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October 2004 Semi-Annual Post-Closure Groundwater Monitoring Report: Former International Paper Folding Carton Facility, Wilmington, North Carolina

Prepared for

International Paper
Memphis, Tennessee

Certification

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Tom C. Richardson
Corporate EHS Remediation Project Manager

Exponent®

October 2004 Semi-Annual Post-Closure Groundwater Monitoring Report: Former International Paper Folding Carton Facility, Wilmington, North Carolina

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Acronyms and Abbreviations

Addendum	*Addendum to the Groundwater Sampling and Analysis Plan for Corrective Action and Compliance Monitoring*
amsl	above mean sea level
AST	above-ground storage tank
bgs	below ground surface
CAP	Corrective Action Plan
COD	chemical oxygen demand
DO	dissolved oxygen
GWPS	groundwater protection standard
LCS	laboratory control sample
MEK	methyl ethyl ketone
MS	matrix spike
MSD	matrix spike duplicate
NCDENR	North Carolina Department of Environment and Natural Resources
SAP	Sampling and Analysis Plan
SVOC	semivolatile organic compound
SWMU	solid waste management unit
VOC	volatile organic compound

Introduction

This data report presents the results of a groundwater sampling event conducted October 11–14, 2004, at the former International Paper Folding Carton Facility (the facility), located at 2221 J.R. Kennedy Drive in Wilmington, North Carolina (Figure 1). Additionally, an inspection of facility's groundwater monitoring well network was completed on October 12, 2004. These tasks were completed to satisfy the requirements of the facility's Hazardous Waste Management Permit No. NCD 072 022 726-M1 (Permit), issued on July 25, 1997 (DEHNR 1997), and amended with a Class 2 permit modification on June 6, 2001 (DENR 2001). The re-application of ORC®, as required in the *Corrective Action Plan for the International Paper Retail Packaging Facility, Wilmington, North Carolina* (CAP) (Exponent 2000a) was last performed in December 2002 per the *ORC® Re-application Plan for Groundwater Corrective Action* (Exponent 2002a).

The October 2004 groundwater sampling was performed to satisfy the Permit's semi-annual groundwater requirements, and was completed in accordance with the *Groundwater Sampling and Analysis Plan (SAP) for Corrective Action and Compliance Monitoring, October 2004 Semi-Annual Sampling Event* (Exponent 2004a). This SAP was prepared to supplement the *Groundwater Sampling and Analysis Plan for Corrective Action and Compliance Monitoring* (Radian 1998) and the *Addendum to the Groundwater Sampling and Analysis Plan for Corrective Action and Compliance Monitoring* (Addendum) (Exponent 2000b), to address comments provided by the North Carolina Department of Environment and Natural Resources (NCDENR) for the April 2004 semi-annual data summary report (DENR 2004).

The CAP is based on enhanced natural attenuation and is designed to augment existing biodegradation processes that are reducing the concentration and extent of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) in groundwater associated with an accidental release of organic compounds from a former aboveground storage tank (AST) farm at Solid Waste Management Unit (SWMU) 14 (Exponent 2000a). As specified in the CAP, International Paper installed an ORC® array in June 2001, and re-applied in December 2002. This data report provides a description of ongoing performance monitoring (Exponent 2003a,b, 2004b) conducted since the December 2002 ORC® re-application. To satisfy the CAP's performance monitoring requirements, monitoring wells MW-09, MW-31, and MW-34 were sampled for selected VOCs, SVOCs, chemical oxygen demand (COD), and field parameters (i.e., pH, temperature, specific conductivity, dissolved oxygen [DO], redox, and iron) in October 2004.

The facility's Permit specifies semi-annual groundwater sampling and analysis, in April and October, for selected VOCs, SVOCs, and field parameters, at seven shallow monitoring wells (POC-01, MW-09, MW-21, MW-23, MW-25, MW-31, and MW-34) at the site. In addition, the permit requires collection of groundwater samples from well POC-01 for Appendix IX analysis (40 CFR 264, Appendix IX) in April of each year, and therefore, the Appendix IX analysis was not performed for this sampling event. Annual groundwater sampling and analysis of one deep well (MW-10) is required in October of each year, and the results are included in this report.

In addition to the permit requirements, the October 2004 SAP required the sampling of three additional wells (MW-22, MW-24, and MW-32) and three direct-push boreholes (four were installed) for selected VOCs and field parameters, to address NCDENR comments, provide additional data to delineate the current location of the benzene plume, and provide information to evaluate the effectiveness of the CAP monitoring well network and criteria in monitoring current site conditions.

This data report describes the sampling locations, sampling methods, deviations from the SAP (October 2004 supplemental SAP, the 1998 SAP, and Addendum), data quality, methods used to measure field parameters, and analytical methods used to analyze samples for VOCs, SVOCs, and COD.

Plume Background and ORC® Re-application History

As described in detail in the CAP (Exponent 2000a), natural biodegradation processes (combined with recovery operations following the methyl ethyl ketone (MEK) spill and an engineered cap for source control) have caused the VOC and SVOC plume to shrink over time. Site-specific data have shown a loss of contaminant mass over time. Field measurements of redox in groundwater within the plume in October 1999 (Exponent 1999) showed that the redox potential (Eh) of the plume was significantly negative, and the plume contained high dissolved iron concentrations, which indicate anaerobic conditions. Dissolved oxygen concentrations within the plume were typically on the order of 1 mg/L or lower.

Because VOCs typically biodegrade more slowly under anaerobic conditions than under aerobic conditions, oxygen was applied to the groundwater using ORC® applied via a borehole array at the perceived downgradient end of the anaerobic plume. The goal of creating the aerobic zone was to increase the degradation of benzene, which was not being reduced at the same rate as the other organic contaminants present in the plume (i.e., the benzene plume showed a slight contraction over the same time period compared to acetone, MEK, and toluene). The dissolved oxygen concentrations observed in October 2004 are shown in Figure 2, along with the last ORC® borehole injection array. There are currently no aerobic zones present on the site (i.e., dissolved oxygen > 1).

The last ORC® re-application was performed on December 10–12, 2002, and the borehole array is depicted in Figure 2. International Paper first applied ORC® to the same injection array on June 13, 2001. Each application consisted of 57 1.5-in.-diameter boreholes (ORC-1A through ORC-57A), which were advanced for the injection of ORC® using direct-push methods. The injection array consists of a double row of injection points in a horseshoe configuration. The inner row includes an 80-ft central segment extending 40 ft north and 40 ft south of a point 50 ft west-northwest (i.e., hydraulically downgradient) of MW-09. From the northern and southern ends of the central segment, two 140-ft segments extend at angles of 60° east of north and 60° east of south, respectively. The outer row is offset 5 ft in both the perpendicular and parallel directions from the inner row. The angled segments of the outer row are each 80 ft long, as shown in Figure 2. Galvanized steel fence posts were previously installed at each of the four array corners and were surveyed to a horizontal accuracy of 0.1 ft. The locations of the individual injection points were marked using the corner guideposts and a distance wheel.

ORC® was injected into each borehole from the bottom of the borehole to approximately 2 ft below ground surface (bgs). A total of 2,474 pounds (dry weight) of ORC® was injected during the December 2002 re-injection. The uppermost 2 ft of each borehole was sealed using bentonite chips.

Monitoring Well Maintenance and Repairs

Twenty-three existing wells are located on the facility property. On October 12, 2004, an inspection of these 23 wells was performed, and the following maintenance and repairs were conducted:

- Fire ant mounds were noted within the Waste Management Unit near well POC-1. Corrective action was not performed, because any pesticide treatment could influence groundwater concentrations.
- Monitoring well MW-27 has a J-plug slip cap only, because there is not room for a padlock beneath the bolt-on manhole cover.

As discussed in the April 2003 semi-annual groundwater monitoring report, well MW-05 was abandoned in July 2003. Equipment installed to withdraw groundwater for the facility's previously planned dual-phase extraction system was obstructing the well and hindering reliable sample collection. This well is not included in the Permit-specified semi-annual post-closure groundwater-monitoring program and was being used only for measuring water levels. The absence of water-level measurements will not hinder the analysis of site groundwater flow contours.

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Groundwater Sampling Summary

As specified in the SAP, groundwater samples are to be collected semi-annually, in April and October of each year. The semi-annual groundwater sampling was completed October 11–14, 2004.

Sampling Locations

During the October sampling event, a total of seven monitoring wells (POC-01, MW-09, MW-21, MW-23, MW-25, MW-31, and MW-34) at the facility were sampled for selected VOCs, SVOCs, and field parameters (Figure 1). Monitoring wells MW-31 and MW-34 were also sampled for COD. Three monitoring wells (MW-22, MW-24, and MW-32) were sampled for selected VOCs and field parameters. In addition, groundwater samples collected from four direct-push boreholes were analyzed for selected VOCs and COD. Depth to groundwater was measured in all 10 sampled monitoring wells, 13 additional wells, and 4 direct-push boreholes.

Well completion details are provided in Table 1. Direct-push borehole installation was performed by Troxler Geological Services, Inc., and sampling was performed by URS Corporation personnel.

Groundwater Sampling Summary

Unless noted in this section, all field sampling activities were performed in accordance with the SAP and Addendum.

Static water levels were measured in all wells prior to purging. This was done to ensure that the recorded water levels represent the undisturbed water table. The depth to water in individual wells was measured using an electronic water-level indicator. Depths to water and calculated groundwater elevations are provided in Table 2.

Monitoring wells were purged using a peristaltic pump with new, dedicated tubing.[1] During groundwater purging, flow from the discharge tube was directed into a flow-through cell and allowed to discharge from the cell directly to a secondary container. Use of the flow-through cell minimizes contact between the groundwater and the ambient atmosphere, which can influence some field parameter measurements (e.g., pH, temperature, DO, and redox). Field parameters (i.e., pH, temperature, specific conductivity, DO, redox, and turbidity) were measured using a YSI 556 multi-parameter meter and recorded at every purge volume. Turbidity was measured using a Hach 2100P turbidimeter. Ferrous and total iron measurements were made following parameter stabilization using a Hach DR/820 colorimeter and AccuVac

[1] This is a deviation from the SAP, which specifies the use of a bailer for purging and sample collection. A pump with dedicated tubing was used in conjunction with a flow-through cell to improve the quality and reliability of the field parameter measurements. Samples for laboratory analysis of VOCs were collected using a disposable Teflon® bottom-loading bailer.

ampules. All meters were calibrated and operated in accordance with the manufacturer's recommendations. At least three well volumes, or the number of well volumes required until field parameters stabilized within 10% of the previous reading, whichever was greater, were removed prior to sampling.

After purging the appropriate volume of groundwater and achieving equilibration of field parameters, groundwater samples were collected following the procedures specified in the SAP and Addendum for laboratory analysis of VOCs, SVOCs, and COD. Samples for VOC analyses were collected using a disposable Teflon® bottom-loading bailer, while samples for all other analyses were collected from the pump discharge line. Samples were then packed in an ice-filled cooler and submitted to Columbia Analytical Services (CAS), in Jacksonville, Florida, for analysis.

Field quality control (QC) samples for the October 2004 sampling consisted of one field duplicate from well MW-34, one equipment blank, and one trip blank. Organic-free, deionized water for blanks was supplied by CAS.

Four direct-push boreholes with pre-packed well screens were installed, sampled, and left for possible sample collection in April 2005. The October 2004 SAP supplement required the installation and sampling at three locations (GB-01, GB-02, and GB-03), followed by borehole abandonment. A fourth location (GB-04) was installed between GB-01 and GB-02 on the upgradient side of the ORC injection wall to aid in further delineating the benzene plume.

Investigation Results

Corrective Action Performance Monitoring Results

This section presents the results of the groundwater performance monitoring conducted to assess the effectiveness of the corrective action as described in the CAP (Exponent 2000a) and the *ORC® Re-application Plan for Groundwater Corrective Action* (Exponent 2002a). The initial ORC® application was implemented in June 2001, and an ORC® re-application was implemented in December 2002. Ongoing monitoring results for the well upgradient of the ORC® array (MW-09), and the two downgradient monitoring wells (MW-31 and MW-34), are presented in Table 3. Table 3 also contains monitoring results for the baseline, pre–corrective action, sampling event in April 2001.

Criteria under the CAP for initiating an ORC® re-application include a review of data from the two downgradient monitoring wells (MW-31 and MW-34). If the data at either well show a combination of dissolved oxygen concentrations less than 2.0 mg/L and a benzene concentration greater than 1.0 μg/L, then a re-application of ORC® is required.

Benzene concentrations at monitoring well MW-09, upgradient of the ORC® array, have fluctuated between 8.5 and 51 μg/L since the April 2001 sampling event, which occurred just prior to the first ORC® application, and during October 2004, the benzene concentration was 14 μg/L. Benzene has not been detected at monitoring well MW-31 since October 2002. At monitoring well MW-34, benzene has not been detected since February 2003. Figure 3 depicts time-series concentrations of benzene in MW-09, MW-31, MW-34, and the source well POC-01. Although collecting reliable DO measurements in the field on a consistent basis has proven difficult, historically DO concentrations have generally been below 2 mg/L in both MW-31 and MW-34. Dissolved oxygen levels in these two wells showed a decrease and are both less than 0.2 mg/L. COD concentrations in all three wells have generally ranged from 6.0 to 36 mg/L (Table 3).

Results from the October 2004 performance monitoring (i.e., monitoring wells MW-09, MW-31, and MW-34) are provided with the semi-annual groundwater monitoring results below.

Semi-Annual Groundwater Sampling Results

Groundwater elevation measurements are presented in Table 2 and Figure 4. Measured depths to groundwater ranged from 2.31 to 7.30 ft on October 11, 2004, and calculated groundwater elevations ranged from 10.62 to 24.38 ft above mean sea level (amsl).

Field parameter measurements are summarized in Table 4. Neutral to slightly acidic pH was measured in all shallow-aquifer wells, with values ranging from 5.75 to 7.03. Monitoring wells MW-10 and MW-32, which are screened in the lower, confined Peedee Formation, had slightly higher pH values of 8.05 and 7.85, respectively. Specific conductivity values ranged from 154 to 667 μS/cm, and Eh ranged from 43 to 215 mV. DO measurements ranged from 0.05 to

(1,000 μg/L) was also exceeded in POC-01. No other GWPS exceedances were noted in the groundwater monitoring wells.

Groundwater data from supplemental direct-push borehole pre-packed screens delineated a narrow contaminant plume, with the majority of the contaminant mass currently situated along a flow path from POC-01 to MW-23 (Figure 5). These results indicate that the occurrence of hazardous constituents at concentrations above the GWPS is still limited to a relatively small area downgradient to the west-northwest from the former AST farm at the facility, with the majority of the mass centered around GB-01. Benzene, COD, and DO concentrations are presented in wells along this "new" plume axis (POC-01, GB-01, GB-04, GB-02, GB-03, and MW-23) in Figure 7. All three parameters appear to be decreasing along the axis, with the exception of an increase in benzene from POC-01 to GB-01. This could be an indication of additional contaminant mass downgradient of POC-01, but this needs to be confirmed through additional sampling at both locations.

Time trend data for benzene, COD (if measured), and DO concentrations are presented graphically for wells POC-01, MW-09, and MW-34 in Figures 8, 9, and 10, respectively, at the request of NCDENR. Review of data presented in Figure 8 indicates that there is no correlation between the measured DO concentrations and benzene concentrations in POC-01. COD has not been measured in POC-01. Review of data presented in Figure 9 once again indicates that there is no correlation between the measured DO concentrations and benzene concentrations in MW-09. Also, COD in MW-09 appears to be within the range of background aquifer values, and thus, no correlation with either benzene or DO concentrations could be established. Prior to April 2003, benzene concentrations seem to directly correlate with COD, and indirectly correlate with dissolved oxygen concentrations in MW-34. This correlation would be anticipated (i.e., an increased benzene concentration should increase the COD, and an increase in DO concentration should increase biological activity, decreasing both benzene concentrations and COD); however, the COD values are within the background aquifer values, making this correlation potentially coincidental. Since April 2003, benzene concentrations have been non-detect in MW-34, so that a correlation could not be established.

Results of Data Quality Assurance Review

Exponent performed a quality assurance review for chemical analyses completed on groundwater samples collected on October 12–15, 2004.

Fifteen groundwater samples, one field duplicate sample, one trip blank, and one equipment rinsate blank were collected and are associated with Columbia Analytical Services (CAS) data packages J0402991 and J0403002. Analyses were completed for SVOCs (8 target analytes), VOCs (11 target analytes), and COD. A trip blank was analyzed for VOCs, and one equipment blank was analyzed for SVOCs and VOCs. All analyses were completed by CAS in Jacksonville, Florida.

The quality assurance review was conducted to verify that the laboratory quality assurance and quality control procedures were documented and that the quality of the data is sufficient for their intended purposes. The quality assurance review included evaluating the applicable quality control results reported by the laboratory. The data were validated in accordance with guidance specified by the *USEPA Contract Laboratory Program, National Functional Guidelines for Organic Data Review* (U.S. EPA 1999a) for the SVOC and VOC analyses, the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (U.S. EPA 2002) for COD, and in the context of method-specific quality control requirements, as applicable. Data validation procedures were modified, as appropriate, to accommodate method-specific quality control requirements not specifically addressed by the functional guidelines (i.e., the COD analyses).

Analytical Methods

Analyses were completed in accordance with the methods listed in the following table:

Constituent	Method
SVOCs	SW-846 Method 8270C[a]
VOCs	SW-846 Method 8260B[a]
Chemical oxygen demand	EPA Method 410.2[b]

[a] U.S. EPA 2004
[b] U.S. EPA 1999b

Completeness

Results reported by the laboratory were 100-percent complete. No results required rejection (*R*) during the quality assurance review; therefore, completeness after the quality assurance review is 100%.

Holding Times and Sample Preservation

Method-specific holding-time constraints were met.

Instrument Performance

The performance of the analytical instruments, as documented by the laboratory, was acceptable.

Initial and Continuing Calibration

Initial and continuing calibrations were completed for all applicable target analytes and met the criteria (U.S. EPA 199a) for acceptable performance and frequency of calibration.

Method Blank Analyses

Target analytes were not detected in the method blanks.

Accuracy

The accuracy of the analytical results is evaluated in the following sections in terms of analytical bias (surrogate compound recoveries, matrix spike [MS] recoveries, and laboratory control sample [LCS] recoveries, and internal standard responses) and precision (applicable duplicate sample and/or matrix spike duplicate [MSD] analyses).

Surrogate Compound Recoveries

The recoveries reported by the laboratory for the surrogate compounds added to all samples analyzed for SVOCs and VOCs were within the laboratory-established control limits, with one exception.

For the VOC analysis completed on Sample GW0016, no recovery could be calculated for the surrogate compound toluene-d8 due to interferences from the high concentration of toluene in this sample. No action was required for this reason.

Matrix Spike Recoveries

The frequency of MS and/or MS/MSD analyses was met, and the recoveries reported by the laboratory, as were applicable to the analyses completed, were within the laboratory-established control limits, with one exception.

A recovery of 113% was reported for the SVOC compound 4-methyl phenol in the MS. This recovery is above the laboratory-established upper control limit of 106%. Qualification of the

associated sample data is not required because no action is taken based solely on MS/MSD data alone (U.S. EPA 1999a).

Laboratory Control Sample Recoveries

The frequency of LCS analyses was met and the recoveries reported by the laboratory, as were applicable to the analyses completed, were acceptable and within the laboratory-established control limits, with two exceptions.

Recoveries of 106% and 59% were reported for the SVOC compounds 4-methyl phenol and benzoic acid in the LCS. These recoveries are above the laboratory-established upper control limits of 93% for 4-methyl phenol and 23% for benzoic acid. Qualification of the associated sample data is not required, because a high bias is indicated and these two compounds were not reported as detected in any sample.

Internal Standard Responses

The responses and retention times for all internal standards (SVOC and VOC analyses) met method-specific criteria for acceptable performance.

Precision

The results reported by the laboratory for all applicable MSD and duplicate sample analyses, and the frequency of analysis, were acceptable and within the laboratory-established control limits.

Field Quality Control Samples

The field quality control samples consisted of one groundwater field duplicate pair (Samples GW0011 and GW0012), a trip blank, and an equipment rinsate blank. The trip blank was analyzed for VOCs. The equipment rinsate blank was analyzed for SVOCs and VOCs.

The precision of all target analytes reported as detected in the field duplicate pair was acceptable. No VOC target analytes were reported as detected in the trip blank. No SVOC or VOC target analytes were reported as detected in the equipment rinsate blank.

Target Analyte Identification and Quantification

All criteria for the identification and quantification of all target analytes reported as detected or undetected, as specified in the applicable analytical methods, were met.

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Figures

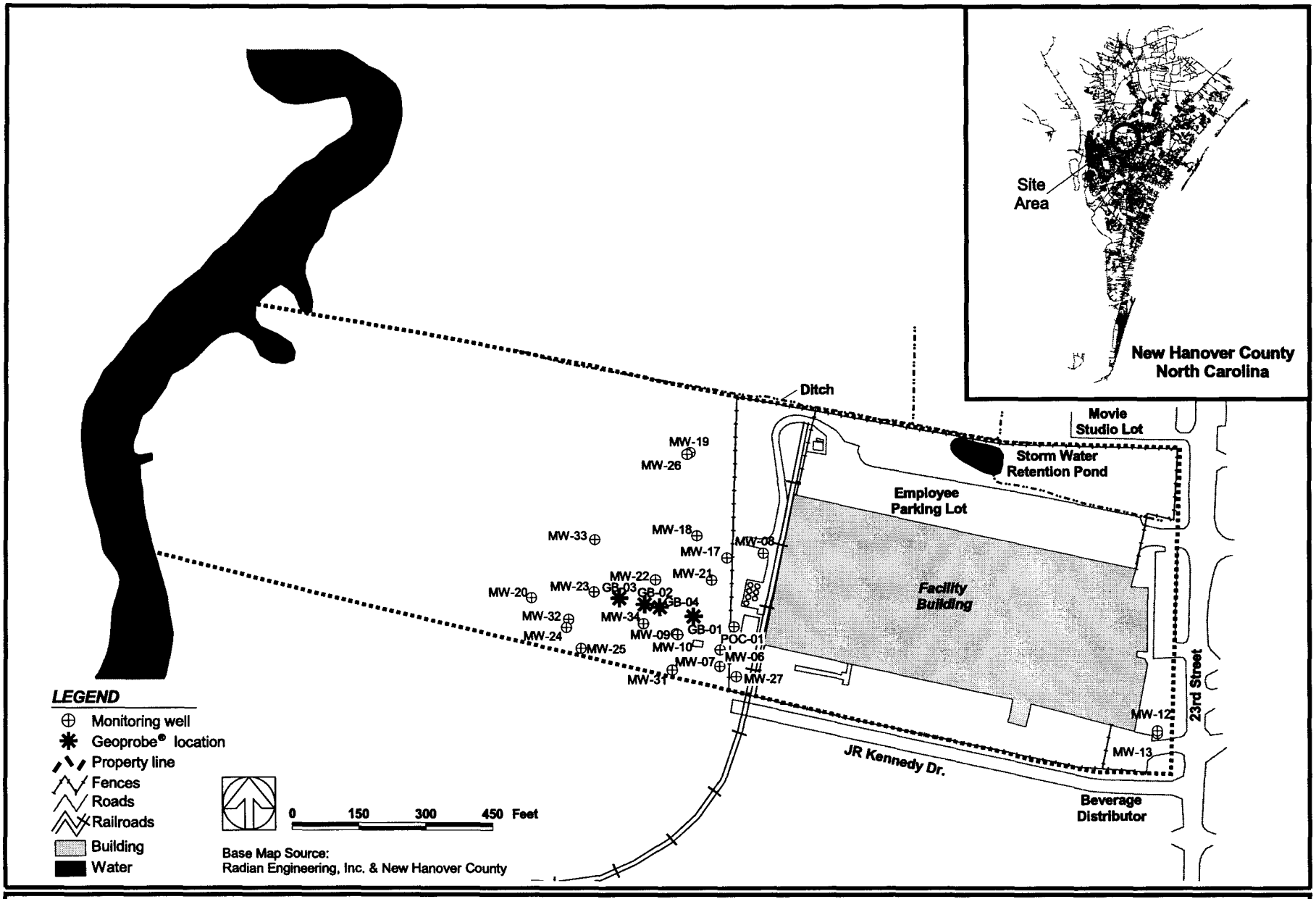

Figure 1. Former International Paper facility, Wilmington, North Carolina.

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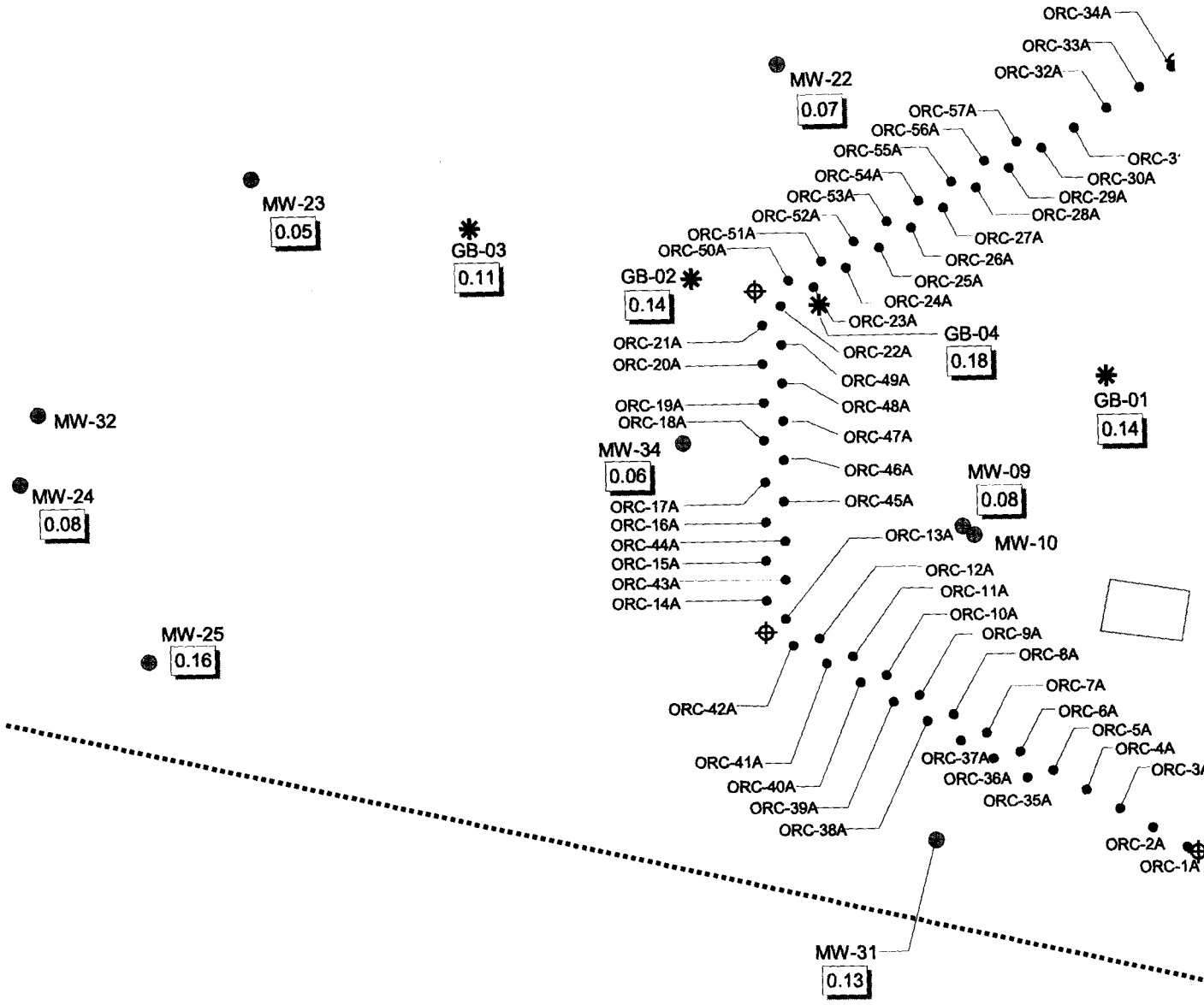

LEGEND

- Monitoring well
- ORC borehole
- Geoprobe® location
- 0.16 Dissolved oxygen (mg/L)
- Steel fence post
- Railroad
- Fence
- Road
- Property line
- Aerobic zone

Exponent®

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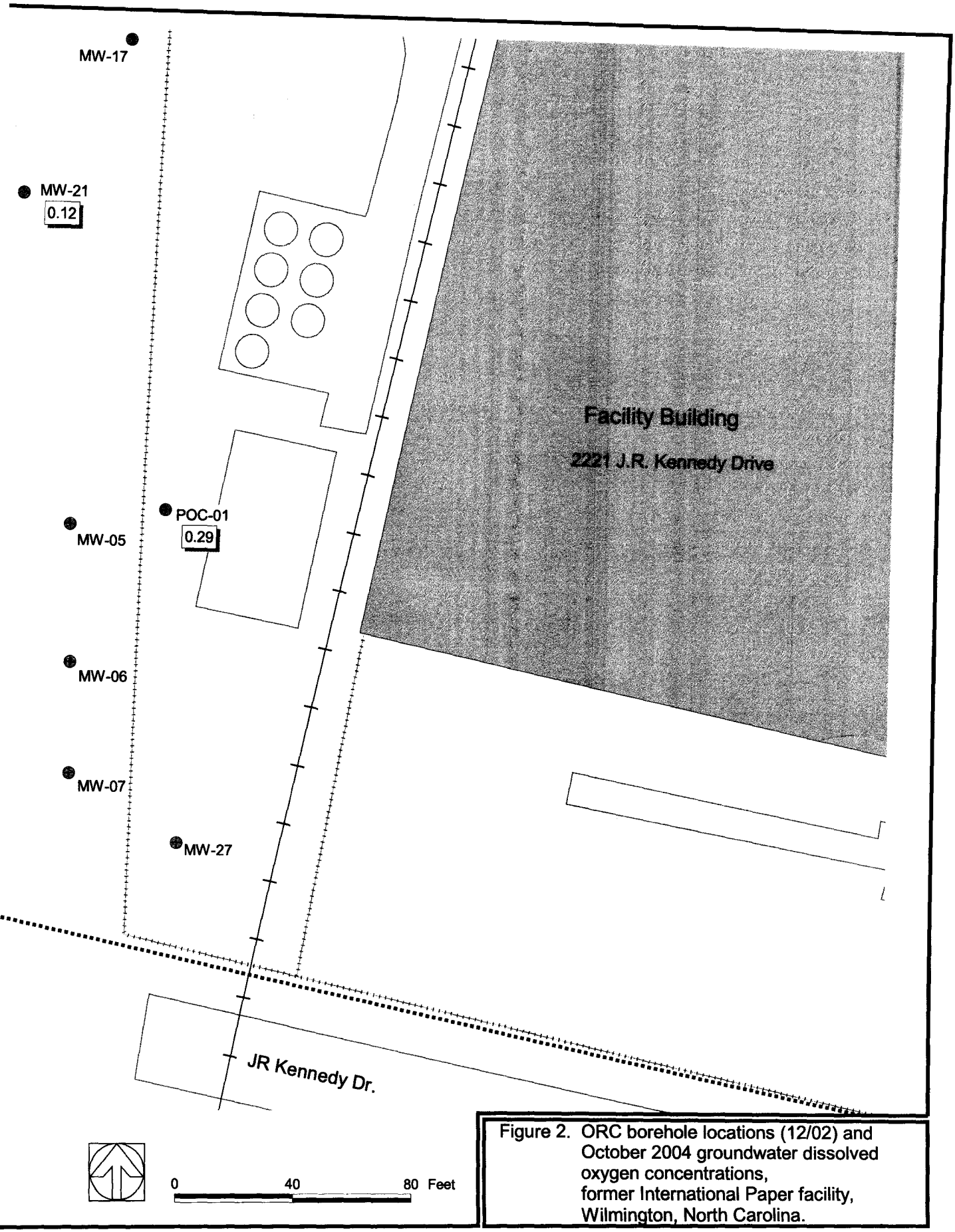
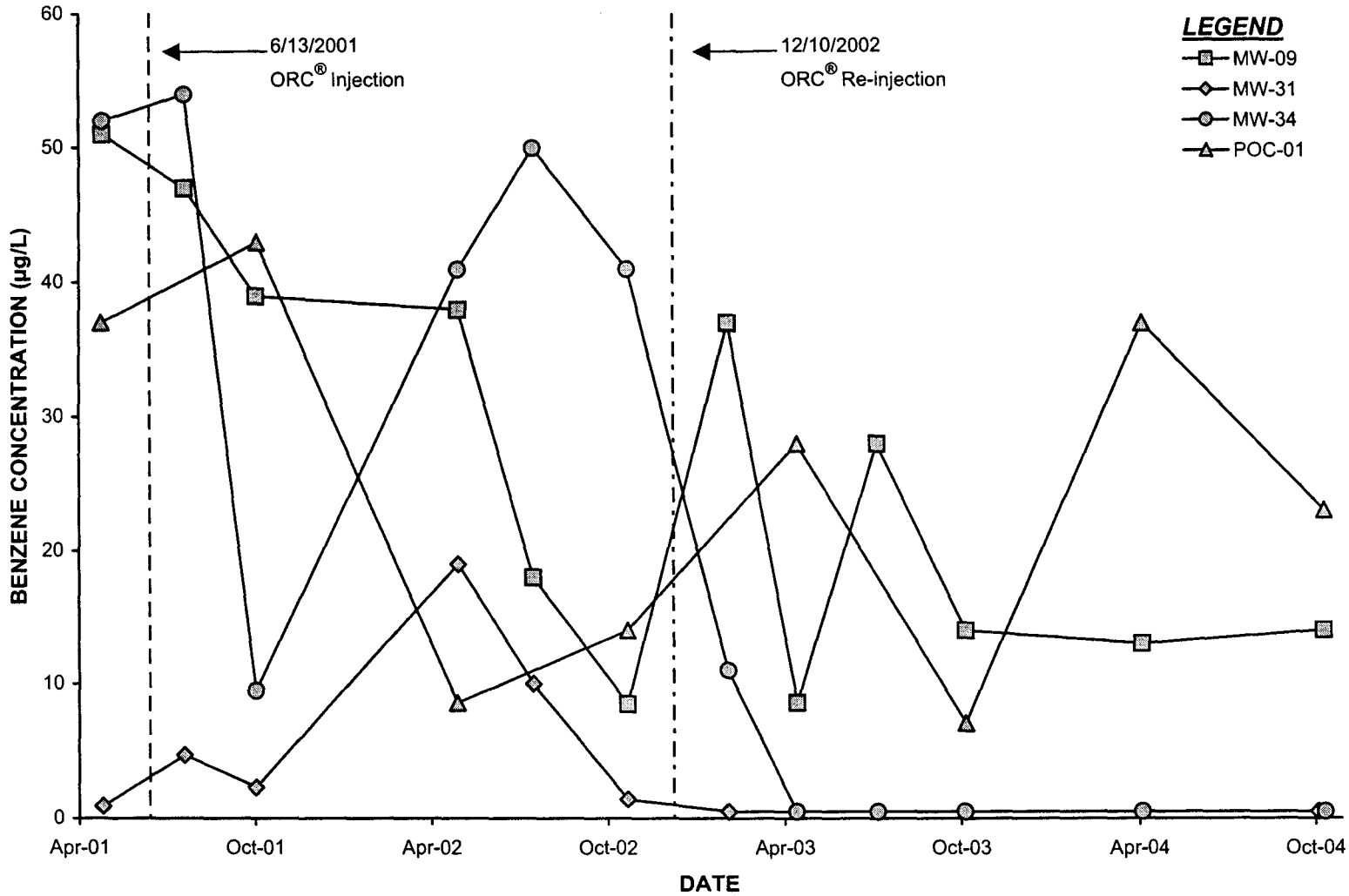


Figure 2. ORC borehole locations (12/02) and October 2004 groundwater dissolved oxygen concentrations, former International Paper facility, Wilmington, North Carolina.



Note: Field duplicates averaged.
Samples with concentrations below the reporting limit are plotted at one-half the reporting limit.
Benzene concentrations were below the 1-µg/L reporting limit at MW-31 from 2/2003 to 10/2004, and at MW-34 from 4/2003 to 10/2004.

Figure 3. Benzene concentrations in MW-09, MW-31, MW-34, and POC-01 since April 2001, former International Paper facility, Wilmington, North Carolina

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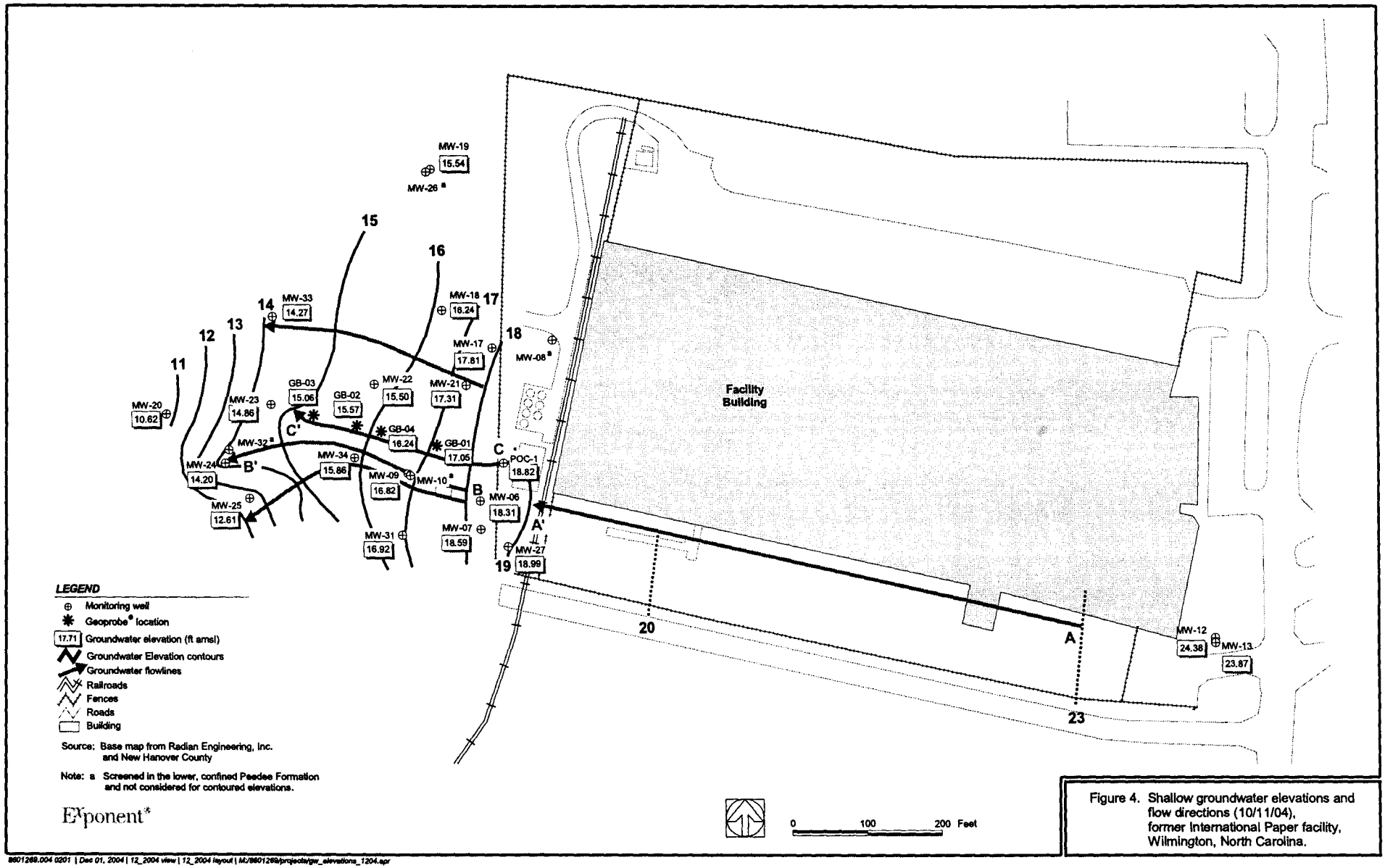


Figure 4. Shallow groundwater elevations and flow directions (10/11/04), former International Paper facility, Wilmington, North Carolina.

8801269.004 0201 | Dec 01, 2004 | 12_2004 view | 12_2004 layout | M:/8801269/projects/gw_elevations_1204.apr

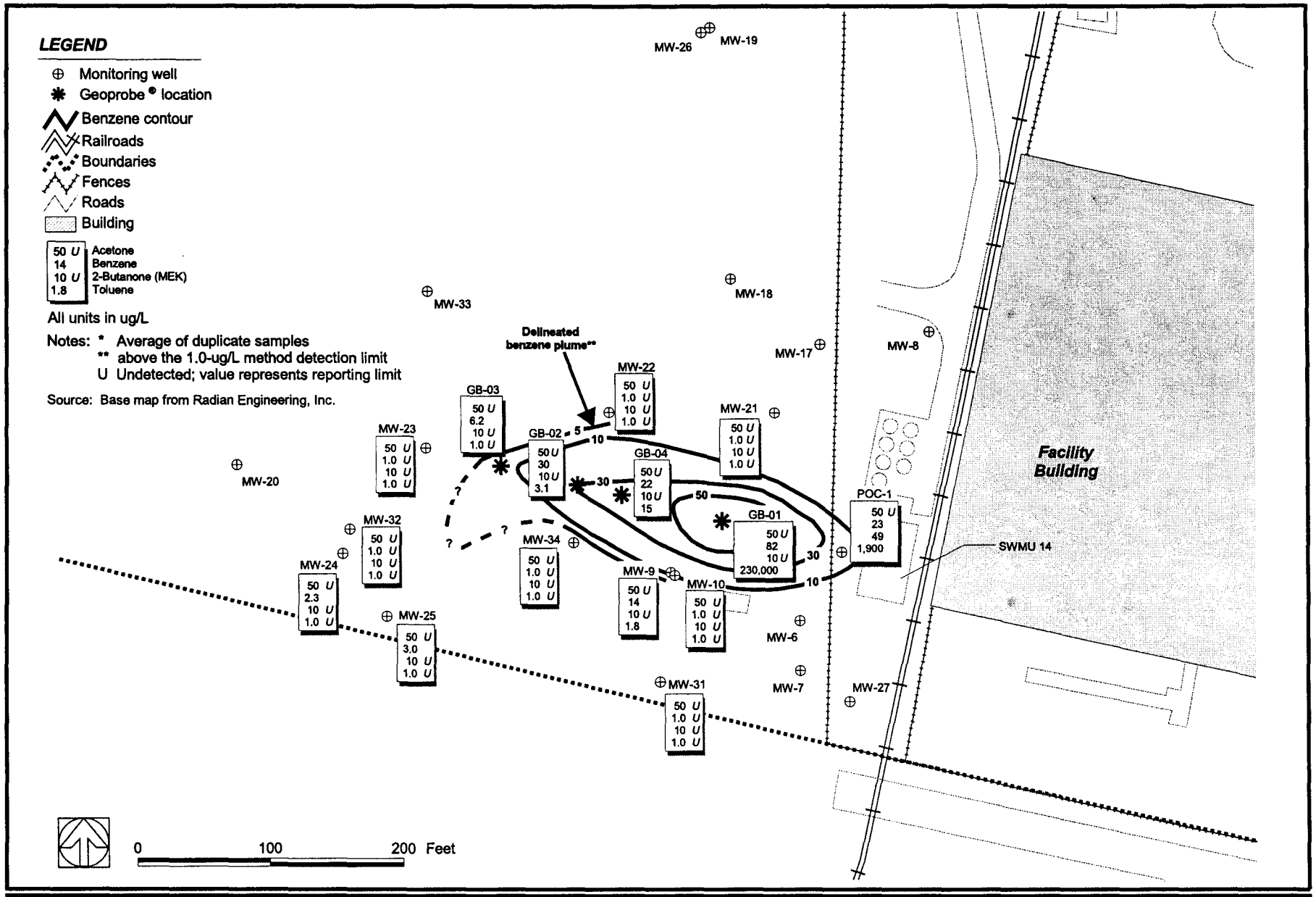
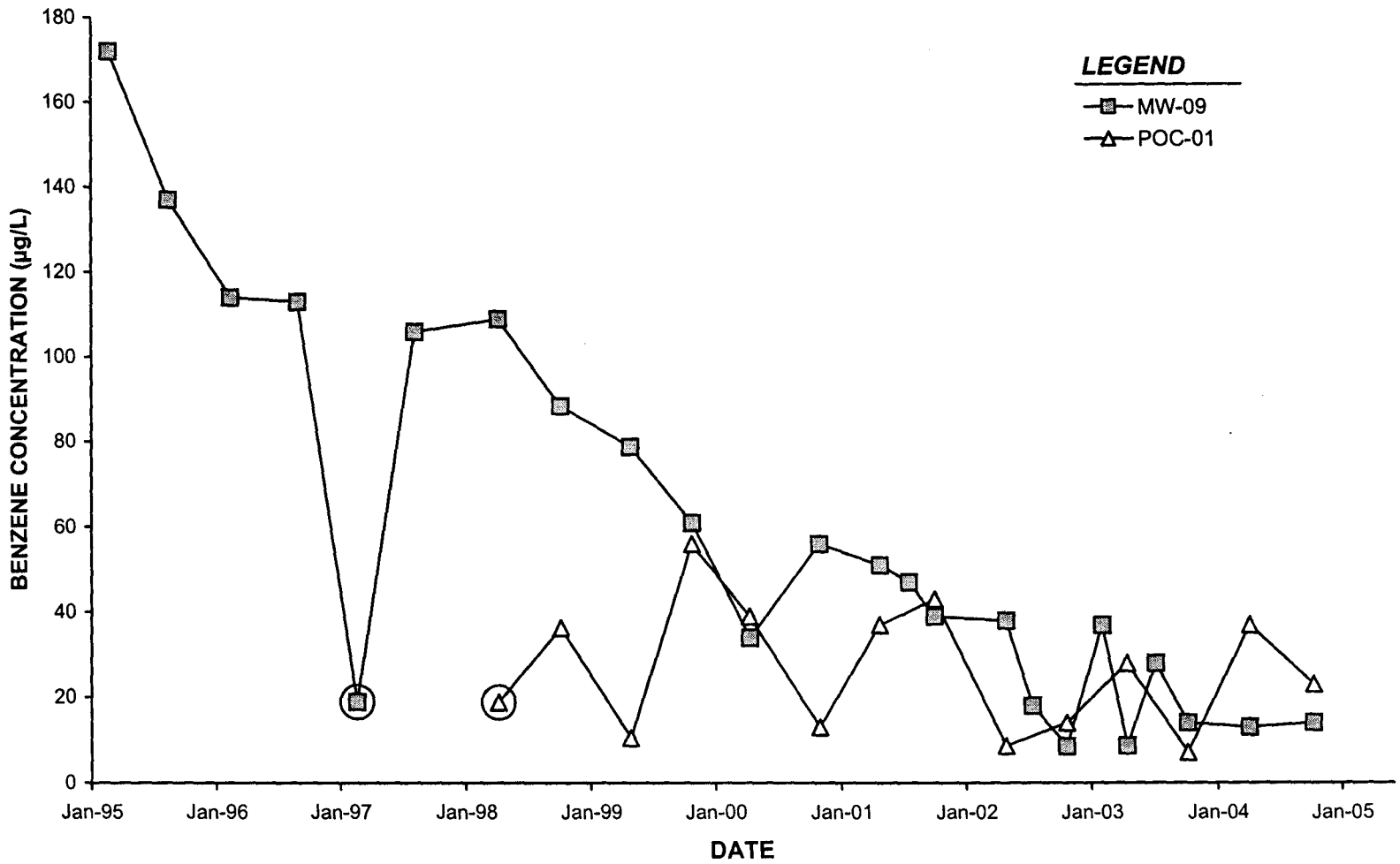


Figure 5. MEK, acetone, toluene, and benzene concentrations in groundwater (10/12–14/04), former International Paper facility, Wilmington, North Carolina.

Exponent

8601269.004 0201 | Dec 01, 2004 | gw results view | gw results layout | m:/8601269/projects/gw_results_1204.apr



Note: Non-detects are circled and are plotted at one-half the detection limit.

Figure 6. Benzene concentrations in MW-09 and POC-01 since 2/21/1995, former International Paper facility, Wilmington, North Carolina

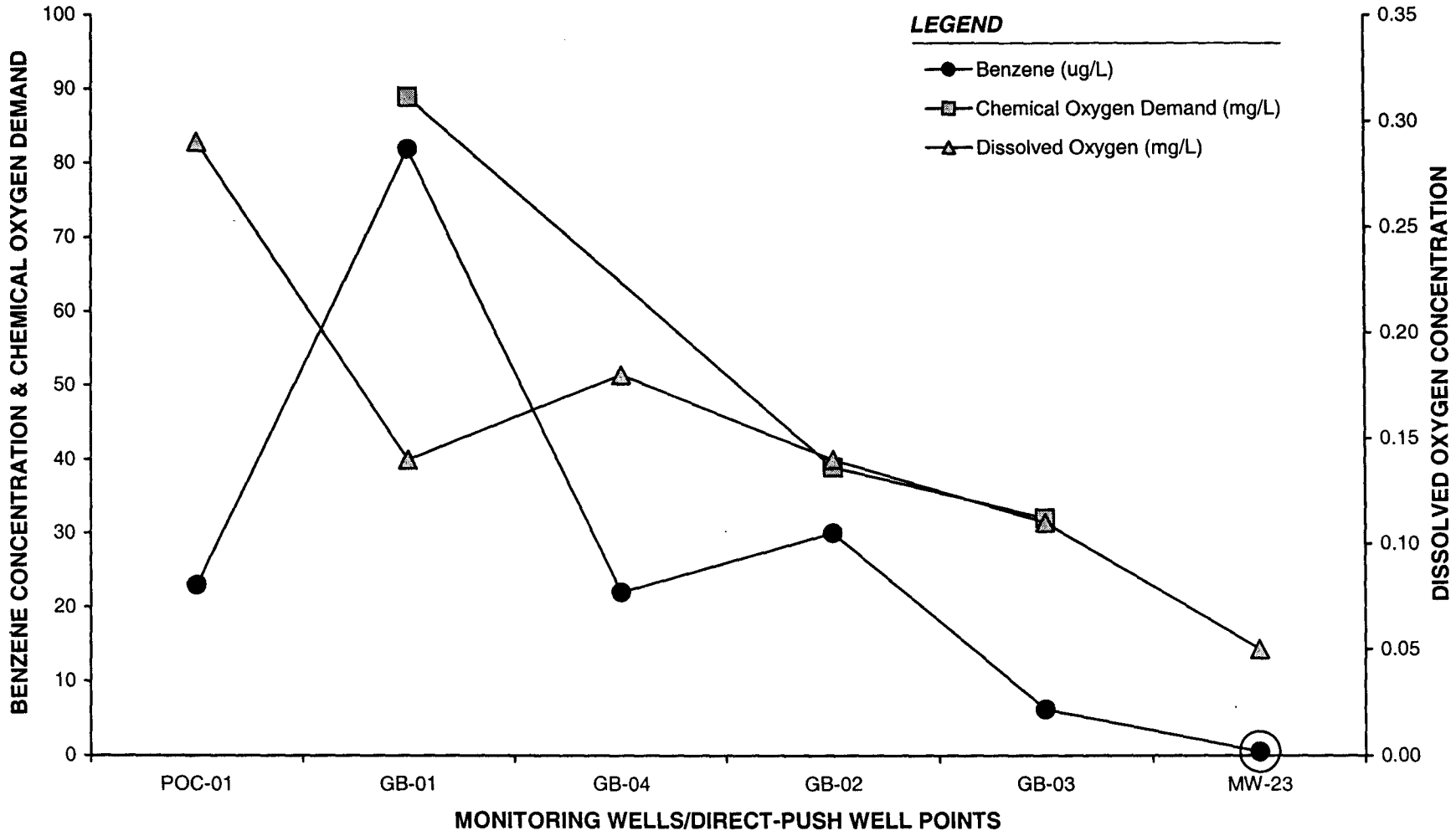


Figure 7. Benzene concentrations, chemical oxygen demand, and dissolved oxygen concentrations in POC-01, GB-01,GB-02, GB-03, GB-04, and MW-23 for October 2004 at the former International Paper facility, Wilmington, North Carolina

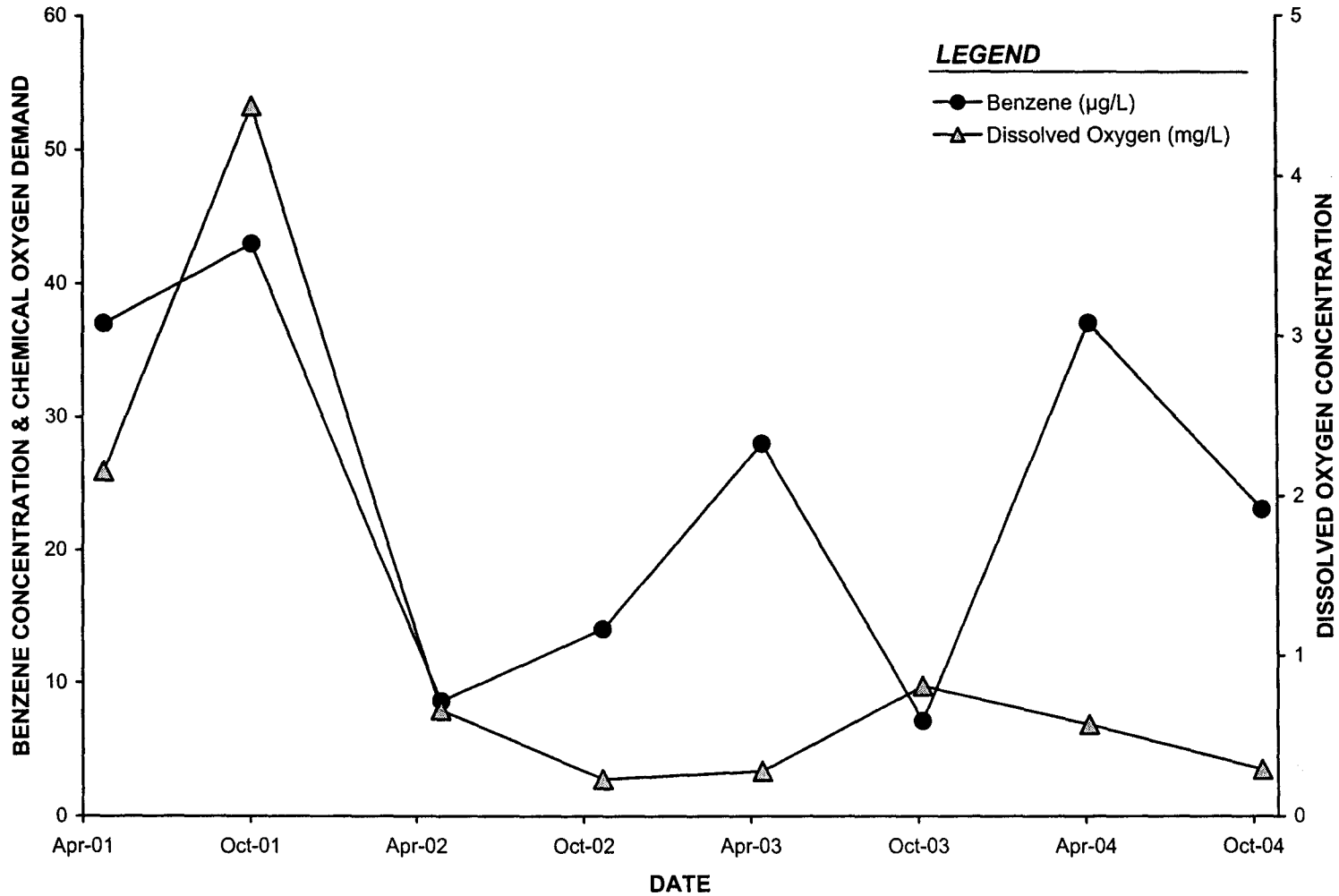


Figure 8. Benzene and dissolved oxygen concentrations in POC-01 since 4/25/2001, former International Paper facility, Wilmington, North Carolina

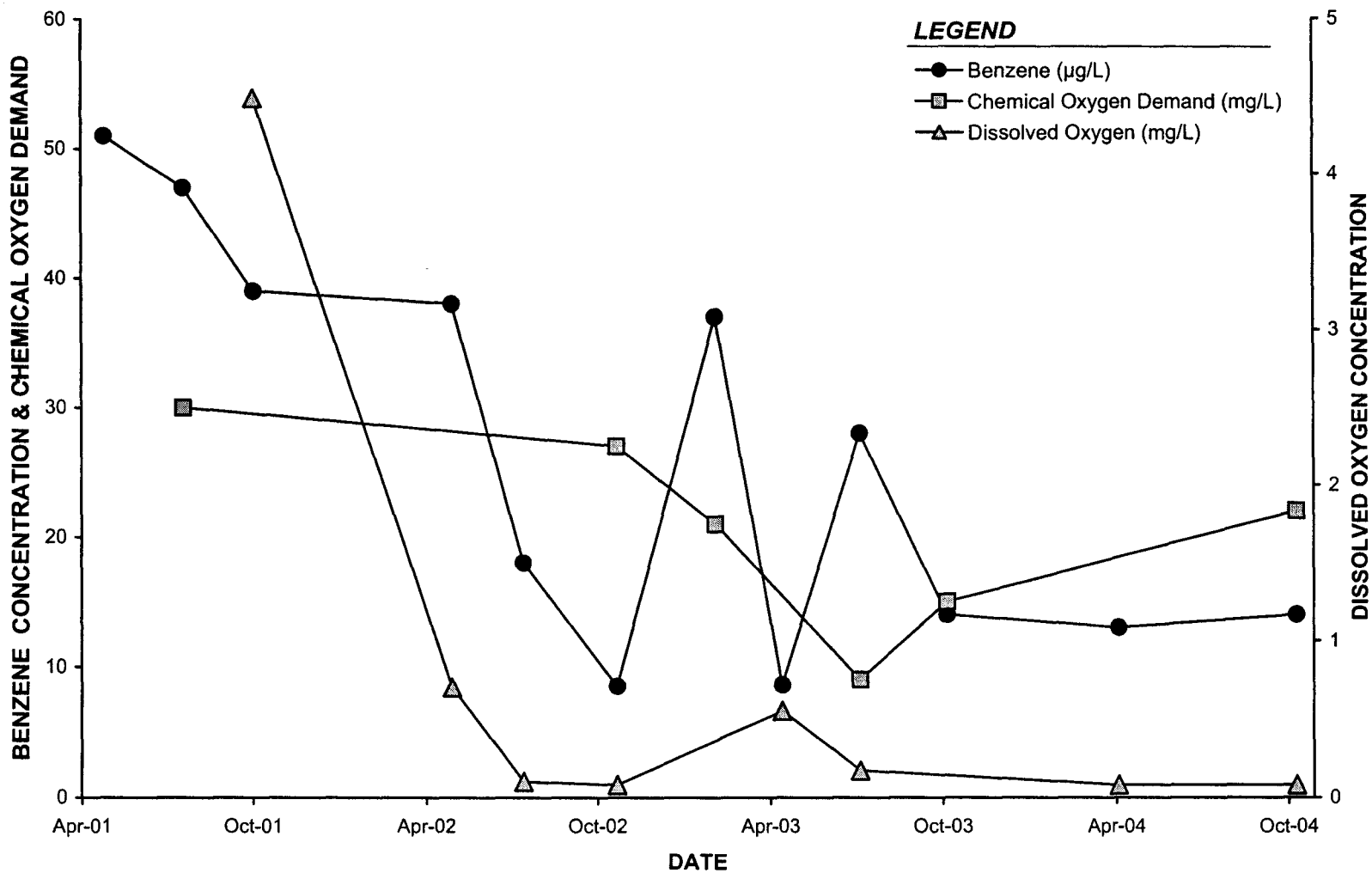
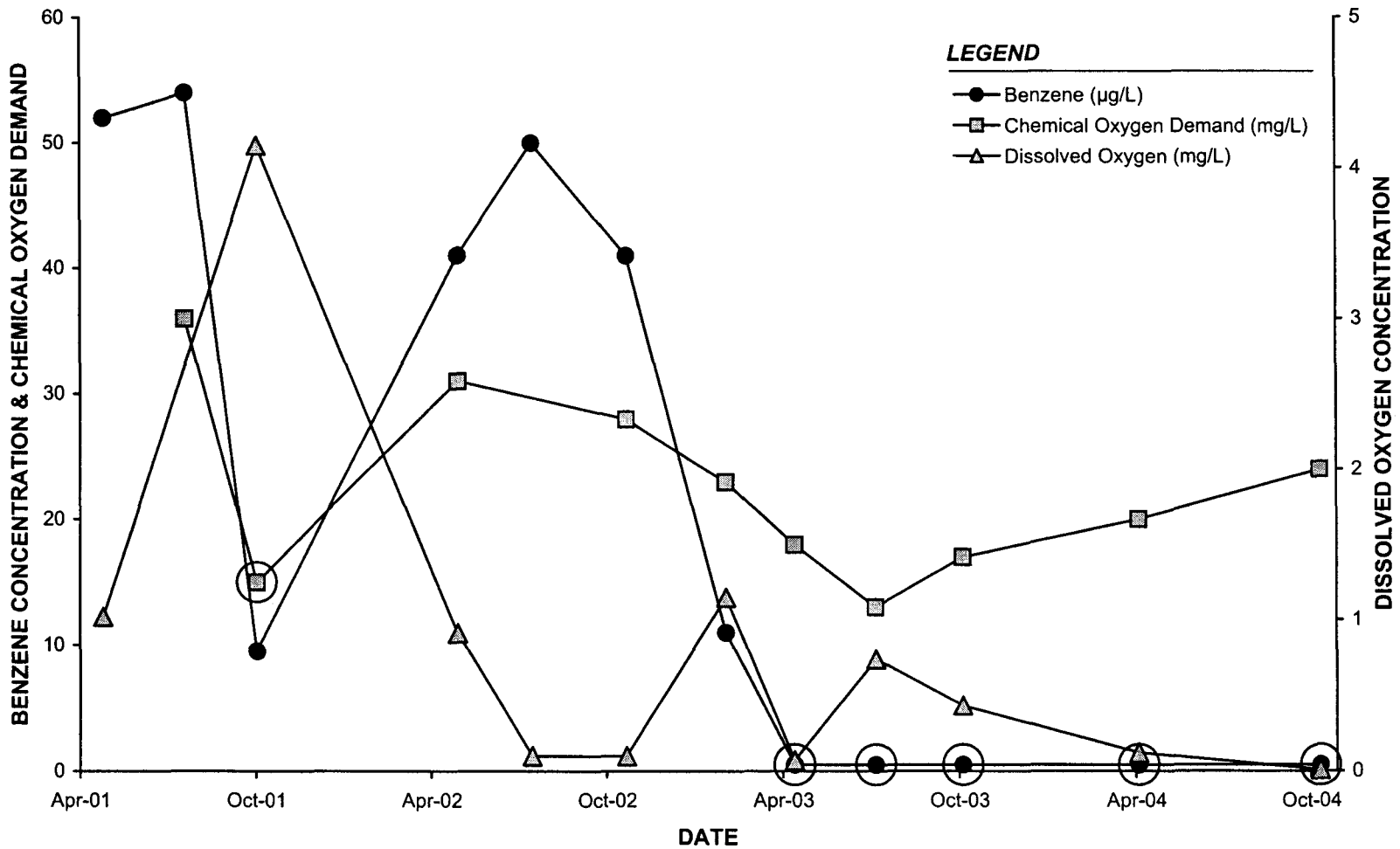


Figure 9. Benzene concentrations, chemical oxygen demand, and dissolved oxygen concentrations in MW-09 since 4/25/2001, former International Paper facility, Wilmington, North Carolina

\\oswego2\data\work\IP Wilmington\Oct_2004 Tables\Figure 8_benzene_COD_DO_MW-09.xls



Note: Non-detects are circled and are plotted at one-half the detection limit.
Sample and sample duplicate results are averaged.

Figure 10. Benzene concentrations, chemical oxygen demand, and dissolved oxygen concentrations in MW-34 since 4/25/2001, former International Paper facility, Wilmington, North Carolina

Tables

Table 1. Well construction details, former International Paper facility, Wilmington, North Carolina

Well	Drilling Contractor	Driller Registration Number	Completion Date	Status	Total Depth (ft bgs)	Screen Depth (ft bgs) Top	Screen Depth (ft bgs) Bottom	Total Depth from TOC (ft)	Casing Diameter (in.)	Casing Material	TOC Elevation (ft amsl)	Ground Elevation (ft amsl)
MW-01	Carolina Drilling	728	6/15/1985	Abandoned[b]	--	--	--	--	--	--	--	--
MW-02	Carolina Drilling	728	6/15/1985	Abandoned[c]	--	--	--	--	--	--	27.25	--
MW-03	Carolina Drilling	728	6/16/1985	Abandoned[c]	--	--	--	--	--	--	27.01	--
MW-04	Carolina Drilling	728	6/11/1985	Abandoned[b]	--	--	--	--	--	--	--	--
MW-05	Carolina Drilling	728	6/11/1985	Abandoned[g]	--	--	--	17.4 [f]	--	--	26.15	22.01
MW-06	Carolina Drilling	728	6/10/1985	Existing	16.0	6.0	16.0	18.9	2	PVC	25.32	22.41
MW-07	Carolina Drilling	728	6/10/1985	Existing	17.0	2.0	17.0	20.7	2	PVC	25.89	22.24
MW-08	Carolina Drilling	728	1/21/1986	Existing	--	-- [e]	--	18.4 [f]	--	--	25.87	23.82
MW-09	Carolina Drilling	728	1/21/1986	Existing	18.0	8.0	18.0	19.4	2	PVC	22.31	20.88
MW-10	Carolina Drilling	728	1/23/1986	Existing	42.0	27.5 [a,e]	--	44.5	4	GALV	23.25	20.78
MW-11	Carolina Drilling	728	1/22/1986	Abandoned[d]	--	--	--	--	--	--	24.80	--
MW-12	Carolina Drilling	728	5/6/1986	Existing	20.0	3.0	20.0	21.3	2	PVC	29.41	28.08
MW-13	Carolina Drilling	728	5/6/1986	Existing	--	-- [e]	--	--	--	--	29.66	28.23
MW-14	Carolina Drilling	728	11/16/1986	Abandoned[b]	--	--	--	--	--	--	--	--
MW-15	Carolina Drilling	728	11/16/1986	Abandoned[d]	--	--	--	--	--	--	22.34	--
MW-16	Carolina Drilling	728	11/16/1986	Abandoned[d]	--	--	--	--	--	--	16.58	--
MW-17	Carolina Drilling	728	11/17/1986	Existing	8.5	2.5	8.5	10.5	2	PVC	22.46	20.46
MW-18	Carolina Drilling	728	11/17/1986	Existing	--	--	--	14.4 [f]	--	--	21.72	19.17
MW-19	Carolina Drilling	728	11/17/1986	Existing	--	--	--	12.3 [f]	--	--	21.11	17.91
MW-20	Carolina Drilling	728	11/17/1986	Existing	--	--	--	--	--	--	15.07	13.67
MW-21	Carolina Drilling	728	6/26/1989	Existing	19.3	9.0	19.0	21.1	2	PVC	22.36	20.52
MW-22	Carolina Drilling	728	6/27/1989	Existing	--	--	--	20.8 [f]	--	--	20.87	18.87
MW-23	Carolina Drilling	728	6/28/1989	Existing	11.0	6.0	11.0	13.0	2	PVC	18.48	16.45
MW-24	Carolina Drilling	728	6/27/1989	Existing	17.2	7.2	14.2	19.2	2	PVC	16.51	14.55
MW-25	Carolina Drilling	728	6/28/1989	Existing	12.0	6.0	12.0	14.2	2	PVC	17.93	15.74
MW-26	Carolina Drilling	728	--	Existing	--	-- [e]	--	30.1 [f]	--	--	20.70	17.91
MW-27	Carolina Drilling	728	--	Existing	--	--	--	--	--	--	23.00	23.15
MW-28	Carolina Drilling	728	7/14/1990	Abandoned[d]	10.5	3.5	8.5	10.2	2	PVC	25.66	25.93
MW-29	Carolina Drilling	728	7/14/1990	Abandoned[d]	8.5	3.5	8.5	8.2	2	PVC	25.29	25.59
MW-30	Carolina Drilling	728	7/14/1990	Abandoned[d]	9.3	4.3	9.3	9.0	2	PVC	25.43	25.69
MW-31	Carolina Drilling	728	2/6/1991	Existing	15.0	3.5	13.5	16.9	2	PVC	23.10	21.19
MW-32	--	--	--	Existing	--	-- [e]	--	--	--	--	17.47	14.86
MW-33	--	--	--	Existing	--	--	--	--	--	--	17.53	15.31
MW-34	Parratt-Wolff	2487	10/27/2000	Existing	17.0	5.5	15.5	19.4	2	PVC	21.75	19.33
POC-1	Carolina Drilling	728	11/26/1997	Existing	17.0	7.0	17.0	19.4	2	SS	25.50	23.06
GB-01[h]	Troxler Geological	2511	10/14/2004	Existing	9.0	4.0	9.0	10.0	1	PVC	21.33	--
GB-02[h]	Troxler Geological	2511	10/14/2004	Existing	9.0	4.0	9.0	10.0	1	PVC	19.93	--
GB-03[h]	Troxler Geological	2511	10/14/2004	Existing	9.0	4.0	9.0	10.0	1	PVC	18.66	--
GB-04[h]	Troxler Geological	2511	10/14/2004	Existing	9.0	4.0	9.0	10.0	1	PVC	20.98	--

(notes on following page)

Table 1. (cont.)

Note: Reported elevations of existing wells based on June–July 2001 survey results and reported elevations of abandoned wells based on Radian documents.
-- – Not applicable or information not available
GALV – Galvanized steel
PVC – Polyvinyl chloride
SS – Stainless steel
TOC – Top of casing

[a] Completed as an open borehole well below the 4" casing.
[b] Abandoned prior to June 1989.
[c] Likely abandoned during installation of engineered cap at SWMU 14 on July 30, 1991.
[d] Abandoned on December 21, 1999.
[e] Monitoring wells MW-08, MW-10, MW-13, MW-26, and MW-32 are screened in the lower confined Peedee Formation.
[f] Total depth from top of casing obtained on April 17, 2003 by URS personnel.
[g] Abandoned in July 2003.
[h] Geoprobe temporary wellpoints

Table 2. October 2004 groundwater elevations, former International Paper facility, Wilmington, North Carolina

Well ID	Date	TOC Elevation (ft amsl)	Depth to Water from TOC (ft)	Groundwater Elevation (ft amsl)
MW-06	10/11/2004	25.32	7.01	18.31
MW-07	10/11/2004	25.89	7.30	18.59
MW-08	10/11/2004	25.87	6.53	19.34
MW-09	10/11/2004	22.31	5.49	16.82
MW-10	10/11/2004	23.25	7.06	16.19
MW-12	10/11/2004	29.41	5.03	24.38
MW-13	10/11/2004	29.66	5.79	23.87
MW-17	10/11/2004	22.46	4.65	17.81
MW-18	10/11/2004	21.72	5.48	16.24
MW-19	10/11/2004	21.11	5.57	15.54
MW-20	10/11/2004	15.07	4.45	10.62
MW-21	10/11/2004	22.36	5.05	17.31
MW-22	10/11/2004	20.87	5.37	15.50
MW-23	10/11/2004	18.48	3.62	14.86
MW-24	10/11/2004	16.51	2.31	14.20
MW-25	10/11/2004	17.93	5.32	12.61
MW-26	10/11/2004	20.70	5.55	15.15
MW-27	10/11/2004	23.00	4.01	18.99
MW-31	10/11/2004	23.10	6.18	16.92
MW-32	10/11/2004	17.47	5.92	11.55
MW-33	10/11/2004	17.53	3.26	14.27
MW-34	10/11/2004	21.75	5.89	15.86
POC-01	10/11/2004	25.50	6.68	18.82
GB-01[a]	10/14/2004	21.33	4.28	17.05
GB-02[a]	10/14/2004	19.93	4.36	15.57
GB-03[a]	10/14/2004	18.66	3.60	15.06
GB-04[a]	10/14/2004	20.98	4.74	16.24

Note: amsl – above mean sea level
TOC – top of casing
[a] Geoprobe temporary wellpoint

Table 3. Corrective action performance monitoring results, former International Paper facility, Wilmington, North Carolina

Chemical	Units	GW Protection Standard	MW-09											
			4/25/2001	7/19/2001	10/2/2001	4/30/2002	7/16/2002	10/23/2002	2/4/2003	4/16/2003	7/8/2003	10/8/2003	4/6/2004	10/12/2004
Conventional Parameters														
Chemical Oxygen Demand	mg/L	--	--	30 [b]	--	--	--	27	21	--	9.0	15	--	22
Field Parameters														
Conductivity	µS/cm	--	736	550	549	649	639	579	386	451	504	473	488	518
Dissolved oxygen, wt/vol	mg/L	--	-- [d]	2.09	4.49	0.70	0.1	0.08	--	0.55 [e]	0.17	-- [d]	0.08	0.08
pH	pH	--	6.69	-- [d]	6.18	6.53	6.36	6.50	6.42	6.45	6.41	-- [d]	6.23	6.49
Redox	mV	--	-87	-70	-92	-119.6	-90.3	-229.0	-86.6	-106	-75.6	-- [d]	-94.4	-133.3
Eh[a]	mV	--	--	--	--	89.4	115	7.89	120	113	129	-- [d]	122	86.9
Temperature	°C	--	16.27	21.8	21.7	17.4	23.1	22.1	17.5	19.9	28.0	20.2	15.39	22.47
Turbidity	NTU	--	2.14	9.5	4.4	1.68	0.78	-- [d]	1.14	1.7	0.94	1.42	3.23	0.80
Ferrous Iron	mg/L	--	39.3	43.0	35.6	34.6	30.9	22.9	28.1	27.0	28.9	24.1	39.7	31.8 [b]
Total Iron	mg/L	--	40.3	54.0	38.2	39.5	34.8	23.1	26.1	31.4	33.8	27.1	40.3	32.4
Metals														
Total Iron	mg/L	--	--	--	--	--	--	--	--	--	--	36.9 *J*	--	--
Volatile Organic Compounds														
Acetone	µg/L	700	5.0 *U*	50 *U* [b]	10 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*
Benzene	µg/L	1.0	***51***	***47*** [b]	***39***	***38***	***18***	***8.5***	***37***	***8.6***	***28***	***14***	***13***	***14***
2-Butanone (MEK)	µg/L	170	5.0 *U*	10 *U* [b]	5.0 *U*	25 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*
Chlorobenzene	µg/L	50	0.14 *J*	1.0 *U* [b]	1.0 *U*	1 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*
Ethylbenzene	µg/L	29	15	12 [b]	11	7.6	2.2	1.1	7.0	1.4	6.1	1.2	1.0 *U*	1.0 *U*
2-Hexanone	µg/L	50	5.0 *U*	10 *U* [b]	5.0 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*
4-Methyl-2-pentanone	µg/L	50	5.0 *U*	10 *U* [b]	5.0 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*
Toluene	µg/L	1,000	44	18 [b]	3.6 *U*	0.66 *J*	1.2	0.55 *J*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.8
m,p-Xylenes	µg/L	--	8.8	7.3 [b]	27	7.8	6.1 *J*	1.8 *J*	2.0 *U*	2.0 *U*	2.0	16	5.1	8.0
o-Xylene	µg/L	--	0.27	0.21 *J* [b]	0.25 *J*	1 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*
Total Xylenes	µg/L	530	9.1	7.5 [b]	28	7.8	7.1 *J* [f]	2.8 *J* [f]	3.0 *U* [f]	3.0 *U* [f]	3.0 [f]	17 [f]	6.1	9.0 [f]
Semi-volatile Organic Compounds														
Benzoic acid	µg/L	50	50 *U*	50 *UJ* [b]	50 *U*	48 *UJ*	--	51 *UJ*	52 *U*	51 *U*	53 *UJ*	54 *UR*	51 *U*	52 *U*
Benzyl alcohol	µg/L	20	5.0 *U*	5.0 *UJ* [b]	5.0 *U*	4.8 *U*	--	5.1 *U*	5.2 *U*	5.1 *U*	5.3 *UJ*	5.4 *U*	5.1 *U*	5.2 *U*
1,2-Dichlorobenzene	µg/L	620	5.0 *U*	5.0 *UJ* [b]	5.0 *U*	4.8 *U*	--	5.1 *U*	5.2 *U*	5.1 *U*	5.3 *UJ*	5.4 *U*	5.1 *U*	5.2 *U*
2-Methylphenol	µg/L	10	5.0 *U*	5.0 *UJ* [b]	5.0 *U*	4.8 *U*	--	5.1 *U*	5.2 *U*	5.1 *U*	5.3 *UJ*	5.4 *U*	5.1 *U*	5.2 *U*
3- and 4-Methylphenol	µg/L	10	10 *U*	10 *UJ* [b]	10 *U*	9.7 *U*	--	--	--	--	--	--	--	--
4-Methylphenol	µg/L	10	--	--	--	--	--	5.1 *U*	5.2 *U*	5.1 *U*	5.3 *UJ*	5.4 *U*	5.1 *U*	5.2 *U*
Naphthalene	µg/L	21	5.0 *U*	5.0 *UJ* [b]	5.0 *U*	4.8 *U*	--	5.1 *U*	5.2 *U*	5.1 *U*	5.3 *UJ*	5.4 *U*	5.1 *U*	5.2 *U*
N-Nitrosopiperidine	µg/L	10	5.0 *U*	5.0 *UJ* [b]	5.0 *U*	4.8 *U*	--	5.1 *U*	5.2 *U*	5.1 *U*	5.3 *UJ*	5.4 *U*	5.1 *U*	5.2 *U*
Phenol	µg/L	300	5.0 *U*	5.0 *UJ* [b]	5.0 *U*	4.8 *U*	--	5.1 *U*	5.2 *U*	5.1 *U*	5.3 *UJ*	5.4 *U*	5.1 *U*	5.2 *U*

Table 3. (cont.)

Chemical	Units	GW Protection Standard	MW-31 4/25/2001	7/19/2001	10/2/2001	4/30/2002	7/16/2002	10/23/2002	2/4/2003	4/15/2003	7/8/2003	10/7/2003	4/6/2004	10/12/2004
Conventional Parameters														
Chemical Oxygen Demand	mg/L	--	--	29	-- [c]	26	--	23	16	14	6.0	14	13	18
Field Parameters														
Conductivity	µS/cm	--	214	150	162	353	374	224	156	164	197	292	127	154
Dissolved oxygen, wt/vol	mg/L	--	2.94	1.61	5.81	3.80	1.4	0.24	0.85	0	1.57	1.81	1.93	0.13
pH	pH	--	5.87	-- [d]	5.82	6.38	6.30	5.87	5.63	5.82	6.05	6.14	5.16	5.75
Redox	mV	--	32	21	-6	-48.5	-64.0	-390.2	-192.0	-152	-82.5	-205.9	-128.6	-5.2
Eh[a]	mV	--	--	--	--	160	141	-153	14.3	56.3	122	49.4	88.2	215
Temperature	°C	--	14.35	20.9	21.2	17.1	24.6	20.8	14.2	14.8	21.4	21.1	13.43	21.32
Turbidity	NTU	--	38.4	9.8	9	2.25	3.41	-- [d]	2.77	12.0	8.81	4.78	12.8	18
Ferrous Iron	mg/L	--	5.70	2.30	7.30	12.0	13.0	5.23	2.4	1.75	2.82	5.57	2.70	2.15
Total Iron	mg/L	--	8.40	3.10	6.40	12.8	13.7	5.48	2.4	1.97	2.93	5.97	2.67	2.05
Metals														
Total Iron	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds														
Acetone	µg/L	700	5.0 *U*	50 *U*	10 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*
Benzene	µg/L	1.0	0.9 *J*	***4.7***	***2.3***	***19***	***10***	***1.4***	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*
2-Butanone (MEK)	µg/L	170	5.0 *U*	10 *U*	5.0 *U*	25 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*
Chlorobenzene	µg/L	50	1.0 *U*	1.0 *U*	1.0 *U*	0.35 *J*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*
Ethylbenzene	µg/L	29	1.0 *U*	1.0 *U*	1.0 *U*	1 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*
2-Hexanone	µg/L	50	5.0 *U*	10 *U*	5.0 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*
4-Methyl-2-pentanone	µg/L	50	5.0 *U*	10 *U*	5.0 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*
Toluene	µg/L	1,000	1.0 *U*	1.0 *U*	1.0 *U*	1 *U*	1.4	0.72 *J*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*
m,p-Xylenes	µg/L	--	2.0 *U*	2.0 *U*	2.0 *U*	2 *U*	2.0 *U*	2.0 *UJ*	2.0 *U*	2.0 *U*	2.0 *U*	2.0 *U*	2.0 *U*	2.0 *U*
o-Xylene	µg/L	--	1.0 *U*	1.0 *U*	1.0 *U*	1 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*
Total Xylenes	µg/L	530	3.0 *U*	3.0 *U*	3.0 *U*	3 *U*	3.0 *U*[f]	3.0 *U*[f]	3.0 *U*[f]	3.0 *U*[f]	3.0 *U*[f]	3.0 *U*[f]	3.0 *U*[f]	3.0 *U*[f]
Semi-volatile Organic Compounds														
Benzoic acid	µg/L	50	50 *U*	50 *U*	50 *U*	50 *UJ*	--	52 *UJ*	51 *U*	51 *U*	50 *U*	55 *UR*	51 *U*	54 *U*
Benzyl alcohol	µg/L	20	5.0 *U*	5.0 *U*	5.0 *U*	5 *U*	--	5.2 *U*	5.1 *U*	5.1 *U*	5.0 *U*	5.5 *U*	5.1 *U*	5.4 *U*
1,2-Dichlorobenzene	µg/L	620	5.0 *U*	5.0 *U*	5.0 *U*	5 *U*	--	5.2 *U*	5.1 *U*	5.1 *U*	5.0 *U*	5.5 *U*	5.1 *U*	5.4 *U*
2-Methylphenol	µg/L	10	5.0 *U*	5.0 *U*	5.0 *U*	5 *U*	--	5.2 *U*	5.1 *U*	5.1 *U*	5.0 *U*	5.5 *U*	5.1 *U*	5.4 *U*
3- and 4-Methylphenol	µg/L	10	10 *U*	10 *U*	10 *U*	10 *U*	--	--	--	--	--	--	--	--
4-Methylphenol	µg/L	10	--	--	--	--	--	5.2 *U*	5.1 *U*	5.1 *U*	5.0 *U*	5.5 *U*	5.1 *U*	5.4 *U*
Naphthalene	µg/L	21	5.0 *U*	5.0 *U*	5.0 *U*	5 *U*	--	5.2 *U*	5.1 *U*	5.1 *U*	5.0 *U*	5.5 *U*	5.1 *U*	5.4 *U*
N-Nitrosopiperidine	µg/L	10	5.0 *U*	5.0 *U*	5.0 *U*	5 *U*	--	5.2 *U*	5.1 *U*	5.1 *U*	5.0 *U*	5.5 *U*	5.1 *U*	5.4 *U*
Phenol	µg/L	300	5.0 *U*	5.0 *U*	5.0 *U*	5 *U*	--	5.2 *U*	5.1 *U*	5.1 *U*	5.0 *U*	5.5 *U*	5.1 *U*	5.4 *U*

Table 3. (cont.)

Chemical	Units	GW Protection Standard	MW-34											
			4/25/2001	7/19/2001	10/2/2001	4/30/2002	7/16/2002	10/23/2002	2/4/2003	4/15/2003	7/8/2003	10/7/2003	4/6/2004	10/13/2004
Conventional Parameters														
Chemical Oxygen Demand	mg/L	--	--	36	30 *U*	31 [b]	--	28 [b]	23 [b]	18 [b]	13 [b]	17 [b]	20	24 [b]
Field Parameters														
Conductivity	µS/cm	--	759	620	592	707	656	693	553	597	701	605	519	551
Dissolved oxygen, wt/vol	mg/L	--	1.02	0.57	4.15	0.91	0.1	0.10	1.15	0.07 [e]	0.74	0.43	0.12	0.06
pH	pH	--	6.67	-- [d]	6.52	6.81	6.58	6.74	6.79	6.82	6.96	6.63	6.70	6.75
Redox	mV	--	-113	-100	-154	-112.9	-154	-222.2	-123.7	-161	-190.2	-340.6	-132.1	-166
Eh[a]	mV	--	--	--	--	96.1	51.1	14.7	82.6	47.3	14.8	-85.3	84.7	43
Temperature	°C	--	15.96	21.9	22.7	17.9	26.4	22.9	16.8	17.3	22.8	21.7	16.23	24.18
Turbidity	NTU	--	3.24	4.0	3.6	0.59	2.37	-- [d]	5.18	2.0	4.55	2.08	23.2	4.4
Ferrous Iron	mg/L	--	11.5	64.3	46.8	48.2	40.6	30.1	29.3	37.7	32.1	28.4	27.9	51.7 [g]
Total Iron	mg/L	--	13.1	71.0	46.2	52.5	39.5	32.9	34	38.7	34.1	31.5	31.4	56.1 [g]
Metals														
Total Iron	mg/L	--	--	--	--	--	--	--	--	--	--	41.6 *J*	--	--
Volatile Organic Compounds														
Acetone	µg/L	700	5 *U*	50 *U*	10 *U*	50 *U* [b]	50 *U* [b]	50 *U*	50 *U* [b]	50 *U* [b]	50 *U* [b]	50 *U* [b]	50 *U*	50 *U* [b]
Benzene	µg/L	1.0	***52***	***54***	***9.5***	***41*** [b]	***50*** [b]	***41***	***11*** [b]	1.0 *U* [b]	1.0 *U* [b]	1.0 *U* [b]	1.0 *U*	1.0 *U* [b]
2-Butanone (MEK)	µg/L	170	5.0 *U*	10 *U*	5.0 *U*	25 *U* [b]	10 *U* [b]	10 *U*	10 *U* [b]	10 *U* [b]	10 *U* [b]	10 *U* [b]	10 *U*	10 *U* [b]
Chlorobenzene	µg/L	50	0.95 *J*	0.64 *J*	1.0 *U*	0.64 *J* [b]	1.0 *U* [b]	0.55 *J*	1.0 *U* [b]	1.0 *U* [b]	1.0 *U* [b]	1.0 *U* [b]	1.0 *U*	1.0 *U* [b]
Ethylbenzene	µg/L	29	1.1	0.36 *J*	1.0 *U*	1 *U* [b]	1.0 *U* [b]	1.0 *U*	1.0 *U* [b]	1.0 *U* [b]	1.0 *U* [b]	1.0 *U* [b]	1.0 *U*	1.0 *U* [b]
2-Hexanone	µg/L	50	5.0 *U*	10 *U*	5.0 *U*	25 *U* [b]	25 *U* [b]	25 *U*	25 *U* [b]	25 *U* [b]	25 *U* [b]	25 *U* [b]	25 *U*	25 *U* [b]
4-Methyl-2-pentanone	µg/L	50	5.0 *U*	10 *U*	5.0 *U*	25 *U* [b]	25 *U* [b]	25 *U*	25 *U* [b]	25 *U* [b]	25 *U* [b]	25 *U* [b]	25 *U*	25 *U* [b]
Toluene	µg/L	1,000	1.0 *U*	1.1	1.0 *U*	0.63 *J* [b]	1.1 [b]	0.37 *J*	1.0 *U* [b]	1.0 *U* [b]	1.0 *U* [b]	1.0 *U* [b]	1.0 *U*	1.0 *U* [b]
m,p-Xylenes	µg/L	--	3.8	1.7 *J*	2.0 *U*	2 *U* [b]	2.0 *U* [b]	2.0 *UJ*	2.0 *U* [b]	2.0 *U* [b]	2.0 *U* [b]	2.0 *U* [b]	2.0 *U*	2.0 *U* [b]
o-Xylene	µg/L	--	0.6	0.57 *J*	1.0 *U*	0.37 *J* [b]	1.0 *U* [b]	1.0 *U*	1.0 *U* [b]	1.0 *U* [b]	1.0 *U* [b]	1.0 *U* [b]	1.0 *U*	1.0 *U* [b]
Total Xylenes	µg/L	530	4.3	2.2 *J*	3.0 *U*	3 *U* [b]	3.0 *U* [b,f]	3.0 *U* [f]	3.0 *U* [b,f]	3.0 *U* [b,f]	3.0 *U* [b,f]	3.0 *U* [b,f]	3.0 *U* [f]	3.0 *U* [b,f]
Semi-volatile Organic Compounds														
Benzoic acid	µg/L	50	50 *U*	50 *U*	50 *U*	52 *UJ* [b]	--	50 *UJ*	50 *U* [b]	52 *U* [b]	52 *UJ* [b]	55 *UR* [b]	50 *U*	54 *U* [b]
Benzyl alcohol	µg/L	20	5.0 *U*	5.0 *U*	5.0 *U*	5.2 *U* [b]	--	5.0 *U*	5.0 *U* [b]	5.2 *U* [b]	5.2 *UJ* [b]	5.5 *U* [b]	5.0 *U*	5.4 *U* [b]
1,2-Dichlorobenzene	µg/L	620	5.0 *U*	5.0 *U*	5.0 *U*	5.2 *U* [b]	--	5.0 *U*	5.0 *U* [b]	5.2 *U* [b]	5.2 *UJ* [b]	5.5 *U* [b]	5.0 *U*	5.4 *U* [b]
2-Methylphenol	µg/L	10	5.0 *U*	5.0 *U*	5.0 *U*	5.2 *U* [b]	--	5.0 *U*	5.0 *U* [b]	5.2 *U* [b]	5.2 *UJ* [b]	5.5 *U* [b]	5.0 *U*	5.4 *U* [b]
3- and 4-Methylphenol	µg/L	10	10 *U*	10 *U*	10 *U*	10 *U* [b]	--	--	--	--	--	--	--	--
4-Methylphenol	µg/L	10	--	--	--	--	--	5.0 *U*	5.0 *U* [b]	5.2 *U* [b]	5.2 *UJ* [b]	5.5 *U* [b]	5.0 *U*	5.4 *U* [b]
Naphthalene	µg/L	21	5.0 *U*	5.0 *U*	5.0 *U*	5.2 *U* [b]	--	5.0 *U*	5.0 *U* [b]	5.2 *U* [b]	5.2 *UJ* [b]	5.5 *U* [b]	5.0 *U*	5.4 *U* [b]
N-Nitrosopiperidine	µg/L	10	5.0 *U*	5.0 *U*	5.0 *U*	5.2 *U* [b]	--	5.0 *U*	5.0 *U* [b]	5.2 *U* [b]	5.2 *UJ* [b]	5.5 *U* [b]	5.0 *U*	5.4 *U* [b]
Phenol	µg/L	300	5.0 *U*	5.0 *U*	5.0 *U*	5.2 *U* [b]	--	5.0 *U*	5.0 *U* [b]	5.2 *U* [b]	5.2 *UJ* [b]	5.5 *U* [b]	5.0 *U*	5.4 *U* [b]

(notes on following page)

Table 3. (cont.)

Note: Highlighted values (bold, italic) equal or exceed the groundwater protection standard.
-- – not applicable or not available
J – estimated
R – rejected
U – undetected; value represents reporting limit

[a] Potential measured with Ag/AgCl reference electrode and corrected to Eh.
[b] Value is averaged result of field duplicates.
[c] Sample was to be collected; however, Chain of Custody was not filled out for COD analysis.
[d] No measurements reported due to malfunctioning meter.
[e] Dissolved oxygen measured in a beaker.
[f] Total Xylenes result is sum of m,p-Xylenes and o-Xylene results.
[g] Value is averaged result of field triplicates.

Table 4. October 2004 field parameter measurements, former International Paper facility, Wilmington, North Carolina

Well ID	Date	Temperature (°C)	pH (s.u.)	Specific Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Eh[a] (mV)	Turbidity (NTU)	Ferrous iron (mg/L)	Total Iron (mg/L)
GB-01	10/14/2004	22.91	5.99	221	0.14	167	4.7	23.7	24.3
GB-02	10/14/2004	22.86	6.30	473	0.14	100	31	60.9 [b]	61.5
GB-03	10/14/2004	21.07	6.21	369	0.11	109	7.5	79.5	80.5
GB-04	10/14/2004	22.34	6.26	417	0.18	108	9.3	57.9 [b]	67.5
MW-09	10/12/2004	22.47	6.49	518	0.08	86.9	0.80	31.8 [b]	32.4
MW-10[c]	10/12/2004	20.19	8.05	249	--- [c]	101	8.3	0.07	0.04
MW-21	10/13/2004	21.62	5.93	185	0.12	166	7.3	36.0	36.4
MW-22	10/13/2004	23.00	6.60	355	0.07	68	0.65	59.6	61.4
MW-23	10/13/2004	21.41	6.42	393	0.05	70	7.2	65.5 [b]	66.0
MW-24	10/12/2004	19.36	7.03	471	0.08	62	1.5	12.2	12.2
MW-25	10/12/2004	20.93	6.62	600	0.16	86.9	4.7	29.1	32.6
MW-31	10/12/2004	21.32	5.75	154	0.13	215	18	2.15	2.05
MW-32[c]	10/12/2004	18.97	7.85	311	--- [c]	107	5.9	0.02	0.05
MW-34	10/13/2004	24.18	6.75	551	0.06	43	4.4	51.7 [d]	56.1 [d]
POC-01	10/13/2004	21.02	6.48	667	0.29	133	4.0	4.30	4.90

[a] Potential measured with Ag/AgCl electrode and corrected to Eh.
[b] Iron measurements are average of replicates.
[c] Measurements taken just prior to well being purged dry (elevated dissolved oxygen measurements were rejected).
[d] Iron measurements are average of triplicates.

Table 5. October 2004 groundwater analytical results, former International Paper facility, Wilmington, North Carolina

Chemical	Groundwater Protection Standard	GB-01 10/14/2004 GW-0016	GB-02 10/14/2004 GW-0014	GB-03 10/14/2004 GW-0015	GB-04 10/14/2004 GW-0013	MW-09 10/12/2004 GW-0001	MW-10 10/12/2004 GW-0002	MW-21 10/13/2004 GW-0008	MW-22 10/13/2004 GW-0009	MW-23 10/13/2004 GW-0010
Conventional Parameters (mg/L)										
Chemical Oxygen Demand	--	89	39	32	--	22	--	--	--	--
Volatile Organic Compounds (μg/L)										
Acetone	700	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*
Benzene	1	***82***	***30***	***6.2***	***22***	***14***	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*
2-Butanone (MEK)	170	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*
Chlorobenzene	50	1.0 *U*	3.7	1.0 *U*	14	1.0 *U*	1.0 *U*	2.2	1.0 *U*	1.0 *U*
Ethylbenzene	29	***120***	***71***	1.0 *U*	***33***	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*
2-Hexanone	50	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*
4-Methyl-2-pentanone	50	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*
Toluene	1,000	***230,000***	3.1	1.0 *U*	15	1.8	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*
m,p-Xylenes	--	230	100	2.0 *U*	38	8.0	2.0 *U*	2.0 *U*	2.0 *U*	2.0 *U*
o-Xylene	--	46	2.5	1.0 *U*	2.9	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*
Semi-volatile Organic Compounds (μg/L)										
Benzoic acid	50	--	--	--	--	52 *U*	52 *U*	55 *U*	--	56 *U*
Benzyl alcohol	20	--	--	--	--	5.2 *U*	5.2 *U*	5.5 *U*	--	5.6 *U*
1,2-Dichlorobenzene	620	--	--	--	--	5.2 *U*	5.2 *U*	29	--	5.6 *U*
2-Methylphenol	10	--	--	--	--	5.2 *U*	5.2 *U*	5.5 *U*	--	5.6 *U*
4-Methylphenol	10	--	--	--	--	5.2 *U*	5.2 *U*	5.5 *U*	--	5.6 *U*
Naphthalene	21	--	--	--	--	5.2 *U*	5.2 *U*	5.5 *U*	--	5.6 *U*
N-Nitrosopiperidine	10	--	--	--	--	5.2 *U*	5.2 *U*	5.5 *U*	--	5.6 *U*
Phenol	300	--	--	--	--	5.2 *U*	5.2 *U*	5.5 *U*	--	5.6 *U*

Table 5. (cont.)

Chemical	Groundwater Protection Standard	MW-24 10/12/2004 GW-0004	MW-25 10/12/2004 GW-0003	MW-31 10/12/2004 GW-0005	MW-32 10/12/2004 GW-0006	MW-34 (dup) 10/13/2004 GW-0011	MW-34 10/13/2004 GW-0012	POC-01 10/13/2004 GW-0007
Conventional Parameters (mg/L)								
Chemical Oxygen Demand	--	--	--	18	--	23	25	--
Volatile Organic Compounds (μg/L)								
Acetone	700	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*	50 *U*
Benzene	1	***2.3***	***3.0***	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	***23***
2-Butanone (MEK)	170	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*	10 *U*	49
Chlorobenzene	50	6.9	2.8	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*
Ethylbenzene	29	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	5.0
2-Hexanone	50	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*
4-Methyl-2-pentanone	50	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*	25 *U*
Toluene	1,000	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	***1,900***
m,p-Xylenes	--	2.0 *U*	2.0 *U*	2.0 *U*	2.0 *U*	2.0 *U*	2.0 *U*	28
o-Xylene	--	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	1.0 *U*	2.7
Semi-volatile Organic Compounds (μg/L)								
Benzoic acid	50	--	55 *U*	54 *U*	--	54 *U*	54 *U*	54 *U*
Benzyl alcohol	20	--	5.5 *U*	5.4 *U*	--	5.4 *U*	5.4 *U*	5.4 *U*
1,2-Dichlorobenzene	620	--	5.5 *U*	5.4 *U*	--	5.4 *U*	5.4 *U*	5.4 *U*
2-Methylphenol	10	--	5.5 *U*	5.4 *U*	--	5.4 *U*	5.4 *U*	5.4 *U*
4-Methylphenol	10	--	5.5 *U*	5.4 *U*	--	5.4 *U*	5.4 *U*	5.4 *U*
Naphthalene	21	--	5.5 *U*	5.4 *U*	--	5.4 *U*	5.4 *U*	5.4 *U*
N-Nitrosopiperidine	10	--	5.5 *U*	5.4 *U*	--	5.4 *U*	5.4 *U*	5.4 *U*
Phenol	300	--	5.5 *U*	5.4 *U*	--	5.4 *U*	5.4 *U*	5.4 *U*

Note: Highlighted values (bold, italic) equal or exceed the groundwater protection standard.
-- – not applicable or not available
J – estimated
U – undetected; value represents reporting limit

Table 6. October 2004 field quality control results, former International Paper facility, Wilmington, North Carolina

Chemical	Equipment Blank 10/14/2004 GW-0017	Trip Blank 10/15/2004 TB101504
Volatile Organic Compounds (µg/L)		
Acetone	50 *U*	50 *U*
Benzene	1.0 *U*	1.0 *U*
2-Butanone (MEK)	10 *U*	10 *U*
Chlorobenzene	1.0 *U*	1.0 *U*
Ethylbenzene	1.0 *U*	1.0 *U*
2-Hexanone	25 *U*	25 *U*
4-Methyl-2-pentanone	25 *U*	25 *U*
Toluene	1.0 *U*	1.0 *U*
m,p-Xylenes	2.0 *U*	2.0 *U*
o-Xylene	1.0 *U*	1.0 *U*
Semi-volatile Organic Compounds (µg/L)		
Benzoic acid	56 *U*	--
Benzyl alcohol	5.6 *U*	--
1,2-Dichlorobenzene	5.6 *U*	--
2-Methylphenol	5.6 *U*	--
4-Methylphenol	5.6 *U*	--
Naphthalene	5.6 *U*	--
N-Nitrosopiperidine	5.6 *U*	--
Phenol	5.6 *U*	--

Note: -- – not applicable or not available
U – undetected; value represents reporting limit

Table 7. Cumulative groundwater analytical results for RCRA Part B permit hazardous constituents in selected wells, former International Paper Facility, Wilmington, North Carolina

Well ID	Date	Acetone (µg/L)	Benzene (µg/L)	Benzoic acid (µg/L)	Benzyl alcohol (µg/L)	2-Butanone (MEK) (µg/L)	Chlorobenzene (µg/L)	1,2-Dichloro-benzene (µg/L)	Ethylbenzene (µg/L)	2-Hexanone (µg/L)	4-Methyl-2-Pentanone (µg/L)
GW Protection Standard		700	1.0	50	20	170	50	620	29	50	50
MW-06	5/31/1989	**450,000** *E*	5,000 *U*	**170**	190 *U*	**1,300,000**	5,000 *U*	97 *U*	5,000 *U*	50,000 *U*	50,000 *U*
MW-06	9/14/1989	**230,000** *E*	8,300 *U*	**1,500**	**77**	**730,000** *E*	8,300 *U*	10 *U*	8,300 *U*	83,000 *U*	83,000 *U*
MW-06	12/4/1989	**38,200** *J*	**99.1**	--	13.3 *J*	**120,000** *E*	5.0 *U*	10 *U*	7.94 *E*	50 *U*	50 *U*
MW-06	3/6/1990	--	--	--	130 *U*	--	--	67 *U*	--	--	--
MW-06	4/12/1990	100 *U*	5.0 *U*	--	--	100 *U*	5.0 *U*	--	5.0 *U*	50 *U*	50 *U*
MW-06	5/21/1990	**22,000** *E*	2,500 *U*	**230** *E*	29 *U*	**53,000**	2,800 *U*	11 *U*	2,800 *U*	5,600 *U*	5,600 *U*
MW-06	8/27/1990	**440,000**	17,000 *U*	1,000 *U*	**91** *J*	**630,000**	19,000 *U*	56 *U*	19,000 *U*	38,000 *U*	38,000 *U*
MW-06	11/13/1990	**44,000**	1,800 *U*	--	--	**85,000**	2,000 *U*	2.8 *U*	2,000 *U*	4,000 *U*	4,000 *U*
MW-06	2/15/1991	**450,000**	50 *U*	**1,400** *E*	94 *U*	**410,000**	50 *U*	94 *U*	**40** *J*	500 *U*	**220** *J*
MW-06	5/7/1991	**610,186**	25,000 *U*	**295**	20 *U*	**622,650**	25,000 *U*	10 *U*	25,000 *U*	50,000 *U*	50,000 *U*
MW-06	8/6/1991	**178,000**	5,000 *U*	**275**	**28.6**	**257,000**	5,000 *U*	10 *U*	5,000 *U*	10,000 *U*	10,000 *U*
MW-06	12/19/1991	**23,000** *E*	500 *U*	**120** *E*	12 *E*	**13,000** *E*	500 *U*	9.5 *U*	500 *U*	5,000 *U*	5,000 *U*
MW-06	2/18/1992	**490,000** *E*	500 *U*	950 *U*	190 *U*	**310,000** *E*	500 *U*	190 *U*	500 *U*	5,000 *U*	5,000 *U*
MW-06	5/7/1992	**300,000**	500 *U*	**250**	11 *E*	**200,000** *E*	500 *U*	9.5 *U*	500 *U*	5,000 *U*	5,000 *U*
MW-06	8/20/1992	**230,000** *E*	10,000 *U*	**690**	**57**	200,000 *U*	10,000 *U*	10 *U*	10,000 *U*	100,000 *U*	100,000 *U*
MW-06	10/29/1992	--	--	**140** *E*	15 *E*	--	--	9.5 *U*	--	--	--
MW-06	2/17/1993	**270,000** *E*	**280** *E*	48 *U*	9.5 *U*	**300,000** *E*	250 *U*	9.5 *U*	250 *U*	2,500 *U*	2,500 *U*
MW-06	5/26/1993	**102,000**	NR *U*	**66.8**	--	**74,800**	NR *U*	NR *U*	NR *U*	NR *U*	NR *U*
MW-06	8/26/1993	**200,000**	10,000 *U*	**386** *J*	**36.3**	**129,000**	6,300 *U*	0.635 *U*	3,040 *U*	17,800 *U*	17,800 *U*
MW-06	2/9/1994	**150,000**	10,000 *U*	--	**44** *J*	**230,000**	10,000 *U*	200 *U*	10,000 *U*	20,000 *U*	20,000 *U*
MW-06	8/24/1994	**32,200**	**67**	**171**	0.665 *U*	**75,500**	1.01 *J*	0.67 *U*	7.25	2.83	27.6
MW-06	2/21/1995	**134,000**	**169**	**328**	68.4 *U*	**275,000**	0.741	69 *U*	19	1.7 *U*	0.86 *U*
MW-06	8/15/1995	**49,200**	**31.2**	**118**	2.04	**51,100**	0.319 *U*	1.33 *U*	3.67	0.713 *U*	16.6
MW-06	2/13/1996	**184,000**	**165**	**368**	50.2 *U*	**307,000**	2.2 *U*	38.7 *U*	16.7	11.2 *U*	**55.6**
MW-06	8/28/1996	**118,000** *J*	378 *U*	**219** *J*	2.14 *J*	**267,000** *J*	258 *U*	0.658 *UJ*	649 *UJ*	2,080 *UJ*	809 *UJ*
MW-06	2/19/1997	**194,000**	**107**	**472** *J*	1.4 *U*	**305,000** *J*	2.58 *U*	2.79 *U*	6.49 *J*	20.8 *U*	8.09 *U*
MW-06	8/7/1997	**41,500** *J*	**67.4** *J*	**218** *FJ*	0.363 *U*	**88,200** *J*	0.37 *J*	0.54 *U*	7.32 *J*	4.91 *J*	33.4 *J*
MW-07	5/31/1989	100 *U*	5.0 *U*	9.5 *U*	19 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-07	9/14/1989	3,300 *U*	170 *U*	10 *U*	10 *U*	**4,000** *E*	170 *U*	10 *U*	170 *U*	1,700 *U*	1,700 *U*
MW-07	12/4/1989	100 *U*	5.0 *U*	--	20 *U*	100 *U*	5.0 *U*	10 *U*	5.0 *U*	50 *U*	50 *U*
MW-07	3/6/1990	100 *U*	5.0 *U*	--	20 *U*	100 *U*	5.0 *U*	10 *U*	5.0 *U*	50 *U*	50 *U*
MW-07	4/12/1990	**72,000** *E*	**38**	--	--	**94,000** *E*	5.0 *U*	--	5.0 *U*	50 *U*	50 *U*
MW-07	5/21/1990	10 *U*	**1.8** *J*	48 *U*	7.1 *U*	10 *U*	5.0 *U*	2.7 *U*	5.0 *U*	10 *U*	10 *U*
MW-07	8/27/1990	26 *E*	**2.9** *J*	50 *U*	7.5 *U*	10 *U*	5.0 *U*	2.8 *U*	5.0 *U*	10 *U*	10 *U*
MW-07	11/13/1990	91	**3.9** *J*	--	--	130	5.0 *U*	2.8 *U*	5.0 *U*	10 *U*	10 *U*

Table 7. (cont.)

Well ID	Date	Acetone (µg/L)	Benzene (µg/L)	Benzoic acid (µg/L)	Benzyl alcohol (µg/L)	2-Butanone (MEK) (µg/L)	Chlorobenzene (µg/L)	1,2-Dichloro-benzene (µg/L)	Ethylbenzene (µg/L)	2-Hexanone (µg/L)	4-Methyl-2-Pentanone (µg/L)
GW Protection Standard		700	1.0	50	20	170	50	620	29	50	50
MW-07	2/15/1991	27 *J*	**2.4** *J*	5.6 *J*	9.4 *U*	100 *U*	5.0 *U*	9.4 *U*	5.0 *U*	50 *U*	50 *U*
MW-07	5/7/1991	30	5.0 *U*	50 *U*	20 *U*	10 *U*	5.0 *U*	10 *U*	5.0 *U*	10 *U*	10 *U*
MW-07	8/6/1991	157	**25** *J*	--	--	73.8	25 *U*	--	25 *U*	50 *U*	50 *U*
MW-07	12/19/1991	100 *U*	5.0 *U*	48 *U*	9.5 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-07	2/18/1992	100 *U*	5.0 *U*	48 *U*	9.5 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-07	5/7/1992	100 *U*	**6.6** *E*	50 *U*	10 *U*	100 *U*	5.0 *U*	10 *U*	5.0 *U*	50 *U*	50 *U*
MW-07	8/20/1992	330 *E*	**6.9** *E*	50 *U*	9.9 *U*	**490** *E*	5.0 *U*	9.9 *U*	5.0 *U*	50 *U*	50 *U*
MW-07	10/29/1992	--	--	48 *U*	9.6 *U*	--	--	9.6 *U*	--	--	--
MW-07	2/17/1993	100 *U*	5.0 *U*	48 *U*	9.5 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-07	5/26/1993	NR *U*	**6.95**	NR *U*	NR *U*	NR *U*	NR *U*	NR *U*	--	NR *U*	NR *U*
MW-07	8/26/1993	26.6 *J*	**4.09**	40.8 *U*	0.646 *U*	14.7	1.26 *U*	0.672 *U*	0.608 *U*	3.57 *U*	3.57 *U*
MW-07	2/9/1994	5.25	**1.68**	6.28 *U*	0.633 *U*	1.22 *U*	4.94 *U*	0.771 *U*	0.274 *U*	1.23 *U*	1.39 *U*
MW-07	8/24/1994	16	0.657 *U*	2.93 *U*	0.658 *U*	2.76 *U*	1.01 *U*	0.664 *U*	1.1 *U*	1.57 *U*	1.06 *U*
MW-07	2/21/1995	**4,700**	50.3 *U*	2.98 *U*	0.668 *U*	**2,330**	59.1 *U*	0.674 *U*	65.6 *U*	170 *U*	86 *U*
MW-07	8/15/1995	2.87 *U*	**1.02**	5.74 *U*	0.391 *U*	10.1	0.319 *U*	1.34 *U*	0.588 *U*	0.713 *U*	0.493 *U*
MW-07	2/13/1996	1.45 *U*	0.262 *U*	6.65 *U*	1.67 *U*	0.57 *UJ*	0.22 *U*	1.29 *U*	0.381 *U*	1.12 *U*	0.906 *U*
MW-07	8/28/1996	2.22	0.464	--	0.656 *UJ*	0.26 *U*	0.0258 *U*	0.658 *UJ*	0.0649 *U*	0.208 *U*	0.0809 *U*
MW-07	2/19/1997	0.489 *U*	0.0378 *U*	2.62 *UJ*	0.7 *U*	0.26 *U*	0.0258 *U*	1.39 *U*	0.0649 *U*	0.208 *U*	0.0809 *U*
MW-07	8/7/1997	--	0.0605 *U*	6.13 *UJ*	0.36 *U*	--	0.0935 *U*	0.535 *U*	0.109 *U*	0.497 *UJ*	0.188 *UJ*
MW-09	5/31/1989	100 *U*	**250**	17 *E*	19 *U*	**15,000**	5.0 *U*	9.7 *U*	**42**	50 *U*	50 *U*
MW-09	9/14/1989	13,000 *U*	630 *U*	10 *U*	10 *U*	13,000 *U*	630 *U*	10 *U*	630 *U*	6,300 *U*	6,300 *U*
MW-09	12/4/1989	25.9 *J*	**200**	--	5.61 *J*	**2,310** *J*	5.0 *U*	10 *U*	**40.2**	50 *U*	50 *U*
MW-09	3/6/1990	100 *U*	5.0 *U*	--	20 *U*	100 *U*	5.0 *U*	10 *U*	5.0 *U*	50 *U*	50 *U*
MW-09	4/12/1990	670 *U*	34 *U*	--	--	670 *U*	34 *U*	--	34 *U*	340 *U*	340 *U*
MW-09	5/21/1990	**2,400** *E*	880 *U*	42 *J*	10 *J*	2,000 *U*	1,000 *U*	5.3 *U*	1,000 *U*	2,000 *U*	2,000 *U*
MW-09	8/27/1990	**7,500** *E*	2,300 *U*	150 *U*	22 *U*	**5,600** *E*	2,600 *U*	8.4 *U*	2,600 *U*	5,200 *U*	5,200 *U*
MW-09	11/13/1990	**17,000** *E*	2,200 *U*	--	--	**26,000**	2,500 *U*	2.8 *U*	2,500 *U*	5,000 *U*	5,000 *U*
MW-09	2/15/1991	**8,600** *J*	1,200 *U*	47 *U*	9.4 *U*	**12,000** *J*	1,200 *U*	9.4 *U*	1,200 *U*	12,000 *U*	12,000 *U*
MW-09	5/7/1991	10,000 *U*	5,000 *U*	50 *U*	20 *U*	10,000 *U*	5,000 *U*	10 *U*	5,000 *U*	10,000 *U*	10,000 *U*
MW-09	8/6/1991	10,000 *U*	5,000 *U*	50 *U*	**20** *J*	**388,000**	5,000 *U*	10 *U*	5,000 *U*	10,000 *U*	**80,700**
MW-09	12/19/1991	**5,900** *E*	250 *U*	950 *U*	190 *U*	**6,400** *E*	250 *U*	190 *U*	250 *U*	2,500 *U*	2,500 *U*
MW-09	2/17/1992	**150,000** *E*	2,500 *U*	950 *U*	190 *U*	**110,000** *E*	2,500 *U*	190 *U*	2,500 *U*	25,000 *U*	25,000 *U*
MW-09	5/6/1992	20,000 *U*	1,000 *U*	**60** *E*	9.5 *U*	**23,000** *E*	1,000 *U*	9.5 *U*	1,000 *U*	10,000 *U*	10,000 *U*
MW-09	8/20/1992	40,000 *U*	2,000 *U*	**180** *E*	18 *E*	40,000 *U*	2,000 *U*	10 *U*	2,000 *U*	20,000 *U*	20,000 *U*
MW-09	10/28/1992	**4,300**	**230**	48 *U*	9.5 *U*	**13,000**	5 *U*	9.5 *U*	**30**	50 *U*	50 *U*
MW-09	2/17/1993	5,000 *U*	**380** *E*	48 *U*	9.7 *U*	5,000 *U*	250 *U*	9.7 *U*	250 *U*	2,500 *U*	2,500 *U*
MW-09	5/26/1993	**3,260**	**175**	NR *J*	--	**3,940**	NR *U*	NR *U*	NR *U*	NR *U*	NR *U*

Table 7. (cont.)

Well ID	Date	Acetone (µg/L)	Benzene (µg/L)	Benzoic acid (µg/L)	Benzyl alcohol (µg/L)	2-Butanone (MEK) (µg/L)	Chlorobenzene (µg/L)	1,2-Dichloro-benzene (µg/L)	Ethylbenzene (µg/L)	2-Hexanone (µg/L)	4-Methyl-2-Pentanone (µg/L)
GW Protection Standard		700	1.0	50	20	170	50	620	29	50	50
MW-09	8/26/1993	**6,020**	**151**	38.6 *J*	5.66	**3,810**	1.26 *U*	0.635 *U*	21.7	3.57 *U*	18.5
MW-09	2/9/1994	**2,400**	**230**	7.37	13.9	**2,860**	247 *U*	0.796 *U*	**30**	61.5 *U*	69.5 *U*
MW-09	8/24/1994	70.9	**127**	2.96 *U*	3.35	151	1.01 *U*	0.67 *U*	16.4	1.57 *U*	1.06 *U*
MW-09	2/21/1995	**2,500**	**172**	9.13	8.91	**2,780**	59.1 *U*	0.667 *U*	65.6 *U*	170 *U*	86 *U*
MW-09	8/15/1995	**1,040**	**137** *	6.01	2.56	**889**	0.319 *U*	1.34 *U*	27.9	0.713 *U*	0.493 *U*
MW-09	2/13/1996	454	**114**	6.65 *J*	3.53	**584**	0.22 *U*	1.29 *U*	21.3	1.12 *U*	0.906 *U*
MW-09	8/28/1996	**962** *J*	**113** *J*	--	5.73 *J*	5.2 *UJ*	0.516 *UJ*	0.658 *UJ*	26.6 *J*	4.16 *UJ*	1.62 *UJ*
MW-09	2/19/1997	489 *U*	37.8 *U*	2.62 *UJ*	3.77	260 *U*	25.8 *U*	1.39 *U*	64.9 *U*	208 *U*	80.9 *U*
MW-09	8/7/1997	209 *EJ*	**106**	6.13 *UJ*	3.53	**307** *J*	0.0935 *U*	0.535 *U*	**37.7**	0.497 *UJ*	0.188 *UJ*
MW-09	4/7/1998	347 *J*	**109**	--	3.55	**586**	0.215	0.346 *U*	**35.4**	0.314 *UJ*	0.294 *U*
MW-09	10/6/1998	244 *J*	**88.4**	15.4 *J*	**25.3**	**244** *J*	0.249	0.346 *U*	**32.3**	0.232 *U*	0.576
MW-09	4/29/1999	360	**78.8**	3.37 *J*	12.7	**329**	3.59 *U*	0.398 *U*	27.4	9.0 *U*	6.15 *U*
MW-09	10/27/1999	50 *UJ*	**61**	50 *UJ*	5.0 *U*	10	1.0 *U*	1.0 *U*	**33**	10 *UJ*	10 *U*
MW-09	4/12/2000	50 *UJ*	**34**	50 *U*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	13	10 *U*	10 *U*
MW-09	10/31/2000	10 *U*	**56**	50 *U*	5.0 *U*	9 *J*	1.0 *U*	5.0 *U*	20	10 *U*	10 *U*
MW-09	4/25/2001	5.0 *U*	**51**	50 *U*	5.0 *U*	5.0 *U*	0.14 *J*	5.0 *U*	15	5.0 *U*	5.0 *U*
MW-09	7/19/2001	50 *U*	**47**	50 *U*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	12	10 *U*	10 *U*
MW-09 (dup)	7/19/2001	50 *U*	**47**	50 *UJ*	5.0 *UJ*	10 *U*	1.0 *U*	5.0 *UJ*	12	10 *U*	10 *U*
MW-09	10/2/2001	10 *U*	**39**	50 *U*	5.0 *U*	5.0 *U*	1.0 *U*	5.0 *U*	11	5.0 *U*	5.0 *U*
MW-09	4/30/2002	50 *U*	**38**	48 *UJ*	4.8 *U*	25 *U*	1 *U*	4.8 *U*	7.6	25 *U*	25 *U*
MW-09	7/16/2002	50 *U*	**18**	--	--	10 *U*	1.0 *U*	--	2.2	25 *U*	25 *U*
MW-09	10/23/2002	50 *U*	**8.5**	51 *UJ*	5.1 *U*	10 *U*	1.0 *U*	5.1 *U*	1.1	25 *U*	25 *U*
MW-09	2/4/2003	50 *U*	**37**	52 *U*	5.2 *U*	10 *U*	1.0 *U*	5.2 *U*	7.0	25 *U*	25 *U*
MW-09	4/16/2003	50 *U*	**8.6**	51 *U*	5.1 *U*	10 *U*	1.0 *U*	5.1 *U*	1.4	25 *U*	25 *U*
MW-09	7/8/2003	50 *U*	**28**	53 *UJ*	5.3 *UJ*	10 *U*	1.0 *U*	5.3 *UJ*	6.1	25 *U*	25 *U*
MW-09	10/8/2003	50 *U*	**14**	54 *UR*	5.4 *U*	10 *U*	1.0 *U*	5.4 *U*	1.2	25 *U*	25 *U*
MW-09	4/6/2004	50 *U*	**13**	51 *U*	5.1 *U*	10 *U*	1.0 *U*	5.1 *U*	1.0 *U*	25 *U*	25 *U*
MW-09	10/12/2004	50 *U*	**14**	52 *U*	5.2 *U*	10 *U*	1.0 *U*	5.2 *U*	1.0 *U*	25 *U*	25 *U*
MW-10	3/15/1989	--	5 *U*	--	--	10 *U*	5 *U*	10 *U*	5 *U*	--	--
MW-10	8/29/1990	10 *U*	4.4 *U*	50 *U*	7.5 *U*	10 *U*	5.0 *U*	2.8 *U*	5.0 *U*	10 *U*	10 *U*
MW-10	8/6/1991	10 *U*	5 *U*	50.0 *U*	20.0 *U*	10 *U*	5 *U*	10.0 *U*	5 *U*	10 *U*	10 *U*
MW-10	8/19/1992	100 *U*	5.0 *U*	48 *U*	9.5 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-10	8/26/1993	26.6 *U*	2.00 *U*	43.9 *U*	0.693 *U*	4.58 *U*	1.26 *U*	0.722 *U*	0.608 *U*	3.57 *U*	3.57 *U*
MW-10	8/23/1994	5.87 *U*	0.657 *U*	2.96 *U*	0.665 *U*	2.76 *U*	1.01 *U*	0.670 *U*	1.10 *U*	1.57 *U*	1.06 *U*
MW-10	8/15/1995	2.87 *U*	0.462 *U*	5.69 *U*	0.388 *U*	1.60 *U*	0.319 *U*	1.33 *U*	0.588 *U*	0.713 *U*	0.493 *U*
MW-10	8/27/1996	0.489 *U*	0.150	2.67 *U*	0.713 *U*	0.260 *U*	0.0258 *U*	1.42 *U*	0.0649 *U*	0.208 *U*	0.0809 *U*
MW-10	8/6/1997	0.488 *UJ*	0.193	6.02 *UJ*	0.353 *U*	0.598 *UJ*	0.0935 *U*	0.525 *U*	0.109 *U*	0.497 *UJ*	0.188 *UJ*
MW-10	10/6/1998	0.413 *U*	0.377	29.6 *UJ*	0.669 *UJ*	0.222 *UJ*	0.0453 *U*	0.336 *UJ*	0.0928 *U*	0.232 *U*	0.160 *U*

Table 7. (cont.)

Well ID	Date	Acetone (µg/L)	Benzene (µg/L)	Benzoic acid (µg/L)	Benzyl alcohol (µg/L)	2-Butanone (MEK) (µg/L)	Chlorobenzene (µg/L)	1,2-Dichloro-benzene (µg/L)	Ethylbenzene (µg/L)	2-Hexanone (µg/L)	4-Methyl-2-Pentanone (µg/L)
GW Protection Standard		700	1.0	50	20	170	50	620	29	50	50
MW-10	10/27/1999	50 *UJ*	1.0 *U*	50 *UJ*	5.0 *U*	10 *U*	1.0 *U*	1.0 *U*	1.0 *U*	10 *UJ*	10 *U*
MW-10	10/31/2000	10 *U*	1.0 *U*	50 *U*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	1.0 *U*	10 *U*	10 *U*
MW-10	10/3/2001	10 *U*	1.0 *U*	50 *U*	5.0 *U*	5.0 *U*	1.0 *U*	5.0 *U*	1.0 *U*	5.0 *U*	5.0 *U*
MW-10	10/23/2002	50 *U*	1.0 *U*	50 *UJ*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	1.0 *U*	25 *U*	25 *U*
MW-10	10/8/2003	50 *U*	1.0 *U*	53 *UR*	5.3 *U*	10 *U*	1.0 *U*	5.3 *U*	1.0 *U*	25 *U*	25 *U*
MW-10	10/12/2004	50 *U*	1.0 *U*	52 *U*	5.2 *U*	10 *U*	1.0 *U*	5.2 *U*	1.0 *U*	25 *U*	25 *U*
MW-15	8/5/1991	10 *U*	5.0 *U*	50.5 *U*	20.2 *U*	17.5	5.0 *U*	10.1 *U*	5.0 *U*	10 *U*	10 *U*
MW-15	12/19/1991	100 *U*	5.0 *U*	--	--	100 *U*	5.0 *U*	--	5.0 *U*	50 *U*	50 *U*
MW-15	2/16/1993	100 *U*	5.0 *U*	48 *U*	9.5 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-16	12/19/1991	100 *U*	5.0 *U*	--	--	100 *U*	5.0 *U*	--	5.0 *U*	50 *U*	50 *U*
MW-16	2/16/1993	100 *U*	5.0 *U*	48 *U*	9.5 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-17	6/30/1989	100 *U*	5.0 *U*	--	--	100 *U*	**61**	--	5.0 *U*	50 *U*	50 *U*
MW-18	5/26/1993	NR *U*	NR *U*	--	--	NR *U*	**67**	--	NR *U*	NR *U*	NR *U*
MW-18	2/8/1994	3.93	0.28 *U*	--	--	1.22 *U*	38	--	0.274 *U*	1.23 *U*	1.39 *U*
MW-20	6/30/1989	100 *U*	5.0 *U*	--	--	100 *U*	5.0 *U*	--	5.0 *U*	50 *U*	50 *U*
MW-21	6/30/1989	100 *U*	5.0 *U*	--	--	100 *U*	5.0 *U*	--	5.0 *U*	50 *U*	50 *U*
MW-21	5/26/1993	NR *U*	NR *U*	--	--	NR *U*	--	--	--	NR *U*	NR *U*
MW-21	4/7/1998	0.413 *U*	0.0375 *U*	--	0.669 *U*	0.222 *U*	4.85	14	0.0928 *U*	0.232 *U*	0.16 *U*
MW-21	10/6/1998	0.413 *U*	0.117	30.2 *UJ*	0.682 *UJ*	0.222 *UJ*	6.64	21.5 *J*	0.0928 *U*	0.232 *U*	0.16 *U*
MW-21	4/29/1999	1.43 *U*	0.228	30.1 *UJ*	0.316 *U*	0.769 *U*	46.9	33.1	0.102 *U*	0.180 *U*	0.123 *U*
MW-21	10/27/1999	50 *UJ*	1.0 *U*	50 *UJ*	5.0 *U*	10 *U*	14	24	1.0 *U*	10 *UJ*	10 *U*
MW-21	4/12/2000	50 *UJ*	1.0 *U*	50 *U*	5.0 *U*	10 *U*	14	17	1.0 *U*	10 *U*	10 *U*
MW-21	10/31/2000	10 *U*	1.0 *U*	50 *U*	5.0 *U*	10 *U*	10	12	1.0 *U*	10 *U*	10 *U*
MW-21	4/25/2001	5.0 *U*	1.0 *U*	50 *U*	5.0 *U*	5.0 *U*	11	15	1.0 *U*	5.0 *U*	5.0 *U*
MW-21	10/2/2001	10 *U*	0.2 *J*	50 *U*	5.0 *U*	5.0 *U*	**55**	77	1.0 *U*	5.0 *U*	5.0 *U*
MW-21	4/30/2002	50 *U*	1 *U*	48 *UJ*	4.8 *U*	25 *U*	**92**	100	1 *U*	25 *U*	25 *U*
MW-21	10/23/2002	50 *U*	1.0 *U*	50 *UJ*	5.0 *U*	10 *U*	22	66	1.0 *U*	25 *U*	25 *U*
MW-21	4/15/2003	50 *U*	1.0 *U*	51 *U*	5.1 *U*	10 *U*	17	46	1.0 *U*	25 *U*	25 *U*
MW-21	10/8/2003	50 *U*	1.0 *U*	54 *UR*	5.4 *U*	10 *U*	14	23	1.0 *U*	25 *U*	25 *U*
MW-21	4/7/2004	50 *U*	1.0 *U*	51 *U*	5.1 *U*	10 *U*	3.2	11	1.0 *U*	25 *U*	25 *U*
MW-21	10/13/2004	50 *U*	1.0 *U*	55 *U*	5.5 *U*	10 *U*	2.2	29	1.0 *U*	25 *U*	25 *U*
MW-22	6/30/1989	100 *U*	5.0 *U*	--	--	100 *U*	5.0 *U*	--	5.0 *U*	50 *U*	50 *U*
MW-22	2/16/1993	2,000 *U*	100 *U*	48 *U*	9.5 *U*	2,000 *U*	100 *U*	9.5 *U*	100 *U*	1,000 *U*	1,000 *U*
MW-22	5/26/1993	NR *U*	**6.79**	--	--	NR *U*	NR *U*	--	20.9	NR *U*	NR *U*
MW-22	10/13/2004	50 *U*	1.0 *U*	--	--	10 *U*	1.0 *U*	--	1.0 *U*	25 *U*	25 *U*

Table 7. (cont.)

Well ID	Date	Acetone (µg/L)	Benzene (µg/L)	Benzoic acid (µg/L)	Benzyl alcohol (µg/L)	2-Butanone (MEK) (µg/L)	Chlorobenzene (µg/L)	1,2-Dichloro-benzene (µg/L)	Ethylbenzene (µg/L)	2-Hexanone (µg/L)	4-Methyl-2-Pentanone (µg/L)
GW Protection Standard		700	1.0	50	20	170	50	620	29	50	50
MW-23	6/30/1989	100 *U*	5.0 *U*	--	--	100 *U*	5.0 *U*	--	5.0 *U*	50 *U*	50 *U*
MW-23	8/27/1990	10 *U*	**20** *E*	50 *U*	7.5 *U*	10 *U*	5.0 *U*	2.8 *U*	5.0 *U*	10 *U*	10 *U*
MW-23	8/5/1991	10 *U*	**71.5**	50 *U*	20 *U*	30.8	5.0 *U*	10 *U*	5.0 *U*	10 *U*	10 *U*
MW-23	8/19/1992	100 *U*	**34**	49 *U*	9.7 *U*	100 *U*	5.0 *U*	9.7 *U*	5.0 *U*	50 *U*	50 *U*
MW-23	8/25/1993	28 *U*	**16.8**	42.9 *U*	0.678 *U*	5.67 *U*	1.03 *U*	0.706 *U*	0.786 *J*	4.39 *U*	2.28 *U*
MW-23	8/23/1994	5.87 *J*	**25.6**	2.91 *U*	0.652 *U*	2.76 *U*	10.3	1.27	1.1 *U*	1.57 *U*	1.06 *U*
MW-23	8/14/1995	2.87 *U*	**10.7**	5.69 *U*	0.388 *U*	1.6 *U*	0.319 *U*	1.33 *U*	0.588 *U*	0.713 *U*	0.493 *U*
MW-23	8/27/1996	0.489 *U*	**6.83**	--	0.656 *U*	0.26 *U*	0.0258 *U*	0.658 *U*	0.0649 *U*	0.208 *U*	0.0809 *U*
MW-23	8/6/1997	0.488 *UJ*	**6.28**	6.13 *UJ*	0.36 *U*	0.598 *UJ*	0.0935 *U*	0.535 *U*	0.109 *U*	0.497 *UJ*	0.188 *UJ*
MW-23	4/7/1998	0.413 *U*	**3.94**	--	0.675 *U*	0.222 *U*	0.0453 *U*	0.34 *U*	0.0928 *U*	0.232 *U*	0.16 *U*
MW-23	10/6/1998	0.413 *U*	**3.41**	29.6 *UJ*	0.669 *UJ*	0.222 *UJ*	0.0453 *U*	0.296 *J*	0.0928 *U*	0.232 *U*	0.16 *U*
MW-23	4/29/1999	1.43 *U*	**3.48**	31.6 *UJ*	0.331 *U*	0.769 *U*	0.0718 *U*	0.418 *U*	0.102 *U*	0.180 *U*	0.123 *U*
MW-23	10/27/1999	50 *UJ*	**4.0**	50 *UJ*	5.0 *U*	10 *U*	1.0 *U*	1.0 *U*	1.0 *U*	10 *UJ*	10 *U*
MW-23	4/11/2000	50 *UJ*	**4.0**	50 *U*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	1.0 *U*	10 *U*	10 *U*
MW-23 (dup)	4/11/2000	50 *UJ*	**4.0**	50 *U*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	1.0 *U*	10 *U*	10 *U*
MW-23	10/31/2000	10 *U*	**2.0**	50 *U*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	1.0 *U*	10 *U*	10 *U*
MW-23	4/24/2001	5.0 *U*	**2.8**	50 *U*	5.0 *U*	3.2 *J*	1.0 *U*	5.0 *U*	1.0 *U*	5.0 *U*	5.0 *U*
MW-23	10/2/2001	10 *U*	0.44 *J*	50 *U*	5.0 *U*	5.0 *U*	1.0 *U*	5.0 *U*	1.9	5.0 *U*	5.0 *U*
MW-23	4/30/2002	50 *U*	**2.9**	50 *UJ*	5 *U*	25 *U*	1 *U*	5 *U*	8	25 *U*	25 *U*
MW-23	10/23/2002	31 *J*	**4.1**	51 *UJ*	5.1 *U*	10 *U*	1.0 *U*	5.1 *U*	13	25 *U*	25 *U*
MW-23	4/16/2003	50 *U*	**2.1**	52 *UR*	5.2 *U*	10 *U*	1.0 *U*	5.2 *U*	1.0 *U*	25 *U*	25 *U*
MW-23	10/8/2003	50 *U*	**4.5**	54 *UR*	5.4 *U*	10 *U*	1.0 *U*	5.4 *U*	1.0 *U*	25 *U*	25 *U*
MW-23	4/7/2004	50 *U*	**6.4**	51 *U*	5.1 *U*	10 *U*	1.0 *U*	5.1 *U*	1.0 *U*	25 *U*	25 *U*
MW-23	10/13/2004	50 *U*	1.0 *U*	56 *U*	5.6 *U*	10 *U*	1.0 *U*	5.6 *U*	1.0 *U*	25 *U*	25 *U*
MW-24	6/30/1989	100 *U*	5 *U*	--	--	100 *U*	8.4 *E*	--	5 *U*	50 *U*	50 *U*
MW-24	8/27/1990	10 *U*	**25**	50 *U*	7.5 *U*	10 *U*	8.2 *E*	2.8 *U*	5 *U*	10 *U*	10 *U*
MW-24	8/6/1991	--	--	55.5 *U*	22.2 *U*	--	--	11.1 *U*	--	--	--
MW-24	10/7/1991	100 *U*	**39**	--	--	100 *U*	9.2 *E*	--	5.0 *U*	50 *U*	50 *U*
MW-24	8/19/1992	100 *U*	**52**	48 *U*	9.5 *U*	100 *U*	8.6 *E*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-24	2/16/1993	100 *U*	**30**	48 *U*	9.5 *U*	100 *U*	7.6 *E*	2.5 *J*	5.0 *U*	50 *U*	50 *U*
MW-24	8/25/1993	280 *UF*	**22.9** *F*	39.4 *U*	0.622 *U*	56.7 *UF*	10.3 *UF*	3.3	7.86 *UF*	43.9 *UF*	22.8 *UF*
MW-24	8/23/1994	5.87 *J*	**15.3**	3.06 *U*	0.688 *U*	2.76 *U*	1.01 *U*	0.694 *U*	1.1 *U*	1.57 *U*	1.06 *U*
MW-24	8/14/1995	10.7	**11.2**	6.85 *U*	0.467 *U*	1.6 *U*	10.8	1.6 *U*	0.588 *U*	0.713 *U*	0.493 *U*
MW-24	8/28/1996	1.92	**15.8**	--	0.678 *U*	0.26 *U*	13.2	0.68 *U*	0.0649 *U*	0.208 *U*	0.0809 *U*
MW-24	8/6/1997	0.488 *UJ*	**12.1**	6.13 *UJ*	0.36 *U*	0.598 *UJ*	14.5	0.535 *U*	0.109 *U*	0.497 *UJ*	0.188 *UJ*
MW-24	10/12/2004	50 *U*	**2.3**	--	--	10 *U*	6.9	--	1.0 *U*	25 *U*	25 *U*
MW-25	6/30/1989	100 *U*	**11** *E*	--	--	100 *U*	5 *U*	--	5 *U*	50 *U*	50 *U*
MW-25	4/7/1998	0.413 *U*	**8.1**	--	0.675 *U*	0.222 *U*	2.19	0.34 *U*	0.0928 *U*	0.232 *U*	0.16 *U*
MW-25	10/6/1998	0.413 *U*	**8.22**	30.5 *UJ*	0.688 *U*	0.222 *UJ*	4.24	0.346 *U*	0.0928 *U*	0.232 *U*	0.16 *U*

Table 7. (cont.)

Well ID	Date	Acetone (µg/L)	Benzene (µg/L)	Benzoic acid (µg/L)	Benzyl alcohol (µg/L)	2-Butanone (MEK) (µg/L)	Chlorobenzene (µg/L)	1,2-Dichloro-benzene (µg/L)	Ethylbenzene (µg/L)	2-Hexanone (µg/L)	4-Methyl-2-Pentanone (µg/L)
GW Protection Standard		700	1.0	50	20	170	50	620	29	50	50
MW-25	4/29/1999	1.43 *U*	**7.98**	30.1 *UJ*	0.316 *U*	0.769 *U*	2.93	0.398 *U*	0.102 *U*	0.180 *U*	0.123 *U*
MW-25	10/27/1999	50 *UJ*	**5**	50 *UJ*	5.0 *U*	10 *U*	1.0	1.0 *U*	1.0 *U*	10 *UJ*	10 *U*
MW-25 (dup)	10/27/1999	50 *UJ*	**5**	50 *UJ*	5.0 *U*	10 *U*	2.0	1.0 *U*	1.0 *U*	10 *UJ*	10 *U*
MW-25	4/11/2000	50 *UJ*	**5**	50 *U*	5.0 *U*	10 *U*	2.0	5.0 *U*	1.0 *U*	10 *U*	10 *U*
MW-25	10/31/2000	10 *U*	**5**	50 *U*	5.0 *U*	10 *U*	1.0	5.0 *U*	1.0 *U*	10 *U*	10 *U*
MW-25	4/24/2001	5.0 *U*	**5.0**	50 *U*	5.0 *U*	5.0 *U*	2.2	5.0 *U*	1.0 *U*	5.0 *U*	5.0 *U*
MW-25	10/2/2001	10 *U*	**6.1**	50 *U*	5.0 *U*	5.0 *U*	2.5	5.0 *U*	1.0 *U*	5.0 *U*	5.0 *U*
MW-25	4/30/2002	50 *U*	**4.8**	51 *UJ*	5.1 *U*	25 *U*	2.1	5.1 *U*	1 *U*	25 *U*	25 *U*
MW-25	10/22/2002	50 *U*	**4.2** *J*	51 *UJ*	5.1 *U*	10 *U*	2.3 *J*	5.1 *U*	1.0 *U*	25 *U*	25 *U*
MW-25	4/16/2003	50 *U*	**2.9**	50 *U*	5.0 *U*	10 *U*	1.8	5.0 *U*	1.0 *U*	25 *U*	25 *U*
MW-25	10/8/2003	50 *U*	**3.6**	55 *URJ*	5.5 *U*	10 *U*	2.1	5.5 *U*	1.0 *U*	25 *U*	25 *U*
MW-25	4/6/2004	50 *U*	1.0 *U*	51 *U*	5.1 *U*	10 *U*	1.0 *U*	5.1 *U*	1.0 *U*	25 *U*	25 *U*
MW-25	10/12/2004	50 *U*	**3.0**	55 *U*	5.5 *U*	10 *U*	2.8	5.5 *U*	1.0 *U*	25 *U*	25 *U*
MW-31	2/15/1991	**1,800**	**7.4** *E*	43 *J*	3.9 *J*	**1,100**	5 *U*	9.4 *U*	2.2 *J*	50 *U*	50 *U*
MW-31	5/7/1991	100 *U*	50 *U*	50 *U*	20 *U*	100 *U*	50 *U*	10 *U*	50 *U*	100 *U*	100 *U*
MW-31	8/6/1991	**1,150**	500 *U*	50.5 *U*	20.2 *U*	**1,110**	500 *U*	10.1 *U*	500 *U*	1,000 *U*	1000 *U*
MW-31	12/19/1991	100 *U*	**11** *E*	48 *U*	9.5 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-31	2/17/1992	100 *U*	5.0 *U*	48 *U*	9.5 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-31	5/6/1992	100 *U*	**16** *E*	48 *U*	9.5 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-31	8/19/1992	100 *U*	**5.9** *E*	49 *U*	9.7 *U*	100 *U*	5.0 *U*	9.7 *U*	5.0 *U*	50 *U*	50 *U*
MW-31	10/28/1992	100 *U*	**12** *E*	48 *U*	9.5 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-31	4/7/1998	0.413 *UJ*	**10.9** *J*	--	0.675 *U*	0.222 *UJ*	0.0453 *UJ*	0.34 *U*	0.0928 *UJ*	0.232 *UJ*	0.16 *UJ*
MW-31	10/6/1998	0.413 *UJ*	**3.42** *J*	30.5 *UJ*	0.688 *U*	0.222 *UJ*	0.0453 *UJ*	0.346 *U*	0.0928 *UJ*	0.232 *UJ*	0.16 *UJ*
MW-31	4/29/1999	1.43 *U*	**6.66**	30.1 *U*	0.316 *U*	0.769 *U*	0.0718 *U*	0.398 *U*	0.102 *U*	0.180 *U*	0.123 *U*
MW-31	10/27/1999	50 *UJ*	**3.0**	50 *UJ*	5.0 *U*	10 *U*	1.0 *U*	1.0 *U*	1.0 *U*	10 *UJ*	10 *U*
MW-31	4/11/2000	50 *UJ*	**3.0**	50 *U*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	1.0 *U*	10 *U*	10 *U*
MW-31	10/31/2000	10 *U*	**2.0**	50 *U*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	1.0 *U*	10 *U*	10 *U*
MW-31	4/25/2001	5.0 *U*	0.90 *J*	50 *U*	5.0 *U*	5.0 *U*	1.0 *U*	5.0 *U*	1.0 *U*	5.0 *U*	5.0 *U*
MW-31	7/19/2001	50 *U*	**4.7**	50 *U*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	1.0 *U*	10 *U*	10 *U*
MW-31	10/2/2001	10 *U*	**2.3**	50 *U*	5.0 *U*	5.0 *U*	1.0 *U*	5.0 *U*	1.0 *U*	5.0 *U*	5.0 *U*
MW-31	4/30/2002	50 *U*	**19**	50 *UJ*	5 *U*	25 *U*	0.35 *J*	5 *U*	1 *U*	25 *U*	25 *U*
MW-31	7/16/2002	50 *U*	**10**	--	--	10 *U*	1.0 *U*	--	1.0 *U*	25 *U*	25 *U*
MW-31	10/23/2002	50 *U*	**1.4**	52 *UJ*	5.2 *U*	10 *U*	1.0 *U*	5.2 *U*	1.0 *U*	25 *U*	25 *U*
MW-31	2/4/2003	50 *U*	1.0 *U*	51 *U*	5.1 *U*	10 *U*	1.0 *U*	5.1 *U*	1.0 *U*	25 *U*	25 *U*
MW-31	4/15/2003	50 *U*	1.0 *U*	51 *U*	5.1 *U*	10 *U*	1.0 *U*	5.1 *U*	1.0 *U*	25 *U*	25 *U*
MW-31	7/8/2003	50 *U*	1.0 *U*	50 *U*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	1.0 *U*	25 *U*	25 *U*
MW-31	10/7/2003	50 *U*	1.0 *U*	55 *UR*	5.5 *U*	10 *U*	1.0 *U*	5.5 *U*	1.0 *U*	25 *U*	25 *U*
MW-31	4/6/2004	50 *U*	1.0 *U*	51 *U*	5.1 *U*	10 *U*	1.0 *U*	5.1 *U*	1.0 *U*	25 *U*	25 *U*
MW-31	10/12/2004	50 *U*	1.0 *U*	54 *U*	5.4 *U*	10 *U*	1.0 *U*	5.4 *U*	1.0 *U*	25 *U*	25 *U*

Table 7. (cont.)

Well ID	Date	Acetone (µg/L)	Benzene (µg/L)	Benzoic acid (µg/L)	Benzyl alcohol (µg/L)	2-Butanone (MEK) (µg/L)	Chlorobenzene (µg/L)	1,2-Dichloro-benzene (µg/L)	Ethylbenzene (µg/L)	2-Hexanone (µg/L)	4-Methyl-2-Pentanone (µg/L)
GW Protection Standard		700	1.0	50	20	170	50	620	29	50	50
MW-32	2/16/1993	100 *U*	5.0 *U*	48 *U*	9.5 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-32	10/12/2004	50 *U*	1.0 *U*	--	--	10 *U*	1.0 *U*	--	1.0 *U*	25 *U*	25 *U*
MW-33	2/15/1993	100 *U*	5 *U*	48 *U*	9.5 *U*	100 *U*	5.0 *U*	9.5 *U*	5.0 *U*	50 *U*	50 *U*
MW-34	10/31/2000	10 *U*	**60**	50 *U*	5 *U*	10 *U*	1.0	5.0 *U*	1.0 *U*	10 *U*	10 *U*
MW-34	4/25/2001	5.0 *U*	**52**	50 *U*	5.0 *U*	5.0 *U*	0.95 *J*	5.0 *U*	1.1	5.0 *U*	5.0 *U*
MW-34	7/19/2001	50 *U*	**54**	50 *U*	5.0 *U*	10 *U*	0.64 *J*	5.0 *U*	0.36 *J*	10 *U*	10 *U*
MW-34	10/2/2001	10 *U*	**9.5**	50 *U*	5.0 *U*	5.0 *U*	1.0 *U*	5.0 *U*	1.0 *U*	5.0 *U*	5.0 *U*
MW-34	4/30/2002	50 *U*	**44**	52 *UJ*	5.2 *U*	25 *U*	0.65 *J*	5.2 *U*	1 *U*	25 *U*	25 *U*
MW-34 (dup)	4/30/2002	50 *U*	**38**	53 *UJ*	5.3 *U*	25 *U*	0.62 *J*	5.3 *U*	1 *U*	25 *U*	25 *U*
MW-34	7/16/2002	50 *U*	**45**	--	--	10 *U*	1.0 *U*	--	1.0 *U*	25 *U*	25 *U*
MW-34 (dup)	7/16/2002	50 *U*	**55**	--	--	10 *U*	1.0 *U*	--	1.0 *U*	25 *U*	25 *U*
MW-34	10/23/2002	50 *U*	**41**	50 *UJ*	5.0 *U*	10 *U*	0.55 *J*	5.0 *U*	1.0 *U*	25 *U*	25 *U*
MW-34	2/4/2003	50 *U*	**12**	51 *U*	5.1 *U*	10 *U*	1.0 *U*	5.1 *U*	1.0 *U*	25 *U*	25 *U*
MW-34 (dup)	2/4/2003	50 *U*	**10**	50 *U*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	1.0 *U*	25 *U*	25 *U*
MW-34	4/15/2003	50 *U*	1.0 *U*	53 *U*	5.3 *U*	10 *U*	1.0 *U*	5.3 *U*	1.0 *U*	25 *U*	25 *U*
MW-34 (dup)	4/15/2003	50 *U*	1.0 *U*	52 *U*	5.2 *U*	10 *U*	1.0 *U*	5.2 *U*	1.0 *U*	25 *U*	25 *U*
MW-34	7/8/2003	50 *U*	1.0 *U*	52 *UJ*	5.2 *UJ*	10 *U*	1.0 *U*	5.2 *UJ*	1.0 *U*	25 *U*	25 *U*
MW-34 (dup)	7/8/2003	50 *U*	1.0 *U*	52 *UJ*	5.2 *UJ*	10 *U*	1.0 *U*	5.2 *UJ*	1.0 *U*	25 *U*	25 *U*
MW-34	10/7/2003	50 *U*	1.0 *U*	55 *UR*	5.5 *U*	10 *U*	1.0 *U*	5.5 *U*	1.0 *U*	25 *U*	25 *U*
MW-34 (dup)	10/7/2003	50 *U*	1.0 *U*	55 *UR*	5.5 *U*	10 *U*	1.0 *U*	5.5 *U*	1.0 *U*	25 *U*	25 *U*
MW-34	4/6/2004	50 *U*	1.0 *U*	50 *U*	5.0 *U*	10 *U*	1.0 *U*	5.0 *U*	1.0 *U*	25 *U*	25 *U*
MW-34	10/13/2004	50 *U*	1.0 *U*	54 *U*	5.4 *U*	10 *U*	1.0 *U*	5.4 *U*	1.0 *U*	25 *U*	25 *U*
MW-34 (dup)	10/13/2004	50 *U*	1.0 *U*	54 *U*	5.4 *U*	10 *U*	1.0 *U*	5.4 *U*	1.0 *U*	25 *U*	25 *U*
POC-01	4/7/1998	413 *U*	37.5 *U*	--	13.5 *J*	222 *U*	45.3 *U*	0.343 *U*	92.8 *U*	232 *U*	160 *U*
POC-01	10/6/1998	52.7 *J*	**36.3** *J*	21.9 *J*	7.16	57.8 *J*	0.762 *J*	0.346 *U*	**45.4** *J*	0.232 *UJ*	22.5 *J*
POC-01	4/29/1999	1.43 *U*	**10.5**	--	1.42	0.769 *U*	0.411	0.398 *U*	16.6	0.180 *U*	0.123
POC-01	10/26/1999	**890** *J*	**56**	300 *J*	5.0 *U*	**4,700**	1.0 *U*	1.0 *U*	**87**	10 *U*	40
POC-01	4/11/2000	220 *J*	**39**	50 *U*	4.0	**1,100**	1.0 *U*	10 *U*	**44**	10 *U*	13
POC-01	10/31/2000	10 *U*	**14**	50 *U*	5.0 *U*	50	1.0 *U*	5.0 *U*	6.0	10 *U*	10 *U*
POC-01 (dup)	10/31/2000	10 *U*	**13**	50 *U*	5.0 *U*	40	1.0 *U*	5.0 *U*	5.0	10 *U*	10 *U*
POC-01	4/24/2001	440 *J*	**41** *J*	50 *U*	10 *U*	**1,700**	0.17 *J*	10 *U*	**31** *J*	5.0 *UJ*	14 *J*
POC-01 (dup)	4/24/2001	270 *J*	**32** *J*	50 *U*	5.0 *U*	**1,400**	0.18 *J*	5.0 *U*	20 *J*	5.0 *UJ*	9.2 *J*
POC-01	10/3/2001	42	**41**	50 *U*	5.0 *U*	110	1.0 *U*	5.0 *U*	7.3	5.0 *U*	1.1 *J*
POC-01 (dup)	10/3/2001	58	**44**	50 *U*	5.0 *U*	**200**	1.0 *U*	5.0 *U*	11	5.0 *U*	2.0 *J*
POC-01	4/29/2002	16 *J*	**8.6**	50 *UJ*	5 *U*	25 *UJ*	1 *U*	5 *U*	1.2	25 *U*	25 *UJ*
POC-01	10/23/2002	25 *J*	**13**	52 *UJ*	5.2 *U*	12 *J*	1.0 *U*	5.2 *U*	3.1 *J*	25 *U*	25 *U*
POC-01 (dup)	10/23/2002	26 *J*	**14**	51 *UJ*	5.1 *U*	27 *J*	1.0 *U*	5.1 *U*	6.2 *J*	25 *U*	25 *U*
POC-01	4/16/2003	81	**28**	--	5.1 *U*	10 *U*	1.0 *U*	5.1 *U*	28	25 *U*	25 *U*

Table 7. (cont.)

Well ID	Date	Acetone (µg/L)	Benzene (µg/L)	Benzoic acid (µg/L)	Benzyl alcohol (µg/L)	2-Butanone (MEK) (µg/L)	Chlorobenzene (µg/L)	1,2-Dichloro-benzene (µg/L)	Ethylbenzene (µg/L)	2-Hexanone (µg/L)	4-Methyl-2-Pentanone (µg/L)
GW Protection Standard		700	1.0	50	20	170	50	620	29	50	50
POC-01	10/8/2003	50 *U*	**7.1**	55 *UR*	5.5 *U*	10 *U*	1.0 *U*	5.5 *U*	1.0 *U*	25 *U*	25 *U*
POC-01	4/7/2004	250 *UJ*	**38**	--	5.1 *U*	**800** *J*	5.0 *U*	5.1 *U*	**73**	130 *U*	130 *U*
POC-01 (dup)	4/7/2004	250 *UJ*	**36**	--	5.0 *U*	**770** *J*	5.0 *U*	5.0 *U*	**71**	130 *U*	130 *U*
POC-01	10/13/2004	50 *U*	**23**	54 *U*	5.4 *U*	49	1.0 *U*	5.4 *U*	5.0	25 *U*	25 *U*
GB-01	10/14/2004	50 *U*	**82**	--	--	10 *U*	1.0 *U*	--	**120**	25 *U*	25 *U*
GB-02	10/14/2004	50 *U*	**30**	--	--	10 *U*	3.7	--	**71**	25 *U*	25 *U*
GB-03	10/14/2004	50 *U*	**6.2**	--	--	10 *U*	1.0 *U*	--	1.0 *U*	25 *U*	25 *U*
GB-04	10/14/2004	50 *U*	**22**	--	--	10 *U*	14	--	**33**	25 *U*	25 *U*

Table 7. (cont.)

Well ID	Date	2-Methyl phenol (µg/L)	3-Methyl phenol (µg/L)	3- and 4-Methylphenol (µg/L)	4-Methyl phenol (µg/L)	Naphthalene (µg/L)	N-Nitroso-piperidine (µg/L)	Phenol (µg/L)	Toluene (µg/L)	m,p-Xylenes (µg/L)	o-Xylene (µg/L)	Total Xylenes (µg/L)
GW Protection Standard		10	10	10	10	21	10	300	1,000	--	--	530
MW-06	5/31/1989	**1,900**	--	--	**180** *E*	9.7 *U*	9.7 *U*	97 *U*	**210,000**	--	--	5,000 *U*
MW-06	9/14/1989	--	--	--	--	10 *U*	50 *U*	32 *E*	**110,000**	--	--	8,300 *U*
MW-06	12/4/1989	**433** *E*	10 *U*	--	**505**	10 *U*	10 *U*	8.9 *J*	**58,500**	--	--	5.0 *U*
MW-06	3/6/1990	**920**	67 *U*	--	**210** *E*	67 *U*	67 *U*	67 *U*	--	--	--	--
MW-06	4/12/1990	--	--	--	--	--	--	--	5.0 *U*	--	--	5.0 *U*
MW-06	5/21/1990	**270**	--	--	**250**	6.1 *U*	11 *U*	9.9 *U*	**25,000**	--	--	2,800 *U*
MW-06	8/27/1990	**1,700**	--	--	**400** *E*	32 *U*	58 *U*	29 *J*	**100,000**	--	--	19,000 *U*
MW-06	11/13/1990	--	--	--	--	1.6 *U*	2.9 *U*	--	**41,000**	--	--	2,000 *U*
MW-06	2/15/1991	**1,700**	--	--	**400** *E*	94 *U*	94 *U*	37 *J*	**150,000**	--	--	67 *E*
MW-06	5/7/1991	**669**	--	--	**205**	10 *U*	5.0 *U*	10 *U*	**317,194**	--	--	25,000 *U*
MW-06	8/6/1991	**953**	--	--	**151**	10 *U*	5.0 *U*	11.9	**67,200**	--	--	5,000 *U*
MW-06	12/19/1991	**240** *E*	--	--	**110**	9.5 *U*	--	9.5 *U*	**12,000**	--	--	500 *U*
MW-06	2/18/1992	**1,200**	--	--	**290** *E*	190 *U*	--	190 *U*	**120,000** *D*	--	--	500 *U*
MW-06	5/7/1992	**630**	--	--	**180** *E*	9.5 *U*	--	9.5 *U*	**44,000**	--	--	500 *U*
MW-06	8/20/1992	**1,000**	--	--	**240** *E*	10 *U*	10 *U*	22 *E*	**62,000**	--	--	10,000 *U*
MW-06	10/29/1992	**340**	--	--	**150**	9.5 *U*	9.5 *U*	9.5 *U*	--	--	--	--
MW-06	2/17/1993	**990**	--	--	**280**	9.5 *U*	9.5 *U*	14 *E*	**98,000**	--	--	250 *U*
MW-06	5/26/1993	**287** *ER*	--	--	**89** *F*	NR *U*	NR *U*	--	**26,300**	--	--	NR *U*
MW-06	8/26/1993	**656**	--	**178** *F*	--	0.572	0.597 *U*	8.72	**54,800**	--	--	8,250 *U*
MW-06	2/9/1994	**810**	--	**280**	--	200 *U*	200 *U*	200 *U*	**100,000**	--	--	10,000 *U*
MW-06	8/24/1994	**269**	--	**129** *F*	--	0.789 *J*	0.981 *U*	10.9	**40,100**	--	--	19
MW-06	2/21/1995	**642**	--	**198** *F*	--	81.2 *U*	101 *U*	69.3 *U*	**105,000**	--	--	48.9
MW-06	8/15/1995	**154** *EF*	--	**94.7** *F*	--	1.49 *U*	0.542 *U*	1.1	**11,300**	5.81	1.67	--
MW-06	2/13/1996	**478**	--	**165** *FJ*	--	45.4 *U*	7.65 *U*	11 *J*	**83,800**	38.4	12	--
MW-06	8/28/1996	--	--	**110** *J*	--	0.797 *J*	0.476 *UJ*	2.67 *J*	**36,000** *J*	688 *UJ*	490 *UJ*	--
MW-06	2/19/1997	**399**	--	**208** *FJ*	--	5.68 *U*	1.81 *U*	1.28 *U*	**62,600**	6.88 *U*	4.9 *U*	--
MW-06	8/7/1997	**208** *F*	--	**154** *J*	--	0.649	0.456 *U*	2.85	**19,900**	13.4 *J*	4.15 *J*	--
MW-07	5/31/1989	9.5 *U*	--	--	9.5 *U*	9.5 *U*	9.5 *U*	9.5 *U*	5.0 *U*	--	--	5.0 *U*
MW-07	9/14/1989	--	--	--	--	10 *U*	50 *U*	10 *U*	900	--	--	170 *U*
MW-07	12/4/1989	10 *U*	10 *U*	--	10 *U*	10 *U*	10 *U*	10 *U*	5.0 *U*	--	--	5.0 *U*
MW-07	3/6/1990	10 *U*	10 *U*	--	10 *U*	10 *U*	10 *U*	10 *U*	5.0 *U*	--	--	5.0 *U*
MW-07	4/12/1990	--	--	--	--	--	--	--	**97,000**	--	--	7.9 *E*
MW-07	5/21/1990	4.8 *U*	--	--	4.8 *U*	1.5 *U*	2.8 *U*	2.5 *U*	1.2 *J*	--	--	5.0 *U*
MW-07	8/27/1990	5.0 *U*	--	--	5.0 *U*	1.6 *U*	2.9 *U*	2.6 *U*	15 *E*	--	--	5.0 *U*
MW-07	11/13/1990	--	--	--	--	1.6 *U*	2.9 *U*	--	34	--	--	5.0 *U*

Table 7. (cont.)

Well ID	Date	2-Methyl phenol (µg/L)	3-Methyl phenol (µg/L)	3- and 4-Methylphenol (µg/L)	4-Methyl phenol (µg/L)	Naphthalene (µg/L)	N-Nitroso-piperidine (µg/L)	Phenol (µg/L)	Toluene (µg/L)	m,p-Xylenes (µg/L)	o-Xylene (µg/L)	Total Xylenes (µg/L)
GW Protection Standard		10	10	10	10	21	10	300	1,000	--	--	530
MW-07	2/15/1991	9.4 *U*	--	--	9.4 *U*	9.4 *U*	9.4 *U*	9.4 *U*	23 *E*	--	--	5.0 *U*
MW-07	5/7/1991	10 *U*	--	--	10 *U*	10 *U*	5.0 *U*	10 *U*	92	--	--	5.0 *U*
MW-07	8/6/1991	10 *U*	--	--	10 *U*	10 *U*	5.0 *U*	10 *U*	169	--	--	25 *U*
MW-07	12/19/1991	9.5 *U*	--	--	9.5 *U*	9.5 *U*	--	9.5 *U*	5.0 *U*	--	--	5.0 *U*
MW-07	2/18/1992	9.5 *U*	--	--	9.5 *U*	9.5 *U*	--	9.5 *U*	32	--	--	5.0 *U*
MW-07	5/7/1992	10 *U*	--	--	10 *U*	10 *U*	--	10 *U*	51	--	--	5.0 *U*
MW-07	8/20/1992	9.9 *U*	--	--	9.9 *U*	9.9 *U*	9.9 *U*	9.9 *U*	170	--	--	5.0 *U*
MW-07	10/29/1992	9.6 *U*	--	--	9.6 *U*	9.6 *U*	9.6 *U*	9.6 *U*	--	--	--	--
MW-07	2/17/1993	9.5 *U*	--	--	9.5 *U*	9.5 *U*	9.5 *U*	9.5 *U*	5.0 *U*	--	--	5.0 *U*
MW-07	5/26/1993	--	--	--	--	NR *U*	NR *U*	NR *U*	168	--	--	NR *J*
MW-07	8/26/1993	3.5	--	4.23	--	0.506 *U*	0.632 *U*	0.934 *U*	55 *F*	--	--	1.65 *U*
MW-07	2/9/1994	0.662 *U*	--	0.456 *U*	--	0.66 *U*	0.793 *U*	0.347 *U*	7.0	--	--	0.63 *U*
MW-07	8/24/1994	0.542 *U*	--	7.22 *F*	--	0.781 *U*	0.972 *U*	0.667 *U*	0.805 *J*	--	--	2.54 *U*
MW-07	2/21/1995	0.55 *U*	--	0.822 *U*	--	0.792 *U*	0.986 *U*	0.677 *U*	119	--	--	110 *U*
MW-07	8/15/1995	0.481 *U*	--	0.534 *U*	--	1.5 *U*	0.547 *U*	0.415 *U*	1.45	0.509 *U*	0.402 *U*	--
MW-07	2/13/1996	0.762 *U*	--	0.432 *U*	--	1.51 *U*	0.255 *U*	0.366 *U*	0.245 *U*	0.487 *U*	0.388 *U*	--
MW-07	8/28/1996	0.636 *UJ*	--	0.485 *UJ*	--	0.502 *UJ*	0.476 *UJ*	--	0.0492 *U*	0.0688 *U*	0.049 *U*	--
MW-07	2/19/1997	0.645 *U*	--	0.524 *U*	--	2.84 *U*	0.907 *U*	0.638 *U*	0.0492 *U*	0.0688 *U*	0.049 *U*	--
MW-07	8/7/1997	0.349 *U*	--	0.449 *U*	--	0.405 *U*	0.451 *U*	1.51 *U*	--	0.19 *U*	0.097 *U*	--
MW-09	5/31/1989	**560**	--	--	**100**	13 *E*	9.7 *U*	9.7 *U*	**110,000**	--	--	110
MW-09	9/14/1989	--	--	--	--	10 *U*	50 *U*	10 *U*	**120,000**	--	--	630 *U*
MW-09	12/4/1989	**382** *E*	10 *U*	--	**99.5**	11.2 *E*	10 *U*	10 *U*	**10,700** *E*	--	--	101
MW-09	3/6/1990	**310**	10 *U*	--	**93**	10 *U*	10 *U*	10 *U*	5.0 *U*	--	--	5.0 *U*
MW-09	4/12/1990	--	--	--	--	--	--	--	740	--	--	34 *U*
MW-09	5/21/1990	**200**	--	--	**88**	7.1 *E*	5.3 *U*	4.9 *U*	**31,000**	--	--	1,000 *U*
MW-09	8/27/1990	**310**	--	--	**84**	3.9 *J*	8.7 *U*	7.8 *U*	**79,000**	--	--	2,600 *U*
MW-09	11/13/1990	--	--	--	--	2.3 *E*	2.9 *U*	--	**30,000**	--	--	2,500 *U*
MW-09	2/15/1991	**760**	--	--	**130**	3.4 *J*	9.4 *U*	3.3 *J*	**100,000**	--	--	1,200 *U*
MW-09	5/7/1991	**178**	--	--	**77**	10 *U*	5 *U*	10 *U*	**21,717**	--	--	5,000 *U*
MW-09	8/6/1991	**426**	--	--	**85.5**	10 *U*	5 *U*	10 *J*	**81,200**	--	--	5,000 *U*
MW-09	12/19/1991	190 *U*	--	--	190 *U*	190 *U*	--	190 *U*	**13,000**	--	--	250 *U*
MW-09	2/17/1992	**670** *E*	--	--	190 *U*	190 *U*	--	190 *U*	**200,000** *D*	--	--	2,500 *U*
MW-09	5/6/1992	**210**	--	--	**86**	9.5 *U*	--	9.5 *U*	**56,000**	--	--	1,000 *U*
MW-09	8/20/1992	**310**	--	--	**120**	10 *U*	10 *U*	10 *U*	**62,000**	--	--	2,000 *U*
MW-09	10/28/1992	**96**	--	--	**59**	9.5 *U*	9.5 *U*	9.5 *U*	**23,000**	--	--	47
MW-09	2/17/1993	**99**	--	--	**60**	9.7 *U*	9.7 *U*	9.7 *U*	**7,900**	--	--	250 *U*
MW-09	5/26/1993	**73.4**	--	--	**38** *F*	--	NR *U*	--	**8,360**	--	--	NR *U*

Table 7. (cont.)

Well ID	Date	2-Methyl phenol (µg/L)	3-Methyl phenol (µg/L)	3- and 4-Methylphenol (µg/L)	4-Methyl phenol (µg/L)	Naphthalene (µg/L)	N-Nitroso-piperidine (µg/L)	Phenol (µg/L)	Toluene (µg/L)	m,p-Xylenes (µg/L)	o-Xylene (µg/L)	Total Xylenes (µg/L)
GW Protection Standard		10	10	10	10	21	10	300	1,000	--	--	530
MW-09	8/26/1993	**82.9**	--	**45** *F*	--	1.14	0.597 *U*	0.883 *U*	**16,700**	--	--	39.5
MW-09	2/9/1994	**114**	--	**93.2** *F*	--	1.42	0.818 *U*	1.54	**14,500**	--	--	49
MW-09	8/24/1994	**43.7**	--	**25.9** *F*	--	0.91	0.981 *U*	0.673 *U*	**1,440**	--	--	26.6
MW-09	2/21/1995	**81.8**	--	**64** *F*	--	1.09	0.976 *U*	0.67 *U*	**14,700**	--	--	110 *U*
MW-09	8/15/1995	**41.1**	--	**44.4** *F*	--	1.5 *J*	0.547 *U*	2.52	**3,180**	23.1	1.2	--
MW-09	2/13/1996	**33.9**	--	**18.7** *FJ*	--	1.51 *J*	0.255 *U*	0.366 *U*	**2,860**	21.0	1.71	--
MW-09	8/28/1996	**51.8** *J*	--	**40.5** *J*	--	0.859 *J*	0.476 *UJ*	--	**3,090** *J*	22.4 *J*	0.98 *UJ*	--
MW-09	2/19/1997	**65.8**	--	**37.5** *FJ*	--	2.84 *J*	0.907 *U*	0.638 *U*	**3,280**	68.8 *U*	49 *U*	--
MW-09	8/7/1997	**21**	--	**33.8** *J*	--	1.05	0.451 *U*	3.8	**1,660**	21.3	0.884	--
MW-09	4/7/1998	**26.1**	--	**15.9** *J*	--	1.11	0.185 *U*	2.5	**2,090**	--	--	36.12
MW-09	10/6/1998	**29.9**	--	**68.4** *J*	--	1.23	0.185 *U*	3.38	**1,960** *J*	--	--	15.9
MW-09	4/29/1999	**22.7**	--	**15.6**	--	0.363 *U*	0.292 *U*	2.69	**1,320**	17.7	4.04 *U*	--
MW-09	10/27/1999	9	--	10 *U*	--	5 *U*	5 *U*	5 *U*	120	--	--	39
MW-09	4/12/2000	5 *U*	--	10 *U*	--	5 *U*	5 *U*	5 *U*	20	--	--	14
MW-09	10/31/2000	5 *UR*	--	10 *UR*	--	5 *U*	5 *U*	5 *UR*	180	23	1 *U*	--
MW-09	4/25/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	44	8.8	0.27	9.1
MW-09	7/19/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	18	7.6	0.21 *J*	7.8
MW-09 (dup)	7/19/2001	5.0 *UJ*	--	10 *UJ*	--	5.0 *UJ*	5.0 *UJ*	5.0 *UJ*	17	7.1	0.20 *J*	7.3
MW-09	10/2/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	3.6 *U*	27	0.25 *J*	28
MW-09	4/30/2002	4.8 *U*	--	9.7 *U*	--	4.8 *U*	4.8 *U*	4.8 *U*	0.66 *J*	7.8	1 *U*	7.8
MW-09	7/16/2002	--	--	--	--	--	--	--	1.2	6.1 *J*	1.0 *U*	--
MW-09	10/23/2002	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	0.55 *J*	1.8 *J*	1.0 *U*	--
MW-09	2/4/2003	5.2 *U*	--	--	5.2 *U*	5.2 *U*	5.2 *U*	5.2 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-09	4/16/2003	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-09	7/8/2003	5.3 *UJ*	--	--	5.3 *UJ*	5.3 *UJ*	5.3 *UJ*	5.3 *UJ*	1.0 *U*	2.0	1.0 *U*	--
MW-09	10/8/2003	5.4 *U*	--	--	5.4 *U*	5.4 *U*	5.4 *U*	5.4 *U*	1.0 *U*	16	1.0 *U*	--
MW-09	4/6/2004	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	1.0 *U*	5.1	1.0 *U*	--
MW-09	10/12/2004	5.2 *U*	--	--	5.2 *U*	5.2 *U*	5.2 *U*	5.2 *U*	1.8	8.0	1.0 *U*	--
MW-10	3/15/1989	--	--	--	--	10 *U*	--	10 *U*	5 *U*	--	--	--
MW-10	8/29/1990	5.0 *U*	--	5.0 *U*	--	1.6 *U*	2.9 *U*	2.5	9.5	--	--	5.0 *U*
MW-10	8/6/1991	--	--	--	--	--	--	--	5 *U*	--	--	5 *U*
MW-10	8/19/1992	9.5 *U*	--	9.5 *U*	--	9.5 *U*	9.5 *U*	9.5 *U*	5.0 *U*	--	--	5.0 *U*
MW-10	8/26/1993	0.352 *U*	--	0.522 *U*	--	0.543 *U*	0.678 *U*	1.00 *U*	0.706 *U*	--	--	1.65 *U*
MW-10	8/23/1994	0.548 *U*	--	0.818 *U*	--	0.789 *U*	0.981 *U*	0.673 *U*	0.805 *U*	--	--	2.54 *U*
MW-10	8/15/1995	0.476 *U*	--	0.529 *U*	--	1.49 *U*	0.542 *U*	0.411 *U*	0.409 *U*	0.509 *U*	0.402 *U*	--
MW-10	8/27/1996	0.657 *U*	--	0.534 *U*	--	2.90 *U*	0.924 *U*	0.650 *U*	0.410	0.0688 *U*	0.0490 *U*	--
MW-10	8/6/1997	0.342 *U*	--	0.440 *U*	--	0.397 *U*	0.443 *U*	1.49 *U*	0.276	0.190 *U*	0.0970 *U*	--
MW-10	10/6/1998	0.200 *UJ*	--	0.213 *UJ*	--	0.375 *UJ*	0.179 *UJ*	0.226 *UJ*	0.394 *U*	--	--	0.115 *U*

Table 7. (cont.)

Well ID	Date	2-Methyl phenol (µg/L)	3-Methyl phenol (µg/L)	3- and 4-Methylphenol (µg/L)	4-Methyl phenol (µg/L)	Naphthalene (µg/L)	N-Nitroso-piperidine (µg/L)	Phenol (µg/L)	Toluene (µg/L)	m,p-Xylenes (µg/L)	o-Xylene (µg/L)	Total Xylenes (µg/L)
GW Protection Standard		10	10	10	10	21	10	300	1,000	--	--	530
MW-10	10/27/1999	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	--	--	2.0 *U*
MW-10	10/31/2000	5 *U*	--	10 *U*	--	5 *U*	5 *U*	5 *U*	1 *U*	2 *U*	1 *U*	--
MW-10	10/3/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	3.0 *U*
MW-10	10/23/2002	5.0 *U*	--	--	5.0 *U*	5.0 *U*	5.0 *U*	5.0 *U*	0.37 *J*	2.0 *UJ*	1.0 *U*	--
MW-10	10/8/2003	5.3 *U*	--	--	5.3 *U*	5.3 *U*	5.3 *U*	5.3 *U*	1.5	2.0 *U*	1.0 *U*	--
MW-10	10/12/2004	5.2 *U*	--	--	5.2 *U*	5.2 *U*	5.2 *U*	5.2 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-15	8/5/1991	10.1 *U*	--	--	10.1 *U*	10.1 *U*	5.05 *U*	10.1 *U*	70.5	--	--	5.0 *U*
MW-15	12/19/1991	--	--	--	--	--	--	--	5.0 *U*	--	--	5.0 *U*
MW-15	2/16/1993	9.5 *U*	--	--	9.5 *U*	9.5 *U*	9.5 *U*	9.5 *U*	5.0 *U*	--	--	5.0 *U*
MW-16	12/19/1991	--	--	--	--	--	--	--	5.0 *U*	--	--	5.0 *U*
MW-16	2/16/1993	9.5 *U*	--	--	9.5 *U*	9.5 *U*	9.5 *U*	9.5 *U*	5.0 *U*	--	--	5.0 *U*
MW-17	6/30/1989	--	--	--	--	--	--	--	5.0 *U*	--	--	5.0 *U*
MW-18	5/26/1993	--	--	--	--	--	--	--	NR *J*	--	--	NR *J*
MW-18	2/8/1994	--	--	--	--	--	--	--	0.245 *U*	--	--	0.63 *U*
MW-20	6/30/1989	--	--	--	--	--	--	--	5.0 *U*	--	--	5.0 *U*
MW-21	6/30/1989	--	--	--	--	--	--	--	5.0 *U*	--	--	5.0 *U*
MW-21	5/26/1993	--	--	--	--	--	--	--	NR *J*	--	--	--
MW-21	4/7/1998	0.2 *U*	--	0.213 *U*	--	0.375 *U*	0.179 *U*	0.226 *U*	0.0522 *U*	--	--	0.115 *U*
MW-21	10/6/1998	0.204 *UJ*	--	0.217 *UJ*	--	0.382 *UJ*	0.183 *UJ*	0.23 *UJ*	0.394 *U*	--	--	0.115 *U*
MW-21	4/29/1999	0.375 *U*	--	0.349 *U*	--	0.363 *U*	0.292 *U*	0.602 *U*	0.0766 *U*	0.164 *U*	0.0807 *U*	--
MW-21	10/27/1999	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	--	--	2.0 *U*
MW-21	4/12/2000	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	--	--	2.0 *U*
MW-21	10/31/2000	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-21	4/25/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.4	2.0 *U*	1.0 *U*	3.0 *U*
MW-21	10/2/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	3.0 *U*
MW-21	4/30/2002	4.8 *U*	--	9.6 *U*	--	4.8 *U*	4.8 *U*	4.8 *U*	1 *U*	2 *U*	1 *U*	3 *U*
MW-21	10/23/2002	5.0 *U*	--	--	5.0 *U*	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *UJ*	1.0 *U*	--
MW-21	4/15/2003	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-21	10/8/2003	5.4 *U*	--	--	5.4 *U*	5.4 *U*	5.4 *U*	5.4 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-21	4/7/2004	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-21	10/13/2004	5.5 *U*	--	--	5.5 *U*	5.5 *U*	5.5 *U*	5.5 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-22	6/30/1989	--	--	--	--	--	--	--	5 *U*	--	--	5 *U*
MW-22	2/16/1993	9.5 *U*	--	--	9.5 *U*	9.5 *U*	9.5 *U*	9.5 *U*	**4,000**	--	--	100 *U*
MW-22	5/26/1993	--	--	--	--	--	--	--	5.69	--	--	31.8
MW-22	10/13/2004	--	--	--	--	--	--	--	1.0 *U*	2.0 *U*	1.0 *U*	--

Table 7. (cont.)

Well ID	Date	2-Methyl phenol (µg/L)	3-Methyl phenol (µg/L)	3- and 4-Methylphenol (µg/L)	4-Methyl phenol (µg/L)	Naphthalene (µg/L)	N-Nitroso-piperidine (µg/L)	Phenol (µg/L)	Toluene (µg/L)	m,p-Xylenes (µg/L)	o-Xylene (µg/L)	Total Xylenes (µg/L)
GW Protection Standard		10	10	10	10	21	10	300	1,000	--	--	530
MW-23	6/30/1989	--	--	--	--	--	--	--	370	--	--	5 *U*
MW-23	8/27/1990	5.0 *U*	--	--	5.0 *U*	1.6 *U*	2.9 *U*	2.6 *U*	10 *E*	--	--	5 *U*
MW-23	8/5/1991	10 *U*	--	--	10 *U*	10 *U*	5.0 *U*	10 *U*	428	--	--	5 *U*
MW-23	8/19/1992	9.7 *U*	--	--	9.7 *U*	9.7 *U*	9.7 *U*	9.7 *U*	5 *U*	--	--	5 *U*
MW-23	8/25/1993	0.344 *U*	--	0.51 *U*	--	0.531 *U*	0.663 *U*	0.981 *U*	0.879 *U*	--	--	1.7
MW-23	8/23/1994	0.537 *U*	--	0.803 *U*	--	0.774 *U*	0.963 *U*	0.661 *U*	0.805 *U*	--	--	2.54 *U*
MW-23	8/14/1995	0.476 *U*	--	0.529 *U*	--	1.49 *U*	0.542 *U*	0.411 *U*	0.409 *U*	0.509 *U*	0.402 *U*	--
MW-23	8/27/1996	0.636 *U*	--	0.485 *U*	--	0.502 *U*	0.476 *U*	--	0.0492 *U*	0.0688 *U*	0.049 *U*	--
MW-23	8/6/1997	0.349 *U*	--	0.449 *U*	--	0.405 *U*	0.451 *U*	1.51 *U*	0.0581 *U*	0.19 *U*	0.097 *U*	--
MW-23	4/7/1998	0.202 *U*	--	0.215 *U*	--	0.378 *U*	0.181 *U*	0.228 *U*	0.0522 *U*	--	--	0.115 *U*
MW-23	10/6/1998	0.2 *UJ*	--	0.213 *UJ*	--	0.375 *UJ*	0.179 *UJ*	0.226 *UJ*	0.493 *U*	--	--	0.115 *U*
MW-23	4/29/1999	0.393 *U*	--	0.366 *U*	--	0.380 *U*	0.306 *U*	0.631 *U*	0.0766 *U*	0.164 *U*	0.0807 *U*	--
MW-23	10/27/1999	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	--	--	2.0 *U*
MW-23	4/11/2000	5.0 *UJ*	--	10 *UJ*	--	5.0 *U*	5.0 *U*	5.0 *UJ*	1.0 *U*	--	--	2.0 *U*
MW-23 (dup)	4/11/2000	5.0 *UJ*	--	10 *UJ*	--	5.0 *U*	5.0 *U*	5.0 *UJ*	1.0 *U*	--	--	2.0 *U*
MW-23	10/31/2000	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-23	4/24/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	8.0	1.1 *J*	1.0 *U*	1.6 *J*
MW-23	10/2/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.3 *U*	3.2	0.5 *J*	3.8
MW-23	4/30/2002	5 *U*	--	9.9 *U*	--	5 *U*	5 *U*	5 *U*	0.65 *J*	22	3.5	26
MW-23	10/23/2002	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	1.5	17 *J*	2.5	--
MW-23	4/16/2003	5.2 *UR*	--	--	5.2 *UR*	5.2 *U*	5.2 *U*	5.2 *UR*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-23	10/8/2003	5.4 *U*	--	--	5.4 *U*	5.4 *U*	5.4 *U*	5.4 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-23	4/7/2004	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-23	10/13/2004	5.6 *U*	--	--	5.6 *U*	5.6 *U*	5.6 *U*	5.6 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-24	6/30/1989	--	--	--	--	--	--	--	15 *E*	--	--	5.0 *U*
MW-24	8/27/1990	5.0 *U*	--	--	5.0 *U*	1.6 *U*	2.9 *U*	1.1 *J*	64	--	--	5.0 *U*
MW-24	8/6/1991	11.1 *U*	--	--	11.1 *U*	11.1 *U*	5.55 *U*	11.1 *U*	--	--	--	--
MW-24	10/7/1991	--	--	--	--	--	--	--	5.0 *U*	--	--	5.0 *U*
MW-24	8/19/1992	9.5 *U*	--	--	9.5 *U*	9.5 *U*	9.5 *U*	9.5 *U*	5.0 *U*	--	--	5.0 *U*
MW-24	2/16/1993	9.5 *U*	--	--	9.5 *U*	9.5 *U*	9.5 *U*	9.5 *U*	5.0 *U*	--	--	5.0 *U*
MW-24	8/25/1993	0.316 *U*	--	0.468 *U*	--	0.488 *U*	0.609 *U*	0.901 *U*	8.79 *UF*	--	--	14.7 *UF*
MW-24	8/23/1994	0.567 *U*	--	0.846 *U*	--	0.816 *U*	1.01 *U*	0.697 *U*	0.805 *U*	--	--	2.54 *U*
MW-24	8/14/1995	0.574 *U*	--	0.637 *U*	--	1.8 *U*	0.652 *U*	0.495 *U*	0.409 *U*	0.509 *U*	0.402 *U*	--
MW-24	8/28/1996	0.658 *U*	--	0.501 *U*	--	0.519 *U*	0.493 *U*	--	0.108	0.0688 *U*	0.049 *U*	--
MW-24	8/6/1997	0.349 *U*	--	0.449 *U*	--	0.405 *U*	0.451 *U*	1.51 *U*	0.0956	0.19 *U*	0.097 *U*	--
MW-24	10/12/2004	--	--	--	--	--	--	--	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-25	6/30/1989	--	--	--	--	--	--	--	5 *U*	--	--	5 *U*
MW-25	4/7/1998	0.202 *U*	--	0.215 *U*	--	0.378 *U*	0.181 *U*	0.228 *U*	0.0522 *U*	--	--	0.115 *U*
MW-25	10/6/1998	0.206 *U*	--	0.219 *U*	--	0.386 *U*	0.185 *U*	0.233 *U*	1.37 *U*	--	--	0.115 *U*

Table 7. (cont.)

Well ID	Date	2-Methyl phenol (µg/L)	3-Methyl phenol (µg/L)	3- and 4-Methylphenol (µg/L)	4-Methyl phenol (µg/L)	Naphthalene (µg/L)	N-Nitroso-piperidine (µg/L)	Phenol (µg/L)	Toluene (µg/L)	m,p-Xylenes (µg/L)	o-Xylene (µg/L)	Total Xylenes (µg/L)
GW Protection Standard		10	10	10	10	21	10	300	1,000	--	--	530
MW-25	4/29/1999	0.375 *U*	--	0.349 *U*	--	0.363 *U*	0.292 *U*	0.602 *U*	0.0766 *U*	0.164 *U*	0.0807 *U*	--
MW-25	10/27/1999	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	--	--	2.0 *U*
MW-25 (dup)	10/27/1999	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	--	--	2.0 *U*
MW-25	4/11/2000	5.0 *UJ*	--	10 *UJ*	--	5.0 *U*	5.0 *U*	5.0 *UJ*	1.0 *U*	--	--	2.0 *U*
MW-25	10/31/2000	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-25	4/24/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	3.1	2.0 *U*	1.0 *U*	3.0 *U*
MW-25	10/2/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	3.0 *U*
MW-25	4/30/2002	5.1 *U*	--	10 *U*	--	5.1 *U*	5.1 *U*	5.1 *U*	1 *U*	2 *U*	1 *U*	3 *U*
MW-25	10/22/2002	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	1.0 *U*	2.0 *UJ*	1.0 *U*	--
MW-25	4/16/2003	5.0 *U*	--	--	5.0 *U*	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-25	10/8/2003	5.5 *UJ*	--	--	5.5 *UJ*	5.5 *U*	5.5 *U*	5.5 *UJ*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-25	4/6/2004	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-25	10/12/2004	5.5 *U*	--	--	5.5 *U*	5.5 *U*	5.5 *U*	5.5 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-31	2/15/1991	**29** *E*	--	--	**16** *E*	9.4 *U*	9.4 *U*	9.4 *U*	**1,400**	--	--	3.2 *J*
MW-31	5/7/1991	**29**	--	--	**12**	10 *U*	5.0 *U*	10 *U*	340	--	--	50 *U*
MW-31	8/6/1991	10.1 *U*	--	--	10.1 *U*	10.1 *U*	5.05 *U*	10.1 *U*	500 *J*	--	--	500 *U*
MW-31	12/19/1991	9.5 *U*	--	--	9.5 *U*	9.5 *U*	--	9.5 *U*	23 *E*	--	--	5.0 *U*
MW-31	2/17/1992	9.5 *U*	--	--	9.5 *U*	9.5 *U*	--	9.5 *U*	5.0 *U*	--	--	5.0 *U*
MW-31	5/6/1992	9.5 *U*	--	--	9.5 *U*	9.5 *U*	--	9.5 *U*	200	--	--	5.0 *U*
MW-31	8/19/1992	9.7 *U*	--	--	9.7 *U*	9.7 *U*	9.7 *U*	9.7 *U*	5 *U*	--	--	5.0 *U*
MW-31	10/28/1992	9.5 *U*	--	--	9.5 *U*	9.5 *U*	9.5 *U*	9.5 *U*	5.8 *E*	--	--	5.0 *U*
MW-31	4/7/1998	0.202 *U*	--	0.215 *U*	--	0.378 *U*	0.181 *U*	0.228 *U*	0.0522 *UJ*	--	--	0.115 *UJ*
MW-31	10/6/1998	0.206 *U*	--	0.219 *U*	--	0.386 *U*	0.185 *U*	0.233 *U*	1.42 *UJ*	--	--	0.115 *UJ*
MW-31	4/29/1999	0.375 *U*	--	0.349 *U*	--	0.363 *U*	0.292 *U*	0.602 *U*	0.0766 *U*	0.164 *U*	0.0807 *U*	--
MW-31	10/27/1999	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0	--	--	2.0 *U*
MW-31	4/11/2000	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	--	--	2.0 *U*
MW-31	10/31/2000	5.0 *UR*	--	10 *UR*	--	5.0 *U*	5.0 *U*	5.0 *UR*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-31	4/25/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	3.0 *U*
MW-31	7/19/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	3.0 *U*
MW-31	10/2/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	3.0 *U*
MW-31	4/30/2002	5 *U*	--	10 *U*	--	5 *U*	5 *U*	5 *U*	1 *U*	2 *U*	1 *U*	3 *U*
MW-31	7/16/2002	--	--	--	--	--	--	--	1.4	2.0 *U*	1.0 *U*	--
MW-31	10/23/2002	5.2 *U*	--	--	5.2 *U*	5.2 *U*	5.2 *U*	5.2 *U*	0.72 *J*	2.0 *UJ*	1.0 *U*	--
MW-31	2/4/2003	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-31	4/15/2003	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-31	7/8/2003	5.0 *U*	--	--	5.0 *U*	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-31	10/7/2003	5.5 *U*	--	--	5.5 *U*	5.5 *U*	5.5 *U*	5.5 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-31	4/6/2004	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-31	10/12/2004	5.4 *U*	--	--	5.4 *U*	5.4 *U*	5.4 *U*	5.4 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--

Table 7. (cont.)

Well ID	Date	2-Methyl phenol (µg/L)	3-Methyl phenol (µg/L)	3- and 4-Methylphenol (µg/L)	4-Methyl phenol (µg/L)	Naphthalene (µg/L)	N-Nitroso-piperidine (µg/L)	Phenol (µg/L)	Toluene (µg/L)	m,p-Xylenes (µg/L)	o-Xylene (µg/L)	Total Xylenes (µg/L)
GW Protection Standard		10	10	10	10	21	10	300	1,000	--	--	530
MW-32	2/16/1993	9.5 *U*	--	9.5 *U*	--	9.5 *U*	9.5 *U*	9.5 *U*	5.0 *U*	--	--	5.0 *U*
MW-32	10/12/2004	--	--	--	--	--	--	--	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-33	2/15/1993	9.5 *U*	--	--	9.5 *U*	9.5 *U*	9.5 *U*	9.5 *U*	5 *U*	--	--	5 *U*
MW-34	10/31/2000	5 *U*	--	10 *U*	--	5 *U*	5 *U*	5 *U*	2	1 *J*	0.6 *J*	--
MW-34	4/25/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	3.8	0.60	4.3
MW-34	7/19/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.1	1.7 *J*	0.57 *J*	2.2 *J*
MW-34	10/2/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	3.0 *U*
MW-34	4/30/2002	5.2 *U*	--	10 *U*	--	5.2 *U*	5.2 *U*	5.2 *U*	0.64 *J*	2 *U*	0.36 *J*	3 *U*
MW-34 (dup)	4/30/2002	5.3 *U*	--	10 *U*	--	5.3 *U*	5.3 *U*	5.3 *U*	0.62 *J*	2 *U*	0.38 *J*	3 *U*
MW-34	7/16/2002	--	--	--	--	--	--	--	1.2	2.0 *U*	1.0 *U*	--
MW-34 (dup)	7/16/2002	--	--	--	--	--	--	--	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-34	10/23/2002	5.0 *U*	--	--	5.0 *U*	5.0 *U*	5.0 *U*	5.0 *U*	0.37 *J*	2.0 *UJ*	1.0 *U*	--
MW-34	2/4/2003	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-34 (dup)	2/4/2003	5.0 *U*	--	--	5.0 *U*	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-34	4/15/2003	5.3 *U*	--	--	5.3 *U*	5.3 *U*	5.3 *U*	5.3 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-34 (dup)	4/15/2003	5.2 *U*	--	--	5.2 *U*	5.2 *U*	5.2 *U*	5.2 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-34	7/8/2003	5.2 *UJ*	--	--	5.2 *UJ*	5.2 *UJ*	5.2 *UJ*	5.2 *UJ*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-34 (dup)	7/8/2003	5.2 *UJ*	--	--	5.2 *UJ*	5.2 *UJ*	5.2 *UJ*	5.2 *UJ*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-34	10/7/2003	5.5 *U*	--	--	5.5 *U*	5.5 *U*	5.5 *U*	5.5 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-34 (dup)	10/7/2003	5.5 *U*	--	--	5.5 *U*	5.5 *U*	5.5 *U*	5.5 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-34	4/6/2004	5.0 *U*	--	--	5.0 *U*	5.0 *U*	5.0 *U*	5.0 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-34	10/13/2004	5.4 *U*	--	--	5.4 *U*	5.4 *U*	5.4 *U*	5.4 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
MW-34 (dup)	10/13/2004	5.4 *U*	--	--	5.4 *U*	5.4 *U*	5.4 *U*	5.4 *U*	1.0 *U*	2.0 *U*	1.0 *U*	--
POC-01	4/7/1998	**318**	--	**189** *J*	--	8.7 *J*	0.183 *U*	6.32 *J*	**125,000**	115 *U*	41.4 *U*	--
POC-01	10/6/1998	**190**	--	**92.5** *J*	--	4.74	0.185 *U*	0.922	**52,800**	--	--	117.2 *J*
POC-01	4/29/1999	**28.9**	--	**13.6** *J*	--	1.54	0.292 *U*	0.602 *U*	977	29.5	2.73 *J*	--
POC-01	10/26/1999	**220**	--	**58**	--	5.0	5.0 *U*	5.0 *U*	**72,000**	--	--	230
POC-01	4/11/2000	**94**	--	**46**	--	10 *U*	10 *U*	10 *U*	**55,000**	--	--	130
POC-01	10/31/2000	**14**	--	**14**	--	5.0 *U*	5.0 *U*	5.0 *U*	550	28	1.0	--
POC-01 (dup)	10/31/2000	**10**	--	**10**	--	5.0 *U*	5.0 *U*	5.0 *U*	480	25	1.0	--
POC-01	4/24/2001	**43**	--	**12**	--	10 *U*	10 *U*	10 *U*	**40,000**	100 *J*	17 *J*	120 *J*
POC-01 (dup)	4/24/2001	**49**	--	**13**	--	5.0 *U*	5.0 *U*	5.0 *U*	**30,000**	72 *J*	11 *J*	83 *J*
POC-01	10/3/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	**3,200**	85	7.8	93
POC-01 (dup)	10/3/2001	5.0 *U*	--	10 *U*	--	5.0 *U*	5.0 *U*	5.0 *U*	**5,300**	99	10	110
POC-01	4/29/2002	5 *U*	--	9.9 *U*	--	5 *U*	5 *U*	5 *U*	6.4	4.1	1.4	5.6
POC-01	10/23/2002	5.2 *U*	--	--	5.2 *U*	5.2 *U*	5.2 *U*	5.2 *U*	610 *J*	17 *J*	2.7 *J*	--
POC-01 (dup)	10/23/2002	5.1 *U*	--	--	5.1 *U*	5.1 *U*	5.1 *U*	5.1 *U*	**2,300** *J*	29 *J*	4.1 *J*	--
POC-01	4/16/2003	**10**	--	--	6.0	5.1 *U*	5.1 *U*	5.1 *U*	**21,000**	84	14	--

Table 7. (cont.)

Well ID	Date	2-Methyl phenol (µg/L)	3-Methyl phenol (µg/L)	3- and 4-Methylphenol (µg/L)	4-Methyl phenol (µg/L)	Naphthalene (µg/L)	N-Nitroso-piperidine (µg/L)	Phenol (µg/L)	Toluene (µg/L)	m,p-Xylenes (µg/L)	o-Xylene (µg/L)	Total Xylenes (µg/L)
GW Protection Standard		10	10	10	10	21	10	300	1,000	--	--	530
POC-01	10/8/2003	5.5 *U*	--	--	5.5 *U*	5.5 *U*	5.5 *U*	5.5 *U*	300	4.4	1.0 *U*	--
POC-01	4/7/2004	**17**	--	--	**14**	5.1 *U*	5.1 *U*	5.1 *U*	**63,000**	220	40	--
POC-01 (dup)	4/7/2004	9.1	--	--	9.9	5.0 *U*	5.0 *U*	5.0 *U*	**45,000**	210	39	--
POC-01	10/13/2004	5.4 *U*	--	--	5.4 *U*	5.4 *U*	5.4 *U*	5.4 *U*	**1,900**	28	2.7	--
GB-01	10/14/2004	--	--	--	--	--	--	--	**230,000**	230	46	--
GB-02	10/14/2004	--	--	--	--	--	--	--	3.1	100	2.5	--
GB-03	10/14/2004	--	--	--	--	--	--	--	1.0 *U*	2.0 *U*	1.0 *U*	--
GB-04	10/14/2004	--	--	--	--	--	--	--	15	38	2.9	--

Note: Due to mislabeling of the well information plate at MW-22, it is possible that some data reported for MW-23 was collected from MW-22. This disparity was noted and corrected in April 2003.

Bold values equal or exceed the groundwater protection standard.

-- – not applicable or not available

* – value unclear on original report

D – dilution required for this analyte

E – estimated (estimated result less than 5 times detection limit)

F – not defined

J – for dates prior to 1998, detected at less than detection limit
for dates 1998 or after, estimated

NR – value not reported

R – unusable data or rejected data

U – undetected

Table 8. Groundwater velocities[a] and estimated travel times[b] along specified flowlines[c], former International Paper facility, Wilmington, North Carolina

Flowline Segment[c]	April 29, 2002		April 15, 2003		April 6, 2004		October 11, 2004	
	Groundwater Velocity (ft/day)	Estimated Travel Time (yrs)	Groundwater Velocity (ft/day)	Estimated Travel Time (yrs)	Groundwater Velocity (ft/day)	Estimated Travel Time (yrs)	Groundwater Velocity (ft/day)	Estimated Travel Time (yrs)
A-A'								
MW-12/POC-01 (A-A')	0.3	7.4	0.4	5.8	0.4	5.3	0.4	5.0
B-B'								
MW-06/MW-09	0.8	0.3	1.1	0.2	1.1	0.2	1.0	0.2
MW-09/MW-34	0.7	0.3	1.2	0.1	0.8	0.2	0.9	0.2
MW-34/MW-24	0.9	0.3	1.5	0.3	0.6	0.7	0.7	0.7
MW-06/MW-24 (B-B')	0.8	0.9	1.3	0.6	0.8	1.1	0.8	1.1
C-C'								
POC-01/MW-09(GB-01)	0.8	0.4	1.1	0.3	1.1	0.3	1.1	0.3
MW-09(GB-01)/MW-34(GB-02)	0.7	0.3	1.2	0.1	0.8	0.2	0.8	0.2
MW-34(GB-02)/MW-23	0.6	0.5	0.6	0.5	0.5	0.6	0.6	0.4
POC-01/MW-23 (C-C')	0.7	1.2	0.9	0.9	0.8	1.1	0.9	0.9

[a] Groundwater velocity (v) = (K*dh/dl)/n, where hydraulic conductivity (K) = 10 ft/day, effective porosity (n) = 0.17, and hydraulic gradient (dh/dl) = difference in groundwater elevation/distance along flowline.

[b] Travel time = (dl/v)*(1 yr/365 days) where dl is the distance along flowline (ft) and v is the groundwater velocity (ft/day).

[c] Specified flow lines for the October 2004 calculations (A-A', B-B', C-C') are shown on Figure 4. Calculations prior October 2004 were made along flow paths beginning at the upgradient well and ending near the downgradient well.