13/99	10/2/00	10/30/01	10/23/02	10/15/03	10/19/04	10/12/05	10/18/06	10/17/07	10/16/08	10/13/09	10/20/10	(µg/L)
VOCs (µg/L)																				
Acetone	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	<2	<2	--
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	ND	**23**	**7.4**	**10**	**7.4**	**5.1**	ND	ND	ND	**3**	**3**	**5**	**4**	**3**	**3**	< 1	< 1	< 1	< 1	**973**
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	**2.4**	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene	NA	NA	**1,100**	**980**	**780**	**640**	**87**	**96**	**120**	**187**	**237**	**344**	**330**	**200**	**280**	**155**	**175**	**150**	**427**	**70**
trans-1,2-Dichloroethene	NA	NA	**59**	**74**	**55**	**48**	**23**	**10**	**12**	**21**	**21**	**33**	**29**	**18**	**23**	**17**	**20**	**16**	**59**	**100**
1,2-Dichloroethene, Total	**2,600**	**1,900**	**1,159**	**1,054**	**855**	**688**	**110**	**106**	**132**	**208**	**258**	**377**	**359**	**218**	**303**	**172**	**195**	**166**	**486**	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene	ND	ND	**3**	**92**	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**2.54**
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride	ND	**1**	ND	ND	ND	ND	ND	**6**	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	<1.0	*<1.0*	**0.0283**
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 2	< 2	**828**
TOTAL VOCs	**2,600**	**1,924**	**1,170**	**1,156**	**862**	**693**	**110**	**112**	**132**	**211**	**261**	**382**	**363**	**221**	**306**	**172**	**197**	**166**	**486**	--
Metals (mg/L)																				
Arsenic, Dissolved	**0.005**	**0.003**	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.100	**0.0118**	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	--
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**	**0.125**	**0.174**	**0.149**	**0.14**	**0.084**	**0.089**	**0.06**	--
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total	ND	**0.016**	**0.095**	ND	ND	ND	ND	ND	ND	ND	ND	**0.0060**	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--
Lead, Dissolved	ND	ND	ND	**0.0099**	ND	ND	ND	ND	ND	ND	ND	<0.080	<0.00500	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved	ND	ND	ND	**0.06**	ND	ND	ND	ND	**0.006**	ND	ND	<0.010	<0.0500	< 0.05	< 0.05	< 0.01	< 0.01	<0.01	<0.01	--
Zinc, Dissolved	ND	**0.0263**	ND	**0.02**	ND	ND	ND	**0.22**	ND	ND	ND	<0.050	**0.0272**	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 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).
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
2003 and subsequent data were validated to Level II
-- = 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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-9S (Aboveground Storage Tank Area)																	
CONSTITUENT **Date Sampled**	**3/1/88**	**8/1/88**	**7/24/92**	**11/7/95**	**8/27/96**	**6/12/97**	**11/18/97**	**4/21/98**	**10/15/98**	**4/12/99**	**10/20/99**	**5/4/00**	**10/2/00**	**4/19/01**	**10/30/01**	**4/23/02**	**10/23/02**	**4/16/03**
VOCs (µg/L)																		
Acetone	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<20.0
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0
2-Butanone (MEK)	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5
n-Butylbenzene	ND	ND	ND	**4.2**	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Carbon Disulfide	ND	**0.59**	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	**13**	ND	ND	ND	ND	ND	ND	ND	*<1.0*
Dibromomethane	ND	ND	NA	**1.8**	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
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**
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,1-Dichloroethene	ND	**92**	ND	**56**	ND	**15**	**76**	**17**	**51**	**13**	**18**	**67**	**63**	ND	**5**	**8**	**38**	**42**
cis-1,2-Dichloroethene	NA	NA	NA	**30,000**	**24,000**	**18,000**	NA	**10,000**	**19,000**	**8,800**	NA	**43,000**	**37,000**	**5,400**	**3,360**	**3,600**	**18,300**	**16,200**
trans-1,2-Dichloroethene	NA	NA	NA	**140**	ND	**200**	NA	**190**	**170**	**95**	NA	**350**	**210**	ND	**75**	**63**	**122**	**145**
1,2-Dichloroethene, Total	**33,000**	**32,000**	**23,000**	**30,140**	**24,000**	**18,200**	**42,390**	**10,190**	**19,170**	**8,895**	**8,003**	**43,350**	**37,210**	**5,400**	**3,435**	**3,663**	**18,422**	**16,345**
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
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
Tetrachloroethene	ND	**27**	ND	**36**	ND	**78**	**220**	**280**	**250**	**720**	**67**	**37**	**97**	ND	**28**	**46**	**64**	**59**
Toluene	ND	**21**	ND	ND	ND	ND	ND	**9**	**10**	**22**	ND	ND	ND	ND	ND	ND	ND	<1.0
1,1,1-Trichloroethane	ND	**9.9**	ND	ND	ND	ND	ND	**13**	**21**	**13**	ND	**6**	**7**	ND	**1**	**3**	**5**	**3**
1,1,2-Trichloroethane	ND	ND	ND	**3**	ND	ND	ND	**8**	**12**	ND	ND	**6**	ND	ND	ND	ND	ND	**2**
Trichloroethene	**18,000**	**18,000**	**9,700**	**17,000**	**28,000**	**24,000**	**67,000**	**25,000**	**12,000**	**16,000**	**5,800**	**5,800**	**21,000**	**16,000**	**4,590**	**9,300**	**6,470**	**8,180**
1,2,4-Trimethylbenzene	ND	ND	NA	**4.3**	ND	ND	NA	ND	ND	**6**	ND	ND	ND	ND	ND	ND	ND	<1.0
Vinyl Chloride	ND	**480**	**340**	**1,100**	**680**	**200**	**380**	**59**	ND	**72**	**140**	**260**	**140**	ND	**3**	**4**	**122**	**403**
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7**	ND	ND	ND	ND	ND	ND	ND	<1.0
TOTAL VOCs	**51,000**	**50,641**	**33,040**	**48,363**	**52,680**	**42,506**	**110,066**	**35,592**	**31,531**	**25,774**	**14,034**	**49,585**	**58,530**	**21,400**	**8,064**	**13,025**	**25,125**	**25,038**
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
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**
Cadmium, Dissolved	ND	ND	**271**	ND	ND	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	**0.0052**	ND	ND	ND	ND	ND	ND	<0.040
Cyanide, Total	**0.03**	**0.014**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<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
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**
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

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; no flags were required for the data in this table collected on that date
2003 and subsequent data were validated to Level I
(J) = estimated.

-- = No PRG assigned.
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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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	MONITORING WELL MW-9S (Aboveground Storage Tank Area)																PRG
Date Sampled	10/15/03	4/20/04	10/19/04	4/19/05	10/13/05	4/26/06	10/18/06	4/17/07	10/17/07	4/14/08	10/14/08	4/22/09	10/13/09	4/10/10	10/20/10	4/11/11	(µg/L)
VOCs (µg/L)																	
Acetone	<20.0	<20	<20	< 20	< 100	< 100	< 10000	< 2000	< 2000	< 200	< 20	< 20	< 20	< 200	< 200	< 200	**3,650**
Benzene	*<1.0*	**1.4**	*<1.0*	*< 1*	*< 5*	*< 5*	*< 500*	*< 100*	*< 100*	*< 10*	*< 1*	*< 1*	*< 1*	*< 10*	*< 10*	*< 10*	**0.617**
Bromomethane	NA	<2.0	<2.0	< 2	< 10	< 10	< 1000	< 1000	< 1000	< 100	< 2	< 2	< 2	< 20	< 20	< 20	--
2-Butanone (MEK)	<12.5	<20	<20	< 20	< 100	< 100	< 10000	< 2000	< 2000	< 200	< 20	< 20	< 20	< 200	< 200	< 200	--
n-Butylbenzene	<1.0	<1.0	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 1	< 10	< 10	< 10	--
Carbon Disulfide	<1.0	<20	<20	< 20	< 100	< 100	*< 10000*	*< 2000*	*< 2000*	< 200	< 20	< 20	< 20	< 200	< 200	< 200	**768**
Chloroethane	<5.0	<2.0 (J)	<2.0	< 2	< 10	< 10	< 1000	< 1000	< 1000	< 100	< 2	< 2	< 2	< 20	< 20	< 20	--
Chloroform	*<1.0*	*<1.0*	*<1.0*	*< 1*	*< 5*	*< 5*	*< 500*	*< 100*	*< 100*	*< 10*	*< 1*	*< 1*	*< 1*	*< 10*	*< 10*	*< 10*	**0.274**
Dibromomethane	<1.0	<1.0	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 1	< 10	< 10	< 10	--
1,1-Dichloroethane	<1.0	**16**	**2.3**	**1.2**	**20**	< 1	< 100	< 100	< 100	< 10	**1.7**	< 1	**3.2**	< 10	< 10	< 10	**973**
1,2-Dichloroethane	<1.0	<1.0	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 1	< 10	< 10	< 10	--
1,1-Dichloroethene	*<1.0*	**94**	**10**	**7**	**150**	**11**	*<500*	*< 100*	**134**	*< 10*	**15**	**17**	**28**	*< 10*	*< 10*	*< 10*	**0.0167**
cis-1,2-Dichloroethene	**29,400**	**35,000**	**5,300**	**3,700**	**55,000**	**7,100**	**24,000**	**9,020**	**61,000**	**1,040**	**6,910**	**6,930**	**13,900**	**13,200**	**15,800**	**10,300**	**70**
trans-1,2-Dichloroethene	**252**	**310**	**84**	**36**	**390 (J)**	**78**	*<500*	< 100	< 100	< 10	85	48	**181**	**105**	**227**	**79**	**100**
1,2-Dichloroethene, Total	**29,652**	**35,310**	**5,384**	**3,736**	**55,390**	**7,178**	**24,000**	**9,020**	**61,000**	**1,040**	**6,995**	**6,978**	**14,081**	**13,305**	**16,027**	**10,379**	(170)
1,2-Dichloropropane	**3**	<1.0	<1.0	< 1	< 5	< 5	*< 500*	*< 100*	*< 100*	*< 10*	*< 1*	< 1	< 1	*< 10*	*< 10*	*< 10*	**1.25**
Ethylbenzene	<1.0	<1.0	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 1	< 10	< 10	< 10	**700**
4-Methyl-2-pentanone (MIBK)	<12.5	<20	<20	< 20	< 100	< 100	*< 10000*	*< 2000*	*< 2000*	< 200	< 20	< 20	< 20	< 200	< 200	< 200	**487**
Tetrachloroethene	**106**	**180**	**33**	**12**	**190**	**34**	*<500*	*< 100*	*< 100*	*< 10*	**5.5 J**	**12**	**1.8**	*< 10*	*< 10*	*< 10*	**1.43**
Toluene	**2**	**4**	<1.0	< 1	**6**	< 1	< 100	< 100	< 100	< 10	< 1	< 1	< 1	< 10	< 10	< 10	**1,000**
1,1,1-Trichloroethane	**10**	**11**	**1**	**2**	**10**	**1**	*<500*	*< 100*	*< 100*	< 10	< 1	< 1	< 1	< 10	< 10	< 10	**200**
1,1,2-Trichloroethane	**5**	**5**	*<1.0*	*< 1*	*< 5*	*< 5*	*< 500*	*< 100*	*< 100*	*< 10*	*< 1*	*< 1*	*< 1*	*< 10*	*< 10*	*< 10*	**0.314**
Trichloroethene	**32,200**	**39,000**	**6,600**	**4,100**	**49,000**	**7,100**	**13,000**	**5,640**	**25,900**	**524**	**1,490**	**2,360**	**787**	**989**	**1,020**	**894**	**2.54**
1,2,4-Trimethylbenzene	<1.0	NA	NA	< 5	< 25	< 25	< 2500	NA	< 500	< 50	< 5	< 5	< 5	< 50	< 50	< 50	--
Vinyl Chloride	**396**	**220**	**38**	**16**	**420 (J)**	**26**	*<500*	**135**	**157**	*< 10*	**106**	**139**	**257**	**218**	**87**	**117**	**0.0283**
Xylenes, Total	<1.0	**3**	<1.0	< 1	< 5	< 5	< 500	< 100	< 100	< 10	< 1	< 1	< 1	< 10	< 10	< 10	**828**
TOTAL VOCs	**62,373**	**74,845**	**12,068**	**7,874**	**104,766**	**14,350**	**37,000**	**14,795**	**87,191**	**1,564**	**8,613**	**9,506**	**15,158**	**14,512**	**17,134**	**11,390**	--
Metals (mg/L)																	
Arsenic, Dissolved	<0.100	<0.100	<0.0100	< 0.01	**0.0103**	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--
Barium, Dissolved	**0.048**	**0.0749**	**0.09**	**0.0674**	**0.102**	**0.0775**	**0.0669**	**0.078**	**0.071**	**0.046**	**0.079**	**0.05**	**0.077**	**0.052**	**0.065**	**0.037**	--
Cadmium, Dissolved	<0.030	<0.005	<0.00100	< 0.001	< 0.001	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total	<0.040	<0.005	<0.0100	< 0.01	< 0.01	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total	<0.005	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	**0.15**	**< 0.005**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--
Lead, Dissolved	<0.080	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved	**0.020**	**0.0169**	<0.0500	< 0.05	< 0.05	**0.0103**	**0.0132**	< 0.01	0.01	< 0.01	**0.012**	<0.01	<0.01	<0.01	<0.01	<0.01	--
Zinc, Dissolved	<0.050	<0.020	<0.0200	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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)
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date
2003 and subsequent data were validated to Level I
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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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-10S (Southeast Area)																	
CONSTITUENT **Date Sampled**	**3/1/88**	**8/1/88**	**7/23/92**	**11/8/95**	**8/27/96**	**11/18/97**	**4/21/98**	**10/15/98**	**4/12/99**	**10/13/99**	**5/4/00**	**10/2/00**	**4/19/01**	**10/31/01**	**4/23/02**	**10/25/02**	**4/16/03**	**10/15/03**
VOCs (µg/L)																		
Acetone	ND	ND	ND	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0
Benzene	ND	**7**	ND	**1.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*
Bromomethane	ND	ND	ND	**4.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5
n-Butylbenzene	ND	ND	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	**4.5**
Carbon Disulfide	ND	ND	ND	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Chloroethane	ND	ND	ND	**2.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<5.0
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*
Dibromomethane	ND	ND	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
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
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1-Dichloroethene	ND	**20**	ND	ND	ND	ND	ND	ND	ND	**6.8**	ND	ND	ND	ND	**1.4**	**2.6**	*<1.0*	*<1.0*
cis-1,2-Dichloroethene	NA	NA	NA	**37,000**	**15,000**	NA	**5,300**	**3,300**	**7,900**	**6.8**	**3,600**	**3,400**	**1,900**	**118**	**2,980**	**5,250**	**44**	**1,130**
trans-1,2-Dichloroethene	NA	NA	NA	**440**	**350**	NA	**100**	**170**	**200**	**12,000**	**170**	**100**	**130**	**6.2**	**162**	**148**	**47**	**81**
1,2-Dichloroethene, Total	**56,000**	**26,000**	**8,700**	**37,440**	**15,350**	**8,140**	**5,400**	**3,470**	**8,100**	**12,007**	**3,770**	**3,500**	**2,030**	**124.2**	**3,142**	**5,398**	**91**	**1,211**
1,2-Dichloropropane	ND	ND	ND	**6.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2**	<1.0	<1.0
Ethylbenzene	ND	**4**	ND	**5.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
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
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Toluene	ND	**3,500**	**9,000**	**270**	**50**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*
Trichloroethene	ND	**2**	ND	**5**	**70**	ND	ND	**11**	ND	ND	ND	ND	ND	ND	**3.4**	**4.3**	**1.3**	**1.9**
1,2,4-Trimethylbenzene	ND	ND	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Vinyl Chloride	**5,500**	**2,800**	**3,100**	**2,700**	**650**	**370**	**130**	**1,000**	**320**	**700**	ND	**120**	ND	ND	**46.6**	**129**	**122**	**76**
Xylenes, Total	ND	**28**	**96**	**21.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
TOTAL VOCs	**62,130**	**32,501**	**20,987**	**40,456**	**16,120**	**8,510**	**5,530**	**4,509**	**8,426**	**12,722**	**3,770**	**3,626**	**2,030**	**124.2**	**3,195**	**5,540**	**215**	**1,293**
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
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
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<0.030	<0.030
Chromium, Dissolved total	**0.017**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<0.040	<0.040
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**
Lead, Dissolved	ND	ND	ND	ND	**0.0028**	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	NA	<0.080	<0.080
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**
Zinc, Dissolved	ND	**0.0089**	ND	ND	ND	ND	ND	ND	ND	**0.34**	ND	ND	ND	ND	ND	NA	<0.050	<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; no flags were required for the data in this table collected on that date.
October 2002 - dry conditions; VOC only.
2003 and subsequent data were validated to Level II

-- = 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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT Date Sampled	MONITORING WELL MW-10S (Southeast Area)										PRG
	4/20/04	10/22/04	4/19/05	10/13/05	4/26/06	4/17/07	10/17/07	4/14/08	4/20/09	4/20/10	(µg/L)
VOCs (µg/L)											
Acetone	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	<2.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene	<1.0	<1.0	<1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane	<2.0 (J)	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	<2	--
Chloroform	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	<1.0	**1.2**	< 1	**2.8**	< 1	< 1	**2.9**	**2.9**	<1	< 1	**973**
1,2-Dichloroethane	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene	**1,100**	**1,400**	**330**	**1,500**	**420**	**240**	**976**	**70**	**15**	**254**	**70**
trans-1,2-Dichloroethene	**130**	**100**	**26**	**65**	**47**	**22**	**77**	**10**	**2**	**59**	**100**
1,2-Dichloroethene, Total	**1,230**	**1,500**	**356**	**1,565**	**467**	**262**	**1,053**	**79**	**17**	**313**	(170)
1,2-Dichloropropane	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene	**12**	**2.7**	< 1	**2**	**1.8**	< 1	**5.7**	< 1	< 1	**1.9**	**2.54**
1,2,4-Trimethylbenzene	NA	NA	< 5	< 5	< 5	NA	<5	<5	<5	< 5	--
Vinyl Chloride	**8.5**	**4**	**1.4**	**81**	**2**	**1.3**	**13.9**	*< 1*	*< 1*	**17.5**	**0.0283**
Xylenes, Total	<1.0	<1.0	< 1	< 1	< 1	< 1	<3	<3	<3	< 2	**828**
TOTAL VOCs	**1,251**	**1,508**	**357**	**1,651**	**471**	**264**	**1,076**	**82**	**17**	**332**	--
Metals (mg/L)											
Arsenic, Dissolved	**0.0242**	**<0.0100**	**0.0107**	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	<0.1	<0.1	--
Barium, Dissolved	**0.0324**	**0.0686**	**0.0539**	< 0.02	**0.0472**	**0.081**	**0.05**	**0.069**	**0.05**	**0.025**	--
Cadmium, Dissolved	<0.005	<0.00100	< 0.001	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	<0.03	<0.03	--
Chromium, Dissolved total	**0.00849**	**<0.0100**	< 0.01	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	<0.04	<0.04	--
Cyanide, Total	**0.0381**	**0.0128**	**0.108**	< 0.005	< 0.005	**0.2**	**< 0.005**	**0.028**	**0.039**	**0.011**	--
Lead, Dissolved	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	<0.08	<0.08	--
Nickel, Dissolved	**0.0218**	**<0.0500**	< 0.05	< 0.05	< 0.05	< 0.01	**0.01**	**0.01**	<0.01	<0.01	--
Zinc, Dissolved	**0.0295**	**0.0232**	**0.0325**	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	<0.05	<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).
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
October 2002 - dry conditions; VOC only.
2003 and subsequent data were validated to Level II

-- = No PRG assigned.
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Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-11S (Southeast Area)															
CONSTITUENT **Date Sampled**	**3/1/88**	**8/1/88**	**7/24/92**	**11/8/95**	**8/27/96**	**11/6/96**	**6/13/97**	**10/15/98**	**10/13/99**	**10/2/00**	**10/31/01**	**10/24/02**	**10/15/03**	**10/22/04**	**10/13/05**	**10/18/06**
VOCs (µg/L)																
Acetone	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	< 20
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2
2-Butanone (MEK)	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	< 20
n-Butylbenzene	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1
Carbon Disulfide	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	< 20
Chloroethane	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*
Dibromomethane	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1
1,1-Dichloroethane	ND	ND	ND	**19**	**5.3**	**8.3**	**6.6**	ND	**5.4**	**5.7**	**8.6**	**5.9**	**5.9**	**3.7**	**3.7**	**2**
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	**2.0**	*< 1*	**3.1**
cis-1,2-Dichloroethene	NA	NA	ND	**280**	**150**	**200**	**170**	**160**	**440**	**460**	**669**	**694**	**746**	**490**	**400**	**460**
trans-1,2-Dichloroethene	NA	NA	ND	**15**	**6.5**	**10**	**10**	ND	ND	**12**	**15.7**	**8.7**	<1.0	**5.6**	**8.3**	**19**
1,2-Dichloroethene, Total	**44**	**19**	ND	**295**	**157**	**210**	**180**	**160**	**440**	**472**	**685**	**703**	**746**	**496**	**408**	**479**
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	<20.0	< 20	< 20
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1
Toluene	ND	ND	ND	ND	**1.5**	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*
Trichloroethene	ND	ND	ND	**4.1**	**17**	**3.8**	**4.3**	**8**	ND	**6.2**	**10.5**	**4.0**	**4.4**	**4.7**	**20**	**1.8**
1,2,4-Trimethylbenzene	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	NA	< 5	< 5
Vinyl Chloride	**4**	**3**	**20**	**18**	**12**	**14**	**18**	**64**	**190**	**160**	**112**	**120**	**138**	**2.2**	**5.1**	**78**
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1
TOTAL VOCs	**48**	**22**	**20**	**336**	**192**	**236**	**209**	**232**	**635**	**644**	**816**	**833**	**894**	**508**	**437**	**564**
Metals (mg/L)																
Arsenic, Dissolved	ND	ND	ND	**0.001**	ND	ND	ND	ND	ND	ND	ND	ND	<0.100	<0.0100	< 0.01	< 0.01
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**	**0.0830**	**0.103**	**0.0793**
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01
Cyanide, Total	ND	**0.04**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	<0.00500	< 0.005	< 0.005
Lead, Dissolved	ND	ND	ND	ND	**0.0028**	ND	ND	**0.015**	ND	ND	ND	ND	<0.080	<0.00500	< 0.005	< 0.005
Nickel, Dissolved	ND	ND	ND	ND	**0.03**	ND	ND	ND	ND	**0.006**	ND	ND	<0.010	<0.0500	< 0.05	< 0.05
Zinc, Dissolved	**0.026**	**0.0145**	**0.122**	ND	ND	ND	**0.021**	ND	**0.025**	ND	ND	**0.052**	<0.050	<0.0200	< 0.02	< 0.02

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; no flags were required for the data in this table collected on that date.
2003 and subsequent data were validated to Level II
-- = No PRG assigned.

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NA = Not analyzed.
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-11S (Southeast Area)				PRG
CONSTITUE Date Sampled	**10/17/07**	**10/16/08**	**10/13/09**	**10/20/10**	**(µg/L)**
VOCs (µg/L)					
Acetone	< 20	< 20	< 20	< 20	**3,650**
Benzene	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	< 20	< 20	< 20	< 20	--
n-Butylbenzene	< 1	< 1	< 1	< 1	--
Carbon Disulfide	< 20	< 20	< 20	< 20	**768**
Chloroethane	< 2	< 2	<2	<2	--
Chloroform	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	< 1	< 1	< 1	< 1	**973**
1,2-Dichloroethane	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	**5.2**	**4.1**	**3.5**	**4.5**	**0.0167**
cis-1,2-Dichloroethene	**483**	**376**	**299**	**410**	**70**
trans-1,2-Dichloroethene	< 1	**3.5**	**1.8**	< 1	**100**
1,2-Dichloroethene, Tota	**483**	**380**	**301**	**410**	(170)
1,2-Dichloropropane	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (M	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	< 1	< 1 J	< 1	< 1	**1.43**
Toluene	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene	**1.2**	**1.1**	< 1	< 1	**2.54**
1,2,4-Trimethylbenzene	< 5	< 5	< 5	< 5	--
Vinyl Chloride	**104**	**130**	**95**	**192**	**0.0283**
Xylenes, Total	< 1	< 1	< 2	< 2	**828**
TOTAL VOCs	**593**	**515**	**400**	**607**	--
Metals (mg/L)					
Arsenic, Dissolved	< 0.1	< 0.1	<0.10	<0.10	--
Barium, Dissolved	**0.0780**	**0.0850**	**0.065**	**0.057**	--
Cadmium, Dissolved	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved tot	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total	< 0.005	< 0.005	<0.005	<0.005	--
Lead, Dissolved	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved	< 0.01	< 0.01	<0.01	<0.01	--
Zinc, Dissolved	< 0.05	< 0.05	< 0.05	< 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).
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
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ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-13S (Southeast Area)												PRG
		8/1/88	11/1/01	4/23/02	10/24/02	10/17/03	10/22/04	10/14/05	10/19/06	10/17/07	10/17/08	10/19/09	10/23/10	(µg/L)
VOCs (µg/L)														
Acetone		ND	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene		ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane		ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)		ND	NA	NA	NA	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide		ND	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane		ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	<2	<2	--
Chloroform		ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**973**
1,2-Dichloroethane		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene		ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene		NA	**350**	**200**	**214**	**128**	**87**	**75**	**51**	**66**	**36**	**38**	**28**	**70**
trans-1,2-Dichloroethene		NA	**12**	**6.4**	**6.1**	**3.3**	**1.9**	**2.4**	<1	<1	**1.6**	< 1	< 1	**100**
1,2-Dichloroethene, Total		**28**	**362**	**206**	**220**	**131**	**89**	**77**	**51**	**66**	**37**	**38**	**28**	(170)
1,2-Dichloropropane		ND	**17**	**8.7**	**13**	**7.1**	<1.0	**10**	**5.6**	**5.1**	**5.1**	**8.8**	< 1	**1.25**
Ethylbenzene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)		ND	ND	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene		ND	**152**	**140**	**181**	**99.3**	**120**	**270**	**37**	**125**	**150**	**31**	**67**	**2.54**
1,2,4-Trimethylbenzene		ND	ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride		ND	**9.4**	**12**	**8.4**	**17.6**	**13**	**2.9**	**13**	**8.9**	**3.1**	**18**	**20**	**0.0283**
Xylenes, Total		ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 2	< 2	**828**
TOTAL VOCs		**28**	**540**	**367**	**423**	**255**	**222**	**360**	**107**	**205**	**195**	**96**	**115**	--
Metals (mg/L)														
Arsenic, Dissolved		**0.0036**	ND	ND	ND	<0.100	<0.0100	< 0.01	< 0.01	< 100	< 100	<0.10	<0.10	--
Barium, Dissolved		**0.0705**	**0.19**	**0.12**	**0.218** (J)	**0.177**	**0.106**	**0.197**	**0.137**	**0.159**	**0.2**	**0.17**	**0.16**	--
Cadmium, Dissolved		ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001	< 30	< 30	< 0.03	< 0.03	--
Chromium, Dissolved total		ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01	< 40	< 40	< 0.04	< 0.04	--
Cyanide, Total		**0.048**	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005	--
Lead, Dissolved		ND	ND	**0.16**	ND	<0.080	<0.00500	< 0.005	< 0.005	< 80	< 80	< 0.08	< 0.08	--
Nickel, Dissolved		**0.0167**	ND	ND	ND	<0.010	<0.0500	< 0.05	**0.0104**	< 10	< 10	**0.013**	< 0.01	--
Zinc, Dissolved		**0.0542**	ND	ND	**0.054** (J)	<0.050	<0.0200	< 0.02	< 0.02	< 50	< 50	< 0.05	< 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).
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
2003 and subsequent data were validated to Level II

-- = 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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT Date Sampled	MONITORING WELL MW-13D (Southeast Area) 1/28/2002[1]	PRG (µg/L)
VOCs (µg/L)		
Acetone	ND	**3,650**
Benzene	ND	**0.617**
Bromomethane	ND	--
2-Butanone (MEK)	ND	--
n-Butylbenzene	ND	--
Carbon Disulfide	ND	**768**
Chloroethane	ND	--
Chloroform	ND	**0.274**
Dibromomethane	ND	--
1,1-Dichloroethane	ND	**973**
1,2-Dichloroethane	ND	--
1,1-Dichloroethene	ND	**0.0167**
cis-1,2-Dichloroethene	ND	**70**
trans-1,2-Dichloroethene	ND	**100**
1,2-Dichloroethene, Total	ND	(170)
1,2-Dichloropropane	ND	**1.25**
Ethylbenzene	ND	**700**
4-Methyl-2-pentanone (MIBK)	ND	**487**
Tetrachloroethene	ND	**1.43**
Toluene	ND	**1,000**
1,1,1-Trichloroethane	ND	**200**
1,1,2-Trichloroethane	ND	**0.314**
Trichloroethene	ND	**2.54**
1,2,4-Trimethylbenzene	ND	--
Vinyl Chloride	ND	**0.0283**
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.
ND = Not detected greater than the method detection limit.
NA = Not analyzed.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-14S (Aboveground Storage Tank Area)																	
CONSTITUENT **Date Sampled**	**8/1/88**	**7/23/92**	**11/7/95**	**8/27/96**	**6/11/97**	**11/18/97**	**4/21/98**	**10/15/98**	**4/12/99**	**10/14/99**	**5/4/00**	**10/2/00**	**4/19/01**	**10/30/01**	**4/23/02**	**10/23/02**	**4/16/03**	**10/15/03**
VOCs (µg/L)																		
Acetone	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5
n-Butylbenzene	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Carbon Disulfide	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Chloroethane	ND	ND	**5.4**	**22**	**6.6**	**6.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.8**	<5.0
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*
Dibromomethane	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
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**
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
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<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
trans-1,2-Dichloroethene	NA	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,2-Dichloroethene, Total	**650**	**71**	**45**	**20**	**3.9**	**2.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
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
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Toluene	ND	ND	ND	**1.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
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**
1,1,2-Trichloroethane	**6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*
Trichloroethene	ND	ND	**5.5**	**10**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
1,2,4-Trimethylbenzene	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
Vinyl Chloride	**140**	**47**	**15**	**5.4**	**1.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.1**	*<1.0*	*<1.0*
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0
TOTAL VOCs	**1,066**	**209**	**402**	**329**	**167**	**172**	**74**	**63**	**24**	**21**	**12**	**13**	**20**	**23**	**13**	**16**	**24**	**13**
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
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**
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.030
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.040
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
Lead, Dissolved	ND	ND	ND	**0.0065**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	ND	<0.080	<0.080
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
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

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; no flags were required for the data in this table collected on that date.
2003 and subsequent data were 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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-14S (Aboveground Storage Tank Area)															PRG
CONSTITUENT **Date Sampled**	**4/20/04**	**10/19/04**	**4/19/05**	**10/13/05**	**4/26/06**	**10/18/06**	**4/17/07**	**10/17/07**	**4/14/08**	**10/14/08**	**4/22/09**	**10/13/09**	**4/20/10**	**10/20/10**	**4/11/11**	**(µg/L)**
VOCs (µg/L)																
Acetone	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	<2.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene	<1.0	<1.0	<1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane	<2.0 (J)	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	**16**	<2	<2	<2	**38**	<2	--
Chloroform	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	**4.9**	**13**	**6.8**	**12**	**2.5**	**3.8**	**7.9**	**11**	**11**	**22**	**11**	**31**	**24**	**37**	**26**	**973**
1,2-Dichloroethane	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1**	**2**	**1**	**2**	**2**	**3**	< 1	**70**
trans-1,2-Dichloroethene	<1.0	<1.0	**< 1**	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	*< 1*	**100**
1,2-Dichloroethene, Total	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**2**	**1**	**2**	**2**	**3**	< 1	(170)
1,2-Dichloropropane	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	**4.3**	**10**	**10**	**6.8**	**1.5**	< 1	**2.2**	**5.6**	**2.7**	< 1	**3.5**	**2.6**	<1.0	<1.0	**4.9**	**200**
1,1,2-Trichloroethane	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene	**3.0**	<1.0	< 1	< 1	< 1	< 1	< 1	**1.9**	*< 1*	*< 1*	*< 1*	< 1	< 1	< 1	< 1	**2.54**
1,2,4-Trimethylbenzene	NA	NA	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**3.4**	<1.0	**2.5**	*<1.0*	**5.9**	*<1.0*	**0.0283**
Xylenes, Total	**1.3**	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 2	< 2	**828**
TOTAL VOCs	**14**	**23**	**17**	**19**	**4.0**	**3.8**	**10**	**19**	**14**	**43**	**16**	**38**	**26**	**84**	**30**	--
Metals (mg/L)																
Arsenic, Dissolved	**0.0221**	**0.0136**	**0.0135**	**0.0203**	<0.100	**0.0102**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--
Barium, Dissolved	**0.117**	**0.121**	**0.109**	**0.133**	**0.103**	**0.0998**	**0.14**	**0.099**	**0.075**	**0.054**	**0.046**	**0.057**	**0.047**	**0.067**	**0.037**	--
Cadmium, Dissolved	<0.005	<0.00100	< 0.001	< 0.001	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total	<0.005	<0.0100	< 0.01	< 0.01	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	**0.22**	<0.005	**0.0066**	**<0.005**	<0.005	<0.005	<0.005	<0.005	<0.005	--
Lead, Dissolved	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved	**0.0102**	**<0.0500**	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--
Zinc, Dissolved	**0.0280**	**<0.0200**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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).
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
2003 and subsequent data were validated to Level II
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NA = not analyzed.
ND = Not detected greater than the method detection limit.
Shaded = Analyte detected greater than the corresponding PRG.

Table D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled	MONITORING WELL MW-15S (Aboveground Storage Tank Area)															PRG
		8/6/92	11/29/95	6/12/97	10/14/99	10/2/00	10/30/01	10/23/02	10/15/03	10/19/04	10/13/05	10/18/06	10/17/07	10/16/08	10/13/09	10/21/10	(µg/L)
VOCs (µg/L)																	
Acetone		ND	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene		ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane		ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)		ND	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene		NA	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide		ND	NA	NA	ND	ND	ND	ND	<1.0	<20	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane		ND	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	<2	<2	--
Chloroform		ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane		NA	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane		**6**	**5.8**	**4.9**	ND	ND	**1.5**	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**973**
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene		**10**	**13**	**41**	NA	ND	**33**	**5.9**	**13**	**2.9**	**5.8**	**2.6**	< 1	< 1	< 1	< 1	**70**
trans-1,2-Dichloroethene		ND	ND	**2.5**	NA	ND	**2.3**	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**100**
1,2-Dichloroethene, Total		**10**	**13**	**44**	ND	ND	**35**	**5.9**	**13**	**2.9**	**5.8**	**2.6**	< 1	< 1	< 1	< 1	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)		ND	NA	NA	ND	ND	ND	ND	<12.5	<20	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene		ND	**1.1**	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene		ND	ND	**65**	**5.8**	**11**	**145**	**14**	**93**	**13**	**8.5**	**34**	**7.6**	**14**	**3.6**	**1.8**	**2.54**
1,2,4-Trimethylbenzene		NA	ND	ND	ND	ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride		ND	**28**	**2.3**	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	<1.0	*<1.0*	**0.0283**
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 2	< 2	**828**
TOTAL VOCs		**16**	**48**	**116**	**6**	**11**	**182**	**20**	**106**	**16**	**14**	**37**	**8**	**14**	**4**	**2**	--
Metals (mg/L)																	
Arsenic, Dissolved		**0.0196**	ND	ND	**0.0059**	ND	ND	ND	<0.100	<0.0100	**0.0135**	<0.0100	<0.10	<0.10	<0.10	<0.10	--
Barium, Dissolved		**0.219**	**0.14**	**0.053**	**0.086**	**0.097**	**0.09**	**0.106**	**0.079**	**0.103**	**0.0939**	**0.0803**	**0.12**	**0.05**	**0.046**	**0.059**	--
Cadmium, Dissolved		**0.015**	ND	ND	ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total		ND	**0.011**	ND	ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total		ND	ND	ND	ND	ND	ND	ND	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	<0.005	<0.005	--
Lead, Dissolved		ND	ND	**0.0038**	ND	ND	ND	ND	<0.080	<0.00500	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved		ND	ND	ND	ND	**0.007**	ND	ND	**0.011**	<0.0500	< 0.05	**0.0108**	< 0.01	**0.01**	< 0.01	< 0.01	--
Zinc, Dissolved		**0.047**	ND	**0.055**	ND	ND	ND	ND	<0.050	**0.0210**	< 0.02	**0.0273**	< 0.05	< 0.05	< 0.05	< 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).
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
2003 and subsequent data were validated to Level II
-- = 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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT / Date Sampled	MONITORING WELL MW-16S (Aboveground Storage Tank Area)																	PRG
	8/6/92	11/7/95	11/6/96	6/11/97	10/15/98	10/14/99	10/2/00	11/1/01	10/23/02	10/15/03	10/19/04	10/13/05	10/18/06	10/17/07	10/16/08	10/13/09	10/20/10	(µg/L)
VOCs (µg/L)																		
Acetone	ND	NA	NA	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	ND	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide	ND	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane	ND	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	**2.6**	< 2	< 2	<2	<2	--
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	**55**	**85**	**26**	**58**	**37**	**38**	ND	**6.1**	**30**	**63**	**26**	**21**	**35**	**26**	**21**	**12**	**15**	**973**
1,2-Dichloroethane	ND	**1.4**	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene	NA	**190**	**50**	**75**	NA	**93**	**93**	**18.5**	**87.4**	**147**	**73**	**93**	**110**	**77**	**57**	**38**	**52**	**70**
trans-1,2-Dichloroethene	NA	ND	**1.3**	**5.3**	NA	NA	ND	ND	**2.5**	**11.0**	**2.2**	**1.1**	**5.0**	< 1	**2.7**	**1.1**	< 1	**100**
1,2-Dichloroethene, Total	**41**	**190**	**51**	**80**	**130**	**93**	**93**	**19**	**90**	**158**	**75**	**94**	**115**	**77**	**59**	**39**	**52**	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)	ND	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	20.0	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	**8**	**2.7**	**1**	**2.9**	ND	**6.9**	ND	**1.4**	**10**	**56**	**17**	**6.7**	**47**	**35**	**21**	**4.2**	**16**	**200**
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene	ND	**6.9**	ND	ND	**47**	ND	ND	**1.0**	ND	**2.2**	<1.0	**4.5**	< 1	< 1	< 1	< 1	< 1	**2.54**
1,2,4-Trimethylbenzene	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride	**100**	**41**	**19**	**16**	**37**	**15**	ND	ND	**15.6**	*<1.0*	**8.6**	**9.5**	**4.1**	**2.3**	**5.2**	**4**	**4.2**	**0.0283**
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 2	< 2	**828**
TOTAL VOCs	**204**	**327**	**97**	**157**	**251**	**153**	**93**	**27**	**146**	**280**	**147**	**136**	**204**	**139**	**107**	**59**	**87**	--
Metals (mg/L)																		
Arsenic, Dissolved	**0.0025**	**0.003**	ND	ND	ND	ND	**0.021**	ND	ND	<0.100	<0.0100	< 0.01	< 0.01	< 0.01	< 0.01	<0.10	<0.10	--
Barium, Dissolved	**0.05**	**0.06**	**0.065**	ND	**0.054**	**0.059**	**0.11**	**0.034**	**0.146**	**0.081**	**0.0755**	**0.102**	**0.0813**	**0.098**	**0.037**	**0.033**	**0.036**	--
Cadmium, Dissolved	ND	ND	ND	**0.00024**	ND	ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total	ND	ND	ND	**0.011**	ND	ND	**0.009**	ND	ND	**0.021**	<0.00500	< 0.005	**0.00386**	< 0.005	< 0.005	<0.005	<0.005	--
Lead, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	<0.00500	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved	ND	ND	ND	ND	ND	ND	**0.009**	ND	ND	<0.010	<0.0500	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	--
Zinc, Dissolved	**0.038**	ND	ND	**0.028**	ND	ND	ND	ND	**0.06**	<0.050	<0.0200	**0.0242**	<0.0200	<0.05	<0.05	< 0.05	< 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).
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
2003 and subsequent data were validated to Level II
-- = 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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT / Date Sampled	MONITORING WELL MW-18S (Aboveground Storage Tank Area) 8/1/1992[1]	11/1/01	PRG (µg/L)
VOCs (µg/L)			
Acetone	ND	ND	**3,650**
Benzene	ND	ND	**0.617**
Bromomethane	ND	ND	--
2-Butanone (MEK)	NA	NA	--
n-Butylbenzene	ND	ND	--
Carbon Disulfide	ND	ND	**768**
Chloroethane	ND	ND	--
Chloroform	ND	ND	**0.274**
Dibromomethane	ND	ND	--
1,1-Dichloroethane	ND	ND	**973**
1,2-Dichloroethane	ND	ND	--
1,1-Dichloroethene	ND	ND	**0.0167**
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**
Ethylbenzene	ND	ND	**700**
4-Methyl-2-pentanone (MIBK)	ND	ND	**487**
Tetrachloroethene	ND	ND	**1.43**
Toluene	ND	ND	**1,000**
1,1,1-Trichloroethane	ND	ND	**200**
1,1,2-Trichloroethane	ND	ND	**0.314**
Trichloroethene	ND	ND	**2.54**
1,2,4-Trimethylbenzene	ND	ND	--
Vinyl Chloride	ND	**1.6**	**0.0283**
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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-83AS (Southeast Area)																	
CONSTITUENT **Date Sampled**	**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**
VOCs (µg/L)																		
Acetone	ND	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<20.0
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0
2-Butanone (MEK)	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5
n-Butylbenzene	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Carbon Disulfide	ND	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Chloroethane	ND	ND	ND	ND	ND	**5.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*
Dibromomethane	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,1-Dichloroethane	ND	ND	ND	**48**	**72**	**51**	**56**	ND	**42**	**39**	**43**	**38**	**26**	ND	**31**	**29.1**	**33.3**	**18.1**
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,1-Dichloroethene	ND	ND	ND	ND	ND	**4.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
cis-1,2-Dichloroethene	ND	ND	NA	**15,000**	**15,000**	**11,000**	NA	**5,200**	**1,300**	**4,000**	**3,400**	**2,200**	**1,500**	**750**	**1,730**	**1,190**	**1,190**	**698**
trans-1,2-Dichloroethene	ND	ND	NA	**68**	**110**	**56**	NA	ND	**32**	**21**	**17**	**14**	**5.9**	ND	**21**	**12.6**	**2.3**	**2.5**
1,2-Dichloroethene, Total	ND	ND	**12,000**	**15,068**	**15,110**	**11,056**	**8,700**	**5,200**	**1,332**	**4,021**	**3,417**	**2,214**	**1,506**	**750**	**1,751**	**1,203**	**1,192**	**701**
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<12.5
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Toluene	ND	**0.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
1,2,4-Trimethylbenzene	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
Vinyl Chloride	**110**	**140**	**1,200**	**1,700**	**1,600**	**1,400**	**1,400**	**900**	**610**	**990**	**830**	**550**	**380**	**220**	**399**	**387**	**447**	**338**
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0
TOTAL VOCs	**110**	**141**	**13,200**	**16,816**	**16,782**	**12,516**	**10,156**	**6,100**	**1,984**	**5,050**	**4,290**	**2,802**	**1,912**	**970**	**2,181**	**1,619**	**1,673**	**1,057**
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
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**
Cadmium, Dissolved	ND	ND	ND	ND	ND	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	ND	ND	ND	ND	ND	<0.040
Cyanide, Total	ND	**0.022**	**0.006**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<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
Nickel, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.002**	ND	ND	ND	ND	<0.010
Zinc, Dissolved	ND	**0.0054**	ND	ND	ND	**0.041**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.063**	<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).
[1] Possible mislabeling of sample occurred in 1988.
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
2003 and subsequent data were 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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-83AS (Southeast Area)																PRG
CONSTITUENT Date Sampled	**10/15/2003**	**4/20/2004**	**10/20/2004**	**4/19/2005**	**10/12/2005**	**4/26/2006**	**10/18/2006**	**4/17/07**	**10/17/07**	**4/14/08**	**10/14/08**	**4/20/09**	**10/13/09**	**4/20/10**	**10/20/10**	**4/11/11**	**(µg/L)**
VOCs (µg/L)																	
Acetone	<20.0	<20	<20	< 20	< 20	< 20	**27**	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene	*<1.0*	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	NA	<2.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	<12.5	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide	<1.0	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane	<5.0	<2.0 (J)	<2.0	**2.3**	**2.1**	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	--
Chloroform	*<1.0*	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	**23.7**	**21**	**23**	**24**	**19**	**14**	**17**	**14**	**16**	**16**	**13**	**10**	**13**	**12**	**14**	**14**	**973**
1,2-Dichloroethane	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	<1.0	<1.0	<1.0	**1.5**	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene	**839**	**700**	**800**	**800**	**570**	**360**	**430**	**435**	**406**	**331**	**240**	**247**	**294**	**251**	**364**	**321**	**70**
trans-1,2-Dichloroethene	<1.0	**1.6**	**1.5**	**2.2**	**1.3**	< 1	**2.6**	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**100**
1,2-Dichloroethene, Total	**839**	**702**	**802**	**802**	**571**	**360**	**433**	**435**	**406**	**331**	**240**	**247**	**294**	**251**	**364**	**321**	(170)
1,2-Dichloropropane	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)	<12.5	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1 J	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**0.314**
Trichloroethene	<1.0	**1.0**	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**2.54**
1,2,4-Trimethylbenzene	<1.0	NA	NA	< 5	< 5	< 5	< 5	NA	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride	**486**	**370**	**640**	**670**	**520**	**660**	**540**	**900**	**620**	**437**	**619**	**626**	**282**	**280**	**333**	**316**	**0.0283**
Xylenes, Total	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		**828**
TOTAL VOCs	**1,349**	**1,094**	**1,465**	**1,500**	**1,112**	**1,034**	**1,017**	**1,349**	**1,042**	**784**	**872**	**883**	**589**	**543**	**711**	**651**	--
Metals (mg/L)																	
Arsenic, Dissolved	<0.100	<0.0100	<0.0100	**0.0123**	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--
Barium, Dissolved	**0.078**	**0.091**	**0.109**	**0.116**	**0.112**	**0.104**	**0.102**	**0.096**	**0.078**	**0.095**	**0.068**	**0.072**	**0.057**	**0.063**	**0.078**	**0.660**	--
Cadmium, Dissolved	<0.030	<0.005	<0.00100	< 0.001	< 0.001	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total	<0.040	<0.005	<0.0100	< 0.01	< 0.01	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total	**0.0089**	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	**0.032**	< 0.005	**0.005**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--
Lead, Dissolved	<0.080	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved	<0.010	<0.0100	<0.0500	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--
Zinc, Dissolved	<0.050	<0.0200	<0.0200	**0.0314**	< 0.02	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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) Possible mislabeling of sample occurred in 1988.
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
2003 and subsequent data were validated to Level II
(J) = estimated.

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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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-83AD (Southeast Area)																			PRG
CONSTITUENT **Date Sampled**	**3/1/88**	**8/1/88**	**7/31/92**	**11/8/95**	**11/6/96**	**6/13/97**	**10/15/98**	**10/13/99**	**10/2/00**	**10/31/01**	**10/24/02**	**10/15/03**	**10/20/04**	**10/12/05**	**10/18/06**	**10/17/07**	**10/16/08**	**10/13/09**	**10/20/10**	**(µg/L)**
VOCs (µg/L)																				
Acetone	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene	ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide	ND	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	<2	<2	--
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	ND	ND	**0.6**	ND	1.5	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**973**
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene	ND	NA	NA	**140**	**88**	**60**	**38**	**33**	**8.9**	**9.3**	**3.5**	**2.4**	**2.2**	**2**	**5.3**	**11**	**23**	**41**	**24**	**70**
trans-1,2-Dichloroethene	ND	NA	NA	ND	ND	ND	ND	ND	NA	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**100**
1,2-Dichloroethene, Total	ND	**7.2**	**10**	**140**	**88**	**60**	**38**	**33**	**8.9**	**9.3**	**3.5**	**2.4**	**2.2**	**2**	**5.3**	**11**	**23**	**41**	**24**	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene	ND	**0.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	**13**	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**2.54**
1,2,4-Trimethylbenzene	ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	ND	*<1.0*	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride	**4**	**38**	**3**	**110**	**73**	**54**	**8.8**	**35**	**16**	**3.9**	**5.8**	**3.4**	*<1.0*	**1.2**	**8.7**	**6.6**	**19**	**29**	**18**	**0.0283**
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 2	< 2	**828**
TOTAL VOCs	**4**	**46**	**14**	**250**	**163**	**114**	**47**	**81**	**25**	**13**	**9.3**	**5.8**	**2.2**	**3.2**	**14**	**18**	**42**	**70**	**42**	--
Metals (mg/L)																				
Arsenic, Dissolved	NA	NA	ND	**0.004**	ND	ND	ND	ND	ND	ND	ND	<0.100	<0.0100	**0.0161**	<0.01	< 0.1	< 0.1	<0.10	<0.10	--
Barium, Dissolved	NA	NA	**0.022**	**0.25**	**0.24**	**0.27**	**0.17**	**0.19**	**0.17**	**0.16**	**0.288**	**0.217**	**0.149**	**0.213**	**0.209**	**0.17**	**0.15**	**0.13**	**0.11**	--
Cadmium, Dissolved	NA	NA	**0.005**	ND	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total	NA	NA	**0.07**	ND	ND	**0.014**	ND	ND	ND	ND	ND	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	<0.005	<0.005	--
Lead, Dissolved	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	<0.00500	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved	NA	NA	ND	ND	ND	ND	ND	ND	**0.004**	ND	ND	<0.010	<0.0500	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	--
Zinc, Dissolved	NA	NA	ND	**0.01**	ND	**0.02**	**0.022**	**0.02**	ND	**0.069**	**0.057**	<0.050	**0.0287**	< 0.02	< 0.02	< 0.05	< 0.05	< 0.05	< 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).
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
2003 and subsequent data were validated to Level II
-- = 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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

		MONITORING WELL MW-83B (Northeast Area)																	PRG
CONSTITUENT	**Date Sampled**	**3/1988**	**7/31/92**	**6/7/96**	**11/6/96**	**6/12/97**	**10/15/98**	**10/2/00**	**10/31/01**	**10/23/02**	**10/15/03**	**10/20/04**	**10/12/05**	**10/18/06**	**10/17/07**	**10/16/08**	**10/13/09**	**10/20/10**	**(µg/L)**
VOCs (µg/L)																			
Acetone		**270**	ND	ND	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)		**23**	ND	ND	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene		ND	NA	ND	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide		ND	NA	ND	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane		ND	ND	ND	NA	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	<2	<2	--
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane		ND	NA	ND	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**973**
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	**3.8**	**70**
trans-1,2-Dichloroethene		ND	NA	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**100**
1,2-Dichloroethene, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)		ND	ND	ND	NA	NA	ND	ND	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**2.54**
1,2,4-Trimethylbenzene		ND	NA	ND	NA	NA	ND	ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	<1.0	<1.0	**0.0283**
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 2	< 2	**828**
TOTAL VOCs		**293**	ND	ND	ND	ND	ND	ND	ND	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	<0.0100	< 0.01	< 0.01	< 0.1	< 0.1	<0.10	<0.10	--
Barium, Dissolved		ND	ND	**0.16**	**0.22**	**0.19**	**0.16**	**0.26**	**0.18**	**0.227**	**0.257**	**0.225**	**0.203**	**0.195**	**0.23**	**0.17**	**0.14**	**0.15**	--
Cadmium, Dissolved		ND	**0.005**	ND	ND	ND	ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001	< 0.03	< 0.03	< 0.03	< 0.03	--
Chromium, Dissolved total		ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.04	--
Cyanide, Total		ND	**0.019**	ND	ND	ND	ND	ND	ND	ND	**0.0059**	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	<0.005	<0.005	--
Lead, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	<0.00500	< 0.005	< 0.005	< 0.08	< 0.08	< 0.08	< 0.08	--
Nickel, Dissolved		ND	ND	**0.02**	**0.021**	ND	ND	ND	ND	ND	<0.010	<0.0500	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	--
Zinc, Dissolved		ND	ND	**0.1**	**0.081**	**0.029**	ND	ND	ND	ND	<0.050	**0.0252**	**0.027**	<0.0200	<0.05	<0.05	< 0.05	< 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).
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
2003 and subsequent data were validated to Level II

-- = 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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	MONITORING WELL MW-83DS (Formerly GW-83E; Southeast Area)												PRG
CONSTITUENT **Date Sampled**	**8/1/88**	**11/1/01**	**4/23/02**	**10/24/02**	**10/17/03**	**10/22/04**	**10/14/05**	**10/19/06**	**10/17/07**	**10/17/08**	**10/19/09**	**10/23/10**	**(µg/L)**
VOCs (µg/L)													
Acetone	ND	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	ND	NA	NA	NA	**14.4**	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide	ND	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	<2	<2	--
Chloroform	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	ND	**1.1**	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**973**
1,2-Dichloroethane	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene	ND	**191**	**350**	**320**	**239**	**190**	**110**	**79**	**66**	**47**	**44**	**41**	**70**
trans-1,2-Dichloroethene	ND	**1.1**	ND	ND	**1.1**	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**100**
1,2-Dichloroethene, Total	ND	**192**	**350**	**320**	**240**	**190**	**110**	**79**	**66**	**47**	**44**	**41**	(170)
1,2-Dichloropropane	ND	ND	ND	**1.0**	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**2.54**
1,2,4-Trimethylbenzene	ND	ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride	ND	**16**	**120**	**188**	**80**	**76**	**54**	**31**	**44**	**36**	**28**	**30**	**0.0283**
Xylenes, Total	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 2	< 2	**828**
TOTAL VOCs	ND	**209**	**470**	**509**	**334**	**266**	**164**	**110**	**110**	**82**	**72**	**71**	--
Metals (mg/L)													
Arsenic, Dissolved	**0.003**	ND	ND	ND	<0.100	<0.0100	< 0.01	< 0.01	< 100	< 100	<0.10	<0.10	--
Barium, Dissolved	**0.211**	**0.077**	**0.12**	**0.153**	**0.106**	**0.0947**	**0.139**	**0.139**	**0.0972**	**0.12**	**0.12**	**0.13**	--
Cadmium, Dissolved	ND	ND	ND	ND	<0.030	<0.00100	< 0.001	< 0.001	< 30	< 30	< 0.03	< 0.03	--
Chromium, Dissolved total	ND	ND	ND	ND	<0.040	<0.0100	< 0.01	< 0.01	< 40	< 40	< 0.04	< 0.04	--
Cyanide, Total	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.005	<0.005	--
Lead, Dissolved	ND	ND	**0.16**	ND	<0.080	<0.00500	< 0.005	< 0.005	< 80	< 80	< 0.08	< 0.08	--
Nickel, Dissolved	ND	ND	ND	ND	<0.010	<0.0500	< 0.05	< 0.05	< 10	< 10	< 0.01	< 0.01	--
Zinc, Dissolved	ND	**0.062**	ND	ND	<0.050	<0.0200	< 0.02	**0.0258**	< 50	< 50	< 0.05	< 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).
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
2003 and subsequent data were validated to Level II
-- = 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 D-2
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	MONITORING WELL MW-83DD (Formerly GW-83D; Southeast Area)		PRG
Date Sampled	8/1988	11/6/01	(µg/L)
VOCs (µg/L)			
Acetone	ND	ND	**3,650**
Benzene	ND	ND	**0.617**
Bromomethane	ND	ND	--
2-Butanone (MEK)	ND	NA	--
n-Butylbenzene	ND	ND	--
Carbon Disulfide	ND	ND	**768**
Chloroethane	ND	ND	--
Chloroform	ND	ND	**0.274**
Dibromomethane	ND	ND	--
1,1-Dichloroethane	ND	ND	**973**
1,2-Dichloroethane	ND	ND	--
1,1-Dichloroethene	ND	ND	**0.0167**
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**
Ethylbenzene	ND	ND	**700**
4-Methyl-2-pentanone (MIBK)	ND	ND	**487**
Tetrachloroethene	ND	ND	**1.43**
Toluene	ND	ND	**1,000**
1,1,1-Trichloroethane	ND	ND	**200**
1,1,2-Trichloroethane	ND	ND	**0.314**
Trichloroethene	ND	ND	**2.54**
1,2,4-Trimethylbenzene	ND	ND	--
Vinyl Chloride	ND	ND	**0.0283**
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).

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

Table D-3
Columbia City Municipal Water Supply Well Results - Volatile Organic Compounds and Polychlorinated Biphenyls
Wayne Reclamation & Recycling

Date Sampled:	10/14/1998		12/9/1999		10/3/2000		10/31/2001		10/23/2002		10/16/2003		10/22/2004		10/18/2005		1/13/2006	10/19/2006		11/15/2007		10/15/2008		10/14/2009		10/20/2010	
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**	**PW-7**	**PW-8**	**PW-7**	**PW-8**	**PW-8**	**PW-7**	**PW-8**	**PW-7**	**PW-8**	**PW-7**	**PW-8**	**PW-7**	**PW-8**	**PW-7**	**PW-8**
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromomethane	<10	<10	<10	<10	<10	<10	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
2-Butanone (MEK)	<50	<50	<50	<50	<50	<50	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
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	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	<10	<10	<10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chloroform	<5.0	<5.0	<20	<20	<20	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloromethane	<10	<10	<10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	**1.4***	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
2-Hexanone	<50	<50	<50	<50	<50	<50	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Methylene Chloride	<10	<10	<10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
4-Methyl-2-pentanone (MIBK)	<50	<50	<50	<50	<50	<50	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	<2	<2	<5.0	<5.0	<2.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
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	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PCBs (µg/L)																											
Aroclor 1016	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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.
* The detection of cis-1,2-dichloroethene in PW-8 on 10/18/05 is considered a laboratory artifact from previous analyses.

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

Table D-4
Columbia City Municipal Water Supply Well Results - Metals and Inorganics
Wayne Reclamation & Recycling

Date Sampled:	10/14/1998		12/9/1999		10/3/2000		10/31/2001		10/23/2002		10/16/2003		10/22/2004		10/18/2005		10/19/2006		11/15/2007		10/15/2008		10/14/2009		10/20/2010	
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**	**PW-7**	**PW-8**	**PW-7**	**PW-8**	**PW-7**	**PW-8**	**PW-7**	**PW-8**	**PW-7**	**PW-8**	**PW-7**	**PW-8**	**PW-7**	**PW-8**
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	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
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	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	**6.1**	<0.006	<0.006	<0.006	<0.006	<0.006
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	<0.010	<0.010	<0.010	0.0106	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
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**	**0.144**	**0.138**	**0.164**	**0.143**	**0.165**	**0.133**	**0.157**	**0.13**	**0.194**	**0.147**	**0.154**	**0.132**	**0.158**	**0.137**
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	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium	**86**	**83**	**70**	**67**	**87**	**80**	**80.2**	**75.8**	**89.8** (J)	**92.9**	**95.0**	**84.5**	**79**	**80.4**	**95.4**	**89.4**	**94.1**	**82**	**89**	**79.3**	**90.4**	**82.4**	**83.3**	**77.9**	**86.2**	**79.4**
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	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Iron	**2**	**1.6**	**1.6**	**1.4**	**1.8**	**1.5**	**1.82**	**1.5**	**1.85**	**1.66**	**2.15**	**1.67**	**1.79**	**1.6**	**2.02**	**1.64**	**2.1**	**1.59**	**1.97**	**1.56**	**1.21**	**1.62**	**1.87**	**1.54**	**1.93**	**1.54**
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	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Magnesium	**35**	**36**	**28**	**29**	**34**	**34**	**32.1**	**32.8**	**33.7** (J)	**36.7**	**38.1**	**36.0**	**30.9**	**34.1**	**36.5**	**36**	**36.2**	**33.3**	**35.3**	**33.6**	**36**	**35.2**	**33.4**	**32.8**	**34.9**	**34.1**
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**	**0.111**	**0.134**	**0.123**	**0.135**	**0.13**	**0.133**	**0.128**	**0.134**	**0.08**	**0.137**	**0.12**	**0.131**	**0.119**	**0.131**
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	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Molybdenum	**0.023**	**0.031**	**0.025**	**0.031**	<0.020	**0.021**	<0.020	**0.021**	NA	NA	**0.036**	**0.043**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<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**	**1.59**	**1.87**	**1.93**	**2.11**	**1.9**	**1.93**	**1.87**	**1.9**	**2.12**	**2.15**	**1.84**	**1.98**	**1.9**	**2.06**
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	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
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	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	**13**	**17**	**11**	**13**	**14**	**17**	**14**	**15.8**	**12.8**	**17.7**	**16.1**	**18.4**	**12.8**	**17**	**15.2**	**18.3**	**15.1**	**17.4**	**13.6**	**17.1**	**15.9**	**18.4**	**14.7**	**17.9**	**14.4**	**18.3**
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	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	**0.0044**	<0.002	<0.002	<0.002	<0.002	<0.002
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	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
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	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Inorganics/Wet Chemistry (mg/L)																										
Ammonia Nitrogen	**0.38**	**0.41**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biological Oxygen Demand	<5	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	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	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oil & Grease	<5	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	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	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Kjeldahl Nitrogen	**0.64**	**0.73**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	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	NA	NA	NA	NA	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	NA	NA	NA	NA	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.
< = Not detected above the reporting limit provided.
(J) = estimated.
Bold = Analyte detected above the laboratory reporting limit.
NA = Not analyzed.

Table D-5
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	10/22/2004	10/11/2005	10/20/2006	10/17/2007	10/17/2008	10/19/2009	10/22/2010	(µg/L)
VOCs (µg/L)																	
Acetone		NA	NA	NA	NA	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene		ND	ND	ND	ND	ND	ND	ND	<1.0	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane		ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane		ND	**2.4**	**2.2**	**3.7**	ND	ND	ND	<5.0	**2.4**	< 2	< 2	< 2	11.3	**4.7**	**22**	--
Chloroform		ND	ND	ND	ND	ND	ND	ND	<1.0	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane		ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane		**170**	**180**	**110**	**190**	**140**	**103**	**11**	**74**	**100**	**26**	**53**	**28**	**34**	**75**	**40**	**973**
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	<1.0	*<1.0*	*< 1*	*< 1*	**1.3**	**<1**	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene		**240**	**180**	**190**	**230**	**200**	**119**	**1,100**	**85**	**84**	**22**	**42**	**524**	**54**	**51**	**24**	**70**
trans-1,2-Dichloroethene		ND	**1.4**	**1.4**	**2.9**	ND	**1.3**	**13**	<1.0	<1.0	< 1	< 1	**8.5**	**1.9**	< 1	< 1	**100**
1,2-Dichloroethene, Total		**240**	**181**	**191**	**233**	**200**	**120**	**1,113**	**85**	**84**	**22**	**42**	**533**	**55**	**51**	**24**	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane		**22**	**23**	**20**	**31**	**19**	**13**	**13**	**15**	**17**	**7**	**9**	**12**	**< 1**	**14**	**8.3**	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene		ND	ND	ND	ND	ND	**2.4**	**240**	**9.2**	**4.3**	**13**	**2.6**	**87**	**25**	**3.3**	**2.4**	**2.54**
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride		**170**	ND	**100**	**140**	**80**	**55**	**60**	**40**	**38**	**9.1**	**16**	**74**	**14**	**20**	**18**	**0.0283**
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 2	< 2	**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.
2003 and subsequent data were validated to Level II.

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 D-5
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	10/19/2009	(µg/L)
VOCs (µg/L)										
Acetone		NA	NA	NA	NA	ND	ND	ND	< 20	**3,650**
Benzene		ND	ND	ND	ND	ND	ND	ND	< *1*	**0.617**
Bromomethane		ND	ND	ND	ND	ND	ND	ND	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	ND	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	ND	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	ND	< 20	**768**
Chloroethane		ND	**2.6**	**2.2**	ND	ND	ND	ND	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	ND	< *1*	**0.274**
Dibromomethane		ND	NA	NA	NA	ND	ND	ND	< 1	--
1,1-Dichloroethane		**8.1**	**160**	**110**	**21**	**52**	**18.2**	**19**	**12**	**973**
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	< 1	--
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	< *1*	**0.0167**
cis-1,2-Dichloroethene		**6.6**	**150**	**180**	**53**	**78**	**45**	**55**	**32**	**70**
trans-1,2-Dichloroethene		ND	**1.6**	**1.4**	ND	ND	**1.7**	ND	**1.5**	**100**
1,2-Dichloroethene, Total		**6.6**	**151.6**	**181.4**	**53**	**78**	**46.7**	**55**	**34**	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	< 1	**1.25**
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	< 1	**700**
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	ND	< 20	**487**
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	< 1	**1.43**
Toluene		ND	ND	ND	ND	ND	ND	ND	< 1	**1,000**
1,1,1-Trichloroethane		ND	**23.0**	**20.0**	ND	**6.1**	**4.4**	ND	**14**	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	< *1*	**0.314**
Trichloroethene		ND	ND	ND	ND	ND	**1.2**	ND	< 1	**2.54**
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	ND	< 5	--
Vinyl Chloride		**7.7**	**150**	**97**	**19**	**34**	**5.3**	**10**	**1.8**	**0.0283**
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	< 2	**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
2003 and subsequent data were validated to Level II

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

Table D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	RECOVERY WELL RW-3 (Aboveground Storage Tank Area)																PRG
Date Sampled:	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	10/22/2004	10/11/2005	10/20/2006	10/17/2007	10/17/2008	10/19/2009	10/22/2010	(µg/L)
VOCs (µg/L)																	
Acetone	NA	NA	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	NA	NA	NA	NA	NA	ND	NA	NA	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	ND	**3.1**	**2.7**	**4.9**	ND	ND	ND	**9.4**	**3.6**	**3.2**	**3.7**	**2.8**	**2.7**	**3**	**3**	< 1	**973**
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	ND	ND	ND	**1.9**	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene	**390**	**330**	**270**	**690**	**340**	**150**	**200**	**349**	**183**	**170**	**260**	**88**	**288**	**140**	**75**	**135**	**70**
trans-1,2-Dichloroethene	**10**	**5.9**	**6.9**	**15**	**11**	ND	**5.1**	**8.6**	**7.1**	**5.0**	**6.4**	**4.6**	**8.6**	**4.5**	**2.1**	**5.1**	**100**
1,2-Dichloroethene, Total	**400**	**336**	**277**	**705**	**351**	**150**	**205**	**358**	**190**	**175**	**266**	**93**	**297**	**145**	**78**	**140**	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	ND	ND	ND	**1.7**	ND	ND	ND	**4.4**	**4.9**	**5.3**	**10**	**9.2**	**10.1**	< 1	**3.1**	**8.9**	**200**
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene	**150**	**130**	**120**	**240**	**330**	**96**	**140**	**99**	**106**	**92**	**88**	**45**	**96**	**66**	**68**	**78**	**2.54**
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride	**43**	**40**	**28**	**50**	**3.5**	**11**	**15**	**30**	**31**	**9.7**	**12**	**4.2**	**8.3**	**8.4**	**6.5**	**7.7**	**0.0283**
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 2	**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.
2003 and subsequent data were validated to Level II.

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 D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	RECOVERY WELL RW-4 (Monitoring Wells MW-4S and MW-7S Area)															PRG
Date Sampled:	8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	4/23/2002	12/22/2003	10/22/2004	10/11/2005	10/20/2006	10/17/2007	10/17/2008	10/19/2009	10/22/2010	(µg/L)
VOCs (µg/L)																
Acetone	NA	NA	NA	NA	ND	ND	ND	<20.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**3,650**
Benzene	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	--
n-Butylbenzene	ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
Carbon Disulfide	NA	NA	NA	NA	ND	ND	ND	<1.0	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**768**
Chloroethane	ND	NA	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	--
Chloroform	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane	ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane	ND	**2.9**	**1.5**	**2.6**	ND	**13.3**	**1.2**	**1.5**	**2.7**	**1.7**	**1.7**	< 1	< 1	< 1	< 1	**973**
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene	ND	ND	ND	ND	ND	2.3	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.0167**
cis-1,2-Dichloroethene	**430**	**450**	**290**	**390**	**180**	**1,580**	**147**	**165**	**330**	**200**	**180**	**164**	**178**	**128**	**137**	**70**
trans-1,2-Dichloroethene	**27**	**26**	**18**	**24**	**12**	**23**	**16**	**14**	**25**	**16**	**16**	**15**	**16**	**13**	**13**	**100**
1,2-Dichloroethene, Total	**457**	**476**	**308**	**414**	**192**	**1,603**	**163**	**179**	**355**	**216**	**196**	**179**	**194**	**141**	**150**	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	ND	<12.5	<20.0	< 20	< 20	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1.43**
Toluene	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	*<1.0*	*<1.0*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene	ND	ND	ND	ND	ND	**258**	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	**2.54**
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	ND	<1.0	NA	< 5	< 5	< 5	< 5	< 5	< 5	--
Vinyl Chloride	ND	ND	ND	ND	ND	**142**	ND	*<1.0*	**2.9**	*< 1*	*< 1*	*< 1*	**2**	**2.1**	*< 1*	**0.0283**
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	< 1	< 1	< 1	< 1	< 2	**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.
2003 and subsequent data were validated to Level II.

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 D-5
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	10/22/2004	10/11/2005	10/20/2006	10/17/2007	10/17/2008	10/19/2009	10/22/2010	(µg/L)
VOCs (µg/L)																		
Acetone		NA	NA	NA	NA	ND	ND	ND	ND	<100	<20.0	< 100	< 100	< 20	< 20	< 20	< 20	**3,650**
Benzene		ND	ND	ND	ND	ND	**4.0**	**3.8**	**5.6**	*<5.0*	**3.6**	*< 5*	**2.5**	**1**	*< 1*	*< 1*	*< 1*	**0.617**
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 10	< 10	< 1	< 1	< 1	< 1	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	NA	NA	<62	<20.0	< 100	< 100	< 20	< 20	< 20	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	ND	ND	<5.0	<20.0	< 100	< 100	< 20	< 20	< 20	< 20	**768**
Chloroethane		ND	NA	ND	ND	ND	ND	ND	ND	<25	<2.0	< 10	< 10	< 2	< 2	< 2	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	*<5.0*	*<1.0*	*< 5*	*< 5*	*< 1*	*< 1*	*< 1*	*< 1*	**0.274**
Dibromomethane		ND	NA	NA	NA	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	--
1,1-Dichloroethane		ND	ND	**1.1**	**4.0**	ND	**7.1**	**4.7**	**5.7**	<5.0	**4.7**	< 5	**3.1**	**1.3**	**3**	**4.3**	< 1	**973**
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	--
1,1-Dichloroethene		ND	ND	ND	ND	ND	**2.9**	**2.2**	**5.2**	*<5.0*	**2.8**	*< 5*	**1.8**	**3.1**	**1.5**	*< 1*	*<1*	**0.0167**
cis-1,2-Dichloroethene		**330**	**330**	**910**	**1,900**	**4,000**	**5,310**	**3,520**	**5,500**	**2,810**	**3,600**	**2,200**	**2,000**	**2,180**	**1,600 J**	**1,130**	**626**	**70**
trans-1,2-Dichloroethene		**20**	**26**	**53**	**140**	**260**	**211**	**143**	**96**	**102**	**63**	**21**	**48**	**44**	**11**	**13**	**6**	**100**
1,2-Dichloroethene, Total		**350**	**356**	**963**	**2,040**	**4,260**	**5,521**	**3,663**	**5,596**	**2,912**	**3,663**	**2,221**	**2,048**	**2,224**	**1,600**	**1,143**	**632**	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	*<5.0*	<1.0	*< 5*	*< 5*	< 1	< 1	< 1	< 1	**1.25**
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	**700**
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	ND	ND	<62	<20	< 100	< 100	< 20	< 20	< 20	< 20	**487**
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	*<5.0*	<1.0	*< 5*	*< 5*	< 1	< 1	< 1	< 1	**1.43**
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 1	< 1	< 1	< 1	**1,000**
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	**4.0**	**3.1**	ND	<5.0	**1.2**	< 5	**1.4**	< 1	< 1	< 1	< 1	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	*<5.0*	*<1.0*	*< 5*	*< 5*	*< 1*	*< 1*	*< 1*	*< 1*	**0.314**
Trichloroethene		ND	**1.8**	ND	**15**	**130**	**348**	**219**	**55**	**175**	**50 (J)**	**17**	**140**	**54**	**14**	**26**	**11**	**2.54**
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	ND	ND	<5.0	NA	< 25	< 25	< 5	< 5	< 5	< 5	--
Vinyl Chloride		**100**	**200**	**520**	**1,600**	**1,100**	**393**	**436**	**600**	**335**	**520**	**360**	**200**	**415**	**357 J**	**264**	**215**	**0.0283**
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	< 5	< 2	< 2	< 2	< 2	**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.
October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.
2003 and subsequent data were validated to Level II.
(J) = estimated.

No data was collected during the October 1998 sampling event.
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 D-5
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	10/19/2009	(µg/L)
VOCs (µg/L)									
Acetone		NA	NA	NA	NA	ND	ND	< 20	**3,650**
Benzene		ND	ND	ND	ND	ND	ND	< *1*	**0.617**
Bromomethane		ND	ND	ND	ND	ND	ND	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	< 20	**768**
Chloroethane		ND	NA	**7.5**	ND	ND	ND	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	< *1*	**0.274**
Dibromomethane		ND	NA	NA	NA	ND	ND	< 1	--
1,1-Dichloroethane		ND	ND	**21**	ND	ND	ND	**10**	**973**
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	< 1	--
1,1-Dichloroethene		ND	ND	**3.6**	ND	ND	ND	< *1*	**0.0167**
cis-1,2-Dichloroethene		ND	ND	**4,500**	**1.0**	**5.7**	**43**	**1,060**	**70**
trans-1,2-Dichloroethene		ND	ND	**53**	ND	ND	ND	**12**	**100**
1,2-Dichloroethene, Total		ND	ND	**4,553**	**1.0**	**5.7**	**43**	**1,072**	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	< 1	**1.25**
Ethylbenzene		ND	ND	ND	ND	ND	ND	< 1	**700**
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	< 20	**487**
Tetrachloroethene		ND	ND	ND	ND	ND	ND	< 1	**1.43**
Toluene		ND	ND	ND	ND	ND	ND	< 1	**1,000**
1,1,1-Trichloroethane		ND	ND	**3.1**	ND	ND	ND	< 1	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	< *1*	**0.314**
Trichloroethene		ND	ND	**240**	ND	ND	ND	**171**	**2.54**
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	< 5	--
Vinyl Chloride		ND	ND	**780**	**1.1**	ND	**112**	**4.3**	**0.0283**
Xylenes, Total		ND	ND	ND	ND	ND	ND	< 1	**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

2003 and subsequent data were validated to Level II.

Bold = Analyte detected above laboratory reporting limit

Shaded = Analyte detected above the corresponding PRG

-- = No PRG assigned.

Table D-5
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	10/19/2009	(µg/L)
VOCs (µg/L)									
Acetone		NA	NA	NA	NA	ND	ND	< 20	**3,650**
Benzene		ND	ND	ND	ND	ND	ND	*< 1*	**0.617**
Bromomethane		ND	ND	ND	ND	ND	ND	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	< 20	**768**
Chloroethane		ND	NA	ND	ND	ND	ND	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	*< 1*	**0.274**
Dibromomethane		ND	NA	NA	NA	ND	ND	< 1	--
1,1-Dichloroethane		ND	ND	ND	ND	ND	**1.7**	< 1	**973**
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	< 1	--
1,1-Dichloroethene		ND	ND	ND	ND	ND	**1.1**	*< 1*	**0.0167**
cis-1,2-Dichloroethene		**2.4**	**910**	**100**	**520**	ND	**653**	**285**	**70**
trans-1,2-Dichloroethene		ND	**43**	**2.2**	**12**	ND	**7.1**	**6**	**100**
1,2-Dichloroethene, Total		**2.4**	**953**	**102**	**532**	ND	**660**	**291**	(170)
1,2-Dichloropropane		ND	**7.4**	ND	**2.4**	ND	ND	< 1	**1.25**
Ethylbenzene		ND	ND	ND	ND	ND	ND	< 1	**700**
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	< 20	**487**
Tetrachloroethene		ND	**1.0**	ND	ND	ND	ND	< 1	**1.43**
Toluene		ND	ND	ND	ND	ND	ND	< 1	**1,000**
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	*< 1*	**0.314**
Trichloroethene		**1.7**	**290**	**26**	**140**	**43**	**101**	**168**	**2.54**
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	< 5	--
Vinyl Chloride		ND	ND	ND	**7.9**	**3.3**	**174**	**35**	**0.0283**
Xylenes, Total		ND	ND	ND	ND	ND	ND	< 1	**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

2003 and subsequent data were validated to Level II.

Bold = Analyte detected above laboratory reporting limit

Shaded = Analyte detected above the corresponding PRG

-- = No PRG assigned.

Table D-5
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	10/19/2009	(µg/L)
VOCs (µg/L)									
Acetone		NA	NA	NA	NA	ND	ND	< 20	**3,650**
Benzene		ND	ND	ND	ND	ND	ND	*< 1*	**0.617**
Bromomethane		ND	ND	ND	ND	ND	ND	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	< 20	**768**
Chloroethane		ND	NA	**3.6**	**2.1**	ND	ND	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	*< 1*	**0.274**
Dibromomethane		ND	NA	NA	NA	ND	ND	< 1	--
1,1-Dichloroethane		ND	**11**	**19**	**29**	ND	**110**	**46**	**973**
1,2-Dichloroethane		ND	**1,400**	ND	ND	ND	ND	< 1	--
1,1-Dichloroethene		ND	**3.1**	**5.6**	**5.8**	ND	**30.6**	**7.9**	**0.0167**
cis-1,2-Dichloroethene		**3,000**	**1,434**	**2,800**	**4,700**	**5,500**	**18,500**	**3,190**	**70**
trans-1,2-Dichloroethene		**66**	ND	**42**	**44**	ND	**144**	**48**	**100**
1,2-Dichloroethene, Total		**3,066**	**1,434**	**2,842**	**4,744**	**5,500**	**18,644**	**3,238**	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	< 1	**1.25**
Ethylbenzene		ND	ND	ND	ND	ND	ND	< 1	**700**
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	< 20	**487**
Tetrachloroethene		ND	ND	ND	ND	ND	ND	< 1	**1.43**
Toluene		ND	ND	ND	ND	ND	ND	< 1	**1,000**
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	*< 1*	**0.314**
Trichloroethene		**140**	**98**	**160**	**180**	**270**	**5,250**	**818**	**2.54**
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	< 5	--
Vinyl Chloride		**650**	**130**	**310**	**160**	ND	**802**	**282**	**0.0283**
Xylenes, Total		ND	ND	ND	ND	ND	ND	< 1	**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

2003 and subsequent data were validated to Level II.

Bold = Analyte detected above laboratory reporting limit

Shaded = Analyte detected above the corresponding PRG

-- = No PRG assigned.

Table D-5
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	10/19/2009	(µg/L)
VOCs (µg/L)									
Acetone		NA	NA	NA	NA	ND	ND	< 20	**3,650**
Benzene		ND	ND	ND	ND	ND	ND	< *1*	**0.617**
Bromomethane		ND	ND	ND	ND	ND	ND	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	< 20	**768**
Chloroethane		ND	NA	**3.3**	ND	ND	ND	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	< *1*	**0.274**
Dibromomethane		ND	NA	NA	NA	ND	ND	< 1	--
1,1-Dichloroethane		**1.3**	**3.3**	**1.2**	**1.9**	ND	**3.0**	< 1	**973**
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	< 1	--
1,1-Dichloroethene		ND	**3.1**	**5.7**	**4.4**	ND	**6.3**	**5.0**	**0.0167**
cis-1,2-Dichloroethene		**340**	**2,100**	**2,700**	**3,000**	**5,300**	**3,880**	**1,640**	**70**
trans-1,2-Dichloroethene		**3**	**19**	**32**	**17**	**61**	**32.6**	**16**	**100**
1,2-Dichloroethene, Total		**343**	**2,119**	**2,732**	**3,017**	**5,361**	**3,913**	**1,656**	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	**1.8**	< 1	**1.25**
Ethylbenzene		ND	ND	ND	ND	ND	ND	< 1	**700**
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	< 20	**487**
Tetrachloroethene		ND	ND	**3.1**	ND	ND	ND	**2.6**	**1.43**
Toluene		ND	ND	ND	ND	ND	ND	< 1	**1,000**
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	< *1*	**0.314**
Trichloroethene		**23**	**230**	**480**	**300**	**510**	**565**	**370**	**2.54**
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	< 5	--
Vinyl Chloride		**5.1**	**220**	**410**	**400**	ND	**306**	**169**	**0.0283**
Xylenes, Total		ND	ND	ND	ND	ND	ND	< 1	**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.

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-- = No PRG assigned.

Table D-5
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT	Date Sampled:	RECOVERY WELL RW-10 (Southeast Area)							PRG
		8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	10/19/2009	(µg/L)
VOCs (µg/L)									
Acetone		NA	NA	NA	NA	ND	ND	< 20	**3,650**
Benzene		ND	ND	ND	ND	ND	**7**	< *1*	**0.617**
Bromomethane		**2**	ND	ND	ND	ND	ND	< 2	--
2-Butanone (MEK)		NA	NA	NA	NA	NA	NA	< 20	--
n-Butylbenzene		ND	NA	NA	NA	ND	ND	< 1	--
Carbon Disulfide		NA	NA	NA	NA	ND	ND	< 20	**768**
Chloroethane		**10**	NA	NA	**17**	ND	**17**	< 2	--
Chloroform		ND	ND	ND	ND	ND	ND	< *1*	**0.274**
Dibromomethane		ND	NA	NA	NA	ND	ND	< 1	--
1,1-Dichloroethane		**68**	**8**	**55**	**71**	**74**	**82**	**31**	**973**
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	< 1	--
1,1-Dichloroethene		**5**	ND	**7**	**8**	ND	**7**	**6.7**	**0.0167**
cis-1,2-Dichloroethene		**6,100**	**1,100**	**8,600**	**48,000**	**11,000**	**11,000**	**3,080**	**70**
trans-1,2-Dichloroethene		**89**	**28**	**58**	**77**	**84**	**89**	**44**	**100**
1,2-Dichloroethene, Total		**6,189**	**1,128**	**8,658**	**48,077**	**11,084**	**11,089**	**3,124**	(170)
1,2-Dichloropropane		ND	ND	ND	**1**	ND	**2**	< 1	**1.25**
Ethylbenzene		ND	ND	ND	ND	ND	ND	< 1	**700**
4-Methyl-2-pentanone (MIBK)		NA	NA	NA	NA	ND	ND	< 20	**487**
Tetrachloroethene		**1**	ND	**1**	ND	ND	ND	< 1	**1.43**
Toluene		ND	ND	ND	ND	ND	ND	< 1	**1,000**
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	< 1	**200**
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	< *1*	**0.314**
Trichloroethene		**420**	**53**	**500**	**440**	**640**	**308**	**289**	**2.54**
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	< 5	--
Vinyl Chloride		**1,400**	**290**	**1,900**	**1,200**	**1,400**	**548**	**277**	**0.0283**
Xylenes, Total		ND	ND	ND	ND	ND	ND	< 1	**828**

Notes:

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

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NA = Not analyzed.

No data was collected during the October 1998 sampling event

2003 and subsequent data were validated to Level II.

Bold = Analyte detected above laboratory reporting limit

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-- = No PRG assigned.

Table D-6
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 D-6
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 D-6
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 D-6
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 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**
October 2004	Trichloroethene	900	180	0.07	470	350	0.08	(susp)	0	0.00	48	336	0.19	0.34
October 2004	cis-1,2-DCE	900	330	0.09	470	170	0.02	(susp)	0	0.00	48	772	0.45	0.56
October 2004	Vinyl Chloride	900	0	0.00	470	18.4	0.00	(susp)	0	0.00	48	260	0.15	0.15
	Total			0.16			0.11			0.00			0.79	**1.05**
April 2005	Trichloroethene	860	323	0.11	280	105	0.01	(susp)	0	0.00	74	251	0.22	0.35
April 2005	cis-1,2-DCE	860	742	0.19	280	64.6	0.01	(susp)	0	0.00	74	1,670	1.48	1.68
April 2005	Vinyl Chloride	860	0	0.00	280	0	0.00	(susp)	0	0.00	74	210	0.19	0.19
	Total			0.31			0.02			0.00			1.89	**2.22**
October 2005	Trichloroethene	560	230	0.05	218	260	0.03	(susp)	0	0.00	113	205	0.28	0.36
October 2005	cis-1,2-DCE	560	400	0.07	218	290	0.02	(susp)	0	0.00	113	1,711	2.32	2.41
October 2005	Vinyl Chloride	560	0	0.00	218	0	0.00	(susp)	0	0.00	113	168.7	0.23	0.23
	Total			0.12			0.05			0.00			2.83	**3.00**

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.

The soil vapor extraction (SVE) and air sparge (AS) systems were temporarily shut down on November 13, 2005 for assessment of the vadose zone and was restarted in April 2006.

Table D-6
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 2006	Trichloroethene	1,020	309	0.13	213	197	0.02	(susp)	0	0.00	93	157	0.18	0.33
April 2006	cis-1,2-DCE	1,020	458	0.14	213	805	0.05	(susp)	0	0.00	93	928	1.04	1.23
April 2006	Vinyl Chloride	1,020	0	0.00	213	0	0.00	(susp)	0	0.00	93	110	0.12	0.12
	Total			0.27			0.07			0.00			1.34	**1.68**
October 2006	Trichloroethene	873	376	0.14	312	380	0.06	(susp)	0	0.00	77	335	0.31	0.50
October 2006	cis-1,2-DCE	873	570	0.15	312	222	0.02	(susp)	0	0.00	77	1,718	1.59	1.76
October 2006	Vinyl Chloride	873	0	0.00	312	0	0.00	(susp)	0	0.00	77	140	0.13	0.13
	Total			0.29			0.08			0.00			2.03	**2.39**
April 2007	Trichloroethene	(susp)	0	0.00	750	28	0.01	(susp)	0	0.00	85	129	0.13	0.14
April 2007	cis-1,2-DCE	(susp)	0	0.00	750	11	0.00	(susp)	0	0.00	85	894	0.91	0.92
April 2007	Vinyl Chloride	(susp)	0	0.00	750	0	0.00	(susp)	0	0.00	85	123	0.13	0.13
	Total			0.00			0.01			0.00			1.17	**1.18**
October 2007	Trichloroethene	(susp)	0	0.00	690	52	0.02	(susp)	0	0.00	55	84	0.06	0.07
October 2007	cis-1,2-DCE	(susp)	0	0.00	690	33	0.01	(susp)	0	0.00	55	537	0.35	0.36
October 2007	Vinyl Chloride	(susp)	0	0.00	690	0	0.00	(susp)	0	0.00	55	117	0.08	0.08
	Total			0.00			0.02			0.00			0.49	**0.51**

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.

The soil vapor extraction (SVE) and air sparge (AS) systems were temporarily shut down on November 13, 2005 for assessment of the vadose zone and was restarted in April 2006.

The AS system was suspended in November 2006.

Table D-6
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 2008	Trichloroethene	(susp)	0	0.00	700	0	0.00	(susp)	0	0.00	32	45	0.02	0.02
April 2008	cis-1,2-DCE	(susp)	0	0.00	700	0	0.00	(susp)	0	0.00	32	354	0.14	0.14
April 2008	Vinyl Chloride	(susp)	0	0.00	700	0	0.00	(susp)	0	0.00	32	98	0.04	0.04
	Total			0.00			0.00			0.00			0.19	**0.19**
October 2008	Trichloroethene	(susp)	0	0.00	500	559	0.13	(susp)	0	0.00	59	214	0.15	0.29
October 2008	cis-1,2-DCE	(susp)	0	0.00	500	362	0.09	(susp)	0	0.00	59	1,126	0.80	0.89
October 2008	Vinyl Chloride	(susp)	0	0.00	500	0	0.00	(susp)	0	0.00	59	185	0.13	0.13
	Total			0.00			0.22			0.00			1.08	**1.30**
April 2009	Trichloroethene	(susp)	0	0.00	870	9.5	0.00	(susp)	0	0.00	63	82	0.06	0.07
April 2009	cis-1,2-DCE	(susp)	0	0.00	870	13	0.01	(susp)	0	0.00	63	356	0.27	0.27
April 2009	Vinyl Chloride	(susp)	0	0.00	870	1	0.00	(susp)	0	0.00	63	74	0.06	0.06
	Total			0.00			0.01			0.00			0.39	**0.40**
October 2009	Trichloroethene	(susp)	0	0.00	1240	99	0.06	(susp)	0	0.00	55	187	0.12	0.18
October 2009	cis-1,2-DCE	(susp)	0	0.00	1240	37	0.01	(susp)	0	0.00	55	900	0.59	0.61
October 2009	Vinyl Chloride	(susp)	0	0.00	1240	0	0.00	(susp)	0	0.00	55	92	0.06	0.06
	Total			0.00			0.07			0.00			0.78	**0.85**

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.

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[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.

The AS system was suspended in November 2006.

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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 2010	Trichloroethene	(susp)	0	0.00	1300	40	0.03	(susp)	0	0.00	64	623	0.48	0.50
April 2010	cis-1,2-DCE	(susp)	0	0.00	1300	23	0.01	(susp)	0	0.00	64	1,533	1.17	1.18
April 2010	Vinyl Chloride	(susp)	0	0.00	1300	0	0.00	(susp)	0	0.00	64	234	0.18	0.18
	Total			0.00			0.03			0.00			1.83	**1.86**
October 2010	Trichloroethene	(susp)	0	0.00	1240	98	0.06	(susp)	0	0.00	59	305	0.22	0.27
October 2010	cis-1,2-DCE	(susp)	0	0.00	1240	48	0.02	(susp)	0	0.00	59	1,312	0.93	0.95
October 2010	Vinyl Chloride	(susp)	0	0.00	1240	0	0.00	(susp)	0	0.00	59	208	0.15	0.15
	Total			0.00			0.08			0.00			1.29	**1.37**
April 2011	Trichloroethene	(susp)	0	0.00	1000	24	0.01	(susp)	0	0.00	66	335	0.27	0.28
April 2011	cis-1,2-DCE	(susp)	0	0.00	1000	19	0.01	(susp)	0	0.00	66	951	0.75	0.76
April 2011	Vinyl Chloride	(susp)	0	0.00	1000	0	0.00	(susp)	0	0.00	66	161	0.13	0.13
	Total			0.00			0.02			0.00			1.15	**1.17**

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.

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[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.

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Table D-7
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	10/21/2004	10/13/2005	10/19/2006	10/18/2007	10/14/2008	10/14/2009	10/21/2010
Total Metals (mg/L)																
Arsenic	**0.015**	**0.0044**	**0.005**	<0.005	<0.005	<0.028	<0.0050	<0.0050	**0.0130**	<0.0100	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Beryllium	<0.0050	<0.0050	<0.0050	<0.003	<0.003	<0.003	<0.0010	<0.0010	<0.0010	<0.00400	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	<0.0050	<0.0050	<0.0050	<0.005	<0.010	<0.005	<0.0010	<0.0010	<0.0010	<0.00500	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0020	<0.0020	<0.0020	<0.0100	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	**0.032**	<0.020	**1.9**	<0.010	<0.005	<0.005	<0.0050	<0.0050	**0.0170**	<0.0200	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Lead	<0.10	<0.10	<0.10	<0.005	<0.005	<0.005	<0.0010	<0.0010	<0.0010	<0.0100	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Mercury	<0.00020	<0.00020	<0.00020	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.00200	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Molybdenum	<0.20	<0.20	<0.20	<0.020	<0.020	<0.020	**0.0061**	**0.0084**	**0.0064**	<0.0500	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	<0.050	<0.020	<0.020	<0.020	<0.020	<0.005	**0.0091**	**0.0078**	**0.0110**	<0.0500	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Potassium	**12.0**	**12.0**	**9.5**	**11.0**	**9.0**	**9.0**	**8.6**	**10.7**	**10.8**	**10.4**	**9.1**	**11.6**	**8.3**	**9.3**	**8.5**	**8.8**
Selenium	<0.0020	<0.0020	<0.0020	<0.005	<0.005	<0.036	<0.0050	<0.0050	<0.0050	<0.0100	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Silver	<0.010	<0.010	<0.010	<0.020	<0.001	<0.005	<0.0005	<0.0005	<0.0005	<0.0500	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Zinc	**0.054**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.050	<0.050	**0.226**	<0.0500	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Inorganics/Wet Chemistry (mg/L)																
Ammonia Nitrogen	**0.72**	**0.15**	**0.28**	**1.00**	**0.80**	**1.10**	**1.20**	**1.8**	**2.6**	**1.45**	**1.17**	**1.91**	**0.62**	**1.5**	**1.0**	**1.1**
Biological Oxygen Demand	<2.0	<2.0	<2.0	<5	**6**	**8**	<5	**9.4**	<5	<5	**12**	**<5**	NA	NA	**9.46**	<5
Chemical Oxygen Demand	**23**	**18**	**21**	<10	<10	**16**	**72**	**24**	**17**	<10.0	**26.9**	**26.3**	**22.2**	**16.5**	**38.4**	**11.3**
Nitrate/Nitrite Nitrogen	**0.32**	**0.33**	**0.44**	**0.036**	**0.04**	**0.033**	**0.23**	**0.033**	**0.20**	<0.500	< 0.5	< 0.5	**0.10**	< 0.1	< 0.1	**0.37 J**
Oil & Grease	<5	<5	<5	<5	**6**	**6**	<5	<5	<5	<5	< 5	< 5	<5	<5	<5	<5
pH	**8.3**	**8.27**	**7.65**	NA	**7.2**	**7.2**	NA	**8.06**	**7.87**	**8.14**	**8.14**	**8.23**	**8.26**	**8.26**	**8.26**	**8.27**
Surfactants (MBAs)	Negative	Negative	Negative	**Positive**	**Positive**	Negative	**0.13**	**0.16**	<0.10	**0.701**	< 0.2	< 0.2	<0.2	<0.2	<0.1	<0.2
Total Cyanide	<0.005	<0.005	<0.0050	<0.005	<0.005	<0.020	<0.005	<0.005	<0.005 (J)	<0.00500	< 0.005	< 0.005	<0.005	<0.005	<0.005	<0.005
Total Kjeldahl Nitrogen	**47**	**1.21**	**0.98**	**1.6**	**1.09**	**1.5**	**1.6**	**2.1**	**2.7**	**2.08**	< 2	**2.67**	**1.3**	**2.5 J**	**1.8**	**1.1**
Total Phenols	<0.01	<0.01	**0.17**	<0.010	<0.010	<0.005	0.0093	0.0084	<0.010	<0.100	< 0.05	< 0.05	<0.02	**0.03**	<0.02	<0.01
Total Phosphorus	**0.93**	**0.75**	**0.96**	<0.05	**0.48**	<0.15	<0.15	<0.15	<0.05	<0.0500	< 0.05	< 0.05	<0.05	<0.05 J	**0.13**	**2.5 J**
Total Solids	**1,100**	**820**	**850**	**830**	**790**	**820**	**850**	**800**	**960**	**940**	**734**	**828**	**688**	**628**	**614**	**656**
Total Suspended Solids	**11**	**14**	**19**	**27**	<5	**5**	**9**	<5	**6**	**34.5**	< 5	**7.3**	**5**	**6**	<5	**8**
PCBs (µg/L)																
Aroclor 1016	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	< 0.5	< 0.5	< 0.5	< 0.55	< 0.51	< 0.52
Aroclor 1221	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	< 0.5	< 0.5	< 0.5	< 0.55	< 0.51	< 0.52
Aroclor 1232	<0.4	<0.4	<0.4	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	< 0.5	< 0.5	< 0.5	< 0.55	< 0.51	< 0.52
Aroclor 1242	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	< 0.5	< 0.5	< 0.5	< 0.55	< 0.51	< 0.52
Aroclor 1248	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	< 0.5	< 0.5	< 0.5	< 0.55	< 0.51	< 0.52
Aroclor 1254	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	< 0.5	< 0.5	< 0.5	< 0.55	< 0.51	< 0.52
Aroclor 1260	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	< 0.5	< 0.5	< 0.5	< 0.55	< 0.51	< 0.52

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.
J = Estimated.

Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	4/23/1999		5/17/1999		6/24/1999	
CONSTITUENT (ppb[v/v])	**IN**	**EFF**	**IN**	**EFF**	**IN**	**EFF**
1,1-Dichloroethane	**26**	**25**	**29**	**13**	**45**	**9**
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**
Tetrachloroethene	<14	**17**	**110**	**52**	**46**	**6**
Toluene	**20**	<13	<18	<12	<17	**3**
1,1,1-Trichloroethane	**36**	**36**	**83**	**25**	**43**	**8**
Trichloroethene	**220**	**300**	**570**	**240**	**860**	**120**
Vinyl Chloride	**360**	**280**	**220**	**120**	**240**	**35**
Cumulative Risk (1)	**7.52E-07**	**5.93E-07**	**4.98E-07**	**2.67E-07**	**1.08E-07**	**1.53E-08**

Date Sampled	7/13/1999	8/6/1999	9/1/1999	10/14/1999	11/23/1999	12/13/1999
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	**45**	**45**	**60**	**61**	**32**	**32**
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**
Tetrachloroethene	**51**	**27**	**25**	**63**	**16**	**38**
Toluene	<7.8	<9.2	<2.3	<9.2	<14	<12
1,1,1-Trichloroethane	**180**	**44**	**200**	**99**	**97**	**66**
Trichloroethene	**440**	**810**	**390**	**1,700**	**390**	**520**
Vinyl Chloride	**340**	**270**	**220**	**180**	**200**	**200**
Cumulative Risk (1)	**1.10E-07**	**1.09E-07**	**7.53E-08**	**1.41E-07**	**6.93E-08**	**7.96E-08**

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 D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/3/2000	2/7/2000	3/15/2000	4/25/2000	5/24/2000	6/6/2000
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	**29**	**17**	**25**	**31**	**30**	**27**
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**
Tetrachloroethene	**57**	<8.3	**88**	<21	**110**	**30**
Toluene	<18	<8.3	<9.0	<3.1	<12	<2.0
1,1,1-Trichloroethane	**110**	**29**	**89**	**47**	**150**	**110**
Trichloroethene	**440**	**220**	**400**	**300**	**440**	**380**
Vinyl Chloride	**94**	**91**	**61**	**260**	**130**	**190**
Cumulative Risk (1)	**5.38E-08**	**3.39E-08**	**4.88E-08**	**7.92E-08**	**7.03E-08**	**6.86E-08**

Date Sampled	7/25/2000	8/4/2000	9/5/2000	10/6/2000	11/7/2000	12/21/2000
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	**21**	**30**	**34**	**49**	**36**	**30**
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**
Tetrachloroethene	**31**	**56**	**22**	**52**	**110**	**38**
Toluene	<9.7	<12	<12	<18	<10	<9.3
1,1,1-Trichloroethane	**80**	**59**	**80**	**93**	**73**	**50**
Trichloroethene	**290**	**840**	**540**	**920**	**840**	**760**
Vinyl Chloride	**190**	**230**	**210**	**130**	**170**	**190**
Cumulative Risk (1)	**6.40E-08**	**1.06E-07**	**8.04E-08**	**8.66E-08**	**1.01E-07**	**8.99E-08**

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 D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/30/2001	2/26/2001	3/21/2001	4/23/2001	5/21/2001	6/13/2001
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	**30**	<140	**18**	<140	<150	<150
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
Tetrachloroethene	**38**	<140	**34**	<140	<150	<150
Toluene	<9.2	<140	**4.0**	<140	<150	<150
1,1,1-Trichloroethane	**53**	<140	**26**	<140	<150	<150
Trichloroethene	**630**	**260**	**340**	**160**	<150	**430**
Vinyl Chloride	**270**	**180**	**190**	**160**	<150	**210**
Cumulative Risk (1)	**1.02E-07**	**7.71E-08**	**6.71E-08**	**6.72E-08**	**6.59E-08**	**9.46E-08**

Date Sampled	7/23/2001	8/23/2001	9/17/2001	10/31/2001	11/18/2001	12/28/2001
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<140	<140	<140	<140	<100	<130
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
Tetrachloroethene	<140	<140	<140	<140	<100	<130
Toluene	<140	<140	<140	<140	<100	<130
1,1,1-Trichloroethane	<140	<140	<140	<140	<100	<130
Trichloroethene	**140**	**280**	**280**	**410**	**460**	**300**
Vinyl Chloride	<140	<140	<140	**260**	**210**	**210**
Cumulative Risk (1)	**6.16E-08**	**6.89E-08**	**6.89E-08**	**1.04E-07**	**8.84E-08**	**8.46E-08**

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 D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/18/2002	2/7/2002	3/21/2002	4/23/2002	5/23/2002	6/18/2002
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<130	<130	<140	**3.5**	<140	<140
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
Tetrachloroethene	<130	<130	<140	**7.8**	<140	<140
Toluene	<130	<130	<140	<0.69	<140	<140
1,1,1-Trichloroethane	<130	<130	<140	**42**	<140	<140
Trichloroethene	**280**	**530**	**180**	**29**	**160**	**290**
Vinyl Chloride	**280**	**500**	**160**	**1.0**	**150**	**220**
Cumulative Risk (1)	**9.98E-08**	**1.64E-07**	**6.83E-08**	**2.97E-09**	**6.49E-08**	**8.80E-08**

Date Sampled	7/19/2002	8/14/2002	9/20/2002	10/24/2002	11/21/2002	12/13/2002
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<140	<140	<100	<130	<140	<140
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
Tetrachloroethene	<140	<140	<100	<130	<140	<140
Toluene	<140	<140	<100	<130	<140	<140
1,1,1-Trichloroethane	<140	<140	<100	<130	<140	<140
Trichloroethene	<140	**200**	**520**	**1,000**	**720**	**410**
Vinyl Chloride	<140	**220**	<100	<130	<140	<140
Cumulative Risk (1)	**6.16E-08**	**8.32E-08**	**6.61E-08**	**9.21E-08**	**9.21E-08**	**7.58E-08**

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 D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/23/2003	2/10/2003	3/19/2003	4/15/2003	5/19/2003	6/6/2003
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<140	<140	<130	<140	<130	<140
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
Tetrachloroethene	<140	<140	<130	<140	<130	<140
Toluene	<140	<140	<130	<140	<130	<140
1,1,1-Trichloroethane	<140	<140	<130	<140	<130	<140
Trichloroethene	**420**	**320**	**320**	**380**	**280**	**390**
Vinyl Chloride	<140	<140	<130	<140	<130	<140
Cumulative Risk (1)	**7.63E-08**	**7.10E-08**	**6.71E-08**	**7.42E-08**	**6.50E-08**	**7.47E-08**

Date Sampled	7/14/2003	8/21/2003	9/15/2003	10/16/2003	11/7/2003	12/22/2003
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<140	<140	**2.3**	< 130	< 130	< 130
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
Tetrachloroethene	<140	<140	**7.4**	< 130	< 130	< 130
Toluene	<140	<140	<0.66	< 130	< 130	< 130
1,1,1-Trichloroethane	<140	<140	**5.4**	< 130	< 130	< 130
Trichloroethene	**290**	**330**	**240**	**230**	**230**	**220**
Vinyl Chloride	<140	<140	**11**	< 130	< 130	**190**
Cumulative Risk (1)	**6.94E-08**	**7.15E-08**	**1.63E-08**	**6.24E-08**	**6.24E-08**	**7.58E-08**

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 D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/29/2004	2/20/2004	3/16/2004	4/19/2004	5/18/2004	6/23/2004
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<130	<120	<140	**18**	<150	**23**
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
Tetrachloroethene	<130	<120	<140	**7.1**	<150	**12**
Toluene	<130	<120	<140	**2.1**	<150	**5.8**
1,1,1-Trichloroethane	<130	<120	<140	**4.8**	<150	**4.3**
Trichloroethene	<130	**300**	<140	**480**	<150	**260**
Vinyl Chloride	**150**	**220**	<140	**350**	<150	**300**
Cumulative Risk (1)	**6.18E-08**	**8.54E-08**	**6.16E-08**	**1.07E-07**	**6.59E-08**	**8.50E-08**

Date Sampled	7/30/2004	8/31/2004	9/22/2004	10/19/2004	11/22/2004	12/17/2004
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<140	<130	<140	<150	<140	<140
1,1-Dichloroethene	<140	<130	<140	<150	<140	<140
cis-1,2-Dichloroethene	**1,300**	**1,000**	**620**	**820 (UB)**	**1,000**	**1,300**
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA
Tetrachloroethene	<140	<130	<140	<150	<140	<140
Toluene	<140	<130	<140	<150	<140	<140
1,1,1-Trichloroethane	<140	<130	<140	<150	<140	<140
Trichloroethene	**250**	**180**	<140	**180**	**210**	**780**
Vinyl Chloride	**260**	**140**	<140	**180 (UB)**	**170**	<140
Cumulative Risk (1)	**9.51E-08**	**6.21E-08**	**6.16E-08**	**7.45E-08**	**7.22E-08**	**9.52E-08**

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 D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/26/2005	2/18/2005	3/16/2005	4/19/2005	5/13/2005	6/03/2005
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<140	<140	<140	**53.2**	**15.9**	**22**
1,1-Dichloroethene	<140	<140	<140	<13.2	**3**	**3**
cis-1,2-Dichloroethene	**700**	**750**	**620**	**4,330**	<0.71	**1,970**
trans-1,2-Dichloroethene	NA	NA	<140	<14.1	NA	<113
Tetrachloroethene	<140	<140	<140	**46.8**	**15**	**21.6**
Toluene	<140	<140	<140	<13.2	<0.71	**1.5**
1,1,1-Trichloroethane	<140	<140	<140	**15.6**	<0.64	**18.2**
Trichloroethene	<140	<140	<140	**718**	**35**	**522**
Vinyl Chloride	<140	<140	**180**	<13.8	<0.74	**274**
Cumulative Risk (1)	**6.16E-08**	**6.16E-08**	**7.08E-08**	**4.82E-08**	**4.35E-09**	**9.42E-08**

Date Sampled	7/15/2005	8/26/2005	9/29/2005	10/17/2005	11/03/2005	12/01/2005
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	< 140	< 140	**56**	< 140	< 0.69	**22.5**
1,1-Dichloroethene	< 140	< 140	< 13.8	< 140	< 0.69	< 14.8
cis-1,2-Dichloroethene	**920**	**2,400**	**7,160 J**	**1,300**	< 0.69	NA
trans-1,2-Dichloroethene	< 140	< 140	**185**	< 140	< 0.69	**19.4**
Tetrachloroethene	< 140	< 140	< 13.8	< 140	< 0.69	< 14.8
Toluene	< 140	< 140	< 13.8	< 140	< 0.69	< 14.8
1,1,1-Trichloroethane	< 140	< 140	**16**	< 140	< 0.69	< 14.8
Trichloroethene	**250**	**710**	< 13.8	**300**	< 0.69	**224**
Vinyl Chloride	< 140	**530**	< 13.8	< 140	< 0.69	**344**
Cumulative Risk (1)	**3.22E-07**	**1.15E-06**	**3.12E-08**	**3.25E-07**	**1.56E-09**	**7.20E-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 D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/09/2006	2/10/2006	3/15/2006	4/26/2006	5/23/2006	6/15/2006
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	**26**	**21**	**22**	<13.8	**23**	<13.8
1,1-Dichloroethene	<14.3	**5**	<13.8	<13.8	<11.8	<13.8
cis-1,2-Dichloroethene	**2,330**	**1,930**	**2,650**	**818**	**1,800**	**1160**
trans-1,2-Dichloroethene	**23**	**20**	**18**	**38**	**123**	**49**
Tetrachloroethene	<14.3	<3.4	<13.8	**35**	<11.8	**22.4**
Toluene	<14.3	<3.4	<13.8	<18.0	<11.8	<13.8
1,1,1-Trichloroethane	<14.3	<3.4	<13.8	<18.0	<11.8	**28**
Trichloroethene	**315**	**283**	**270**	**279**	**421**	**313**
Vinyl Chloride	**423**	**310**	**215**	**147**	**317**	**168**
Cumulative Risk (1)	**1.17E-07**	**8.72E-08**	**6.61E-08**	**5.41E-08**	**9.74E-08**	**5.88E-08**

Date Sampled	7/18/2006	8/10/2006	9/26/2006	10/20/2006	11/27/2006	12/11/2006
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	**31**	<13.8	**34**	**39**	**21**	**14**
1,1-Dichloroethene	<14.3	<13.8	<14.3	<19.8	<14.3	<13.8
cis-1,2-Dichloroethene	**1,550 J**	<13.8	**1,720 J**	**2,050 J**	**1,420 J**	**927 J**
trans-1,2-Dichloroethene	**59**	<13.8	**93**	**146**	**49**	**17**
Tetrachloroethene	**52**	<13.8	<14.3	**94**	**17**	<13.8
Toluene	<14.3	**36**	<14.3	<19.8	<14.3	<13.8
1,1,1-Trichloroethane	**15**	<13.8	<14.3	**31**	<14.3	<13.8
Trichloroethene	**378**	<13.8	**427**	**888 J**	**242**	**191**
Vinyl Chloride	**319**	<13.8	<14.3	**220**	**230**	**199**
Cumulative Risk (1)	**1.02E-07**	**6.07E-09**	**2.80E-08**	**1.12E-07**	**6.85E-08**	**5.83E-08**

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.

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

Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/04/2007	2/02/2007	3/13/2007	4/17/2007	5/07/2007	6/06/2007
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	**23**	<14.3	**15**	**17**	**36**	**30**
1,1-Dichloroethene	<14.3	<14.3	<13.8	<13.8	<14.3	<14.3
cis-1,2-Dichloroethene	**1,010**	**891**	**1,150**	**1,330**	**1,980**	**1,010**
trans-1,2-Dichloroethene	**20**	<14.3	**16**	**26**	**34**	**28**
Tetrachloroethene	<14.3	<14.3	<13.8	<13.8	<14.3	<14.3
Toluene	<14.3	<14.3	<13.8	<13.8	<14.3	<14.3
1,1,1-Trichloroethane	<14.3	<14.3	<13.8	<13.8	<14.3	<14.3
Trichloroethene	**162**	**141**	**196**	**217**	**419**	**464**
Vinyl Chloride	**197**	**246**	**285**	**334**	**602**	**487**
Cumulative Risk (1)	**5.63E-08**	**6.66E-08**	**7.84E-08**	**9.09E-08**	**1.64E-07**	**1.39E-07**

Date Sampled	7/16/2007	8/06/2007	9/06/2007	10/18/2007	11/05/2007	12/12/2007
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	**35**	**42**	**35**	<14.8	<14.3	<13.8
1,1-Dichloroethene	<14.3	<14.3	<13.8	<14.8	<14.3	<13.8
cis-1,2-Dichloroethene	**2,710**	**2,020**	**2,200**	**694**	**815**	**866**
trans-1,2-Dichloroethene	**35**	**38**	**33**	<14.8	**16**	**14**
Tetrachloroethene	**20**	**23**	**16**	**18**	<14.3	<13.8
Toluene	<14.3	<14.3	<13.8	<14.8	<14.3	<13.8
1,1,1-Trichloroethane	<14.3	<14.3	<13.8	<14.8	<14.3	<13.8
Trichloroethene	**642**	**641**	**512**	**277**	**217**	**191**
Vinyl Chloride	**533**	**411**	**454**	**174**	**203**	**176**
Cumulative Risk (1)	**1.60E-07**	**1.32E-07**	**1.35E-07**	**5.76E-08**	**6.06E-08**	**5.30E-08**

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.

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Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/04/2008	2/12/2008	3/13/2008	4/14/2008	5/05/2008	6/03/2008
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<13.8	<13.8	**16**	<14.3	**21**	**19**
1,1-Dichloroethene	<13.8	<13.8	<13.4	<14.3	<13.8	<14.3
cis-1,2-Dichloroethene	**1,090**	**979**	**1,210**	**463**	**1,370**	**1,460**
trans-1,2-Dichloroethene	<13.8	**20**	**17**	<14.3	**22**	**23**
Tetrachloroethene	<13.8	<13.8	<13.4	<14.3	<13.8	<14.3
Toluene	<13.8	<13.8	<13.4	<14.3	<13.8	<14.3
1,1,1-Trichloroethane	<13.8	<13.8	<13.4	<14.3	<13.8	<14.3
Trichloroethene	**226**	**233**	**304**	**45**	**323**	**328**
Vinyl Chloride	**206**	<13.8	**216**	**145**	<13.8	**272**
Cumulative Risk (1)	**6.17E-08**	**1.76E-08**	**6.81E-08**	**3.82E-08**	**2.23E-08**	**8.24E-08**

Date Sampled	7/09/2008	8/11/2008	9/20/2008	10/17/2008	11/24/2008	12/10/2008
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<229	**25**	**26**	**28**	<221	**32**
1,1-Dichloroethene	<229	<14.3	<14.3	<14.3	<221	<13.4
cis-1,2-Dichloroethene	**2,810**	**1,490**	**1,910**	**5,010**	**3,680**	**1,700**
trans-1,2-Dichloroethene	<229	**23**	**24**	**28**	<221	**29**
Tetrachloroethene	<229	**18**	<14.3	<14.3	<221	**182**
Toluene	<229	<14.3	<14.3	<14.3	<221	<13.4
1,1,1-Trichloroethane	<229	<14.3	<14.3	<14.3	<221	<13.4
Trichloroethene	**679**	**372**	**321**	**330**	**828**	**335**
Vinyl Chloride	**763**	**389**	**404**	**497**	**759**	**401**
Cumulative Risk (1)	**2.48E-07**	**1.12E-07**	**1.13E-07**	**1.35E-07**	**2.54E-07**	**1.39E-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.

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Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/23/2009	2/09/2009	3/30/2009	4/20/2009	5/13/2009	6/10/2009
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	**22**	<14.3	**21**	<13.4	**12**	<14.3
1,1-Dichloroethene	<13.4	<14.3	<13.8	<13.4	<13.8	<14.3
cis-1,2-Dichloroethene	**2,340**	**1,060**	**1,350**	**868**	**1,230**	**898**
trans-1,2-Dichloroethene	**23**	<14.3	**22**	**16**	**16**	<14.3
Tetrachloroethene	<13.4	<14.3	<13.8	<13.4	<13.8	<14.3
Toluene	<13.4	<14.3	<13.8	<13.4	<13.8	<14.3
1,1,1-Trichloroethane	<13.4	<14.3	<13.8	<13.4	<13.8	<14.3
Trichloroethene	**367**	**185**	**288**	**155**	**192**	**201**
Vinyl Chloride	**390**	**298**	**295**	**223**	**230**	**221**
Cumulative Risk (1)	**1.12E-07**	**8.09E-08**	**8.56E-08**	**6.18E-08**	**6.55E-08**	**6.39E-08**

Date Sampled	7/09/2009	8/25/2009	9/25/2009	10/15/2009	11/13/2009	12/15/2009
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	**13**	<14.3	**6**	**12**	<13.8	**16**
1,1-Dichloroethene	**3**	<14.3	<0.69	**1.5**	<13.8	<14.8
cis-1,2-Dichloroethene	**1,290**	**495**	**401**	**903**	**412**	**912**
trans-1,2-Dichloroethene	**16**	<14.3	**7**	**12**	<13.8	<14.8
Tetrachloroethene	**10**	<14.3	**13**	**13**	<13.8	<14.8
Toluene	<0.72	**16**	**6.5**	**5**	<13.8	<14.8
1,1,1-Trichloroethane	**3**	<14.3	**3.6**	**3.5**	<13.8	<14.8
Trichloroethene	**323**	**116**	**158**	**237**	**108**	**201**
Vinyl Chloride	**302**	**136**	**107**	**167**	**83**	**199**
Cumulative Risk (1)	**8.84E-08**	**3.98E-08**	**3.51E-08**	**5.31E-08**	**2.71E-08**	**5.90E-08**

Notes:

(1) Cumulative Risk calculation is indicated on Table 9.

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Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/25/2010	2/17/2010	3/09/2010	4/16/2010	5/10/2010	6/25/2010
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<14.3	**19**	<58.9	**24**	**16**	<14.3
1,1-Dichloroethene	<14.3	<13.8	<57.8	<13.4	<13.8	<14.3
cis-1,2-Dichloroethene	**1,060**	**4,680**	**1,550**	**2,510**	**2,690**	**893**
trans-1,2-Dichloroethene	<14.3	**18**	<57.8	**34**	**26**	**21**
Tetrachloroethene	<14.3	<13.8	<98.7	<13.4	<13.8	<14.3
Toluene	<14.3	<13.8	<54.9	<13.4	<13.8	<14.3
1,1,1-Trichloroethane	<14.3	<13.8	<79.2	<13.4	<13.8	<14.3
Trichloroethene	**145**	**246**	**300**	**639**	**1,020**	**401**
Vinyl Chloride	**281**	**289**	**261**	**373**	**267**	**167**
Cumulative Risk (1)	**7.49E-08**	**8.20E-08**	**8.85E-08**	**1.22E-07**	**1.18E-07**	**6.19E-08**

Date Sampled	7/13/2010	8/09/2010	9/15/2010	10/22/2010	11/12/2010	12/17/2010
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<114	**20**	**8.5**	<44.2	**18**	**17**
1,1-Dichloroethene	<114	<14.3	**1.5**	<44.2	<13.8	**3.1**
cis-1,2-Dichloroethene	**2,640**	**1,180**	**1,820**	**907**	**2,080**	**1,960**
trans-1,2-Dichloroethene	<114	**27**	**10**	<44.2	**17**	**17**
Tetrachloroethene	<114	<14.3	**5.8**	<44.2	<13.8	**6.2**
Toluene	<114	<14.3	**1.2**	<44.2	<13.8	<0.72
1,1,1-Trichloroethane	<114	<14.3	**1.4**	<44.2	<13.8	**3.5**
Trichloroethene	**785**	**537**	**607**	**158**	**343**	**603**
Vinyl Chloride	**453**	**370**	**284**	**149**	**240**	**349**
Cumulative Risk (1)	**1.64E-07**	**1.16E-07**	**9.86E-08**	**4.97E-08**	**7.57E-08**	**1.13E-07**

Notes:

(1) Cumulative Risk calculation is indicated on Table 9.

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Table D-8
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/21/2011	2/01/2011	3/21/2011	4/12/2011	5/18/2011	6/16/2011
CONSTITUENT (ppb[v/v])	**EFFLUENT SAMPLE**					
1,1-Dichloroethane	<0.69	NS	<13.8	<14.3	<19.2	**16**
1,1-Dichloroethene	1	NS	<13.8	<14.3	<19.2	**3.3**
cis-1,2-Dichloroethene	**553**	NS	**3,580**	**2,540**	**903**	**1,900**
trans-1,2-Dichloroethene	5	NS	**19**	<14.3	<19.2	**15**
Tetrachloroethene	6	NS	<13.8	<14.3	<19.2	**6.4**
Toluene	3	NS	<13.8	<14.3	<19.2	<0.72
1,1,1-Trichloroethane	4	NS	<13.8	<14.3	<19.2	**2.2**
Trichloroethene	**118**	NS	**484**	**388**	**205**	**455**
Vinyl Chloride	**142**	NS	**327**	**290**	**244**	**427**
Cumulative Risk (1)	**4.00E-08**	NS	**9.47E-08**	**8.98E-08**	**7.02E-08**	**1.24E-07**

Notes:

(1) Cumulative Risk calculation is indicated on Table 9.

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Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	**TCE** *Carcinogen*	**1,1-DCE** *Non-Carcinogen*	**cis-1,2-DCE** *Non-Carcinogen*	**trans-1,2-DCE** *Non-Carcinogen*	**VC** *Carcinogen*	**1,1,1-TCA** *Non-Carcinogen*	**1,1-DCA** *Carcinogen*	**Toluene** *Non-Carcinogen*	
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				5.55E-08		1.93E-11		1.08E-07
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				8.10E-09		3.86E-12		1.53E-08
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				7.87E-08		1.93E-11		1.10E-07
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				6.25E-08		1.93E-11		1.09E-07
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				5.09E-08		2.57E-11		7.53E-08
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				4.17E-08		2.62E-11		1.41E-07
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				4.63E-08		1.37E-11		6.93E-08
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				4.63E-08		1.37E-11		7.96E-08
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				2.18E-08		1.24E-11		5.38E-08
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				2.11E-08		7.29E-12		3.39E-08

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	**TCE** *Carcinogen*	**1,1-DCE** *Non-Carcinogen*	**cis-1,2-DCE** *Non-Carcinogen*	**trans-1,2-DCE** *Non-Carcinogen*	**VC** *Carcinogen*	**1,1,1-TCA** *Non-Carcinogen*	**1,1-DCA** *Carcinogen*	**Toluene** *Non-Carcinogen*	
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				1.41E-08		1.07E-11		4.88E-08
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				6.02E-08		1.33E-11		7.92E-08
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				3.01E-08		1.29E-11		7.03E-08
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				4.40E-08		1.16E-11		6.86E-08
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				4.40E-08		9.00E-12		6.40E-08
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				5.32E-08		1.29E-11		1.06E-07
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				4.86E-08		1.46E-11		8.04E-08
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				3.01E-08		2.10E-11		8.66E-08
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				3.93E-08		1.54E-11		1.01E-07
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				4.40E-08		1.29E-11		8.99E-08

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	TCE *Carcinogen*	1,1-DCE *Non-Carcinogen*	cis-1,2-DCE *Non-Carcinogen*	trans-1,2-DCE *Non-Carcinogen*	VC *Carcinogen*	1,1,1-TCA *Non-Carcinogen*	1,1-DCA *Carcinogen*	Toluene *Non-Carcinogen*	
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				6.25E-08		1.29E-11		1.02E-07
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				4.17E-08		6.00E-11		7.71E-08
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				4.40E-08		7.72E-12		6.71E-08
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				3.70E-08		6.00E-11		6.72E-08
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				3.47E-08		6.43E-11		6.59E-08
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				4.86E-08		6.43E-11		9.46E-08
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				3.24E-08		6.00E-11		6.16E-08
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				3.24E-08		6.00E-11		6.89E-08
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				3.24E-08		6.00E-11		6.89E-08
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				6.02E-08		6.00E-11		1.04E-07
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				4.86E-08		4.29E-11		8.84E-08
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				4.86E-08		5.57E-11		8.46E-08

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	TCE *Carcinogen*	1,1-DCE *Non-Carcinogen*	cis-1,2-DCE *Non-Carcinogen*	trans-1,2-DCE *Non-Carcinogen*	VC *Carcinogen*	1,1,1-TCA *Non-Carcinogen*	1,1-DCA *Carcinogen*	Toluene *Non-Carcinogen*	
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				6.48E-08		5.57E-11		9.98E-08
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				1.16E-07		5.57E-11		1.64E-07
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				3.70E-08		6.00E-11		6.83E-08
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				2.31E-10		1.50E-12		2.97E-09
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				3.47E-08		6.00E-11		6.49E-08
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				5.09E-08		6.00E-11		8.80E-08
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				3.24E-08		6.00E-11		6.16E-08
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				5.09E-08		6.00E-11		8.32E-08
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				2.31E-08		4.29E-11		6.61E-08
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				3.24E-08		6.00E-11		9.21E-08
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				3.24E-08		6.00E-11		9.21E-08
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				3.24E-08		6.00E-11		7.58E-08

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	TCE *Carcinogen*	1,1-DCE *Non-Carcinogen*	cis-1,2-DCE *Non-Carcinogen*	trans-1,2-DCE *Non-Carcinogen*	VC *Carcinogen*	1,1,1-TCA *Non-Carcinogen*	1,1-DCA *Carcinogen*	Toluene *Non-Carcinogen*	
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				3.24E-08		6.00E-11		7.63E-08
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				3.24E-08		6.00E-11		7.10E-08
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				3.01E-08		5.57E-11		6.71E-08
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				3.24E-08		6.00E-11		7.42E-08
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				3.01E-08		5.57E-11		6.50E-08
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				3.24E-08		6.00E-11		7.47E-08
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				3.24E-08		6.00E-11		6.94E-08
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				3.24E-08		6.00E-11		7.15E-08
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				2.55E-09		9.86E-13		1.63E-08
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				3.01E-08		5.57E-11		6.24E-08
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				3.01E-08		5.57E-11		6.24E-08
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				4.40E-08		5.57E-11		7.58E-08

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	**TCE** *Carcinogen*	**1,1-DCE** *Non-Carcinogen*	**cis-1,2-DCE** *Non-Carcinogen*	**trans-1,2-DCE** *Non-Carcinogen*	**VC** *Carcinogen*	**1,1,1-TCA** *Non-Carcinogen*	**1,1-DCA** *Carcinogen*	**Toluene** *Non-Carcinogen*	
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				3.47E-08		5.57E-11		6.18E-08
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				5.09E-08		5.14E-11		8.54E-08
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				3.24E-08		6.00E-11		6.16E-08
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				8.10E-08		7.72E-12		1.07E-07
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				3.47E-08		6.43E-11		6.59E-08
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				6.94E-08		9.86E-12		8.50E-08
EFF	(ppb[v/v])	140	250	140	1300	1	260	140	140	140	
7/30/2004	(g/s)	0.0008	0.0014	0.0008	0.0073	0.0000	0.0015	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.007	0.004	0.034	0.000	0.007	0.004	0.004	0.004	
	ECR	2.17E-08	1.32E-08				6.02E-08		6.00E-11		9.51E-08
EFF	(ppb[v/v])	130	180	130	1000	1	140	130	130	130	
8/31/2004	(g/s)	0.0007	0.0010	0.0007	0.0056	0.0000	0.0008	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.005	0.003	0.026	0.000	0.004	0.003	0.003	0.003	
	ECR	2.02E-08	9.47E-09				3.24E-08		5.57E-11		6.21E-08
EFF	(ppb[v/v])	140	140	140	620	1	140	140	140	140	
9/22/2004	(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	0.016	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	7.36E-09				3.24E-08		6.00E-11		6.16E-08
EFF	(ppb[v/v])	150	180	150	820	1	180	150	150	150	
10/19/2004	(g/s)	0.0008	0.0010	0.0008	0.0046	0.0000	0.0010	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.005	0.004	0.022	0.000	0.005	0.004	0.004	0.004	
	ECR	2.33E-08	9.47E-09				4.17E-08		6.43E-11		7.45E-08
EFF	(ppb[v/v])	140	210	140	1000	1	170	140	140	140	
11/22/2004	(g/s)	0.0008	0.0012	0.0008	0.0056	0.0000	0.0010	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.006	0.004	0.026	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.10E-08				3.93E-08		6.00E-11		7.22E-08
EFF	(ppb[v/v])	140	780	140	1300	1	140	140	140	140	
12/17/2004	(g/s)	0.0008	0.0044	0.0008	0.0073	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.021	0.004	0.034	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	4.10E-08				3.24E-08		6.00E-11		9.52E-08

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	TCE *Carcinogen*	1,1-DCE *Non-Carcinogen*	cis-1,2-DCE *Non-Carcinogen*	trans-1,2-DCE *Non-Carcinogen*	VC *Carcinogen*	1,1,1-TCA *Non-Carcinogen*	1,1-DCA *Carcinogen*	Toluene *Non-Carcinogen*	
EFF	(ppb[v/v])	140	140	140	700	1	140	140	140	140	
1/26/2005	(g/s)	0.0008	0.0008	0.0008	0.0039	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.018	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	7.36E-09				3.24E-08		6.00E-11		6.16E-08
EFF	(ppb[v/v])	140	140	140	750	1	140	140	140	140	
2/18/2005	(g/s)	0.0008	0.0008	0.0008	0.0042	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.020	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	7.36E-09				3.24E-08		6.00E-11		6.16E-08
EFF	(ppb[v/v])	140	140	140	620	170	180	140	140	140	
3/16/2005	(g/s)	0.0008	0.0008	0.0008	0.0035	0.0010	0.0010	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.016	0.004	0.005	0.004	0.004	0.004	
	ECR	2.17E-08	7.36E-09				4.17E-08		6.00E-11		7.08E-08
EFF	(ppb[v/v])	46.8	718	13.2	4330	14.1	13.8	15.6	53.2	13.2	
4/19/2005	(g/s)	0.0003	0.0040	0.0001	0.0242	0.0001	0.0001	0.0001	0.0003	0.0001	
	Max.Conc.	0.001	0.019	0.000	0.114	0.000	0.000	0.000	0.001	0.000	
	ECR	7.26E-09	3.78E-08				3.19E-09		2.28E-11		4.82E-08
EFF	(ppb[v/v])	15.1	34.7	3.4	0.71	1	0.74	0.64	15.9	0.71	
5/13/2005	(g/s)	0.0001	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	ECR	2.34E-09	1.83E-09				1.71E-10		6.82E-12		4.35E-09
EFF	(ppb[v/v])	21.6	522	3	1970	113	274	18.2	22	1.5	
6/03/2005	(g/s)	0.0001	0.0029	0.0000	0.0110	0.0006	0.0015	0.0001	0.0001	0.0000	
	Max.Conc.	0.001	0.014	0.000	0.052	0.003	0.007	0.000	0.001	0.000	
	ECR	3.35E-09	2.75E-08				6.34E-08		9.43E-12		9.42E-08
EFF	(ppb[v/v])	140	250	140	920	140	140	140	140	140	
7/15/2005	(g/s)	0.0008	0.0014	0.0008	0.0052	0.0008	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.007	0.004	0.024	0.004	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.32E-08				2.87E-07		6.00E-11		3.22E-07
EFF	(ppb[v/v])	140	710	140	2400	140	530	140	140	140	
8/26/2005	(g/s)	0.0008	0.0040	0.0008	0.0134	0.0008	0.0030	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.019	0.004	0.063	0.004	0.014	0.004	0.004	0.004	
	ECR	2.17E-08	3.73E-08				1.09E-06		6.00E-11		**1.15E-06**
EFF	(ppb[v/v])	13.8	13.8	13.8	7160	185	13.8	16.40	56.2	13.8	
9/29/2005	(g/s)	0.0001	0.0001	0.0001	0.0401	0.0010	0.0001	0.0001	0.0003	0.0001	
	Max.Conc.	0.000	0.000	0.000	0.188	0.005	0.000	0.000	0.001	0.000	
	ECR	2.14E-09	7.26E-10				2.83E-08		2.41E-11		3.12E-08
EFF	(ppb[v/v])	140	300	140	1300	140	140	140	140	140	
10/17/2005	(g/s)	0.0008	0.0017	0.0008	0.0073	0.0008	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.008	0.004	0.034	0.004	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.58E-08				2.87E-07		6.00E-11		3.25E-07
EFF	(ppb[v/v])	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	
11/03/2005	(g/s)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	ECR	1.07E-10	3.63E-11				1.42E-09		2.96E-13		1.56E-09
EFF	(ppb[v/v])	14.8	224	14.8	1	19.4	344	14.8	22.5	14.8	
12/01/2005	(g/s)	0.0001	0.0013	0.0001	0.0000	0.0001	0.0019	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.006	0.000	0.000	0.001	0.009	0.000	0.001	0.000	
	ECR	2.30E-09	1.18E-08				7.06E-07		9.65E-12		7.20E-07

Notes:

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/vl]) 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.
Bold = Cumulative Cancer Risk above action level.

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	TCE *Carcinogen*	1,1-DCE *Non-Carcinogen*	cis-1,2-DCE *Non-Carcinogen*	trans-1,2-DCE *Non-Carcinogen*	VC *Carcinogen*	1,1,1-TCA *Non-Carcinogen*	1,1-DCA *Carcinogen*	Toluene *Non-Carcinogen*	
EFF	(ppb[v/v])	14	315	14	2330	23	423	14	26	14	
1/09/2006	(g/s)	0.0001	0.0018	0.0001	0.0130	0.0001	0.0024	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.008	0.000	0.061	0.001	0.011	0.000	0.001	0.000	
	ECR	2.22E-09	1.66E-08				9.79E-08		1.11E-11		1.17E-07
EFF	(ppb[v/v])	3.4	283	4.7	1930	19.9	310	3.4	21.4	3.4	
2/10/2006	(g/s)	0.0000	0.0016	0.0000	0.0108	0.0001	0.0017	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.007	0.000	0.051	0.001	0.008	0.000	0.001	0.000	
	ECR	5.28E-10	1.49E-08				7.17E-08		9.17E-12		8.72E-08
EFF	(ppb[v/v])	13.8	270	13.8	2650	18	215.00	13.8	21.5	13.8	
3/15/2006	(g/s)	0.0001	0.0015	0.0001	0.0148	0.0001	0.0012	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.007	0.000	0.070	0.000	0.006	0.000	0.001	0.000	
	ECR	2.14E-09	1.42E-08				4.98E-08		9.22E-12		6.61E-08
EFF	(ppb[v/v])	34.7	279	13.8	818	38	147	18.0	13.8	18.0	
4/26/2006	(g/s)	0.0002	0.0016	0.0001	0.0046	0.0002	0.0008	0.0001	0.0001	0.0001	
	Max.Conc.	0.001	0.007	0.000	0.022	0.001	0.004	0.000	0.000	0.000	
	ECR	5.38E-09	1.47E-08				3.40E-08		5.92E-12		5.41E-08
EFF	(ppb[v/v])	11.8	421	11.8	1800	123	317	11.8	23.30	11.8	
5/23/2006	(g/s)	0.0001	0.0024	0.0001	0.0101	0.0007	0.0018	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.011	0.000	0.047	0.003	0.008	0.000	0.001	0.000	
	ECR	1.83E-09	2.21E-08				7.34E-08		9.99E-12		9.74E-08
EFF	(ppb[v/v])	22.4	313	13.8	1160	48.6	168	28.4	13.8	13.8	
6/25/2006	(g/s)	0.0001	0.0018	0.0001	0.0065	0.0003	0.0009	0.0002	0.0001	0.0001	
	Max.Conc.	0.001	0.008	0.000	0.031	0.001	0.004	0.001	0.000	0.000	
	ECR	3.48E-09	1.65E-08				3.89E-08		5.92E-12		5.88E-08
EFF	(ppb[v/v])	52	378	14	1550	59	319	15	31	14	
7/18/2006	(g/s)	0.0003	0.0021	0.0001	0.0087	0.0003	0.0018	0.0001	0.0002	0.0001	
	Max.Conc.	0.001	0.010	0.000	0.041	0.002	0.008	0.000	0.001	0.000	
	ECR	8.13E-09	1.99E-08				7.38E-08		1.32E-11		1.02E-07
EFF	(ppb[v/v])	13.8	14	13.8	14	13.8	14	13.8	13.8	35.7	
8/10/2006	(g/s)	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	
	Max.Conc.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	
	ECR	2.14E-09	7.26E-10				3.19E-09		5.92E-12		6.07E-09
EFF	(ppb[v/v])	14.3	427	14.3	1720	93	14.30	14.3	33.6	14.3	
9/26/2006	(g/s)	0.0001	0.0024	0.0001	0.0096	0.0005	0.0001	0.0001	0.0002	0.0001	
	Max.Conc.	0.000	0.011	0.000	0.045	0.002	0.000	0.000	0.001	0.000	
	ECR	2.22E-09	2.25E-08				3.31E-09		1.44E-11		2.80E-08
EFF	(ppb[v/v])	93.7	888	19.8	2050	146	220	31.3	39.2	19.8	
10/20/2006	(g/s)	0.0005	0.0050	0.0001	0.0115	0.0008	0.0012	0.0002	0.0002	0.0001	
	Max.Conc.	0.002	0.023	0.001	0.054	0.004	0.006	0.001	0.001	0.001	
	ECR	1.45E-08	4.67E-08				5.09E-08		1.68E-11		1.12E-07
EFF	(ppb[v/v])	16.6	242	14.3	1420	49	230	14.3	20.90	14.3	
11/27/2006	(g/s)	0.0001	0.0014	0.0001	0.0080	0.0003	0.0013	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.006	0.000	0.037	0.001	0.006	0.000	0.001	0.000	
	ECR	2.58E-09	1.27E-08				5.32E-08		8.96E-12		6.85E-08
EFF	(ppb[v/v])	13.8	191	13.8	927	17.0	199	13.8	14.0	13.8	
12/11/2006	(g/s)	0.0001	0.0011	0.0001	0.0052	0.0001	0.0011	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.024	0.000	0.005	0.000	0.000	0.000	
	ECR	2.14E-09	1.00E-08				4.61E-08		6.00E-12		5.83E-08

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.
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Vinyl Chloride	--	8.80E-06
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Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	**TCE** *Carcinogen*	**1,1-DCE** *Non-Carcinogen*	**cis-1,2-DCE** *Non-Carcinogen*	**trans-1,2-DCE** *Non-Carcinogen*	**VC** *Carcinogen*	**1,1,1-TCA** *Non-Carcinogen*	**1,1-DCA** *Carcinogen*	**Toluene** *Non-Carcinogen*	
EFF	(ppb[v/v])	14	162	14	1010	20	197	14	23	14	
1/04/2007	(g/s)	0.0001	0.0009	0.0001	0.0057	0.0001	0.0011	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.004	0.000	0.027	0.001	0.005	0.000	0.001	0.000	
	ECR	2.22E-09	8.52E-09				4.56E-08		9.86E-12		5.63E-08
EFF	(ppb[v/v])	14	141	14	891	14	246	14	14	14	
2/02/2007	(g/s)	0.0001	0.0008	0.0001	0.0050	0.0001	0.0014	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.004	0.000	0.023	0.000	0.006	0.000	0.000	0.000	
	ECR	2.22E-09	7.42E-09				5.69E-08		6.13E-12		6.66E-08
EFF	(ppb[v/v])	14	196	14	1150	16	285	14	15	14	
3/13/2007	(g/s)	0.0001	0.0011	0.0001	0.0064	0.0001	0.0016	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.030	0.000	0.007	0.000	0.000	0.000	
	ECR	2.14E-09	1.03E-08				6.60E-08		6.43E-12		7.84E-08
EFF	(ppb[v/v])	14	217	14	1330	26	334	14	17	14	
4/17/2007	(g/s)	0.0001	0.0012	0.0001	0.0074	0.0001	0.0019	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.006	0.000	0.035	0.001	0.009	0.000	0.000	0.000	
	ECR	2.14E-09	1.14E-08				7.73E-08		7.29E-12		9.09E-08
EFF	(ppb[v/v])	14	419	14	1980	34	602	14	23	14	
5/07/2007	(g/s)	0.0001	0.0023	0.0001	0.0111	0.0002	0.0034	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.011	0.000	0.052	0.001	0.016	0.000	0.001	0.000	
	ECR	2.22E-09	2.20E-08				1.39E-07		9.86E-12		1.64E-07
EFF	(ppb[v/v])	14	464	14	1010	28	487	14	26	14	
6/06/2007	(g/s)	0.0001	0.0026	0.0001	0.0057	0.0002	0.0027	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.012	0.000	0.027	0.001	0.013	0.000	0.001	0.000	
	ECR	2.22E-09	2.44E-08				1.13E-07		1.11E-11		1.39E-07
EFF	(ppb[v/v])	20	642	14	2710	35	533	14	35	14	
7/16/2007	(g/s)	0.0001	0.0036	0.0001	0.0152	0.0002	0.0030	0.0001	0.0002	0.0001	
	Max.Conc.	0.001	0.017	0.000	0.071	0.001	0.014	0.000	0.001	0.000	
	ECR	3.10E-09	3.38E-08				1.23E-07		1.49E-11		1.60E-07
EFF	(ppb[v/v])	23	641	14	2020	38	411	14	42	14	
8/06/2007	(g/s)	0.0001	0.0036	0.0001	0.0113	0.0002	0.0023	0.0001	0.0002	0.0001	
	Max.Conc.	0.001	0.017	0.000	0.053	0.001	0.011	0.000	0.001	0.000	
	ECR	3.57E-09	3.37E-08				9.51E-08		1.78E-11		1.32E-07
EFF	(ppb[v/v])	16	512	14	2200	33	454	14	35	14	
9/06/2007	(g/s)	0.0001	0.0029	0.0001	0.0123	0.0002	0.0025	0.0001	0.0002	0.0001	
	Max.Conc.	0.000	0.013	0.000	0.058	0.001	0.012	0.000	0.001	0.000	
	ECR	2.54E-09	2.69E-08				1.05E-07		1.50E-11		1.35E-07
EFF	(ppb[v/v])	18	277	15	694	15	174	15	15	15	
10/18/2007	(g/s)	0.0001	0.0016	0.0001	0.0039	0.0001	0.0010	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.007	0.000	0.018	0.000	0.005	0.000	0.000	0.000	
	ECR	2.73E-09	1.46E-08				4.03E-08		6.34E-12		5.76E-08
EFF	(ppb[v/v])	14	217	14	815	16	203	14	14	14	
11/05/2007	(g/s)	0.0001	0.0012	0.0001	0.0046	0.0001	0.0011	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.006	0.000	0.021	0.000	0.005	0.000	0.000	0.000	
	ECR	2.17E-09	1.14E-08				4.70E-08		6.00E-12		6.06E-08
EFF	(ppb[v/v])	14	191	14	866	14	176	14	14	14	
12/12/2007	(g/s)	0.0001	0.0011	0.0001	0.0048	0.0001	0.0010	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.023	0.000	0.005	0.000	0.000	0.000	
	ECR	2.17E-09	1.00E-08				4.07E-08		6.00E-12		5.30E-08

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.
Bold = Cumulative Cancer Risk above action level.

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	**TCE** *Carcinogen*	**1,1-DCE** *Non-Carcinogen*	**cis-1,2-DCE** *Non-Carcinogen*	**trans-1,2-DCE** *Non-Carcinogen*	**VC** *Carcinogen*	**1,1,1-TCA** *Non-Carcinogen*	**1,1-DCA** *Carcinogen*	**Toluene** *Non-Carcinogen*	
EFF	(ppb[v/v])	14	226	14	1090	14	206	14	14	14	
1/04/2008	(g/s)	0.0001	0.0013	0.0001	0.0061	0.0001	0.0012	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.006	0.000	0.029	0.000	0.005	0.000	0.000	0.000	
	ECR	2.14E-09	1.19E-08				4.77E-08		5.92E-12		6.17E-08
EFF	(ppb[v/v])	14	233	14	979	20	14	14	14	14	
2/12/2008	(g/s)	0.0001	0.0013	0.0001	0.0055	0.0001	0.0001	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.006	0.000	0.026	0.001	0.000	0.000	0.000	0.000	
	ECR	2.14E-09	1.23E-08				3.19E-09		5.92E-12		1.76E-08
EFF	(ppb[v/v])	13	304	13	1210	17	216	13	16	13	
3/13/2008	(g/s)	0.0001	0.0017	0.0001	0.0068	0.0001	0.0012	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.008	0.000	0.032	0.000	0.006	0.000	0.000	0.000	
	ECR	2.08E-09	1.60E-08				5.00E-08		6.86E-12		6.81E-08
EFF	(ppb[v/v])	14	45	14	463	14	145	14	14	14	
4/14/2008	(g/s)	0.0001	0.0003	0.0001	0.0026	0.0001	0.0008	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.001	0.000	0.012	0.000	0.004	0.000	0.000	0.000	
	ECR	2.22E-09	2.37E-09				3.36E-08		6.13E-12		3.82E-08
EFF	(ppb[v/v])	14	323	14	1370	22	14	14	21	14	
5/08/2008	(g/s)	0.0001	0.0018	0.0001	0.0077	0.0001	0.0001	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.008	0.000	0.036	0.001	0.000	0.000	0.001	0.000	
	ECR	2.14E-09	1.70E-08				3.19E-09		9.00E-12		2.23E-08
EFF	(ppb[v/v])	14	328	14	1460	23	272	14	19	14	
6/03/2008	(g/s)	0.0001	0.0018	0.0001	0.0082	0.0001	0.0015	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.009	0.000	0.038	0.001	0.007	0.000	0.000	0.000	
	ECR	2.22E-09	1.73E-08				6.30E-08		8.15E-12		8.24E-08
EFF	(ppb[v/v])	229	679	229	2810	14	763	229	229	14	
7/09/2008	(g/s)	0.0013	0.0038	0.0013	0.0157	0.0001	0.0043	0.0013	0.0013	0.0001	
	Max.Conc.	0.006	0.018	0.006	0.074	0.000	0.020	0.006	0.006	0.000	
	ECR	3.55E-08	3.57E-08				1.77E-07		9.82E-11		2.48E-07
EFF	(ppb[v/v])	18	372	14	1490	20	389	14	25	14	
8/11/2008	(g/s)	0.0001	0.0021	0.0001	0.0083	0.0001	0.0022	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.010	0.000	0.039	0.001	0.010	0.000	0.001	0.000	
	ECR	2.79E-09	1.96E-08				9.00E-08		1.07E-11		1.12E-07
EFF	(ppb[v/v])	14	321	14	1910	17	404	14	26	13	
9/20/2008	(g/s)	0.0001	0.0018	0.0001	0.0107	0.0001	0.0023	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.008	0.000	0.050	0.000	0.011	0.000	0.001	0.000	
	ECR	2.17E-09	1.69E-08				9.35E-08		1.11E-11		1.13E-07
EFF	(ppb[v/v])	14	330	14	5010	14	497	14	28	14	
10/17/2008	(g/s)	0.0001	0.0018	0.0001	0.0281	0.0001	0.0028	0.0001	0.0002	0.0001	
	Max.Conc.	0.000	0.009	0.000	0.132	0.000	0.013	0.000	0.001	0.000	
	ECR	2.17E-09	1.74E-08				1.15E-07		1.20E-11		1.35E-07
EFF	(ppb[v/v])	221	828	221	3680	22	759	221	221	14	
11/24/2008	(g/s)	0.0012	0.0046	0.0012	0.0206	0.0001	0.0042	0.0012	0.0012	0.0001	
	Max.Conc.	0.006	0.022	0.006	0.097	0.001	0.020	0.006	0.006	0.000	
	ECR	3.43E-08	4.36E-08				1.76E-07		9.47E-11		2.54E-07
EFF	(ppb[v/v])	182	335	13	1700	23	401	13	32	14	
12/10/2008	(g/s)	0.0010	0.0019	0.0001	0.0095	0.0001	0.0022	0.0001	0.0002	0.0001	
	Max.Conc.	0.005	0.009	0.000	0.045	0.001	0.011	0.000	0.001	0.000	
	ECR	2.82E-08	1.76E-08				9.28E-08		1.37E-11		1.39E-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.
Bold = Cumulative Cancer Risk above action level.

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	**TCE** *Carcinogen*	**1,1-DCE** *Non-Carcinogen*	**cis-1,2-DCE** *Non-Carcinogen*	**trans-1,2-DCE** *Non-Carcinogen*	**VC** *Carcinogen*	**1,1,1-TCA** *Non-Carcinogen*	**1,1-DCA** *Carcinogen*	**Toluene** *Non-Carcinogen*	
EFF	(ppb[v/v])	13	367	13	2340	23	390	13	22	13	
1/23/2009	(g/s)	0.0001	0.0021	0.0001	0.0131	0.0001	0.0022	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.010	0.000	0.062	0.001	0.010	0.000	0.001	0.000	
	ECR	2.02E-09	1.93E-08				9.03E-08		9.43E-12		1.12E-07
EFF	(ppb[v/v])	14	185	14	1060	23	298	14	14	14	
2/09/2009	(g/s)	0.0001	0.0010	0.0001	0.0059	0.0001	0.0017	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.028	0.001	0.008	0.000	0.000	0.000	
	ECR	2.17E-09	9.73E-09				6.90E-08		6.00E-12		8.09E-08
EFF	(ppb[v/v])	14	288	14	1350	22	295	14	21	14	
3/30/2009	(g/s)	0.0001	0.0016	0.0001	0.0076	0.0001	0.0017	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.008	0.000	0.036	0.001	0.008	0.000	0.001	0.000	
	ECR	2.17E-09	1.51E-08				6.83E-08		9.00E-12		8.56E-08
EFF	(ppb[v/v])	13	155	13	868	16	223	13	13	13	
4/20/2009	(g/s)	0.0001	0.0009	0.0001	0.0049	0.0001	0.0012	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.004	0.000	0.023	0.000	0.006	0.000	0.000	0.000	
	ECR	2.02E-09	8.15E-09				5.16E-08		5.57E-12		6.18E-08
EFF	(ppb[v/v])	14	192	14	1230	16	230	14	12	14	
5/13/2009	(g/s)	0.0001	0.0011	0.0001	0.0069	0.0001	0.0013	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.032	0.000	0.006	0.000	0.000	0.000	
	ECR	2.17E-09	1.01E-08				5.32E-08		5.14E-12		6.55E-08
EFF	(ppb[v/v])	14	201	14	898	14	221	14	14	14	
6/10/2009	(g/s)	0.0001	0.0011	0.0001	0.0050	0.0001	0.0012	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.024	0.000	0.006	0.000	0.000	0.000	
	ECR	2.17E-09	1.06E-08				5.11E-08		6.00E-12		6.39E-08
EFF	(ppb[v/v])	10	323	3	1290	16	302	3	13	1	
7/09/2009	(g/s)	0.0001	0.0018	0.0000	0.0072	0.0001	0.0017	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.008	0.000	0.034	0.000	0.008	0.000	0.000	0.000	
	ECR	1.47E-09	1.70E-08				6.99E-08		5.62E-12		8.84E-08
EFF	(ppb[v/v])	14	116	14	495	14	136	14	14	16	
8/25/2009	(g/s)	0.0001	0.0006	0.0001	0.0028	0.0001	0.0008	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.003	0.000	0.013	0.000	0.004	0.000	0.000	0.000	
	ECR	2.17E-09	6.10E-09				3.15E-08		6.00E-12		3.98E-08
EFF	(ppb[v/v])	13	158	1	401	1	107	4	6	7	
9/25/2009	(g/s)	0.0001	0.0009	0.0000	0.0022	0.0000	0.0006	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.004	0.000	0.011	0.000	0.003	0.000	0.000	0.000	
	ECR	2.02E-09	8.31E-09				2.48E-08		2.36E-12		3.51E-08
EFF	(ppb[v/v])	13	237	2	903	12	167	4	12	5	
10/15/2009	(g/s)	0.0001	0.0013	0.0000	0.0051	0.0001	0.0009	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.006	0.000	0.024	0.000	0.004	0.000	0.000	0.000	
	ECR	2.02E-09	1.25E-08				3.87E-08		5.23E-12		5.31E-08
EFF	(ppb[v/v])	14	108	14	412	14	83	14	14	14	
11/13/2009	(g/s)	0.0001	0.0006	0.0001	0.0023	0.0001	0.0005	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.003	0.000	0.011	0.000	0.002	0.000	0.000	0.000	
	ECR	2.17E-09	5.68E-09				1.92E-08		6.00E-12		2.71E-08
EFF	(ppb[v/v])	15	201	15	912	15	199	15	16	15	
12/15/2009	(g/s)	0.0001	0.0011	0.0001	0.0051	0.0001	0.0011	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.005	0.000	0.024	0.000	0.005	0.000	0.000	0.000	
	ECR	2.33E-09	1.06E-08				4.61E-08		6.86E-12		5.90E-08

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.
Bold = Cumulative Cancer Risk above action level.

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	**TCE** *Carcinogen*	**1,1-DCE** *Non-Carcinogen*	**cis-1,2-DCE** *Non-Carcinogen*	**trans-1,2-DCE** *Non-Carcinogen*	**VC** *Carcinogen*	**1,1,1-TCA** *Non-Carcinogen*	**1,1-DCA** *Carcinogen*	**Toluene** *Non-Carcinogen*	
EFF	(ppb[v/v])	14	145	14	1060	14	281	14	14		
1/25/2010	(g/s)	0.0001	0.0008	0.0001	0.0059	0.0001	0.0016	0.0001	0.0001	0.0000	
	Max.Conc.	0.000	0.004	0.000	0.028	0.000	0.007	0.000	0.000	0.000	
	ECR	2.22E-09	7.63E-09				6.50E-08		6.13E-12		7.49E-08
EFF	(ppb[v/v])	14	246	14	4680	18	289	14	19		
2/17/2010	(g/s)	0.0001	0.0014	0.0001	0.0262	0.0001	0.0016	0.0001	0.0001	0.0000	
	Max.Conc.	0.000	0.006	0.000	0.123	0.000	0.008	0.000	0.000	0.000	
	ECR	2.14E-09	1.29E-08				6.69E-08		8.15E-12		8.20E-08
EFF	(ppb[v/v])	79	300	58	1550	58	261	79	59		
3/09/2010	(g/s)	0.0004	0.0017	0.0003	0.0087	0.0003	0.0015	0.0004	0.0003	0.0000	
	Max.Conc.	0.002	0.008	0.002	0.041	0.002	0.007	0.002	0.002	0.000	
	ECR	1.23E-08	1.58E-08				6.04E-08		2.53E-11		8.85E-08
EFF	(ppb[v/v])	13	639	13	2510	34	373	13	24		
4/16/2010	(g/s)	0.0001	0.0036	0.0001	0.0141	0.0002	0.0021	0.0001	0.0001	0.0000	
	Max.Conc.	0.000	0.017	0.000	0.066	0.001	0.010	0.000	0.001	0.000	
	ECR	2.08E-09	3.36E-08				8.63E-08		1.03E-11		1.22E-07
EFF	(ppb[v/v])	14	1020	14	2690	26	267	14	16		
5/10/2010	(g/s)	0.0001	0.0057	0.0001	0.0151	0.0001	0.0015	0.0001	0.0001	0.0000	
	Max.Conc.	0.000	0.027	0.000	0.071	0.001	0.007	0.000	0.000	0.000	
	ECR	2.14E-09	5.37E-08				6.18E-08		6.86E-12		1.18E-07
EFF	(ppb[v/v])		401	14	893	21	167	14	14	14	
6/25/2010	(g/s)	0.0000	0.0022	0.0001	0.0050	0.0001	0.0009	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.011	0.000	0.023	0.001	0.004	0.000	0.000	0.000	
	ECR	0.00E+00	2.11E-08				3.87E-08		6.00E-12		5.98E-08
EFF	(ppb[v/v])	114	785	114	2640	114	453	114	114	114	
7/13/2010	(g/s)	0.0006	0.0044	0.0006	0.0148	0.0006	0.0025	0.0006	0.0006	0.0006	
	Max.Conc.	0.003	0.021	0.003	0.069	0.003	0.012	0.003	0.003	0.003	
	ECR	1.77E-08	4.13E-08				1.05E-07		4.89E-11		1.64E-07
EFF	(ppb[v/v])	14	537	14	1180	27	370	14	20	14	
8/09/2010	(g/s)	0.0001	0.0030	0.0001	0.0066	0.0002	0.0021	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.014	0.000	0.031	0.001	0.010	0.000	0.001	0.000	
	ECR	2.22E-09	2.82E-08				8.56E-08		8.57E-12		1.16E-07
EFF	(ppb[v/v])	6	607	2	1820	10	284	1	9	1	
9/15/2010	(g/s)	0.0000	0.0034	0.0000	0.0102	0.0001	0.0016	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.016	0.000	0.048	0.000	0.007	0.000	0.000	0.000	
	ECR	9.00E-10	3.19E-08				6.57E-08		3.64E-12		9.86E-08
EFF	(ppb[v/v])	44	158	44	907	44	149	44	44	44	
10/22/2010	(g/s)	0.0002	0.0009	0.0002	0.0051	0.0002	0.0008	0.0002	0.0002	0.0002	
	Max.Conc.	0.001	0.004	0.001	0.024	0.001	0.004	0.001	0.001	0.001	
	ECR	6.86E-09	8.31E-09				3.45E-08		1.89E-11		4.97E-08
EFF	(ppb[v/v])	14	343	14	2080	17	240	14	18	14	
11/12/2010	(g/s)	0.0001	0.0019	0.0001	0.0116	0.0001	0.0013	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.009	0.000	0.055	0.000	0.006	0.000	0.000	0.000	
	ECR	2.14E-09	1.80E-08				5.55E-08		7.72E-12		7.57E-08
EFF	(ppb[v/v])	6	603	3	1960	17	349	4	17	1	
12/17/2010	(g/s)	0.0000	0.0034	0.0000	0.0110	0.0001	0.0020	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.016	0.000	0.052	0.000	0.009	0.000	0.000	0.000	
	ECR	9.62E-10	3.17E-08				8.08E-08		7.29E-12		1.13E-07

Notes:

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

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.

Bold = Cumulative Cancer Risk above action level.

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

Table D-9
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description / Sample Date	Input / Output	CONSTITUENTS									Cumulative Cancer Risk
		PCE *Carcinogen*	**TCE** *Carcinogen*	**1,1-DCE** *Non-Carcinogen*	**cis-1,2-DCE** *Non-Carcinogen*	**trans-1,2-DCE** *Non-Carcinogen*	**VC** *Carcinogen*	**1,1,1-TCA** *Non-Carcinogen*	**1,1-DCA** *Carcinogen*	**Toluene** *Non-Carcinogen*	
EFF	(ppb[v/v])	6	118	1	553	5	142	4	1	3	
1/13/2011	(g/s)	0.0000	0.0007	0.0000	0.0031	0.0000	0.0008	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.003	0.000	0.015	0.000	0.004	0.000	0.000	0.000	
	ECR	0.00E+00	6.21E-09				3.29E-08		0.00E+00		3.91E-08
EFF	(ppb[v/v])	14	484	14	3580	19	290	14	14	14	
3/21/2011	(g/s)	0.0000	0.0027	0.0000	0.0200	0.0001	0.0016	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.013	0.000	0.094	0.000	0.008	0.000	0.000	0.000	
	ECR	0.00E+00	2.55E-08				6.71E-08		0.00E+00		9.26E-08
EFF	(ppb[v/v])	14	388	14	2540	14	290	14	14	14	
4/12/2011	(g/s)	0.0000	0.0022	0.0000	0.0142	0.0000	0.0016	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.010	0.000	0.067	0.000	0.008	0.000	0.000	0.000	
	ECR	0.00E+00	2.04E-08				6.71E-08		0.00E+00		8.75E-08
EFF	(ppb[v/v])	19	205	19	903	19	244	19	19	19	
5/18/2011	(g/s)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	ECR	0.00E+00	0.00E+00				0.00E+00		0.00E+00		0.00E+00
EFF	(ppb[v/v])	6	455	3	1900	15	427	2	16	1	
6/16/2011	(g/s)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	ECR	0.00E+00	0.00E+00				0.00E+00		0.00E+00		0.00E+00

onstituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.
v/v] x 1,000 / (22,500 x 2.205 x 3,600).
cess Cancer Risk = Maximum concentration (in $\mu g/m^3$) x Unit Risk Factor.
ple collected from air treatment system influent.
nple collected from air treatment system effluent.
mulative Cancer Risk above action level.

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	--	8.80E-06
1,1-Dichloroethane	--	1.63E-08
Trichloroethene	--	2.00E-06
Tetrachloroethene	--	5.90E-06

APPENDIX E

SUMMARY OF AIR DISPERSION MODELING
AND
CUMULATIVE CANCER RISK CALCULATIONS

APPENDIX E

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 are provided in ***Table 9*** 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 -	8.80E-06
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 9*** of this progress report.

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 August 2005 (exceeded by 0.05x10-6). 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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