

**REMEDIATION UPDATE REPORT
FOR
FEBRUARY 2008 – AUGUST 2008**

**INVISTA S.à.r.l.
NORTH TERMINAL – PARAXYLENE FACILITY
3325 RIVER ROAD
WILMINGTON, NORTH CAROLINA**

DECEMBER 5, 2008

PREPARED ON BEHALF OF:

FLINT HILLS RESOURCES, LP

CATLIN PROJECT NO. 201-125



PREPARED BY:

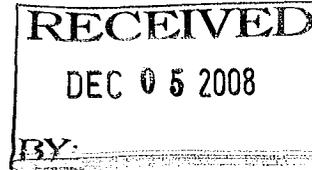
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December 5, 2008

North Carolina Department of Environment
and Natural Resources
Division of Waste Management
Attn: Ms. Genevieve M. Henderson, P.G.
127 Cardinal Drive Extension
Wilmington, North Carolina 28405-3845

Re: **Remediation Update Report for February 2008 to August 2008**
INVISTA S.à r.l. - North Terminal – Paraxylene Facility
Wilmington, North Carolina
CATLIN Project No. 201-125

Dear Ms. Henderson:

On behalf of Flint Hills Resources, LP, we hereby submit the attached Remediation Update Report concerning the above-referenced site and time period. The North Terminal is currently owned by INVISTA S.à r.l., but was previously owned by Flint Hills Resources, LP (FHR). This report is being sent to keep you informed of the investigations and changes being implemented at the site. We understand that you are not able to provide us with official approval because this site is not officially in a program within your branch. We further understand that the Inactive Hazardous Sites Branch is currently negotiating with FHR for this site to be a part of the Registered Environmental Consultant (REC) Program.

Given the unofficial status of the applicable program for this site, we appreciate your willingness to review this report and to alert us if you disagree with any part of it. Upon your review of this report, please contact Mrs. Elizabeth Page at (817) 685-3424 or Mr. Jeffery K. Becken, P.E. at CATLIN Engineers and Scientists at (910) 452-5861 if you should have any questions concerning this project.

Sincerely,


Jeffery K. Becken, P.E.
Project Manager


Stephan A. Tyler, P.G.
Project Geologist

Enclosure

- CC: Mrs. Elizabeth Page, P.G. - Reiss Remediation, LLC (w/ encl.)
- Ms. Nicole Cory – Flint Hills Resources, LP (w/ encl.)
- Ms. Donna Lazzari – INVISTA S.à r.l. (w/ encl.)
- Mr. Todd Walton – North Carolina State Ports Authority (w/ encl.)
- Ms. Catherine Warner – Groundwater & Environmental Service of North Carolina, Inc. (w/ encl.)
- Mr. Dan Shine – Sunoco (w/ encl.)

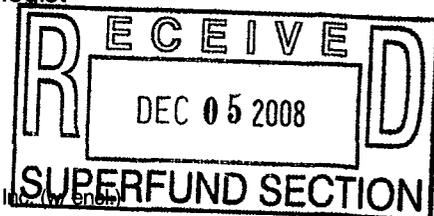


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**REMEDICATION UPDATE REPORT
FOR
FEBRUARY 2008 - AUGUST 2008**

**INVISTA S.à.r.l.
NORTH TERMINAL – PARAXYLENE FACILITY
3325 RIVER ROAD
WILMINGTON, NORTH CAROLINA**

DECEMBER 5, 2008

1.0 INTRODUCTION

1.1 PURPOSE

CATLIN Engineers and Scientists (CATLIN) is submitting this Remediation Update Report on behalf of Flint Hills Resources, LP (FHR) for the INVISTA S.à.r.l. (Invista) North Terminal - Paraxylene (PX) Facility at 3325 River Road, Wilmington, North Carolina (see Figure 1). Flint Hills Resources, LP sold the operations to an affiliate company, Invista, on June 1, 2006. However, FHR retained the obligations regarding remediation of site groundwater areas of concern that originated prior to the operations transfer. In this report, the Invista North Terminal – PX facility project site will be referred to as the PX Facility.

The purpose of this report is to update the status of the subsurface soil and groundwater remediation activities and to present environmental findings for the period of February 2008 through August 2008 at the PX Facility project site.

Current remediation activities at the PX Facility are conducted in accordance with the activities presented within the June 2005 Revised Remedial Action Plan with minor modifications proposed within subsequent Semi-Annual Remediation Update Reports. Titles of applicable remedial action documents have been listed in the table below.

Document	Date	Author	Comments
Corrective Action Plan Addendum (CAPA)	August 9, 2002	FHR	Document updates remediation plans for the subsurface soils and groundwater remediation at two areas of concern (PX Facility and Loading Rack Area)
Statement of General Agreement	October 2002	NCDENR APS	Regulatory agreement with August 2002 plan
Revised Remedial Actions for FHR North Site (Letter only)	March 5, 2004	FHR	Revised to include chemical oxidation
Revised Remedial Action Plan	June 2, 2005	FHR	Provided details for chemical oxidation application
Approval of June 2005 Revised Remedial Action Plan	June 7, 2005	NCDENR APS	Regulatory agreement with revised remedial actions

Semi-Annual Remediation Update Reports	Various	FHR	Minor modifications to the active remedial system layout and monitoring schedule are typically included within these reports with regulatory response accordingly
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NCDENR APS – North Carolina Department of Environment and Natural Resources Aquifer Protection Section

As a result of a memorandum dated March 14, 2007 from Mr. Alan W. Klimek, P.E. of the North Carolina Department of Natural Resources (NCDENR), Division of Water Quality (DWQ), regulatory responsibility for the PX Facility was transferred from the Aquifer Protection Section (APS) to the Inactive Hazardous Sites Branch (IHSB). In response to an IHSB September 13, 2007 correspondence request, FHR and CATLIN submitted a Voluntary Cleanup Checklist (VCC) concerning the above referenced site on October 19, 2007. This VCC was prepared based on our knowledge at that time of the on-site conditions, while assuming that off-site conditions were being addressed by others. The Inactive Hazardous Sites Branch has evaluated the VCC, approved the subject site for the Registered Environmental Consultant (REC) Program and is currently negotiating an Administrative Agreement (AA) with FHR for this site.

1.2 SITE INFORMATION

The North Terminal project site is a bulk chemical storage and transfer facility, which occupies an area of approximately thirty-seven acres. Thirty-three of the thirty-seven acres are located on the east side of River Road and are owned by Invista. The remaining four acres are located west of River Road and are owned by FHR. The North Terminal is subdivided into four areas of environmental concern. These areas of concern are identified as the PX Facility, the Gasoline/#2 Fuel Oil Facility, the Loading Rack Area and the Water Treatment Plant (WTP) Area. The PX Facility site vicinity location is referenced on the attached Figure 1. Figure 2 illustrates the location of each area of environmental concern. However, due to the previously referenced division of responsibilities at NCDENR, this report only covers activities within the PX Facility of the North Terminal.

The PX Facility has seven active aboveground storage tanks (ASTs) and associated pipelines for the storage and transfer of PX. In addition, there is an inactive PX truck loading rack and an active railcar loading rack area. The railcar loading area was active during the reporting period addressed in this report.

2.0 PARAXYLENE FACILITY

2.1 PARAXYLENE FACILITY BACKGROUND

2.1.1 Brief Incident History

Since Phillips Petroleum constructed the North Terminal - Paraxylene Facility in 1954/1955, it has been utilized to handle PX. Since 1954/1955, there have been several product releases at the subject site. Former and ongoing assessment, remediation and monitoring activities for product releases since 1980 have been well documented and are on file at the NCDENR Wilmington Regional Office (WiRO). Off-site areas of concern due to product releases by previous site owners/operators are being addressed by others. This report focuses on the current PX remediation efforts within the PX Facility from February 2008 through August 2008.

2.1.2 Contaminants of Concern

The North Carolina Department of Environment and Natural Resources has agreed that dissolved PX is the primary contaminant of concern at the PX Facility. Paraxylene is one of three Xylene isomers (ortho, meta, and para). Currently, analytical laboratories do not commonly have the technology to accurately distinguish between metaxylenes and PX compounds. Since the source is known to be PX, all soil and groundwater samples are analyzed for meta/para (M/P) Xylenes and the resulting concentration is assumed to be PX.

The goal for groundwater remediation is to reduce dissolved M/P Xylenes concentrations to the 15A NCAC 2L.0202 North Carolina Groundwater Quality Standard (2L GWQS) of 530 micrograms per Liter ($\mu\text{g/L}$) or for PX remediation data (graphical representation) to reach an asymptotic trend. Paraxylene Facility groundwater samples are analyzed by an independent analytical laboratory for M/P Xylenes concentration in $\mu\text{g/L}$ per EPA Method 8260B to monitor the dissolved PX concentrations.

2.2 ADDITIONAL ASSESSMENT ACTIVITIES

Other than the scheduled monitoring activities, no additional assessment activities were conducted at the PX Facility site during the current reporting period.

2.3 PARAXYLENE FACILITY MONITORING PLAN

Monthly

The following activities were completed monthly:

- Operation of the air sparge wells was checked and maintained.

Semi-Annual (February and August)

The following semi-annual activities were completed in addition to the tasks performed on a monthly basis:

- Representative groundwater samples were obtained from selected site monitoring wells (MW-1, MW-2, MW-3, MW-5, MW-8, MW-10, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-28, MW-32, MW-33, MW-34, MW-35, MW-36, MW-37, 101, 102, 105, 106, 107, 108, 113, 117, and 119) for M/P Xylenes and MTBE analysis per EPA Method 8260B. Monitoring wells are selected to provide data concerning PX plume boundary and historical concentration high conditions.
- In order to monitor the effectiveness of the air sparge system, dissolved oxygen concentrations were obtained from groundwater of selected monitoring wells (MW-1, MW-2, MW-3, MW-12, MW-14, MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-32, MW-33, MW-35, MW-36, 101, 102, 105, 106, 107, 108, 113, and 117).
- Submit a semi-annual Remediation Update Report.

2.4 PARAXYLENE FACILITY UPDATE

2.4.1 Soil

A Soil Vapor Extraction (SVE) system to remove remnant PX from subsurface soils west of AST 301 was operated from March 21, 1995 through January 2003. Operation of the SVE system was discontinued due to the minimal M/P Xylene concentrations and reduction of the concentrations in the SVE exhaust combined with an equipment failure. A description of this SVE approach and the remedial progress prior to shut down has been documented in previous Remediation Update Reports.

2.4.2 Groundwater

2.4.2.1 Groundwater Remedial Approach

The remedial approach implemented within the PX Facility during the time period from February 2008 through August 2008 included the use of various air sparge techniques in combination with natural attenuation.

The site air sparge system utilizes two methods (continuous and pulse air sparge) as illustrated on the attached Figure 3. Networks A, B and C were operated as a continuous sparge system during the time period of this report.

The Pulse Air Sparge (PAS) Network, which is in current operation, initially consisted of three pulse sparge wells in the vicinity of monitoring well MW-19. Since August 2007, the PAS Network has been expanded as illustrated on Figure 3 to further aid in decreasing the contaminant level present at the PX Facility. Network Zone 1 consists of seven (7) sparge wells (SP-01 through SP-07) continuing south, parallel to the fence line in the Northwest corner of the property. Network Zone 2 consists of ten (10) pulse air sparge wells (SP-08 through SP-17) and is located from the northern property boundary towards the south, near Network B continuous air sparge wells and down gradient of monitoring well KRW-5. Operation of the entire Pulse Network has been occurring since November 2007.

From February 2008 through August 2008, the PAS system was operational 95% of the time, assuming 5% off time for general maintenance and upgrade activities.

Chemical oxidation activities were conducted from October 2004 to July 2006. These activities consisted of the application of a Fenton's reagent with a water chaser via a series of trenches located throughout the PX Facility. The locations of these trenches were in areas that had experienced M/P Xylene concentrations above 100,000 ppb at that time. The benefits of the chemical oxidation activities have been documented in previous Remediation Update Reports.

2.4.2.2 Groundwater Recovery Data

The remedial approach was modified with NCDENR approval to address the contaminant plume within the PX Facility without pumping groundwater. This was done for several reasons. The use of recovery wells was no longer necessary to address free-phase product because free-phase product has not been observed in a monitoring or recovery well at the PX Facility since December 2004. Further, a new remedial approach was more appropriate in light of modifications to the FHR WTP and limitations to its capacity to handle water from the PX Facility, as well as the changes in property ownership. With NCDENR

approval, the pumps in the six recovery wells illustrated on Figure 3 (KRW-3, KRW-4, KRW-5, KRW-6, KRW-7 and KRW-8) were turned off in February of 2005. The recovery wells were converted to monitoring wells in November 2006.

2.4.2.3 Groundwater Table Data

On August 14, 2008 selected monitoring wells were gauged for depth to water and potential free-phase product. The monitoring wells selected for the measurement of groundwater table elevations were based on the recommendations of the previous Remediation Update Report. Table 1 lists a summary of the water table data and interpolated water table isocontour elevations have been illustrated on Figure 4. The interpolated groundwater migration trend within the PX Facility is predominantly to the west-northwest. This migration trend is consistent with historical site groundwater data.

2.4.2.4 Dissolved Oxygen Data

The goal of an air sparge system is to remediate organic constituents from impacted groundwater by volatilization and biodegradation from indigenous aerobic microbes. Groundwater aerobic conditions are assessed by monitoring the dissolved oxygen (DO) levels within site monitoring wells. Aerobic conditions are generally indicated by groundwater with DO levels greater than one (1) milligram per liter (mg/L).

The latest (August 2008) groundwater DO concentration data has been summarized in Table 2 and illustrated on Figure 5. This data was obtained through the use of an YSI multi-parameter meter. The monitoring wells selected for the measurement of DO were based on the recommendations of the previous Remediation Update Report.

Dissolved oxygen concentrations of monitoring wells associated with the monitoring of the air sparge networks have been summarized as follows:

Network	Monitoring Wells	DO Range (mg/L)
A	MW-17, MW-18*, MW-20	0.38 to 9.20
B	106, 107, MW-14	0.15 to 0.32
C	MW-32, MW-33	7.01 to 9.57
Pulse Zone 1	MW-18*, MW-19	0.78 to 8.08
Pulse Zone 2	102, 105, 117, MW-2, MW-15	0.12 to 9.60
Background wells	101, 108, 113, MW-1, MW-3, MW-12, MW-16, MW-35	0.10 to 0.70**

* Note: Monitoring well is within the influence of multiple networks.

** Note: Monitoring well MW-1 is not included in range since considered to be a data anomaly at 6.63 mg/L because the historical background results of monitoring wells within the vicinity have been much lower.

Active remediation efforts are volatilizing constituents as well as maintaining groundwater DO concentrations at favorable levels for aerobic biodegradation and within the influence of air sparging, which allows for volatilization to also occur. The low DO in the background wells in comparison to the much higher DO in the applicable monitoring wells is further indication that the remediation system is performing as designed.

2.4.2.5 Dissolved Contaminant of Concern Concentration Data

CATLIN personnel obtained the latest representative groundwater samples from selected monitoring wells on August 15, 2008 with an additional sampling of monitoring well MW-34 on September 9, 2008. Prior to obtaining a groundwater sample, each monitoring well was developed a minimum of three well volumes utilizing a disposable bailer. The selected monitoring wells were based on the recommendations of the previous Remediation Update Report. All groundwater samples from the August 2008 sample event were submitted to Test America Laboratories Inc. in Savannah, Georgia for analysis of dissolved M/P Xylene concentrations per EPA Method 8260B. A copy of the laboratory report and Chain-of-Custody has been provided in Appendix A. Results of the latest, as well as a portion of the historical, M/P Xylenes concentration data have been summarized on Table 3 and graphically represented in Appendix B. The current interpolated horizontal extent of dissolved M/P Xylenes within the site groundwater has been illustrated on Figure 6.

While results have fluctuated over time, a comparison of this data to historical data continues to illustrate an overall decreasing trend. In reviewing the graphs in Appendix B, note the progressive decline in PX concentrations at monitoring wells influenced by existing air sparge networks, the previously completed chemical oxidation activities and natural attenuation.

Active remedial efforts along the down gradient property boundary have been predominantly successful. Flint Hills Resources, LP voluntarily implemented a more frequent sampling program of MW-19 between March 2006 and May 2006 to evaluate the efficiency of the PAS System and the chemical oxidation activities. Following the August 2006 semi-annual monitoring event, FHR voluntarily implemented a monthly sampling program until August 2007 and then generally bi-monthly to continue to monitor the M/P Xylenes trend in this area. The laboratory data collected for MW-19 during the time period of this report is included herein. This data continues to illustrate the success of the use of the PAS system in order to continue to maintain a low concentration buffer along the down gradient property boundary.

The M/P Xylenes result for MW-34 was initially reported by the laboratory to be 380,000 µg/L, which is significantly above the historical trend for this monitoring well. The laboratory analyzed the same sample again out of the appropriate hold time and obtained a result of 140,000 µg/L. Laboratory analysis of an additional sample collected on September 9, 2008 determined a M/P Xylenes concentration of 130,000 µg/L. Therefore, we have concluded that the 380,000 µg/L result was an anomaly and have utilized the 140,000 µg/L result in Table 3 and Figure 6.

Following the reporting of the August 2006 sampling event, CATLIN conducted contaminant transport modeling to simulate the transport of dissolved total Xylenes. The transport modeling evaluated the groundwater PX concentrations over time. In the model a buffer area with groundwater PX concentrations below the current 2L GWQS (530 µg/L) was established on the downgradient side of the property and the upgradient portion was remediated by natural attenuation. Based on the August 2006 modeling and on FHR's desire to ensure contamination does not migrate off-site, the PAS Network

was expanded as documented within this Report.

The August 2006 model was updated following the August 2008 sampling event to represent the groundwater conditions at this time. The updated model (refer to Appendix C) indicates that if the xylene concentrations in the area downgradient of the approximate location of monitoring well KRW-5 were actively remediated to at least 2L GWQS, remaining xylene concentrations in exceedance of the 2L GWQS upgradient of KRW-5 would not migrate beyond the North Terminal – PX Facility property boundary. In addition, the model indicates that natural attenuation would remediate the remaining total Xylene concentrations upgradient of KRW-5 to current 2L GWQS (530 µg/L) within 8 to 10 years. This result is consistent with the previous modeling updates. Although our field knowledge of the project site leads us to believe that reaching 2L GWQS upgradient of KRW-5 within 8 to 10 years may be underestimated, model simulations continue to indicate that, so long as xylene concentrations down gradient of monitoring well KRW-5 meet 2L GWQS, migration off the property of total Xylene concentrations above 2L GWQS is unlikely. Additional model simulations are recommended in the future to allow for additional calibration of the accuracy of the model and analysis of the progress toward effectively achieving the cleanup goals for the site. A detailed description of the site modeling variables and results are provided in a previous Remediation Update Report.

2.4.3 Free-Phase PX Data

Free-phase product was last detected in a PX Facility monitoring or recovery well on December 8, 2004.

3.0 FUTURE ACTIVITIES AND RECOMMENDATIONS

- Monitoring and operation of air sparge system as follows:
 - 1) Networks A, B and C continue to operate as a continuous air sparge system.
 - 2) Pulse Networks 1 and 2 continue to operate as a PAS system.
- Based on the data presented within this report, dissolved groundwater contamination within monitoring well MW-19 of M/P Xylenes has significantly decreased from the highest concentration in March 2006 to below 2L GWQS in the August 2008 sampling event. The bi-monthly sampling program will be

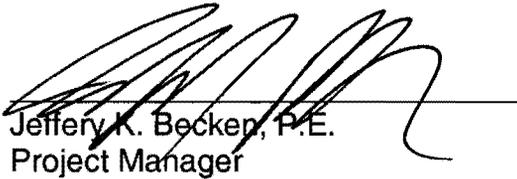
reduced to a quarterly program for the time being to ensure rebound does not occur at the down gradient boundary.

- o Conduct contaminant transport modeling following the August 2009 sampling event. Future modeling should be considered following all future August sampling events.
- o The following monitoring wells will be sampled during the next semi-annual sampling event in August 2009:

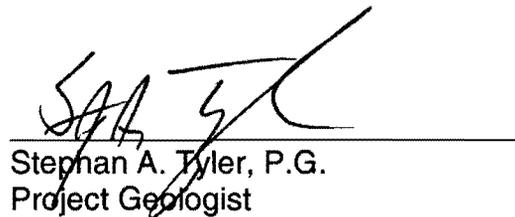
MW-1, MW-2, MW-4, MW-3, MW-5, MW-8, MW-10, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-28, MW-32, MW-33, MW-34, MW-35, MW-36, MW-37, 101, 102, 105, 106, 107, 108, 113, 117, and 119 for M/P Xylenes per EPA Method 8260B. Monitoring wells are selected to provide data concerning PX plume boundary and historical high concentration conditions.

Groundwater at the following monitoring wells will be field gauged for DO:

MW-1, MW-2, MW-3, MW-12, MW-14, MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-32, MW-33, MW-35, MW-36, KRW-5, 101, 102, 104, 105, 106, 107, 108, 113 and 117.



Jeffery K. Becken, P.E.
Project Manager



Stephan A. Tyler, P.G.
Project Geologist

TABLES

TABLE 1

**SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED
MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2008**

**PARAXYLENE FACILITY
INVISTA, NORTH TERMINAL
WILMINGTON, NORTH CAROLINA**

DATA POINT	DATE DATA COLLECTED	TOP OF CASING ELEVATION (in feet)	DEPTH TO WATER (in feet)	FREE-PHASE PRODUCT THICKNESS (in feet)	SPECIFIC GRAVITY ADJUSTMENT	WATER TABLE ELEVATION (in feet)
TYPE II MONITORING WELLS						
MW-1	8/2/2006	39.45	8.80	NMT	NA	30.65
	2/5/2007		6.75	NMT	NA	32.70
	8/8/2007		9.27	NMT	NA	30.18
	2/20/2008		10.44	NMT	NA	29.01
	8/14/2008		10.63	NMT	NA	28.82
MW-2	8/2/2006	29.11	3.80	NMT	NA	25.31
	2/5/2007		2.25	NMT	NA	26.86
	8/8/2007		4.48	NMT	NA	24.63
	2/20/2008		5.13	NMT	NA	23.98
	8/14/2008		5.63	NMT	NA	23.48
MW-3	8/2/2006	37.84	8.61	NMT	NA	29.23
	2/5/2007		6.76	NMT	NA	31.08
	8/8/2007		9.02	NMT	NA	28.82
	2/20/2008		10.13	NMT	NA	27.71
	8/14/2008		10.36	NMT	NA	27.48
MW-4	8/2/2006	33.84	8.21	NMT	NA	25.63
	2/5/2007		6.65	NMT	NA	27.19
MW-5	8/2/2006	39.56	8.30	NMT	NA	31.26
	2/5/2007		6.15	NMT	NA	33.41
	8/8/2007		8.76	NMT	NA	30.80
	2/20/2008		9.97	NMT	NA	29.59
	8/14/2008		10.27	NMT	NA	29.29
MW-6	NA	38.92	NM			
MW-7	NA	38.71	ABANDONED			
MW-8	8/2/2006	39.85	10.20	NMT	NA	29.65
	2/5/2007		6.64	NMT	NA	33.21
	8/8/2007		9.17	NMT	NA	30.68
	2/20/2008		10.35	NMT	NA	29.50
	8/14/2008		10.64	NMT	NA	29.21
MW-9	NA	36.88	NM			
MW-10	8/2/2006	35.45	5.40	NMT	NA	30.05
	2/5/2007		3.39	NMT	NA	32.06
	8/8/2007		5.79	NMT	NA	29.66
	2/20/2008		6.86	NMT	NA	28.59
	8/14/2008		7.12	NMT	NA	28.33

TABLE 1
SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED
MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2008

PARAXYLENE FACILITY
INVISTA, NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

DATA POINT	DATE DATA COLLECTED	TOP OF CASING ELEVATION (in feet)	DEPTH TO WATER (in feet)	FREE-PHASE PRODUCT THICKNESS (in feet)	SPECIFIC GRAVITY ADJUSTMENT	WATER TABLE ELEVATION (in feet)
MW-11	8/2/2006	37.37	7.76	NMT	NA	29.61
	2/5/2007		5.90	NMT	NA	31.47
MW-12	8/2/2006	35.23	7.29	NMT	NA	27.94
	2/5/2007		5.41	NMT	NA	29.82
	8/8/2007		8.07	NMT	NA	27.16
	2/20/2008		9.31	NMT	NA	25.92
	8/14/2008		9.72	NMT	NA	25.51
MW-13	8/2/2006	33.90	7.50	NMT	NA	26.40
	2/5/2007		5.83	NMT	NA	28.07
	8/8/2007		7.97	NMT	NA	25.93
	2/20/2008		9.55	NMT	NA	24.35
	8/14/2008		9.74	NMT	NA	24.16
MW-14	8/2/2006	29.39	4.87	NMT	NA	24.52
	2/5/2007		3.53	NMT	NA	25.86
	8/8/2007		5.60	NMT	NA	23.79
	2/20/2008		6.38	NMT	NA	23.01
	8/14/2008		6.66	NMT	NA	22.73
MW-15	8/2/2006	28.82	5.83	NMT	NA	22.99
	2/5/2007		4.47	NMT	NA	24.35
	8/8/2007		6.74	NMT	NA	22.08
	2/20/2008		7.26	NMT	NA	21.56
	8/14/2008		8.17	NMT	NA	20.65
MW-16	8/2/2006	28.21	5.61	NMT	NA	22.60
	2/5/2007		4.31	NMT	NA	23.90
	8/8/2007		6.45	NMT	NA	21.76
	2/20/2008		6.87	NMT	NA	21.34
	8/14/2008		7.20	NMT	NA	21.01
MW-17	8/2/2006	25.57	3.35	NMT	NA	22.22
	2/5/2007		1.41	NMT	NA	24.16
	8/8/2007		3.28	NMT	NA	22.29
	2/20/2008		3.88	NMT	NA	21.69
	8/14/2008		4.30	NMT	NA	21.27
MW-18	8/2/2006	26.92	8.60	NMT	NA	18.32
	2/5/2007		6.50	NMT	NA	20.42
	8/8/2007		8.95	NMT	NA	17.97
	2/20/2008		9.81	NMT	NA	17.11
	8/14/2008		9.60	NMT	NA	17.32

TABLE 1
SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED
MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2008

PARAXYLENE FACILITY
INVISTA, NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

DATA POINT	DATE DATA COLLECTED	TOP OF CASING ELEVATION (in feet)	DEPTH TO WATER (in feet)	FREE-PHASE PRODUCT THICKNESS (in feet)	SPECIFIC GRAVITY ADJUSTMENT	WATER TABLE ELEVATION (in feet)
MW-19	8/2/2006	27.59	7.95	NMT	NA	19.64
	2/5/2007		8.70	NMT	NA	18.89
	3/30/2007		9.38	NMT	NA	18.21
	5/25/2007		10.80	NMT	NA	16.79
	7/2/2007		10.66	NMT	NA	16.93
	8/8/2007		9.98	NMT	NA	17.61
	10/26/2007		10.67	NMT	NA	16.92
	12/5/2007		11.15	NMT	NA	16.44
	2/20/2008		10.50	NMT	NA	17.09
	4/30/2008		10.58	NMT	NA	17.01
	5/28/2008		9.95	NMT	NA	17.64
	6/30/2008		10.72	NMT	NA	16.87
	7/31/2008		3.45	NMT	NA	24.14
	8/14/2008		10.65	NMT	NA	16.94
MW-20	8/2/2006	29.29	10.51	NMT	NA	18.78
	2/5/2007		8.62	NMT	NA	20.67
	8/8/2007		11.28	NMT	NA	18.01
	2/20/2008		11.82	NMT	NA	17.47
	8/14/2008		11.52	NMT	NA	17.77
MW-28	8/2/2006	36.41	6.63	NMT	NA	29.78
	2/5/2007		4.38	NMT	NA	32.03
	8/8/2007		7.66	NMT	NA	28.75
	2/20/2008		8.96	NMT	NA	27.45
	8/14/2008		8.95	NMT	NA	27.46
MW-30	NA	35.20	NOT LOCATED			
MW-32	8/2/2006	33.69	7.78	NMT	NA	25.91
	2/5/2007		6.16	NMT	NA	27.53
	8/8/2007		9.35	NMT	NA	24.34
	2/20/2008		9.76	NMT	NA	23.93
	8/14/2008		10.05	NMT	NA	23.64
MW-33	8/2/2006	35.16	9.41	NMT	NA	25.75
	2/5/2007		5.51	NMT	NA	29.65
	8/8/2007		11.55	NMT	NA	23.61
	2/20/2008		10.48	NMT	NA	24.68
	8/14/2008		10.75	NMT	NA	24.41

TABLE 1

**SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED
MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2008**

**PARAXYLENE FACILITY
INVISTA, NORTH TERMINAL
WILMINGTON, NORTH CAROLINA**

DATA POINT	DATE DATA COLLECTED	TOP OF CASING ELEVATION (in feet)	DEPTH TO WATER (in feet)	FREE-PHASE PRODUCT THICKNESS (in feet)	SPECIFIC GRAVITY ADJUSTMENT	WATER TABLE ELEVATION (in feet)
MW-34	8/2/2006	33.89	6.64	NMT	NA	27.25
	2/5/2007		4.97	NMT	NA	28.92
	8/8/2007		7.68	NMT	NA	26.21
	2/20/2008		8.83	NMT	NA	25.06
	8/14/2008		9.00	NMT	NA	24.89
	9/9/2008		9.02	NMT	NA	24.87
MW-35	8/2/2006	28.41	2.70	NMT	NA	25.71
	2/5/2007		1.75	NMT	NA	26.66
	8/8/2007		3.27	NMT	NA	25.14
	2/20/2008		3.67	NMT	NA	24.74
	8/14/2008		4.17	NMT	NA	24.24
MW-36	8/2/2006	35.46	7.90	NMT	NA	27.56
	2/5/2007		4.35	NMT	NA	31.11
	8/8/2007		6.21	NMT	NA	29.25
	2/20/2008		7.25	NMT	NA	28.21
	8/14/2008		7.42	NMT	NA	28.04
MW-37	8/2/2006	36.26	7.10	NMT	NA	29.16
	2/5/2007		3.87	NMT	NA	32.39
	8/8/2007		6.30	NMT	NA	29.96
	2/20/2008		6.85	NMT	NA	29.41
	8/14/2008		Dry	NMT	NA	NA
101	8/2/2006	28.88	3.55	NMT	NA	25.33
	2/5/2007		2.25	NMT	NA	26.63
	8/8/2007		4.17	NMT	NA	24.71
	2/20/2008		4.78	NMT	NA	24.10
	8/14/2008		5.13	NMT	NA	23.75
102	8/2/2006	29.88	4.39	NMT	NA	25.49
	2/5/2007		2.90	NMT	NA	26.98
	8/8/2007		5.06	NMT	NA	24.82
	2/20/2008		5.75	NMT	NA	24.13
	8/14/2008		6.18	NMT	NA	23.70
104	NA	28.10	NM			
105	8/2/2006	29.51	7.12	NMT	NA	22.39
	2/5/2007		2.81	NMT	NA	26.70
	8/8/2007		4.84	NMT	NA	24.67
	2/20/2008		5.43	NMT	NA	24.08
	8/14/2008		5.90	NMT	NA	23.61

TABLE 1
SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED
MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2008

PARAXYLENE FACILITY
INVISTA, NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

DATA POINT	DATE DATA COLLECTED	TOP OF CASING ELEVATION (in feet)	DEPTH TO WATER (in feet)	FREE-PHASE PRODUCT THICKNESS (in feet)	SPECIFIC GRAVITY ADJUSTMENT	WATER TABLE ELEVATION (in feet)
106	8/2/2006	26.51	1.35	NMT	NA	25.16
	2/5/2007		0.15	NMT	NA	26.36
	8/8/2007		2.02	NMT	NA	24.49
	2/20/2008		2.68	NMT	NA	23.83
	8/14/2008		3.08	NMT	NA	23.43
107	8/2/2006	31.33	5.05	NMT	NA	26.28
	2/5/2007		3.78	NMT	NA	27.55
	8/8/2007		5.76	NMT	NA	25.57
	2/20/2008		6.31	NMT	NA	25.02
	8/14/2008		6.69	NMT	NA	24.64
108	8/2/2006	31.50	6.85	NMT	NA	24.65
	2/5/2007		5.08	NMT	NA	26.42
	8/8/2007		7.31	NMT	NA	24.19
	2/20/2008		8.07	NMT	NA	23.43
	8/14/2008		8.31	NMT	NA	23.19
113	8/2/2006	33.90	9.10	NMT	NA	24.80
	2/5/2007		7.51	NMT	NA	26.39
	8/8/2007		9.91	NMT	NA	23.99
	2/20/2008		10.40	NMT	NA	23.50
	8/14/2008		11.02	NMT	NA	22.88
114	NA	34.74			NM	
116	NA	28.76			NM	
117	8/2/2006	31.33	9.10	NMT	NA	22.23
	2/5/2007		7.65	NMT	NA	23.68
	8/8/2007		9.90	NMT	NA	21.43
	2/20/2008		10.43	NMT	NA	20.90
	8/14/2008		10.90	NMT	NA	20.43
119	8/2/2006	26.68	4.71	NMT	NA	21.97
	2/5/2007		3.10	NMT	NA	23.58
	8/8/2007		4.85	NMT	NA	21.83
	2/20/2008		4.97	NMT	NA	21.71
	8/14/2008		5.72	NMT	NA	20.96
121	NA	29.20			NM	
PTW-1	NA	36.67			NM	
PTW-2	NA	36.68			NM	

TABLE 1
SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED
MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2008

PARAXYLENE FACILITY
INVISTA, NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

DATA POINT	DATE DATA COLLECTED	TOP OF CASING ELEVATION (in feet)	DEPTH TO WATER (in feet)	FREE-PHASE PRODUCT THICKNESS (in feet)	SPECIFIC GRAVITY ADJUSTMENT	WATER TABLE ELEVATION (in feet)
PTW-3	NA	36.68				NM
PTW-4	NA	36.41				NM
PTW-5	NA	36.57				NM
PTW-6	NA	36.42				NM
PTW-7	NA	36.73				NM
PTW-8	NA	36.72				NM
PTW-9	NA	36.90				NM
TYPE III MONITORING WELLS						
TMW-1	NA	30.43				NM
TMW-2	NA	35.40				NM
FORMER RECOVERY WELLS CONVERTED TO MONITORING WELLS						
RW-2	NA	36.18				ABANDONED
KRW-3	NA	29.07				NM
KRW-4	NA	27.82				NM
KRW-5	NA	32.58				NM
KRW-6	NA	30.90				NM
KRW-7	NA	29.47				NM
KRW-8	NA	38.01				NM

Notes:

Specific gravity adjustment for paraxylene is 0.86

NMT = No Measurable Thickness

NM = Not Measured

NA = Not Applicable

TABLE 2
SUMMARY OF DISSOLVED OXYGEN MEASUREMENTS FROM
SELECTED MONITORING WELLS - AUGUST 2006 THROUGH AUGUST 2008

PARAXYLENE FACILITY
INVISTA, NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	DISSOLVED OXYGEN (mg/L)
101	8/9/2007	2.09
	2/25/2008	0.49
	8/18/2008	0.10
102	8/9/2007	1.10
	2/25/2008	0.41
	8/18/2008	0.12
105	8/8/2006	0.85
	2/8/2007	0.80
	8/9/2007	1.49
	2/25/2008	0.19
	8/18/2008	0.52
106	8/8/2007	1.62
	2/27/2008	0.66
	8/18/2008	0.32
107	8/8/2007	0.86
	2/27/2008	0.43
	8/18/2008	0.20
108	8/8/2006	3.90
	2/8/2007	0.37
	8/8/2007	1.29
	2/27/2008	0.61
	8/18/2008	0.19
113	8/8/2006	1.01
	2/8/2007	0.15
	8/8/2007	5.02
	2/26/2008	0.42
	8/18/2008	0.70
117	8/8/2006	1.22
	2/8/2007	0.32
	8/8/2007	0.57
	2/27/2008	0.26
	8/18/2008	8.23

TABLE 2
SUMMARY OF DISSOLVED OXYGEN MEASUREMENTS FROM
SELECTED MONITORING WELLS - AUGUST 2006 THROUGH AUGUST 2008

PARAXYLENE FACILITY
INVISTA, NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	DISSOLVED OXYGEN (mg/L)
119	8/8/2007	1.52
MW-1	8/18/2008	6.63
MW-2	8/8/2007	5.61
	2/27/2008	1.43
	8/18/2008	0.17
MW-3	8/9/2007	1.56
	2/26/2008	0.81
	8/18/2008	0.19
MW-12	8/8/2006	0.53
	2/8/2007	0.40
	8/9/2007	1.76
	2/25/2008	0.72
	8/18/2008	0.21
MW-14	8/8/2006	0.49
	2/8/2007	0.30
	8/8/2007	2.27
	2/27/2008	0.30
	8/18/2008	0.15
MW-15	8/8/2007	0.69
	2/27/2008	0.38
	8/18/2008	9.60
MW-16	8/8/2006	1.04
	2/8/2007	0.35
	8/8/2007	0.63
	2/27/2008	0.37
	8/18/2008	0.18
MW-17	8/8/2006	8.80
	2/8/2007	8.58
	8/8/2007	11.06
	2/27/2008	9.73
	8/18/2008	9.20

TABLE 2
SUMMARY OF DISSOLVED OXYGEN MEASUREMENTS FROM
SELECTED MONITORING WELLS - AUGUST 2006 THROUGH AUGUST 2008

PARAXYLENE FACILITY
INVISTA, NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	DISSOLVED OXYGEN (mg/L)
MW-18	8/8/2006	1.00
	2/8/2007	7.44
	8/8/2007	5.80
	2/27/2008	6.82
	8/18/2008	0.78
MW-19	8/8/2006	1.91
	2/8/2007	3.65
	8/8/2007	6.36
	2/27/2008	8.05
	8/18/2008	8.08
MW-20	8/8/2006	0.85
	2/8/2007	4.70
	8/8/2007	3.76
	2/27/2008	4.71
	8/18/2008	0.38
MW-32	8/8/2006	2.50
	2/8/2007	4.07
	8/8/2007	0.96
	2/27/2008	5.88
	8/18/2008	7.01
MW-33	8/8/2006	8.80
	2/8/2007	8.17
	8/8/2007	9.32
	2/25/2008	8.42
	8/18/2008	9.57
MW-35	8/8/2007	1.27
	2/27/2008	0.42
	8/18/2008	0.20
MW-36	8/9/2007	1.29
	2/25/2008	0.40

mg/L = milligrams per liter

TABLE 3		
SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER		
PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
TYPE II MONITORING WELLS		
MW-1	12/8/1995	29,000
	2/13/1996	11,000
	6/24/1996	9,400
	1/28/1997	340
	12/4/1997	4,000
	6/13/1998	360
	1/19/1999	250
	7/14/1999	26
	2/29/2000	<1.0
	6/13/2000	470
	2/21/2001	<1.0
	7/31/2001	2.3
	4/1/2002	260
	7/31/2002	4,200
	2/24/2003	<1.0
	8/20/2003	<1.0
	2/20/2004	<1.0
	8/4/2004	<1.0
	2/22/2005	950
	8/25/2005	<0.31
2/9/2006	<1.3	
8/9/2006	<1.3	
2/9/2007	1.9 J	
8/9/2007	<0.53	
2/22/2008	<0.53	
8/15/2008	<0.53	
MW-2	2/20/2004	140,000
	8/4/2004	360,000
	2/21/2005	130,000
	8/25/2005	69,000
	2/9/2006	150,000
	8/9/2006	140,000
	2/8/2007	100,000
	8/8/2007	120,000
	2/21/2008	42,000
8/15/2008	91,000	

TABLE 3 SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
MW-3	12/8/1995	180,000
	6/24/1996	28,000
	1/28/1997	53,000
	12/4/1997	100,000
	6/13/1998	35,000
	1/19/1999	49,000
	7/14/1999	20,000
	2/29/2000	37,000
	6/13/2000	63,000
	2/21/2001	120,000
	7/31/2001	110,000
	4/1/2002	81,000
	7/31/2002	96,000
	2/24/2003	120,000
	8/19/2003	96,000
	2/20/2004	110,000
	8/4/2004	89,000
	2/22/2005	130,000
	8/25/2005	27,000
	2/9/2006	16,000
8/8/2006	110,000	
2/8/2007	10,000	
8/9/2007	110,000	
2/21/2008	100,000	
8/15/2008	90,000	
MW-4	12/8/1995	1,600,000
	2/13/1996	140,000
	6/24/1996	140,000
	1/28/1997	190,000
	12/4/1997	220,000
	6/13/1998	180,000
	1/19/1999	190,000
	7/14/1999	300,000
	2/29/2000	100,000
	6/13/2000	45,000
	2/20/2004	66,000
	8/4/2004	80,000
	2/21/2005	36,000
	8/25/2005	25,000
	2/9/2006	24,000
8/9/2006	75,000	
2/8/2007	52,000	

TABLE 3 SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
MW-5	2/13/1996	9,800
	6/24/1996	2,500
	1/28/1997	1,400
	12/4/1997	790
	6/13/1998	7,800
	1/19/1999	2,400
	7/14/1999	4,900
	2/29/2000	2,100
	6/13/2000	2,800
	7/31/2001	12,000
	4/1/2002	2,000
	7/31/2002	<5.0
	2/24/2003	1,200
	8/20/2003	630
	2/20/2004	1,400
	8/4/2004	390
	2/22/2005	34
	8/25/2005	<0.31
	2/9/2006	1,400
	8/9/2006	1,900
2/8/2007	390	
8/9/2007	79	
2/21/2008	5,200	
8/15/2008	360	
MW-7	10/15/1999	150,000
	2/29/2000	130,000
	2/21/2001	150,000
	7/31/2001	120,000
	4/2/2002	140,000
	2/24/2003	400,000
	8/20/2003	2,200,000
	2/20/2004	570,000 D
	8/4/2004	3,100,000
	8/6/2004	110,000
2/22/2005	120,000	
WELL HAS BEEN PERMANENTLY ABANDONED		

TABLE 3 SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
MW-8	10/5/1999	4,400
	2/29/2000	12,000
	2/21/2001	5,500
	7/31/2001	8,500
	4/2/2002	17,000
	2/24/2003	15,000
	8/20/2003	16,000
	2/20/2004	6,800
	8/4/2004	5,800
	2/22/2005	20,000
	8/25/2005	38,000
	2/9/2006	21,000
	8/9/2006	95
	2/8/2007	6,400
	8/9/2007	3,400
2/21/2008	12,000	
8/15/2008	13,000	
MW-9	2/29/2000	<1
	2/24/2003	<1
	8/20/2003	<1
	2/20/2004	<1
MW-10	2/29/2000	96,000
	2/21/2001	89,000
	7/31/2001	110,000
	8/25/2005	150,000
	2/9/2006	150,000
	8/9/2006	150,000
	2/9/2007	75,000
	8/9/2007	180,000
	2/25/2008	130,000
8/15/2008	130,000	
MW-11	2/29/2000	110,000
	7/31/2001	100,000
	4/1/2002	63,000
	2/24/2003	130,000
	8/20/2003	110,000
	2/20/2004	53,000
	8/4/2004	53,000
	2/22/2005	79,000
	8/25/2005	56,000
	2/9/2006	3,300
	8/9/2006	57,000
2/8/2007	30,000	

TABLE 3 SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
MW-12	2/29/2000	56,000
	2/21/2001	170,000
	7/31/2001	140,000
	7/31/2002	140,000
	2/24/2003	86,000
	8/20/2003	17,000
	2/20/2004	92,000
	8/4/2004	35,000
	2/22/2005	100,000
	8/24/2005	22,000
	2/9/2006	59,000
	8/8/2006	110,000
	2/8/2007	37,000
	8/9/2007	33,000
2/21/2008	99,000	
8/15/2008	130,000	
MW-13	2/29/2000	85,000
	2/21/2001	43,000
	7/31/2001	41,000
	4/1/2002	76,000
	7/31/2002	30,000
	2/24/2003	99
	8/19/2003	7,900
	2/20/2004	6,000
	8/4/2004	13,000
	2/22/2005	54,000
	8/25/2005	110,000
	2/9/2006	51,000
	8/9/2006	80,000
	2/8/2007	98,000
8/9/2007	18,000	
2/21/2008	78,000	
8/15/2008	72,000	
MW-14	2/29/2000	270,000
	7/31/2001	110,000
	4/1/2002	160,000
	7/31/2002	180,000
	2/24/2003	240,000
	8/19/2003	140,000
	2/20/2004	180000 D
	8/4/2004	190,000
	8/24/2005	29,000
	2/10/2006	170,000
	8/9/2006	130,000
	2/8/2007	140,000
	8/8/2007	110,000
	2/21/2008	150,000
8/15/2008	120,000	

TABLE 3		
SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER		
PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
MW-15	2/29/2000	49,000
	6/13/2000	57,000
	2/21/2001	80,000
	7/31/2001	23,000
	7/30/2002	97,000
	2/24/2003	130,000
	8/19/2003	76,000
	2/20/2004	75,000 D
	8/4/2004	110,000
	2/23/2005	86,000
	8/25/2005	98,000
	2/9/2006	71,000
	8/9/2006	84,000
	2/8/2007	48,000
	8/8/2007	86,000
2/21/2008	66,000	
8/15/2008	9,300	
MW-16	2/29/2000	79,000
	6/13/2000	62,000
	2/21/2001	47,000
	7/31/2001	21,000
	4/1/2002	8,700
	7/30/2002	4,300
	2/25/2003	17,000
	8/19/2003	30,000
	2/20/2004	27,000
	8/9/2006	29,000
	2/8/2007	42,000
	8/8/2007	66,000
	2/21/2008	47,000
8/15/2008	39,000	
MW-17	2/29/2000	24,000
	6/13/2000	2,400
	2/21/2001	3,100
	8/1/2001	290
	4/1/2002	170
	7/30/2002	2,600
	2/24/2003	<1.0
	8/19/2003	3.7
	2/20/2004	4,600
	8/4/2004	2,100
	2/21/2005	160
	8/24/2005	92
	2/9/2006	7,800
	3/2/2006	2,800 D
	8/9/2006	4.9
	2/8/2007	<1.3
	8/8/2007	<0.53
2/21/2008	<0.53	
8/15/2008	<0.53	

TABLE 3 SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
MW-18	2/29/2000	13,000
	6/13/2000	21
	2/21/2001	29,000
	7/31/2001	6,400
	4/1/2002	510
	7/30/2002	<10
	2/25/2003	670
	8/19/2003	110
	2/20/2004	<1.0
	2/23/2005	1,300
	8/24/2005	160
	2/9/2006	11,000
	3/2/2006	170
	8/9/2006	5,300
	2/8/2007	200
8/8/2007	<0.53	
2/21/2008	4.6	
8/15/2008	0.98 J	
MW-19	2/29/2000	1,400
	6/13/2000	430
	2/21/2001	1,000
	7/31/2001	260
	4/1/2002	11,000
	7/30/2002	5,700
	2/25/2003	27,000
	8/19/2003	9,700
	2/20/2004	5,800
	2/23/2005	1,600
	8/24/2005	42,000
	2/9/2006	120,000
	3/24/2006	162,000
	4/27/2006	26,000
	5/30/2006	16,000
	8/8/2006	54,000
	10/5/2006	83,000
	10/31/2006	36,000
	11/28/2006	15,000
	12/29/2006	6,700
	1/26/2007	12,000
	2/8/2007	720
	3/30/2007	48
	4/26/2007	5.5
	5/25/2007	<1.3
	7/2/2007	0.70 J
	8/8/2007	0.89 J
	10/26/2007	<0.53
12/5/2007	<0.53	
2/21/2008	<0.53	
4/30/2008	1,700	
5/28/2008	<0.53	
6/30/2008	13	
7/31/2008	<0.53	
8/15/2008	<0.53	

TABLE 3 SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
MW-20	2/29/2000	7,900
	6/13/2000	110,000
	2/21/2001	47,000
	7/31/2001	70,000
	4/2/2002	7,900
	7/31/2002	15,000
	2/25/2003	5,000
	8/19/2003	2,600
	2/20/2004	14,000
	8/3/2004	3,200
	2/18/2005	50,000
	8/24/2005	870
	2/10/2006	15,000
	3/2/2006	26
	8/8/2006	150
	2/8/2007	<1.3
	8/8/2007	320
2/21/2008	6,900	
8/15/2008	2,300	
MW-28	4/94	2,240
	2/13/1996	370
	6/24/1996	740
	1/28/1997	14
	12/4/1997	2,300
	6/13/1998	59
	7/14/1999	<1
	3/1/2000	<1
	6/13/2000	<1
	2/21/2001	4
	7/31/2001	<1.0
	2/25/2003	22
	8/20/2003	<1.0
	2/20/2004	530
	8/3/2004	30
	2/18/2005	<0.31
	8/24/2005	12,000
	2/10/2006	<1.3
	8/8/2006	<1.3
2/8/2007	<1.3	
8/8/2007	0.66 J	
2/21/2008	640	
8/15/2008	9.3	
MW-30	1/19/1999	<1
	7/14/1999	<1
	3/1/2000	<1
	6/13/2000	<1
	2/21/2001	<1

TABLE 3		
SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER		
PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
MW-32	4/1/2002	110,000
	7/31/2002	89,000
	2/25/2003	110,000
	8/19/2003	1,700
	2/20/2004	5,700
	8/4/2004	14,000
	2/22/2005	570
	8/24/2005	430
	2/10/2006	84
	8/8/2006	2,400
	2/8/2007	3,300
	8/8/2007	1,000 D
	2/21/2008	0.95 J
8/15/2008	2.1	
MW-33	4/1/2002	15,000
	7/31/2002	21,000
	2/25/2003	22,000
	8/19/2003	22,000
	2/20/2004	3,600
	8/4/2004	13,000
	2/22/2005	2,500
	8/24/2005	17,000
	2/9/2006	33,000
	8/8/2006	<1.3
	2/8/2007	<1.3
	8/8/2007	<0.53
	2/21/2008	<0.53
8/15/2008	<0.53	
MW-34	2/22/2005	63,000
	8/25/2005	21,000
	2/9/2006	31,000
	8/8/2006	65,000
	2/8/2007	16,000
	8/9/2007	160,000
	2/21/2008	120,000
	8/15/2008	380,000
	8/15/2008	140,000 H
9/9/2008	130,000	
MW-35	2/21/2005	1,400
	8/25/2005	900
	2/9/2006	1,200
	8/9/2006	1,800
	2/8/2007	1,800
	8/8/2007	1,700
	2/21/2008	780
8/15/2008	560	

TABLE 3 SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
MW-36	2/22/2005	130,000
	8/25/2005	52,000
	2/9/2006	100,000
	8/9/2006	140,000
	2/8/2007	140,000
	8/9/2007	160,000
	2/22/2008	120,000
	8/15/2008	23,000
MW-37	2/22/2005	1,900
	8/25/2005	35,000
	2/9/2006	4,500
	8/9/2006	970
	2/9/2007	160
	8/9/2007	3,700
	2/22/2008	Bailed Dry - No Recharge
PTW-1	8/6/2004	2,800
PTW-2	8/6/2004	7,400
PTW-3	8/6/2004	660
PTW-4	8/6/2004	22,000
PTW-5	8/6/2004	46,000
PTW-6	8/6/2004	4,800
PTW-7	8/6/2004	1,200
PTW-8	8/6/2004	40,000
PTW-9	8/6/2004	45,000
101	2/24/2003	1,300
	8/19/2003	3,900
	2/20/2004	12,000
	8/4/2004	2,200
	2/21/2005	7,700
	8/25/2005	370
	2/10/2006	15
	8/9/2006	130
	2/8/2007	54
	8/9/2007	37
	2/25/2008	2.3
	8/15/2008	39

TABLE 3 SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
102	12/8/1995	800
	6/24/1996	200
	1/28/1997	1,100
	12/4/1997	26
	6/13/1998	270
	1/19/1999	49
	7/14/1999	760
	2/29/2000	1,300
	6/13/2000	230
	2/21/2001	100
	8/1/2001	9.1
	4/2/2002	<5.0
	7/30/2002	<10
	2/24/2003	21
	8/19/2003	5.3
	2/20/2004	150
	8/4/2004	35
	2/21/2005	34
	8/25/2005	99
	2/10/2006	600
8/9/2006	740	
2/8/2007	470	
8/9/2007	150	
2/25/2008	120	
8/15/2008	81	
104	7/30/2002	<50
	2/20/2004	860
105	7/30/2002	<50
	8/4/2004	26
	2/21/2005	5.1
	8/25/2005	1.9
	2/10/2006	67
	8/9/2006	6.8
	2/8/2007	7.8
	8/9/2007	3.2
	2/25/2008	0.75 J
	2/25/2008 DUP	0.66 J
8/15/2008	<0.53	

TABLE 3 SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
106	12/8/1995	350,000
	6/24/1996	<10
	1/28/1997	120,000
	6/13/1998	No Data
	1/19/1999	140,000
	7/14/1999	29,000
	3/1/2000	130,000
	6/13/2000	87,000
	2/21/2001	97,000
	8/1/2001	35,000
	8/19/2003	180,000
	2/20/2004	87,000
	8/4/2004	46,000
	2/21/2005	120,000
	8/24/2005	100,000
	2/9/2006	120,000
	8/8/2006	110,000
2/8/2007	100,000	
8/8/2007	86,000	
2/21/2008	130,000	
8/15/2008	53,000	
107	6/13/2000	96,000
	7/31/2002	240,000
	8/19/2003	160,000
	2/20/2004	88,000
	8/4/2004	66,000
	2/21/2005	120,000
	8/25/2005	7,600
	2/9/2006	51,000
	8/9/2006	66,000
	2/8/2007	2,400
	8/8/2007	68,000
2/21/2008	86,000	
8/15/2008	20,000	
108	4/1/2002	130,000
	2/24/2003	150,000
	8/19/2003	97,000
	2/20/2004	120,000
	8/4/2004	120,000
	2/21/2005	140,000
	8/24/2005	48,000
	2/9/2006	110,000
	8/8/2006	14,000
	2/8/2007	6,500
	8/8/2007	84,000
2/21/2008	130,000	
8/15/2008	33,000	

TABLE 3 SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
113	1/19/1999	11
	7/14/1999	BQL
	2/29/2000	370
	6/13/2000	460
	2/21/2001	<1
	7/31/2001	71
	4/1/2002	3.5
	7/31/2002	<1.0
	2/25/2003	2.2
	8/19/2003	1.6
	2/20/2004	<1.0
	8/4/2004	<1.0
	2/22/2005	0.85
	8/24/2005	<0.31
	2/9/2006	1.8 J
	8/8/2006	<1.3
	2/8/2007	1.9 J
8/8/2007	0.71 J	
2/21/2008	0.88 J	
8/15/2008	0.72 J	
114	6/13/1998	42
117	12/8/1995	86,000
	6/24/1996	59,000
	1/28/1997	80,000
	12/4/1997	46,000
	6/13/1998	130,000
	1/19/1999	120,000
	7/14/1999	140,000
	2/29/2000	78,000
	6/13/2000	100,000
	2/21/2001	81,000
	7/31/2001	45,000
	4/1/2002	39,000
	7/30/2002	16,000
	2/25/2003	55,000
	8/19/2003	7,100
	2/20/2004	110,000 D
	8/4/2004	57,000
	2/23/2005	34,000
	8/24/2005	480
	2/9/2006	<1.3
8/8/2006	80,000	
2/8/2007	79,000	
8/8/2007	64,000	
2/21/2008	44,000	
8/15/2008	<0.53	

TABLE 3 SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA			
WELL I.D.	DATE	M/P XYLENE (ug/L)	
119	6/24/1996	<2	
	1/28/1997	1,500	
	12/4/1997	15	
	6/13/1998	3,000	
	1/19/1999	390	
	7/14/1999	420	
	2/29/2000	4,900	
	6/13/2000	1,300	
	2/21/2001	37	
	7/31/2001	1,800	
	4/1/2002	320	
	7/30/2002	<100	
	2/24/2003	9,000	
	8/19/2003	<100	
	2/20/2004	48	
	8/4/2004	590	
	2/23/2005	2,300	
	8/25/2005	<0.31	
	2/9/2006	3.7	
	8/9/2006	190	
2/8/2007	1.7 J		
8/8/2007	<0.53		
2/21/2008	<0.53		
2/21/2008 DUP	<0.53		
8/15/2008	<0.53		
120	12/8/1995	1,600	
	6/24/1996	600	
	1/28/1997	4,300	
	12/4/1997	1,500	
	6/13/1998	1,500	
	1/19/1999	1,000	
	7/14/1999	400	
	WELL WAS DAMAGED		
	6/13/2000	800	
	2/21/2001	1,200	
	8/1/2001	2,300	
4/1/2002	33,000		
121	12/8/1995	300,000	
	6/24/1996	100,000	
	1/28/1997	100,000	
	12/4/1997	140,000	
	6/13/1998	160,000	
	1/19/1999	110,000	
	7/14/1999	140,000	
	3/1/2000	190,000	
2/24/2003	140,000		

TABLE 3		
SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER		
PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
D-O	12/8/1995	160,000
	6/24/1996	62,000
	1/28/1997	3,400
	WELL HAS BEEN PERMANENTLY ABANDONED	
TYPE III MONITORING WELLS		
TMW-1	12/8/1995	220
	2/29/2000	300
TMW-2	2/29/2000	4.2
RECOVERY WELLS		
RW-2	12/4/1997	8,100
	6/13/1998	14,000
	1/19/1999	8,200
	7/14/1999	9,200
	3/1/2000	26,000
	4/1/2002	17,000
	7/31/2002	13,000
WELL HAS BEEN PERMANENTLY ABANDONED		
KRW-3	12/4/1997	87,000
	6/13/1998	120,000
	1/19/1999	67,000
	7/14/1999	86,000
	2/29/2000	17,000
	6/13/2000	85,000
	2/21/2001	100,000
	7/31/2001	140,000
	4/1/2002	47,000
	7/31/2002	57,000
	2/25/2003	45,000
	8/19/2003	93,000
	2/20/2004	53,000 D
8/4/2004	58,000	
8/24/2005	16,000	
KRW-4	12/4/1997	27,000
	6/13/1998	60,000
	1/19/1999	18,000
	7/14/1999	86,000
	2/29/2000	61,000
	6/13/2000	29,000
	2/21/2001	15,000
	8/1/2001	13,000
	4/1/2002	11,000
	7/31/2002	16,000
	2/24/2003	11,000
	8/19/2003	15,000
	2/20/2004	18,000
	8/4/2004	13,000
	2/23/2005	2,400
8/24/2005	73,000	

TABLE 3		
SUMMARY OF EPA METHOD 8260 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER		
PARAXYLENE FACILITY INVISTA, NORTH TERMINAL WILMINGTON, NORTH CAROLINA		
WELL I.D.	DATE	M/P XYLENE (ug/L)
KRW-5	12/4/1997	180,000
	6/13/1998	130,000
	1/19/1999	84,000
	7/14/1999	390,000
	2/29/2000	150,000
	6/13/2000	100,000
	2/21/2001	FP
	7/31/2001	79,000
	4/1/2002	170,000
	7/31/2002	60,000
	2/24/2003	66,000
	8/19/2003	210,000
	2/20/2004	77,000
	8/4/2004	180,000
2/22/2005	77,000	
8/24/2005	58,000	
KRW-6	2/21/2001	64,000
	7/31/2001	95,000
	4/1/2002	93,000
	7/31/2002	53,000
	2/25/2003	60,000
	8/19/2003	72,000
	2/20/2004	120,000
	8/4/2004	92,000
	2/23/2005	69,000
8/24/2005	54,000	
KRW-7	8/21/2003	21,000
	8/4/2004	63,000
	2/23/2005	31,000
	8/24/2005	9,000
KRW-8	8/21/2003	100,000
	8/4/2004	14,000
	2/22/2005	72,000
	8/24/2005	55,000
TEMPORARY MONITORING WELLS *		
HP-1	4/94	11,900
HP-2	4/94	11,500
303TW-1	3/28/03	480
303TW-2	3/28/2003	1
303TW-3	3/28/2003	2,200
303TW-4	3/28/2003	31,000

All results in micrograms per liter (ug/L)

BQL = Below Quantitative Limit

ND = Not Determined

FP = Free-Product

< = Less than method detection limit

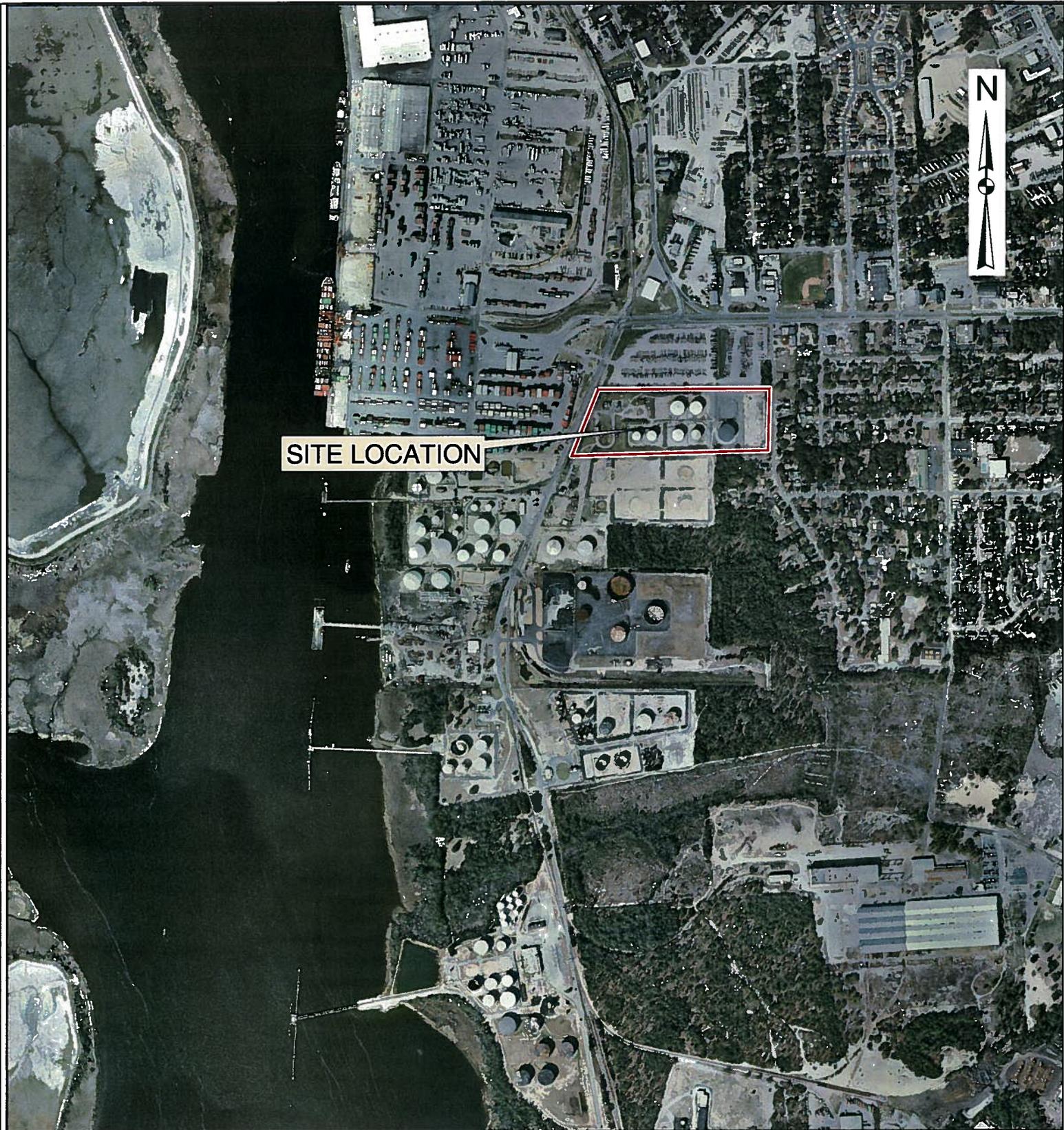
* Temporary wells have been permanently abandoned.

D = The reported result is from a secondary dilution.

H = Prepped and analyzed beyond specified holding time.

J = The result is less than the reporting limit, but greater than or equal to the method detection limit and the concentration is an approximate value.

FIGURES



SITE LOCATION

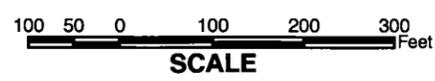
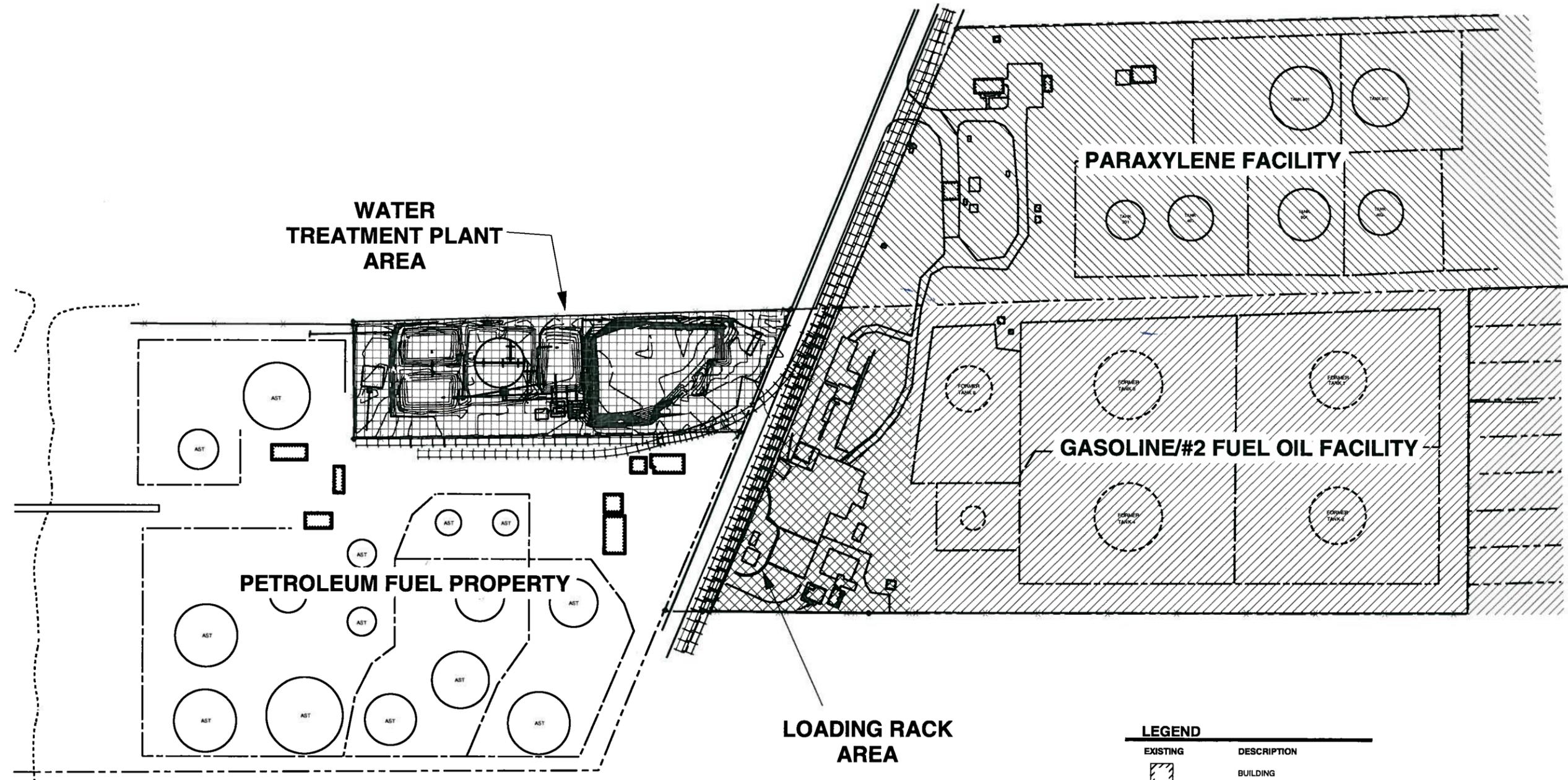
1,000 500 0 1,000 Feet



SCALE

Data Source: New Hanover County Tax Department Orthophotography (2006).

	PROJECT INVISTA S.à.r.l. NORTH TERMINAL PARAXYLENE FACILITY RIVER ROAD WILMINGTON, N.C.	TITLE GENERAL LOCATION MAP		FIGURE 1
	JOB NO. 201-125	DATE OCT 2008	SCALE 1"=1000'	

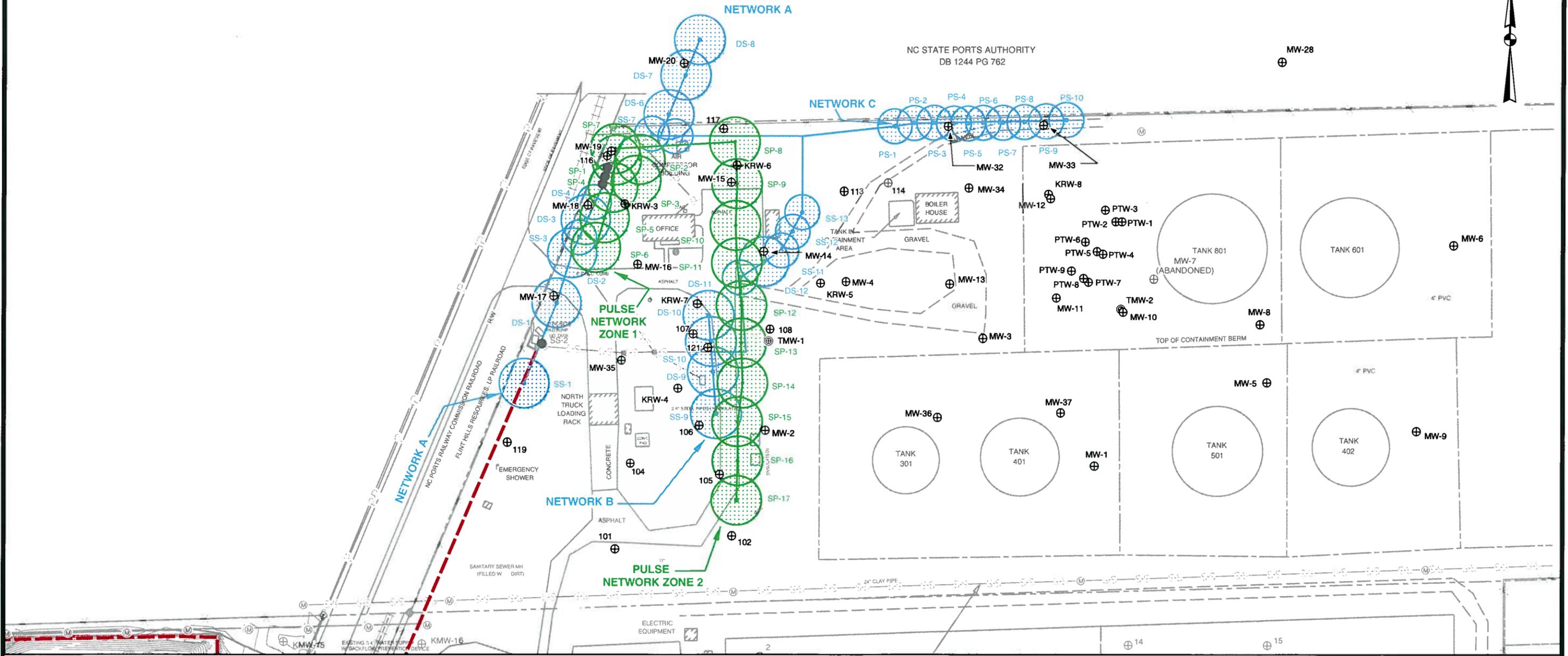


EXISTING	DESCRIPTION
	BUILDING
	PROPERTY LINE
	RAILROAD TRACKS
	FENCE LINE
	TOP OF CONTAINMENT BERM

NOTE:
 1. MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004
 2. PROPERTY LINES NOT SURVEYED.
 3. PETROLUEM FUEL PROPERTY BASED ON AERIAL PHOTOGRAPHS.

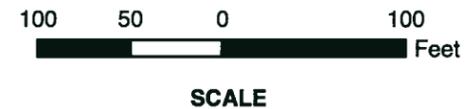
	PROJECT INVISTA S.à.r.l. NORTH TERMINAL PARAXYLENE FACILITY RIVER ROAD WILMINGTON, NC	TITLE <p style="text-align: center;">SITE MAP</p>		FIGURE <p style="text-align: center;">2</p>
	JOB NO 201-125	DATE OCT 2008	SCALE AS SHOWN	DRAWN BY THW

NOTE:
 1. MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
 2. PROPERTY LINE NOT SURVEYED.



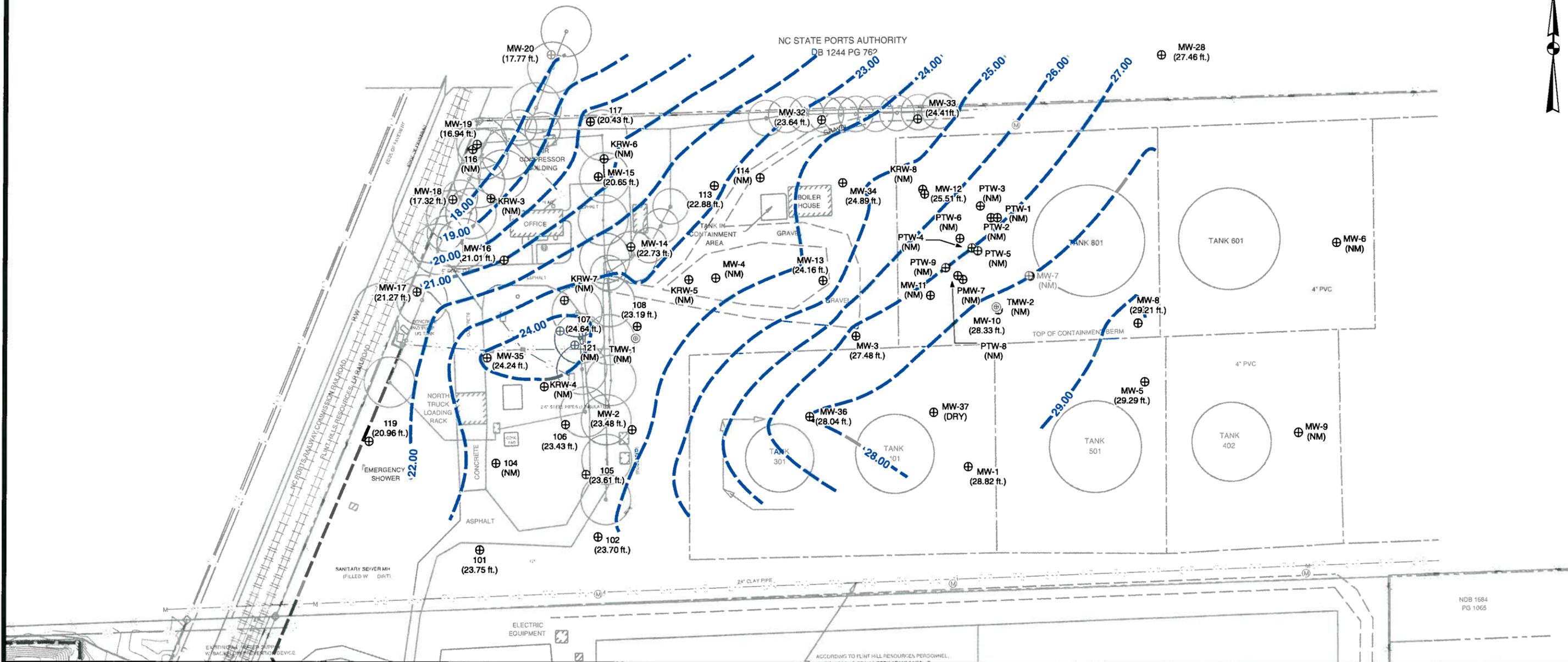
LEGEND

EXISTING	DESCRIPTION	EXISTING	DESCRIPTION
	BUILDING		MANHOLE
	TYPE II MONITORING WELL		ABANDONED SPARGE WELL
	TYPE III MONITORING WELL		OVERHEAD LIGHT
	FORMER RECOVERY WELL CONVERTED TO MONITORING WELL		PROPERTY LINE
	CATCH BASINS		SANITARY SEWER
	CLEAN OUT		WATER SUPPLY
	CONTINUOUS AIR SPARGE WELL WITH ESTIMATED INFLUENCE		POWER LINE
	PULSE AIR SPARGE WELL WITH ESTIMATED INFLUENCE		TELEPHONE LINE
			FENCE LINE
			INVISTA STORMWATER LINE



	PROJECT: INVISTA S.A.r.l., NORTH TERMINAL PARAXYLENE FACILITY, RIVER ROAD, WILMINGTON, NC	TITLE: CURRENT LAYOUT OF SITE AT PARAXYLENE FACILITY AS OF AUGUST 2008		FIGURE: 3
	JOB NO: 201-125	DATE: OCT 2008	SCALE: AS SHOWN	DRAWN BY: THW

NOTE:
 1. MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
 2. PROPERTY LINE NOT SURVEYED.



LEGEND

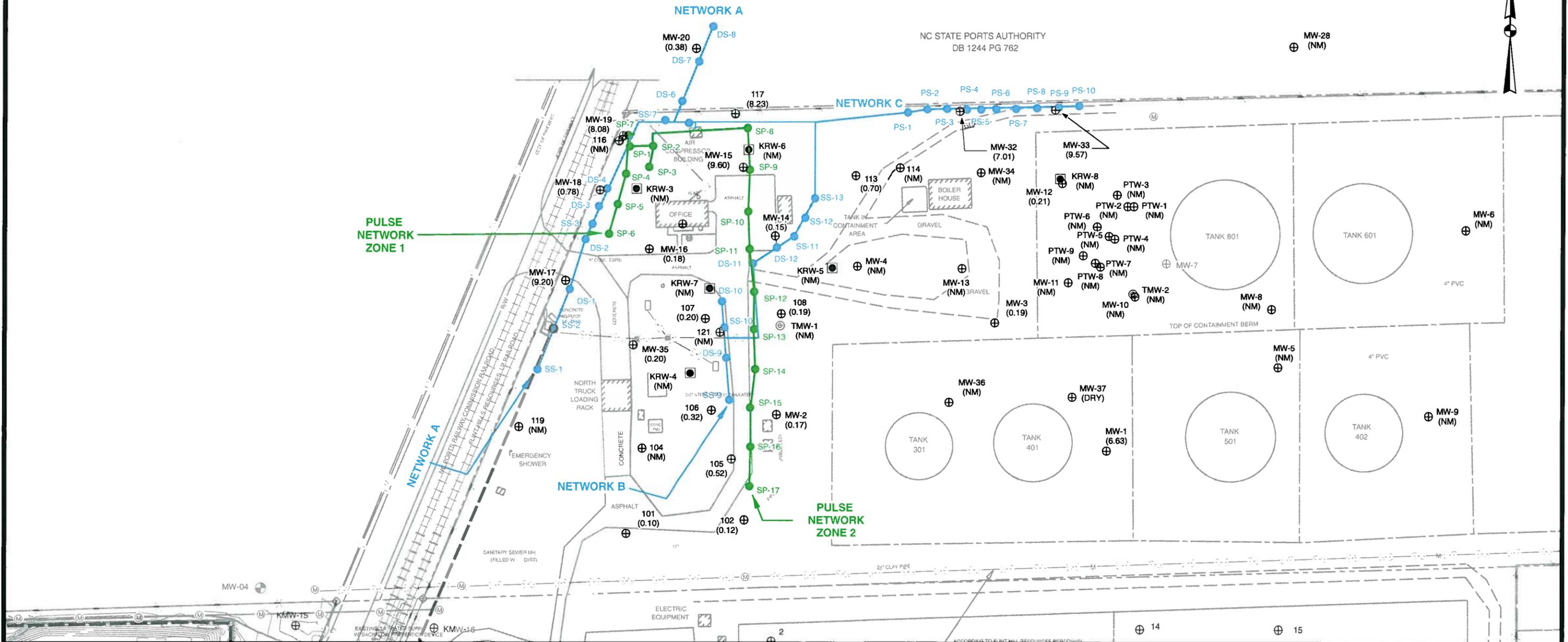
EXISTING	DESCRIPTION	Symbol	DESCRIPTION
	BUILDING		MANHOLE
	TYPE II MONITORING WELL		ABANDONED SPARGE WELL
	TYPE III MONITORING WELL		OVERHEAD LIGHT
	RECOVERY WELL		PROPERTY LINE
	CATCH BASINS		SANITARY SEWER
	CLEAN OUT		WATER SUPPLY
	GROUNDWATER CONTOUR		POWER LINE
			TELEPHONE LINE
			FENCE LINE
			INVISTA STORMWATER LINE
			GROUNDWATER ELEVATION IN FEET
			NOT MEASURED



SCALE

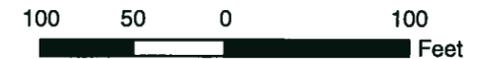
	PROJECT	INVISTA S.A.R.I. NORTH TERMINAL PARAXYLENE FACILITY RIVER ROAD WILMINGTON, NC	TITLE	GROUNDWATER CONTOURS AT PARAXYLENE FACILITY AS OF AUGUST 2008		FIGURE	4		
	JOB NO:	201-125	DATE:	OCT 2008	SCALE:	AS SHOWN		DRAWN BY:	THW

NOTE:
 1. MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
 2. PROPERTY LINE NOT SURVEYED.



LEGEND

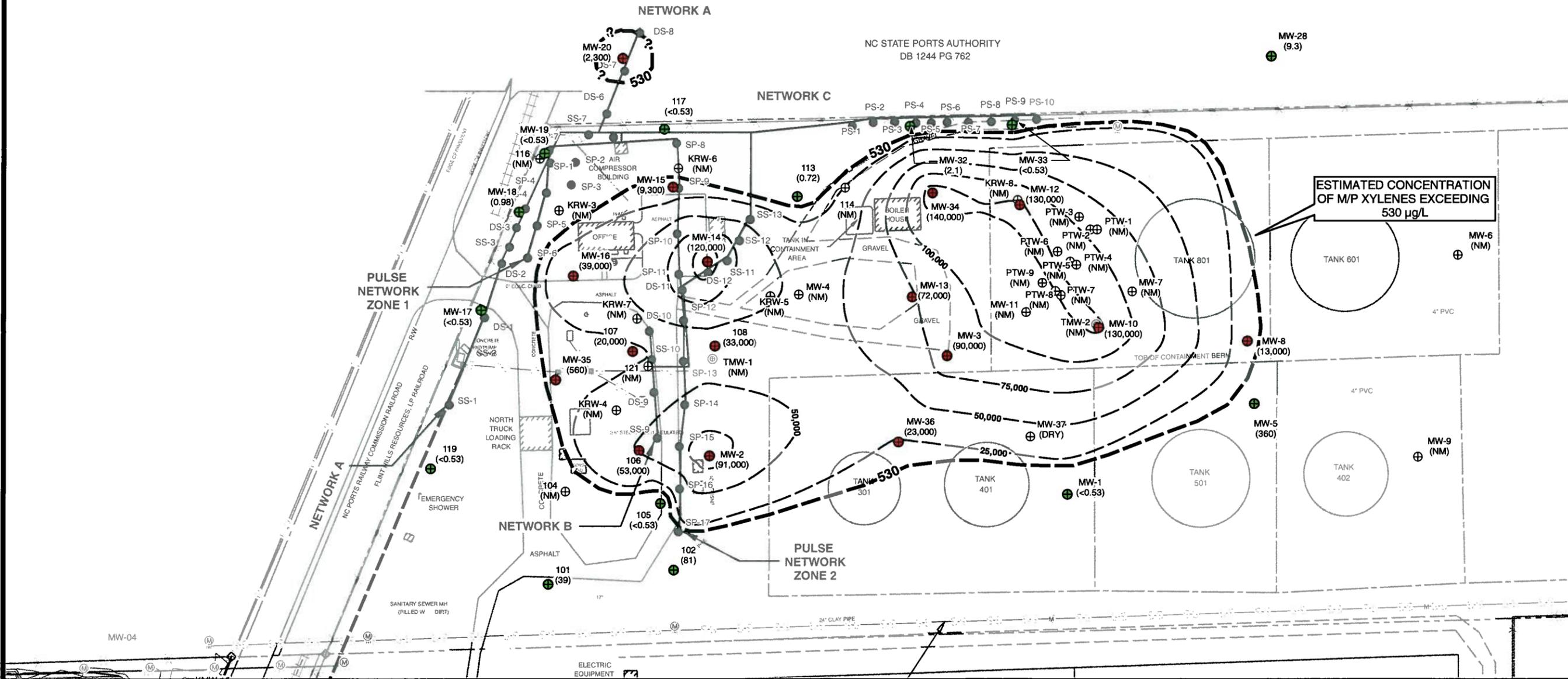
EXISTING	DESCRIPTION	EXISTING	DESCRIPTION
	BUILDING		MANHOLE
	TYPE II MONITORING WELL		ABANDONED SPARGE WELL
	TYPE III MONITORING WELL		OVERHEAD LIGHT
	FORMER RECOVERY WELL CONVERTED TO MONITORING WELL		PROPERTY LINE
	CATCH BASINS		SANITARY SEWER
	CLEAN OUT		WATER SUPPLY
	CONTINUOUS AIR SPARGE WELL		POWER LINE
	PULSE AIR SPARGE WELL		TELEPHONE LINE
(NM)	NOT MEASURED		FENCE LINE
()	DISSOLVED OXYGEN CONCENTRATIONS IN mg/L		INVISTA STORMWATER LINE



SCALE

<p>CATLIN Engineers and Scientists WILMINGTON, NC</p>	PROJECT INVISTA S.A.R.I. NORTH TERMINAL PARAXYLENE FACILITY RIVER ROAD WILMINGTON, NC	TITLE DISSOLVED OXYGEN LEVELS AT PARAXYLENE FACILITY FOR AUGUST 2008 SAMPLING EVENT	FIGURE 5
	JOB NO. 201-125	DATE: OCT 2008	SCALE: AS SHOWN

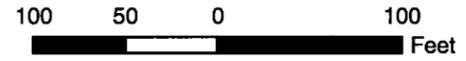
NOTE:
 1. MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
 2. PROPERTY LINE NOT SURVEYED.



ESTIMATED CONCENTRATION OF M/P XYLENES EXCEEDING 530 µg/L

LEGEND

EXISTING	DESCRIPTION
	BUILDING
	TYPE II MONITORING WELL
	TYPE III MONITORING WELL
	FORMER RECOVERY WELL CONVERTED TO MONITORING WELL
	CATCH BASINS
	CLEAN OUT
	CONTINUOUS AIR SPARGE WELL
	PULSE AIR SPARGE WELL
(NM)	NOT MEASURED
()	M/P XYLENES CONCENTRATIONS IN µg/L
	M/P XYLENES CONCENTRATION EXCEED 530 mg/L
	M/P XYLENES CONCENTRATION DOES NOT EXCEED 530 mg/L
	MANHOLE
	ABANDONED SPARGE WELL
	OVERHEAD LIGHT
	PROPERTY LINE
	SANITARY SEWER
	WATER SUPPLY
	POWER LINE
	TELEPHONE LINE
	FENCE LINE
	INVISTA STORMWATER LINE



SCALE

<p>CATLIN Engineers and Scientists WILMINGTON, NC</p>	PROJECT: INVISTA S.à.r.l. NORTH TERMINAL PARAXYLENE FACILITY RIVER ROAD WILMINGTON, NC	TITLE:	FIGURE 6
	JOB NO: 201-125	DATE: OCT 2008	

DRAWN BY: THW CHECKED BY: JKB

GIS_PROJECTS-FLINT HILLS-NORTH TERMINAL-PXFACTORY-OCT08-FIGURE 6

APPENDICES

APPENDIX A

GROUNDWATER ANALYTICAL LABORATORY REPORTS AND CHAIN-OF-CUSTODY RECORDS

ANALYTICAL REPORT

Job Number: 680-39648-1

Job Description: Invista PX (201-125)

For:

Catlin Engineers and Scientists

220 Old Dairy Road

Wilmington, NC 28405

Attention: Mr. Jeff Becken



Kathryn Smith

Project Manager I

kathye.smith@testamericainc.com

09/03/2008

Revision: 1

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who signed this test report.

Job Narrative
680-J39648-1

Comments

No additional comments.

Receipt

All samples for this submission were received at the laboratory outside the required temperature criteria. The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

All other samples were received in good condition within temperature requirements.

GC/MS VOA

Method(s) 8260B: Sample 680-39648-26 was reanalyzed out of hold at clients request. Both analyses are reported.

No other analytical or quality issues were noted.

VOA Prep

No analytical or quality issues were noted.

METHOD SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	TAL SAV	SW846 8260B	
Purge-and-Trap	TAL SAV		SW846 5030B

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB
SW846 8260B	Lui, Chung	CL

SAMPLE SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-39648-1	MW-17	Water	08/15/2008 0850	08/19/2008 1000
680-39648-2	MW-19	Water	08/15/2008 0900	08/19/2008 1000
680-39648-3	MW-18	Water	08/15/2008 0915	08/19/2008 1000
680-39648-4	MW-32	Water	08/15/2008 0920	08/19/2008 1000
680-39648-5	MW-33	Water	08/15/2008 0930	08/19/2008 1000
680-39648-6	113	Water	08/15/2008 0935	08/19/2008 1000
680-39648-7	119	Water	08/15/2008 0945	08/19/2008 1000
680-39648-8	105	Water	08/15/2008 0955	08/19/2008 1000
680-39648-9	101	Water	08/15/2008 1015	08/19/2008 1000
680-39648-10	102	Water	08/15/2008 1045	08/19/2008 1000
680-39648-11	MW-1	Water	08/15/2008 1105	08/19/2008 1000
680-39648-12	MW-5	Water	08/15/2008 1110	08/19/2008 1000
680-39648-13	MW-8	Water	08/15/2008 1120	08/19/2008 1000
680-39648-14FD	MW-8 DUP	Water	08/15/2008 1120	08/19/2008 1000
680-39648-15	MW-2	Water	08/15/2008 1230	08/19/2008 1000
680-39648-16	MW-35	Water	08/15/2008 1235	08/19/2008 1000
680-39648-17	MW-16	Water	08/15/2008 1245	08/19/2008 1000
680-39648-18	117	Water	08/15/2008 1250	08/19/2008 1000
680-39648-19	MW-20	Water	08/15/2008 1300	08/19/2008 1000
680-39648-20	MW-28	Water	08/15/2008 1310	08/19/2008 1000
680-39648-21	MW-3	Water	08/15/2008 1315	08/19/2008 1000
680-39648-22	MW-13	Water	08/15/2008 1330	08/19/2008 1000
680-39648-23	MW-12	Water	08/15/2008 1345	08/19/2008 1000
680-39648-24	MW-10	Water	08/15/2008 1410	08/19/2008 1000
680-39648-25	MW-36	Water	08/15/2008 1415	08/19/2008 1000
680-39648-26	MW-34	Water	08/15/2008 1430	08/19/2008 1000
680-39648-27	MW-15	Water	08/15/2008 1440	08/19/2008 1000
680-39648-28	107	Water	08/15/2008 1455	08/19/2008 1000
680-39648-29	108	Water	08/15/2008 1500	08/19/2008 1000
680-39648-30	106	Water	08/15/2008 1505	08/19/2008 1000
680-39648-31	MW-14	Water	08/15/2008 1515	08/19/2008 1000
680-39648-32EB	EQUIP. BLANK	Water	08/15/2008 1520	08/19/2008 1000
680-39648-33TB	TRIP BLANK	Water	08/15/2008 0000	08/19/2008 1000

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-17

Lab Sample ID: 680-39648-1

Date Sampled: 08/15/2008 0850

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115376

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4550.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 08/22/2008 1837

Final Weight/Volume: 5 mL

Date Prepared: 08/22/2008 1837

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	93	75 - 120
Dibromofluoromethane	103	75 - 121
Toluene-d8 (Surr)	98	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-19

Lab Sample ID: 680-39648-2

Date Sampled: 08/15/2008 0900

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch: 680-115376	Instrument ID:	GC/MS Volatiles - O
Preparation:	5030B		Lab File ID:	o4551.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/22/2008 1857		Final Weight/Volume:	5 mL
Date Prepared:	08/22/2008 1857			

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	95	75 - 120
Dibromofluoromethane	102	75 - 121
Toluene-d8 (Surr)	100	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-18

Lab Sample ID: 680-39648-3

Date Sampled: 08/15/2008 0915

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115376

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4552.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 08/22/2008 1917

Final Weight/Volume: 5 mL

Date Prepared: 08/22/2008 1917

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.98	J	0.53	2.0
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	94		75 - 120	
Dibromofluoromethane	102		75 - 121	
Toluene-d8 (Surr)	97		75 - 120	

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-32

Lab Sample ID: 680-39648-4

Date Sampled: 08/15/2008 0920

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch: 680-115376	Instrument ID:	GC/MS Volatiles - O
Preparation:	5030B		Lab File ID:	o4553.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/22/2008 1937		Final Weight/Volume:	5 mL
Date Prepared:	08/22/2008 1937			

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	2.1		0.53	2.0

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	95	75 - 120
Dibromofluoromethane	102	75 - 121
Toluene-d8 (Surr)	99	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-33

Lab Sample ID: 680-39648-5

Date Sampled: 08/15/2008 0930

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115376

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4554.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 08/22/2008 1956

Final Weight/Volume: 5 mL

Date Prepared: 08/22/2008 1956

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	94		75 - 120	
Dibromofluoromethane	101		75 - 121	
Toluene-d8 (Surr)	98		75 - 120	

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: 113

Lab Sample ID: 680-39648-6

Date Sampled: 08/15/2008 0935

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115376

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4555.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 08/22/2008 2016

Final Weight/Volume: 5 mL

Date Prepared: 08/22/2008 2016

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.72	J	0.53	2.0

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	94	75 - 120
Dibromofluoromethane	102	75 - 121
Toluene-d8 (Surr)	100	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: 119

Lab Sample ID: 680-39648-7

Date Sampled: 08/15/2008 0945

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115376

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4556.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 08/22/2008 2036

Final Weight/Volume: 5 mL

Date Prepared: 08/22/2008 2036

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	95	75 - 120
Dibromofluoromethane	102	75 - 121
Toluene-d8 (Surr)	100	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: 105

Lab Sample ID: 680-39648-8

Date Sampled: 08/15/2008 0955

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115376

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4557.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 08/22/2008 2056

Final Weight/Volume: 5 mL

Date Prepared: 08/22/2008 2056

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	93		75 - 120	
Dibromofluoromethane	102		75 - 121	
Toluene-d8 (Surr)	98		75 - 120	

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: 101

Lab Sample ID: 680-39648-9

Date Sampled: 08/15/2008 1015

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115376

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4558.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 08/22/2008 2116

Final Weight/Volume: 5 mL

Date Prepared: 08/22/2008 2116

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	39		0.53	2.0
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	95		75 - 120	
Dibromofluoromethane	101		75 - 121	
Toluene-d8 (Surr)	100		75 - 120	

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: 102

Lab Sample ID: 680-39648-10

Date Sampled: 08/15/2008 1045

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115376

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4559.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 08/22/2008 2135

Final Weight/Volume: 5 mL

Date Prepared: 08/22/2008 2135

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	81		0.53	2.0
Surrogate	%Rec			Acceptance Limits
4-Bromofluorobenzene	94			75 - 120
Dibromofluoromethane	102			75 - 121
Toluene-d8 (Surr)	99			75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-5

Lab Sample ID: 680-39648-12

Date Sampled: 08/15/2008 1110

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115376

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4561.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 08/22/2008 2215

Final Weight/Volume: 5 mL

Date Prepared: 08/22/2008 2215

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	360		0.53	2.0
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	93		75 - 120	
Dibromofluoromethane	103		75 - 121	
Toluene-d8 (Surr)	99		75 - 120	

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-8

Lab Sample ID: 680-39648-13

Date Sampled: 08/15/2008 1120

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115419

Instrument ID: GC/MS Volatiles - P

Preparation: 5030B

Lab File ID: p2313.d

Dilution: 100

Initial Weight/Volume: 5 mL

Date Analyzed: 08/25/2008 1957

Final Weight/Volume: 5 mL

Date Prepared: 08/25/2008 1957

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	13000		53	200
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	104		75 - 120	
Dibromofluoromethane	97		75 - 121	
Toluene-d8 (Surr)	95		75 - 120	

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-8 DUP

Lab Sample ID: 680-39648-14FD

Date Sampled: 08/15/2008 1120

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch: 680-115419	Instrument ID:	GC/MS Volatiles - P
Preparation:	5030B		Lab File ID:	p2315.d
Dilution:	100		Initial Weight/Volume:	5 mL
Date Analyzed:	08/25/2008 2027		Final Weight/Volume:	5 mL
Date Prepared:	08/25/2008 2027			

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	13000		53	200
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	101		75 - 120	
Dibromofluoromethane	103		75 - 121	
Toluene-d8 (Surr)	94		75 - 120	

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-2

Lab Sample ID: 680-39648-15

Date Sampled: 08/15/2008 1230

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115418

Instrument ID: GC/MS Volatiles - P C2

Preparation: 5030B

Lab File ID: p2312.d

Dilution: 250

Initial Weight/Volume: 5 mL

Date Analyzed: 08/25/2008 1942

Final Weight/Volume: 5 mL

Date Prepared: 08/25/2008 1942

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	91000		130	500
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	104		75 - 120	
Dibromofluoromethane	109		75 - 121	
Toluene-d8 (Surr)	102		75 - 120	

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-35

Lab Sample ID: 680-39648-16

Date Sampled: 08/15/2008 1235

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch: 680-115419	Instrument ID:	GC/MS Volatiles - P
Preparation:	5030B		Lab File ID:	p2291.d
Dilution:	10		Initial Weight/Volume:	5 mL
Date Analyzed:	08/25/2008 1431		Final Weight/Volume:	5 mL
Date Prepared:	08/25/2008 1431			

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	560		5.3	20

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	99	75 - 120
Dibromofluoromethane	99	75 - 121
Toluene-d8 (Surr)	95	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-16

Lab Sample ID: 680-39648-17

Date Sampled: 08/15/2008 1245

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115418

Instrument ID: GC/MS Volatiles - P C2

Preparation: 5030B

Lab File ID: p2314.d

Dilution: 200

Initial Weight/Volume: 5 mL

Date Analyzed: 08/25/2008 2012

Final Weight/Volume: 5 mL

Date Prepared: 08/25/2008 2012

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	39000		110	400

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	102	75 - 120
Dibromofluoromethane	109	75 - 121
Toluene-d8 (Surr)	104	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: 117

Lab Sample ID: 680-39648-18

Date Sampled: 08/15/2008 1250

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115419

Instrument ID: GC/MS Volatiles - P

Preparation: 5030B

Lab File ID: p2289.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 08/25/2008 1401

Final Weight/Volume: 5 mL

Date Prepared: 08/25/2008 1401

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	100		75 - 120	
Dibromofluoromethane	100		75 - 121	
Toluene-d8 (Surr)	96		75 - 120	

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-20

Lab Sample ID: 680-39648-19

Date Sampled: 08/15/2008 1300

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115419

Instrument ID: GC/MS Volatiles - P

Preparation: 5030B

Lab File ID: p2317.d

Dilution: 50

Initial Weight/Volume: 5 mL

Date Analyzed: 08/25/2008 2057

Final Weight/Volume: 5 mL

Date Prepared: 08/25/2008 2057

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	2300		26	100
Surrogate	%Rec			Acceptance Limits
4-Bromofluorobenzene	100			75 - 120
Dibromofluoromethane	100			75 - 121
Toluene-d8 (Surr)	95			75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-28

Lab Sample ID: 680-39648-20

Date Sampled: 08/15/2008 1310

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch: 680-115490	Instrument ID:	GC/MS Volatiles - O
Preparation:	5030B		Lab File ID:	o4585.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/25/2008 1623		Final Weight/Volume:	5 mL
Date Prepared:	08/25/2008 1623			

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	9.3		0.53	2.0
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	90		75 - 120	
Dibromofluoromethane	90		75 - 121	
Toluene-d8 (Surr)	98		75 - 120	

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-3

Lab Sample ID: 680-39648-21

Date Sampled: 08/15/2008 1315

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115490

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4587.d

Dilution: 500

Initial Weight/Volume: 5 mL

Date Analyzed: 08/25/2008 1652

Final Weight/Volume: 5 mL

Date Prepared: 08/25/2008 1652

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	90000		260	1000

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	90	75 - 120
Dibromofluoromethane	91	75 - 121
Toluene-d8 (Surr)	98	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-13

Lab Sample ID: 680-39648-22

Date Sampled: 08/15/2008 1330

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115622

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4611.d

Dilution: 500

Initial Weight/Volume: 5 mL

Date Analyzed: 08/26/2008 1244

Final Weight/Volume: 5 mL

Date Prepared: 08/26/2008 1244

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	72000		260	1000
Surrogate	%Rec			Acceptance Limits
4-Bromofluorobenzene	97			75 - 120
Dibromofluoromethane	94			75 - 121
Toluene-d8 (Surr)	100			75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-12

Lab Sample ID: 680-39648-23

Date Sampled: 08/15/2008 1345

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115622

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4613.d

Dilution: 500

Initial Weight/Volume: 5 mL

Date Analyzed: 08/26/2008 1313

Final Weight/Volume: 5 mL

Date Prepared: 08/26/2008 1313

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	130000		260	1000
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	95		75 - 120	
Dibromofluoromethane	94		75 - 121	
Toluene-d8 (Surr)	102		75 - 120	

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-10

Lab Sample ID: 680-39648-24

Date Sampled: 08/15/2008 1410

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch:	680-115490	Instrument ID:	GC/MS Volatiles - O
Preparation:	5030B			Lab File ID:	o4593.d
Dilution:	500			Initial Weight/Volume:	5 mL
Date Analyzed:	08/25/2008 1820			Final Weight/Volume:	5 mL
Date Prepared:	08/25/2008 1820				

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	130000		260	1000
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	91		75 - 120	
Dibromofluoromethane	89		75 - 121	
Toluene-d8 (Surr)	98		75 - 120	

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-36

Lab Sample ID: 680-39648-25

Date Sampled: 08/15/2008 1415

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch:	680-115490	Instrument ID:	GC/MS Volatiles - O
Preparation:	5030B			Lab File ID:	o4595.d
Dilution:	1000			Initial Weight/Volume:	5 mL
Date Analyzed:	08/25/2008 1849			Final Weight/Volume:	5 mL
Date Prepared:	08/25/2008 1849				

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	23000		530	2000
Surrogate	%Rec			Acceptance Limits
4-Bromofluorobenzene	92			75 - 120
Dibromofluoromethane	90			75 - 121
Toluene-d8 (Surr)	99			75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-34

Lab Sample ID: 680-39648-26

Date Sampled: 08/15/2008 1430

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115490

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4597.d

Dilution: 1000

Initial Weight/Volume: 5 mL

Date Analyzed: 08/25/2008 1918

Final Weight/Volume: 5 mL

Date Prepared: 08/25/2008 1918

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	380000		530	2000

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	91	75 - 120
Dibromofluoromethane	87	75 - 121
Toluene-d8 (Surr)	99	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-34

Lab Sample ID: 680-39648-26

Date Sampled: 08/15/2008 1430

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B Analysis Batch: 680-116058 Instrument ID: GC/MS Volatiles - O C2
Preparation: 5030B Lab File ID: o4724.d
Dilution: 1000 Initial Weight/Volume: 5 mL
Date Analyzed: 09/02/2008 1619 Run Type: RA Final Weight/Volume: 5 mL
Date Prepared: 09/02/2008 1619

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	140000	H	530	2000

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	92	75 - 120
Dibromofluoromethane	81	75 - 121
Toluene-d8 (Surr)	104	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-15

Lab Sample ID: 680-39648-27

Date Sampled: 08/15/2008 1440

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch: 680-115622	Instrument ID:	GC/MS Volatiles - O
Preparation:	5030B		Lab File ID:	o4615.d
Dilution:	2000		Initial Weight/Volume:	5 mL
Date Analyzed:	08/26/2008 1342		Final Weight/Volume:	5 mL
Date Prepared:	08/26/2008 1342			

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	9300		1100	4000

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	96	75 - 120
Dibromofluoromethane	92	75 - 121
Toluene-d8 (Surr)	100	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: 107

Lab Sample ID: 680-39648-28

Date Sampled: 08/15/2008 1455

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115490

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4601.d

Dilution: 250

Initial Weight/Volume: 5 mL

Date Analyzed: 08/25/2008 2016

Final Weight/Volume: 5 mL

Date Prepared: 08/25/2008 2016

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	20000		130	500

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	90	75 - 120
Dibromofluoromethane	88	75 - 121
Toluene-d8 (Surr)	100	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: 108

Lab Sample ID: 680-39648-29

Date Sampled: 08/15/2008 1500

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch: 680-115490	Instrument ID:	GC/MS Volatiles - O
Preparation:	5030B		Lab File ID:	o4603.d
Dilution:	250		Initial Weight/Volume:	5 mL
Date Analyzed:	08/25/2008 2045		Final Weight/Volume:	5 mL
Date Prepared:	08/25/2008 2045			

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	33000		130	500

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	90	75 - 120
Dibromofluoromethane	87	75 - 121
Toluene-d8 (Surr)	99	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: 106

Lab Sample ID: 680-39648-30

Date Sampled: 08/15/2008 1505

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115490

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4605.d

Dilution: 250

Initial Weight/Volume: 5 mL

Date Analyzed: 08/25/2008 2114

Final Weight/Volume: 5 mL

Date Prepared: 08/25/2008 2114

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	53000		130	500
Surrogate	%Rec			Acceptance Limits
4-Bromofluorobenzene	91			75 - 120
Dibromofluoromethane	85			75 - 121
Toluene-d8 (Surr)	99			75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: MW-14

Lab Sample ID: 680-39648-31

Date Sampled: 08/15/2008 1515

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115622

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4617.d

Dilution: 2000

Initial Weight/Volume: 5 mL

Date Analyzed: 08/26/2008 1411

Final Weight/Volume: 5 mL

Date Prepared: 08/26/2008 1411

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	120000		1100	4000

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	95	75 - 120
Dibromofluoromethane	91	75 - 121
Toluene-d8 (Surr)	100	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: EQUIP. BLANK

Lab Sample ID: 680-39648-32EB

Date Sampled: 08/15/2008 1520

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch: 680-115490	Instrument ID:	GC/MS Volatiles - O
Preparation:	5030B		Lab File ID:	o4583.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	08/25/2008 1554		Final Weight/Volume:	5 mL
Date Prepared:	08/25/2008 1554			

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.78	J	0.53	2.0

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	89	75 - 120
Dibromofluoromethane	91	75 - 121
Toluene-d8 (Surr)	98	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 680-39648-33TB

Date Sampled: 08/15/2008 0000

Client Matrix: Water

Date Received: 08/19/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-115490

Instrument ID: GC/MS Volatiles - O

Preparation: 5030B

Lab File ID: o4581.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 08/25/2008 1525

Final Weight/Volume: 5 mL

Date Prepared: 08/25/2008 1525

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	89		75 - 120	
Dibromofluoromethane	90		75 - 121	
Toluene-d8 (Surr)	99		75 - 120	

DATA REPORTING QUALIFIERS

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Lab Section	Qualifier	Description
GC/MS VOA	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Surrogate Recovery Report

8260B Volatile Organic Compounds by GC/MS

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-39648-1	MW-17	93	103	98
680-39648-2	MW-19	95	102	100
680-39648-3	MW-18	94	102	97
680-39648-4	MW-32	95	102	99
680-39648-5	MW-33	94	101	98
680-39648-6	113	94	102	100
680-39648-7	119	95	102	100
680-39648-8	105	93	102	98
680-39648-9	101	95	101	100
680-39648-10	102	94	102	99
680-39648-11	MW-1	96	104	98
680-39648-12	MW-5	93	103	99
680-39648-13	MW-8	104	97	95
680-39648-14	MW-8 DUP	101	103	94
680-39648-15	MW-2	104	109	102
680-39648-16	MW-35	99	99	95
680-39648-17	MW-16	102	109	104
680-39648-18	117	100	100	96
680-39648-19	MW-20	100	100	95
680-39648-20	MW-28	90	90	98
680-39648-21	MW-3	90	91	98
680-39648-22	MW-13	97	94	100
680-39648-23	MW-12	95	94	102
680-39648-24	MW-10	91	89	98
680-39648-25	MW-36	92	90	99
680-39648-26	MW-34	91	87	99
680-39648-26 RA	MW-34 RA	92	81	104
680-39648-27	MW-15	96	92	100
680-39648-28	107	90	88	100

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120

Surrogate Recovery Report

8260B Volatile Organic Compounds by GC/MS

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-39648-29	108	90	87	99
680-39648-30	106	91	85	99
680-39648-31	MW-14	95	91	100
680-39648-32	EQUIP. BLANK	89	91	98
680-39648-33	TRIP BLANK	89	90	99
MB 680-115376/11		96	101	98
MB 680-115418/9		98	108	103
MB 680-115419/4		97	99	95
MB 680-115490/17		90	94	99
MB 680-115622/20		96	98	98
MB 680-116058/9		93	85	101
LCS 680-115376/8		94	98	94
LCS 680-115418/6		100	103	103
LCS 680-115419/6		97	94	93
LCS 680-115490/15		93	93	95
LCS 680-115622/4		95	97	97
LCS 680-116058/6		92	85	97
LCSD 680-115376/9		98	102	99
LCSD 680-115418/7		101	102	100
LCSD 680-115419/7		95	94	92
LCSD 680-115490/16		94	94	98
LCSD 680-115622/5		96	99	98
LCSD 680-116058/7		92	89	100

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Method Blank - Batch: 680-115376

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-115376/11
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/22/2008 1617
Date Prepared: 08/22/2008 1617

Analysis Batch: 680-115376
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O
Lab File ID: oq283.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0
Surrogate	% Rec		Acceptance Limits	
4-Bromofluorobenzene	96		75 - 120	
Dibromofluoromethane	101		75 - 121	
Toluene-d8 (Surr)	98		75 - 120	

**Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 680-115376**

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-115376/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/22/2008 1448
Date Prepared: 08/22/2008 1448

Analysis Batch: 680-115376
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O
Lab File ID: oq279.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-115376/9
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/22/2008 1508
Date Prepared: 08/22/2008 1508

Analysis Batch: 680-115376
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O
Lab File ID: oq280.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
m-Xylene & p-Xylene	102	104	83 - 118	2	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	94		98		75 - 120		
Dibromofluoromethane	98		102		75 - 121		
Toluene-d8 (Surr)	94		99		75 - 120		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Method Blank - Batch: 680-115418

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-115418/9
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/25/2008 1256
Date Prepared: 08/25/2008 1256

Analysis Batch: 680-115418
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - P C2
Lab File ID: pq1000.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	98	75 - 120
Dibromofluoromethane	108	75 - 121
Toluene-d8 (Surr)	103	75 - 120

**Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 680-115418**

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-115418/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/25/2008 1051
Date Prepared: 08/25/2008 1051

Analysis Batch: 680-115418
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - P C2
Lab File ID: pq992.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-115418/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/25/2008 1121
Date Prepared: 08/25/2008 1121

Analysis Batch: 680-115418
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - P C2
Lab File ID: pq994.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
m-Xylene & p-Xylene	106	106	83 - 118	0	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	100	101	101		75 - 120		
Dibromofluoromethane	103	102	102		75 - 121		
Toluene-d8 (Surr)	103	100	100		75 - 120		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Method Blank - Batch: 680-115419

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-115419/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/25/2008 1311
Date Prepared: 08/25/2008 1311

Analysis Batch: 680-115419
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - P
Lab File ID: pq1001.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0
Surrogate	% Rec	Acceptance Limits		
4-Bromofluorobenzene	97	75 - 120		
Dibromofluoromethane	99	75 - 121		
Toluene-d8 (Surr)	95	75 - 120		

**Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 680-115419**

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-115419/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/25/2008 1036
Date Prepared: 08/25/2008 1036

Analysis Batch: 680-115419
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - P
Lab File ID: pq991.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-115419/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/25/2008 1106
Date Prepared: 08/25/2008 1106

Analysis Batch: 680-115419
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - P
Lab File ID: pq993.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
m-Xylene & p-Xylene	97	94	83 - 118	2	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	97		95		75 - 120		
Dibromofluoromethane	94		94		75 - 121		
Toluene-d8 (Surr)	93		92		75 - 120		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Method Blank - Batch: 680-115490

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-115490/17
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/25/2008 1336
Date Prepared: 08/25/2008 1336

Analysis Batch: 680-115490
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O
Lab File ID: oq319.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0
Surrogate	% Rec	Acceptance Limits		
4-Bromofluorobenzene	90	75 - 120		
Dibromofluoromethane	94	75 - 121		
Toluene-d8 (Surr)	99	75 - 120		

**Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 680-115490**

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-115490/15
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/25/2008 1209
Date Prepared: 08/25/2008 1209

Analysis Batch: 680-115490
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O
Lab File ID: oq313.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-115490/16
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/25/2008 1238
Date Prepared: 08/25/2008 1238

Analysis Batch: 680-115490
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O
Lab File ID: oq315.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
m-Xylene & p-Xylene	99	99	83 - 118	0	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	93	94	94		75 - 120		
Dibromofluoromethane	93	94	94		75 - 121		
Toluene-d8 (Surr)	95	98	98		75 - 120		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Method Blank - Batch: 680-115622

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-115622/20
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/26/2008 1215
Date Prepared: 08/26/2008 1215

Analysis Batch: 680-115622
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O
Lab File ID: oq335.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0
Surrogate	% Rec		Acceptance Limits	
4-Bromofluorobenzene	96		75 - 120	
Dibromofluoromethane	98		75 - 121	
Toluene-d8 (Surr)	98		75 - 120	

**Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 680-115622**

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-115622/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/26/2008 1019
Date Prepared: 08/26/2008 1019

Analysis Batch: 680-115622
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O
Lab File ID: oq327.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-115622/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/26/2008 1048
Date Prepared: 08/26/2008 1048

Analysis Batch: 680-115622
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O
Lab File ID: oq329.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
m-Xylene & p-Xylene	102	102	83 - 118	1	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	95		96		75 - 120		
Dibromofluoromethane	97		99		75 - 121		
Toluene-d8 (Surr)	97		98		75 - 120		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-39648-1

Method Blank - Batch: 680-116058

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-116058/9
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/02/2008 1226
Date Prepared: 09/02/2008 1226

Analysis Batch: 680-116058
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq364.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0
Surrogate	% Rec		Acceptance Limits	
4-Bromofluorobenzene	93		75 - 120	
Dibromofluoromethane	85		75 - 121	
Toluene-d8 (Surr)	101		75 - 120	

**Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 680-116058**

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-116058/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/02/2008 1019
Date Prepared: 09/02/2008 1019

Analysis Batch: 680-116058
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq356.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-116058/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/02/2008 1048
Date Prepared: 09/02/2008 1048

Analysis Batch: 680-116058
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq358.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
m-Xylene & p-Xylene	98	99	83 - 118	1	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	92		92		75 - 120		
Dibromofluoromethane	85		89		75 - 121		
Toluene-d8 (Surr)	97		100		75 - 120		

Calculations are performed before rounding to avoid round-off errors in calculated results.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
 5102 LaRoche Avenue
 Savannah, GA 31404
 Website: www.testamericainc.com
 Phone: (912) 354-7858
 Fax: (912) 352-0165

Alternate Laboratory Name/Location
 Phone:
 Fax:

PROJECT REFERENCE INVISTA PX	PROJECT NO. 201-125	PROJECT LOCATION (STATE) NC	MATRIX TYPE	REQUIRED ANALYSIS	PAGE 1	OF 3
TAL (LAB) PROJECT MANAGER KATHY SMITH	P.O. NUMBER	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...) MIP XYLENES PER 8260B	PRESERVATIVE	STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>	
CLIENT (SITE) PM JEFF BECKEN	CLIENT PHONE 910-452-5861	CLIENT FAX 910-452-7565			DATE DUE _____	
CLIENT NAME CATLIN ENG. & SCI.	CLIENT E-MAIL jeff.beckena@catlinusa.com				EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>	
CLIENT ADDRESS 220 OLD DAIRY RD, WILMINGTON, NC 28405		COMPANY CONTRACTING THIS WORK (if applicable) REISS REMEDIATION, LLC			DATE DUE _____	
NUMBER OF CONTAINERS SUBMITTED				NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1		

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED		REMARKS
DATE	TIME									
18AUG08	0850	MW-17	G	X				3		- SEE KATHY SMITH FOR COC & EDD FORMAT
	0900	MW-19								
	0915	MW-18								
	0920	MW-32								
	0930	MW-33								
	0935	113								
	0945	119								
	0955	105								
	1015	101								
	1045	102								
	1105	MW-1								
	1110	MW-5								

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE 18AUG08	TIME 1500	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE) KL	DATE 8/19/08	TIME 1000	CUSTODY INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	CUSTODY SEAL NO.	SAVANNAH LOG NO. 680-39648	LABORATORY REMARKS 9.4°C
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Serial Number 006723

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
 5102 LaRoche Avenue
 Savannah, GA 31404
 Website: www.testamericainc.com
 Phone: (912) 354-7858
 Fax: (912) 352-0165

Alternate Laboratory Name/Location
 Phone:
 Fax:

PROJECT REFERENCE INVISTA PX	PROJECT NO. 201-125	PROJECT LOCATION (STATE) NC	MATRIX TYPE	REQUIRED ANALYSIS	PAGE 2 OF 3
TAL (LAB) PROJECT MANAGER KATHY SMITH	P.O. NUMBER	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...) MPXYGENES PER 8260B	PRESERVATIVE	STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>
CLIENT (SITE) PM JEFF BECKEN	CLIENT PHONE 910-452-5861	CLIENT FAX 910-452-7563			DATE DUE _____
CLIENT NAME CATLIN ENG. & SCI.	CLIENT E-MAIL jeff.beckena@catlinusa.com				EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>
CLIENT ADDRESS 220 OLD DAWN RD, WILMINGTON NC 28405					DATE DUE _____
COMPANY CONTRACTING THIS WORK* (if applicable) RESS RENOVATION, LLC					NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED										REMARKS						
DATE	TIME							1	2	3	4	5	6	7	8	9	10							
18AUG08	1120	MW-8	G	X																			SEE KATHY SMITH FOR DOC & EDD FORMAT	
	1120	MW-8 DUP																						
	1230	MW-2																						
	1235	MW-35																						
	1245	MW-16																						
	1250	117																						
	1300	MW-20																						
	1310	MW-28																						
	1315	MW-3																						
	1330	MW-13																						
	1345	MW-12																						
	1410	MW-10																						

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE 18AUG08	TIME 1500	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE) KL	DATE 8/19/08	TIME 1000	CUSTODY INTACT YES <input type="radio"/> NO <input type="radio"/>	CUSTODY SEAL NO.	SAVANNAH LOG NO. 600-39649	LABORATORY REMARKS
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Serial Number 006724

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE INVESTA PX	PROJECT NO. 291-125	PROJECT LOCATION (STATE) NC	MATRIX TYPE	REQUIRED ANALYSIS	PAGE 3	OF 3
TAL (LAB) PROJECT MANAGER KATY SMITH	P.O. NUMBER	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...) MIP X MENES PER 8260 B	HCL PRESERVATIVE	STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>	DATE DUE _____
CLIENT (SITE) PM JEFF BECKEN	CLIENT PHONE 910-452-5861	CLIENT FAX 910-452-7563			EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>	DATE DUE _____
CLIENT NAME CATLIN ENG. & SCI.	CLIENT E-MAIL jeff.becken@catlinusa.com				NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1	
CLIENT ADDRESS 220 OLD DAIRY RD, WILMINGTON, NC 28405	COMPANY CONTRACTING THIS WORK (if applicable) REISS REMEDIATION, LLC					

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED				REMARKS
DATE	TIME							1	2	3	4	
15AUG08	1415	MW-36	X					3				SEE KATY SMITH FOR COC & FDD FORMAT
	1430	MW-34										
	1440	MW-15										
	1455	107										
	1500	108										EQUIP. BLANK
	1505	106										COLLECTED w/ DISTILLED H ₂ O
↓	1515	MW-14										
↓	1520	EQUIP. BLANK										
		TRIP BLANK	X					X				

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE 18AUG08	TIME 1500	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY								
RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>[Signature]</i>	DATE 8/19/08	TIME 1000	CUSTODY INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	CUSTODY SEAL NO.	SAVANNAH LOG NO. 680-39648	LABORATORY REMARKS		

Page 51 of 51

ANALYTICAL REPORT

Job Number: 680-40264-1

Job Description: Invista North PX Terminal (201-125)

For:

Catlin Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Attention: Mr. Jeff Becken

Kathryn Smith

Kathryn Smith
Project Manager I
kathye.smith@testamericainc.com
09/23/2008

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who signed this test report.

TestAmerica Laboratories, Inc.

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404
Tel (912) 354-7858 Fax (912) 352-0165 www.testamericainc.com



METHOD SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-40264-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds (GC/MS)	TAL SAV	SW846 8260B	
Purge and Trap	TAL SAV		SW846 5030B

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-40264-1

Method	Analyst	Analyst ID
SW846 8260B	Sokolin, Eleina	ES

SAMPLE SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-40264-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-40264-1	MW 34	Water	09/09/2008 1130	09/10/2008 1015
680-40264-2	TRIP BLANK	Water	09/09/2008 1200	09/10/2008 1015

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-40264-1

Client Sample ID: MW 34

Lab Sample ID: 680-40264-1

Client Matrix: Water

Date Sampled: 09/09/2008 1130

Date Received: 09/10/2008 1015

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 680-117524

Instrument ID: GC/MS Volatiles - A

Preparation: 5030B

Lab File ID: a029.d

Dilution: 1000

Initial Weight/Volume: 5 mL

Date Analyzed: 09/17/2008 1521

Final Weight/Volume: 5 mL

Date Prepared: 09/17/2008 1521

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	130000		530	2000

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	98	75 - 120
Dibromofluoromethane	104	75 - 121
Toluene-d8 (Surr)	105	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-40264-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 680-40264-2

Client Matrix: Water

Date Sampled: 09/09/2008 1200

Date Received: 09/10/2008 1015

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Analysis Batch: 680-117524

Instrument ID: GC/MS Volatiles - A

Preparation: 5030B

Lab File ID: a011.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 09/17/2008 1058

Final Weight/Volume: 5 mL

Date Prepared: 09/17/2008 1058

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0
Surrogate	%Rec			Acceptance Limits
4-Bromofluorobenzene	97			75 - 120
Dibromofluoromethane	99			75 - 121
Toluene-d8 (Surr)	104			75 - 120

DATA REPORTING QUALIFIERS

Client: Catlin Engineers and Scientists

Job Number: 680-40264-1

Lab Section	Qualifier	Description
GC/MS VOA	U	Indicates the analyte was analyzed for but not detected.

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-40264-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-40264-1	MW 34	98	104	105
680-40264-2	TRIP BLANK	97	99	104
MB 680-117524/23		97	102	105
LCS 680-117524/20		101	101	102
LCSD 680-117524/21		100	102	105

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-40264-1

Method Blank - Batch: 680-117524

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-117524/23
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/17/2008 0749
Date Prepared: 09/17/2008 0749

Analysis Batch: 680-117524
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - A
Lab File ID: aq011.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	97	75 - 120
Dibromofluoromethane	102	75 - 121
Toluene-d8 (Surr)	105	75 - 120

Lab Control Spike/

Lab Control Spike Duplicate Recovery Report - Batch: 680-117524

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-117524/20
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/17/2008 0622
Date Prepared: 09/17/2008 0622

Analysis Batch: 680-117524
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - A
Lab File ID: aq005.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-117524/21
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/17/2008 0651
Date Prepared: 09/17/2008 0651

Analysis Batch: 680-117524
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - A
Lab File ID: aq007.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
m-Xylene & p-Xylene	104	103	83 - 118	1	30		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	101		100		75 - 120		
Dibromofluoromethane	101		102		75 - 121		
Toluene-d8 (Surr)	102		105		75 - 120		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Login Sample Receipt Check List

Client: Catlin Engineers and Scientists

Job Number: 680-40264-1

Login Number: 40264

List Source: TestAmerica Savannah

Creator: Conner, Keaton

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	

ANALYTICAL REPORT

Job Number: 680-39063-1

Job Description: Invista North PX Terminal (201-125)

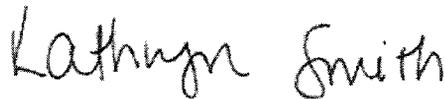
For:

Catlin Engineers and Scientists

220 Old Dairy Road

Wilmington, NC 28405

Attention: Mr. Jeff Becken



Kathryn Smith
Project Manager I
kathye.smith@testamericainc.com
08/05/2008

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who signed this test report.

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TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404

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Job Narrative
680-J39063-1

Comments

No additional comments.

Receipt

The Chain-of-Custody (COC) was not properly filled out. The sample date listed was August 31, 2008, date entered as July 31, 2008.

All other samples were received in good condition within temperature requirements.

GC/MS VOA

No analytical or quality issues were noted.

VOA Prep

No analytical or quality issues were noted.

METHOD SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-39063-1

Description		Lab Location	Method	Preparation Method
Matrix	Water			
Volatile Organic Compounds by GC/MS		TAL SAV	SW846 8260B	
	Purge-and-Trap	TAL SAV		SW846 5030B

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-39063-1

Method	Analyst	Analyst ID
SW846 8260B	Waldorf, Jonathan	JW

SAMPLE SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-39063-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-39063-1	MW19	Water	07/31/2008 1120	08/01/2008 1020

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-39063-1

Client Sample ID: MW19

Lab Sample ID: 680-39063-1

Date Sampled: 07/31/2008 1120

Client Matrix: Water

Date Received: 08/01/2008 1020

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-113368

Instrument ID: GC/MS Volatiles - A

Preparation: 5030B

Lab File ID: a0086.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 08/03/2008 0148

Final Weight/Volume: 5 mL

Date Prepared: 08/03/2008 0148

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	93	75 - 120
Dibromofluoromethane	94	75 - 121
Toluene-d8 (Surr)	90	75 - 120

DATA REPORTING QUALIFIERS

Client: Catlin Engineers and Scientists

Job Number: 680-39063-1

Lab Section	Qualifier	Description
GC/MS VOA	U	Indicates the analyte was analyzed for but not detected.

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-39063-1

Surrogate Recovery Report

8260B Volatile Organic Compounds by GC/MS

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-39063-1	MW19	93	94	90
MB 680-113368/21		97	95	92
LCS 680-113368/19		104	112	110
LCSD 680-113368/20		104	103	104

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-39063-1

Method Blank - Batch: 680-113368

**Method: 8260B
Preparation: 5030B**

Lab Sample ID: MB 680-113368/21
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/02/2008 2313
Date Prepared: 08/02/2008 2313

Analysis Batch: 680-113368
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - A
Lab File ID: aq073.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	97	75 - 120
Dibromofluoromethane	95	75 - 121
Toluene-d8 (Surr)	92	75 - 120

Lab Control Spike/

Lab Control Spike Duplicate Recovery Report - Batch: 680-113368

**Method: 8260B
Preparation: 5030B**

LCS Lab Sample ID: LCS 680-113368/19
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/02/2008 2134
Date Prepared: 08/02/2008 2134

Analysis Batch: 680-113368
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - A
Lab File ID: aq070.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-113368/20
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 08/02/2008 2153
Date Prepared: 08/02/2008 2153

Analysis Batch: 680-113368
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - A
Lab File ID: aq071.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
m-Xylene & p-Xylene	95	93	83 - 118	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	104	104	75 - 120
Dibromofluoromethane	112	103	75 - 121
Toluene-d8 (Surr)	110	104	75 - 120

Calculations are performed before rounding to avoid round-off errors in calculated results.

ANALYTICAL REPORT

Job Number: 680-38249-1

Job Description: Invista North PX Terminal (201-125)

For:

Catlin Engineers and Scientists

220 Old Dairy Road

Wilmington, NC 28405

Attention: Mr. Jeff Becken

Kathryn Smith

Kathryn Smith
Project Manager I

kathye.smith@testamericainc.com

07/14/2008

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METHOD SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-38249-1

Description		Lab Location	Method	Preparation Method
Matrix	Water			
Volatile Organic Compounds by GC/MS		TAL SAV	SW846 8260B	
	Purge-and-Trap	TAL SAV		SW846 5030B

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-38249-1

Method	Analyst	Analyst ID
SW846 8260B	Lui, Chung	CL

SAMPLE SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-38249-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-38249-1	MW-19	Water	06/30/2008 0900	07/03/2008 1020
680-38249-2TB	Trip Blank	Water	06/30/2008 0000	07/03/2008 1020

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-38249-1

Client Sample ID: MW-19

Lab Sample ID: 680-38249-1

Date Sampled: 06/30/2008 0900

Client Matrix: Water

Date Received: 07/03/2008 1020

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-111182

Instrument ID: GC/MS Volatiles - P C2

Preparation: 5030B

Lab File ID: p1160.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/10/2008 2127

Final Weight/Volume: 5 mL

Date Prepared: 07/10/2008 2127

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	13		0.53	2.0

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	97	75 - 120
Dibromofluoromethane	100	75 - 121
Toluene-d8 (Surr)	96	75 - 120

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-38249-1

Client Sample ID: Trip Blank

Lab Sample ID: 680-38249-2TB

Date Sampled: 06/30/2008 0000

Client Matrix: Water

Date Received: 07/03/2008 1020

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-111300

Instrument ID: GC/MS Volatiles - P

Preparation: 5030B

Lab File ID: p1165.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 07/11/2008 1256

Final Weight/Volume: 5 mL

Date Prepared: 07/11/2008 1256

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0
Surrogate	%Rec		Acceptance Limits	
4-Bromofluorobenzene	92		75 - 120	
Dibromofluoromethane	102		75 - 121	
Toluene-d8 (Surr)	100		75 - 120	

DATA REPORTING QUALIFIERS

Client: Catlin Engineers and Scientists

Job Number: 680-38249-1

Lab Section	Qualifier	Description
GC/MS VOA	U	Indicates the analyte was analyzed for but not detected.

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-38249-1

Surrogate Recovery Report

8260B Volatile Organic Compounds by GC/MS

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-38249-1	MW-19	97	100	96
680-38249-2	Trip Blank	92	102	100
MB 680-111182/9		96	98	96
MB 680-111300/8		90	98	96
LCS 680-111182/6		96	100	100
LCS 680-111300/5		98	105	97
LCSD 680-111182/7		95	100	96
LCSD 680-111300/6		97	103	99

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-38249-1

Method Blank - Batch: 680-111182

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-111182/9
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/10/2008 1328
Date Prepared: 07/10/2008 1328

Analysis Batch: 680-111182
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - P C2
Lab File ID: pq462.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	96	75 - 120
Dibromofluoromethane	98	75 - 121
Toluene-d8 (Surr)	96	75 - 120

Lab Control Spike/

Lab Control Spike Duplicate Recovery Report - Batch: 680-111182

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-111182/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/10/2008 1124
Date Prepared: 07/10/2008 1124

Analysis Batch: 680-111182
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - P C2
Lab File ID: pq454.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-111182/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/10/2008 1200
Date Prepared: 07/10/2008 1200

Analysis Batch: 680-111182
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - P C2
Lab File ID: pq456.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
m-Xylene & p-Xylene	99	94	83 - 118	5	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	96	95	75 - 120
Dibromofluoromethane	100	100	75 - 121
Toluene-d8 (Surr)	100	96	75 - 120

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-38249-1

Method Blank - Batch: 680-111300

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-111300/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/11/2008 1152
Date Prepared: 07/11/2008 1152

Analysis Batch: 680-111300
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - P
Lab File ID: pq475.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	90	75 - 120
Dibromofluoromethane	98	75 - 121
Toluene-d8 (Surr)	96	75 - 120

**Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 680-111300**

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-111300/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/11/2008 0950
Date Prepared: 07/11/2008 0950

Analysis Batch: 680-111300
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - P
Lab File ID: pq467.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-111300/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 07/11/2008 1023
Date Prepared: 07/11/2008 1023

Analysis Batch: 680-111300
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - P
Lab File ID: pq469.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
m-Xylene & p-Xylene	101	99	83 - 118	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	98	97	75 - 120
Dibromofluoromethane	105	103	75 - 121
Toluene-d8 (Surr)	97	99	75 - 120

Calculations are performed before rounding to avoid round-off errors in calculated results.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE INUSTA NORTH TERMINAL - PX	PROJECT NO. 201-125	PROJECT LOCATION (STATE) NC	MATRIX TYPE	REQUIRED ANALYSIS										PAGE 1	OF 1	
TAL (LAB) PROJECT MANAGER KATHY SMITH	P.O. NUMBER	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...) MIP XRENES PER 826P	PRESERVATIVE										STANDARD REPORT DELIVERY <input checked="" type="checkbox"/>		DATE DUE _____
CLIENT (SITE) PM JEFF BECKEN	CLIENT PHONE 910-452-586	CLIENT FAX 910-452-7563												EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="checkbox"/>		DATE DUE _____
CLIENT NAME CATLIN ENG. & SOL.	CLIENT E-MAIL jeff.becken@catlinusa.com													NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1		REMARKS
CLIENT ADDRESS 220 OLD DAIRY ROAD, WILMINGTON, NC 28405	COMPANY CONTRACTING THIS WORK (if applicable) REISS REMEDIATION, LLC													NUMBER OF CONTAINERS SUBMITTED		REMARKS

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED										REMARKS		
DATE	TIME							1	2	3	4	5	6	7	8	9	10		11	12
3/21/08	0900	MW-19	GX				3													SEE KATHY SMITH FOR COC & END FORMAT

RELINQUISHED BY: (SIGNATURE) Dimitri A. [Signature]	DATE 3/21/08	TIME 1315	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY							
RECEIVED FOR LABORATORY BY: (SIGNATURE) kh	DATE 7/3/08	TIME 1020	CUSTODY INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	CUSTODY SEAL NO.	SAVANNAH LOG NO. 600-39249	LABORATORY REMARKS 1.6°C	

Page 11 of 11

ANALYTICAL REPORT

Job Number: 680-37200-1

Job Description: Invista North PX Terminal (201-125)

For:

Catlin Engineers and Scientists

220 Old Dairy Road

Wilmington, NC 28405

Attention: Mr. Jeff Becken



Kathryn Smith

Project Manager I

kathye.smith@testamericainc.com

06/11/2008

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METHOD SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-37200-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS Purge-and-Trap	TAL SAV TAL SAV	SW846 8260B	SW846 5030B

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-37200-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB

SAMPLE SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-37200-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-37200-1	MW-19	Water	05/28/2008 1210	05/30/2008 0929

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-37200-1

Client Sample ID: MW-19

Lab Sample ID: 680-37200-1

Client Matrix: Water

Date Sampled: 05/28/2008 1210

Date Received: 05/30/2008 0929

8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 680-108276

Instrument ID: GC/MS Volatiles - O C2

Preparation: 5030B

Lab File ID: o3138.d

Dilution: 1.0

Initial Weight/Volume: 5 mL

Date Analyzed: 06/06/2008 1539

Final Weight/Volume: 5 mL

Date Prepared: 06/06/2008 1539

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	101	75 - 120
Dibromofluoromethane	114	75 - 121
Toluene-d8 (Surr)	101	75 - 120

DATA REPORTING QUALIFIERS

Client: Catlin Engineers and Scientists

Job Number: 680-37200-1

<u>Lab Section</u>	<u>Qualifier</u>	<u>Description</u>
GC/MS VOA	U	Indicates the analyte was analyzed for but not detected.

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-37200-1

Surrogate Recovery Report

8260B Volatile Organic Compounds by GC/MS

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-37200-1	MW-19	101	114	101
MB 680-108276/7		101	115	100
LCS 680-108276/5		103	106	101

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-37200-1

Method Blank - Batch: 680-108276

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-108276/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/06/2008 1321
Date Prepared: 06/06/2008 1321

Analysis Batch: 680-108276
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq524.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.53	U	0.53	2.0
Surrogate	% Rec	Acceptance Limits		
4-Bromofluorobenzene	101	75 - 120		
Dibromofluoromethane	115	75 - 121		
Toluene-d8 (Surr)	100	75 - 120		

Lab Control Spike - Batch: 680-108276

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 680-108276/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/06/2008 1154
Date Prepared: 06/06/2008 1154

Analysis Batch: 680-108276
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - O C2
Lab File ID: oq520.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
m-Xylene & p-Xylene	100	107	107	83 - 118	
Surrogate	% Rec	Acceptance Limits			
4-Bromofluorobenzene	103	75 - 120			
Dibromofluoromethane	106	75 - 121			
Toluene-d8 (Surr)	101	75 - 120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

Login Sample Receipt Check List

Client: Catlin Engineers and Scientists

Job Number: 680-37200-1

Login Number: 37200

Creator: Hornsby, Jess

List Number: 1

List Source: TestAmerica Savannah

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

ANALYTICAL REPORT

Job Number: 680-36457-1

Job Description: Invista North PX Terminal (201-125)

For:

Catlin Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Attention: Mr. Jeff Becken



Kathryn Smith
Project Manager I
kathye.smith@testamericainc.com
05/13/2008

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TestAmerica Laboratories, Inc.

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404
Tel (912) 354-7858 Fax (912) 352-0165 www.testamericainc.com



METHOD SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-36457-1

Description		Lab Location	Method	Preparation Method
Matrix	Water			
Volatile Organic Compounds by GC/MS		TAL SAV	SW846 8260B	
Purge-and-Trap		TAL SAV		SW846 5030B

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-36457-1

Method	Analyst	Analyst ID
SW846 8260B	Lui, Chung	CL

SAMPLE SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-36457-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-36457-1	MW-19	Water	04/30/2008 1120	05/06/2008 1000

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-36457-1

Client Sample ID: MW-19

Lab Sample ID: 680-36457-1

Date Sampled: 04/30/2008 1120

Client Matrix: Water

Date Received: 05/06/2008 1000

8260B Volatile Organic Compounds by GC/MS

Method:	8260B	Analysis Batch: 680-105696	Instrument ID:	GC/MS Volatiles - P
Preparation:	5030B		Lab File ID:	p2061.d
Dilution:	5.0		Initial Weight/Volume:	5 mL
Date Analyzed:	05/09/2008 1919		Final Weight/Volume:	5 mL
Date Prepared:	05/09/2008 1919			

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	1700		2.6	10

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	88	75 - 120
Dibromofluoromethane	98	75 - 121
Toluene-d8 (Surr)	104	75 - 120

DATA REPORTING QUALIFIERS

Client: Catlin Engineers and Scientists

Job Number: 680-36457-1

<u>Lab Section</u>	<u>Qualifier</u>	<u>Description</u>
GC/MS VOA	U	Indicates the analyte was analyzed for but not detected.

Quality Control Results

Client: Catlin Engineers and Scientists

Job Number: 680-36457-1

Surrogate Recovery Report

8260B Volatile Organic Compounds by GC/MS

Client Matrix: Water

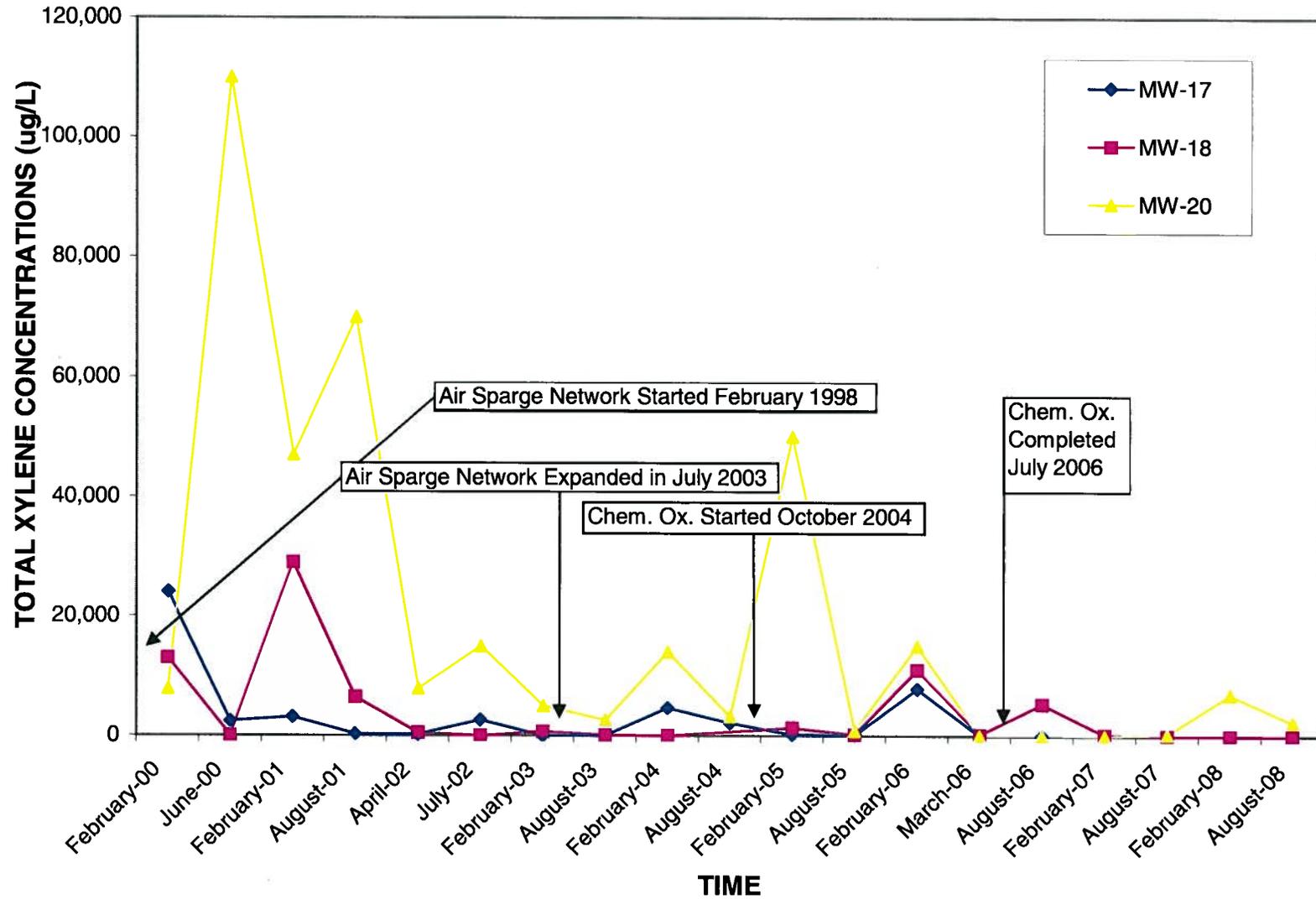
Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-36457-1	MW-19	88	98	104
MB 680-105696/14		79	100	100
LCS 680-105696/12		103	110	104

Surrogate	Acceptance Limits
BFB = 4-Bromofluorobenzene	75-120
DBFM = Dibromofluoromethane	75-121
TOL = Toluene-d8 (Surr)	75-120

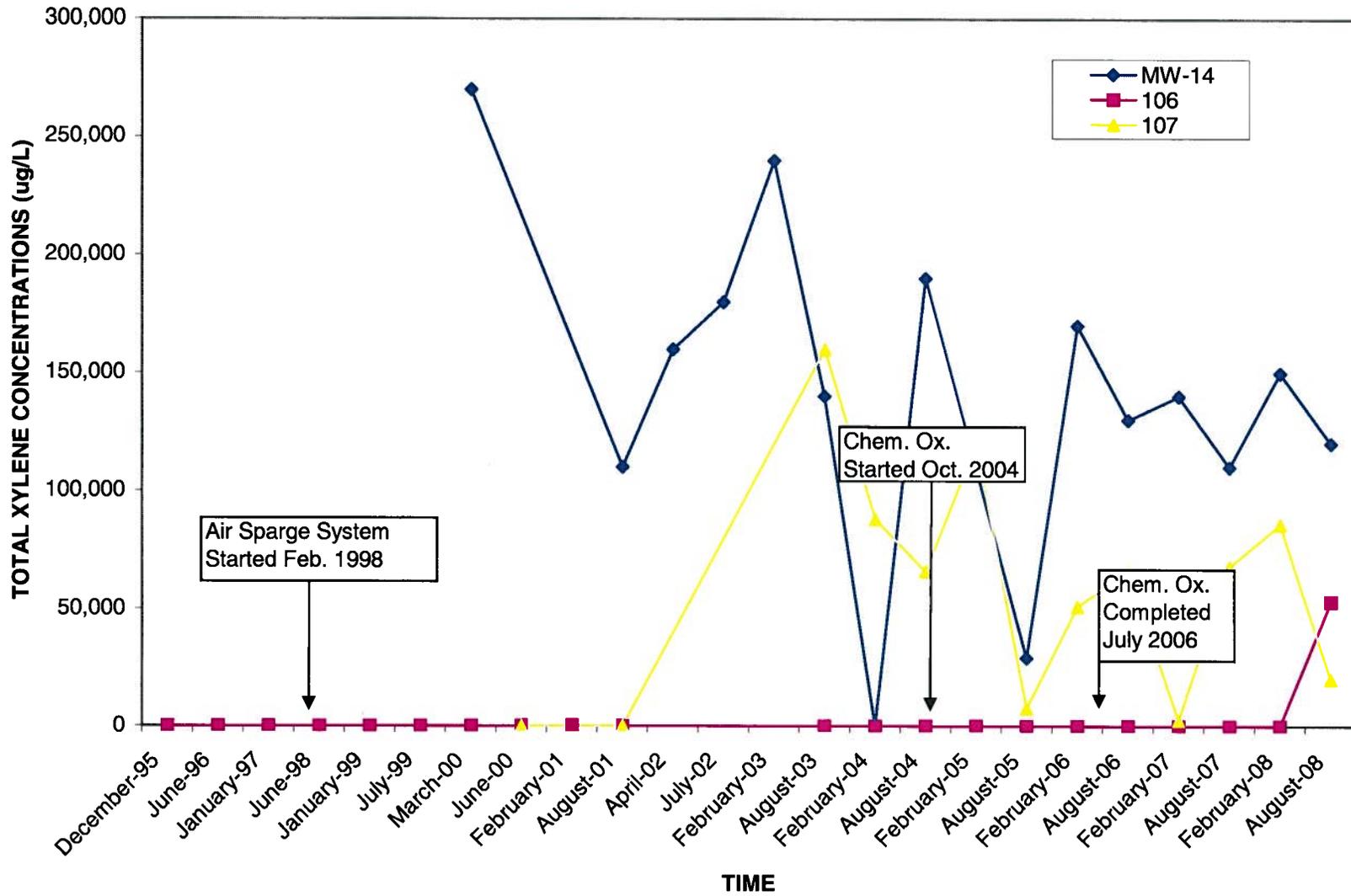
APPENDIX B

**GRAPHS – GROUNDWATER QUALITY DATA FOR SELECTED MONITORING
WELLS**

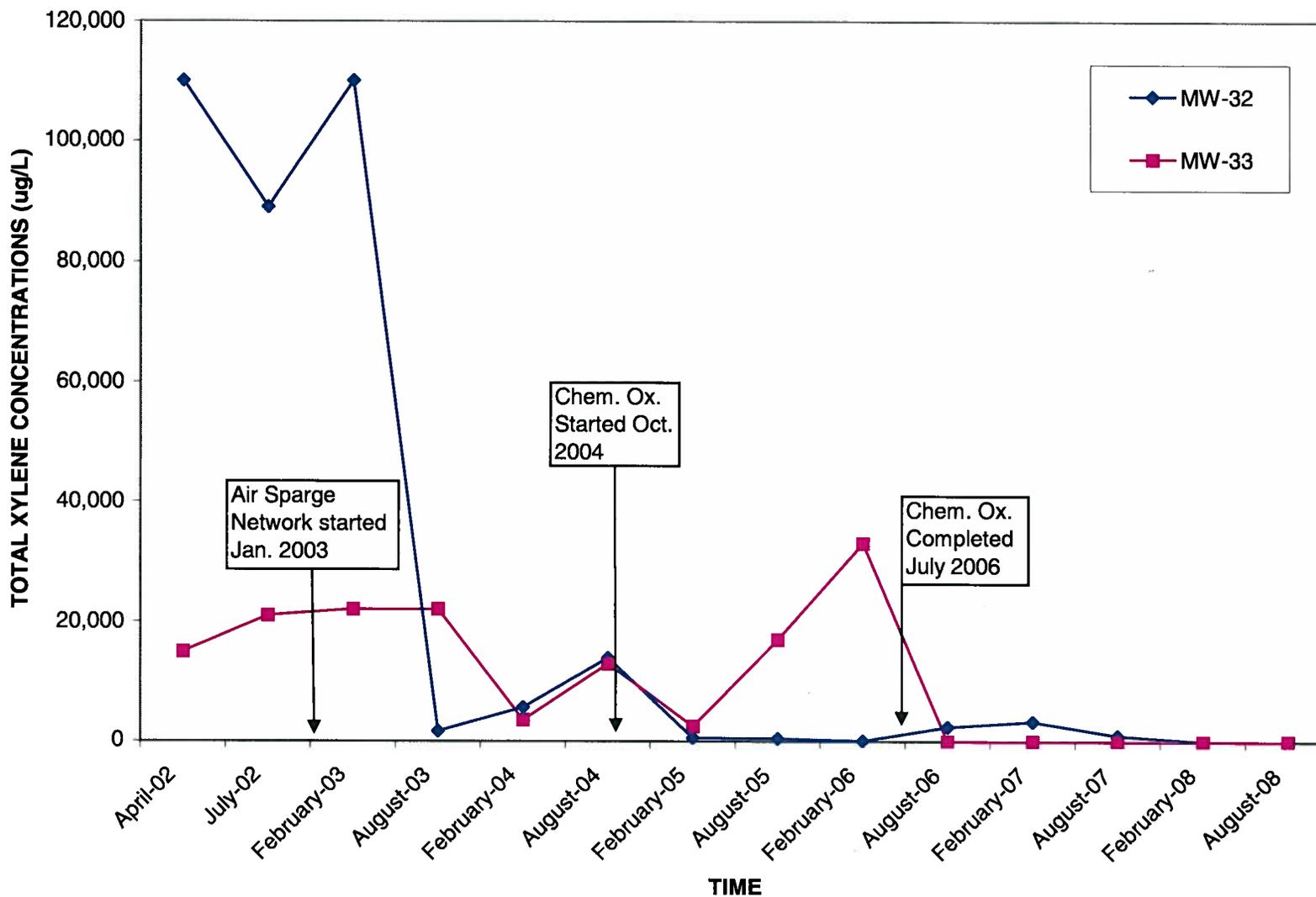
MONITORING WELLS ASSOCIATED WITH AIR SPARGE NETWORK A



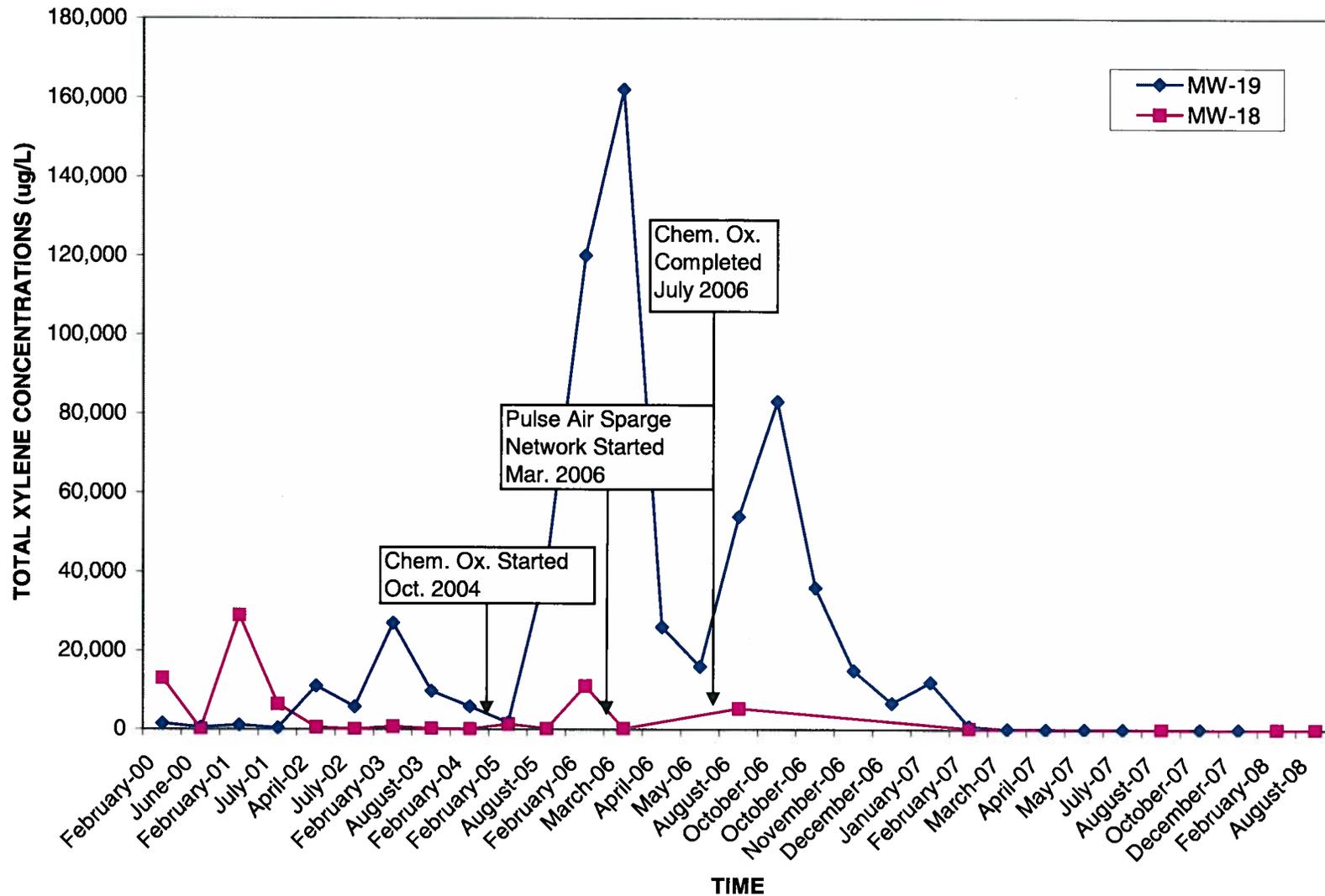
MONITORING WELL ASSOCIATED WITH AIR SPARGE NETWORK B



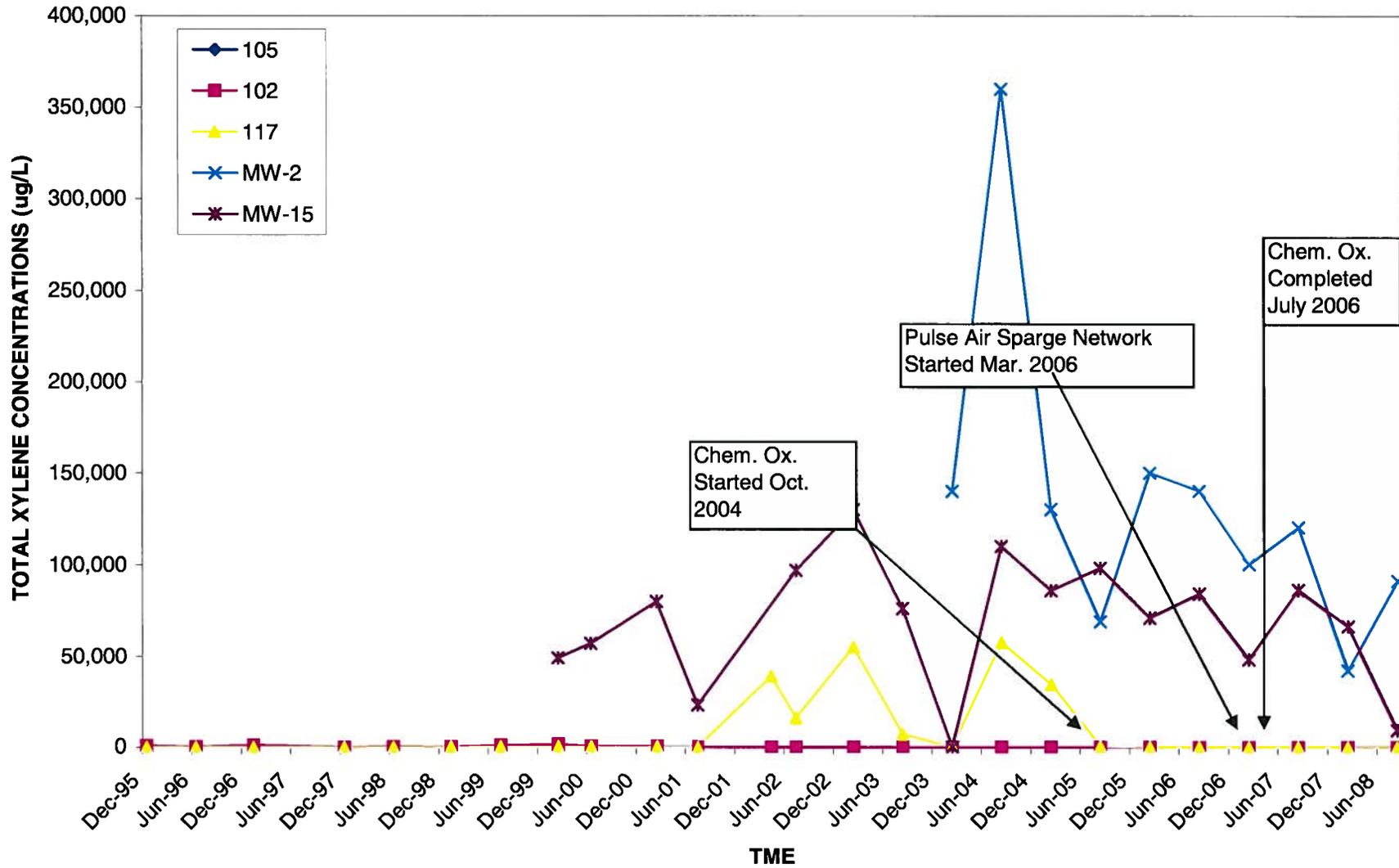
MONITORING WELLS ASSOCIATED WITH AIR SPARGE NETWORK C



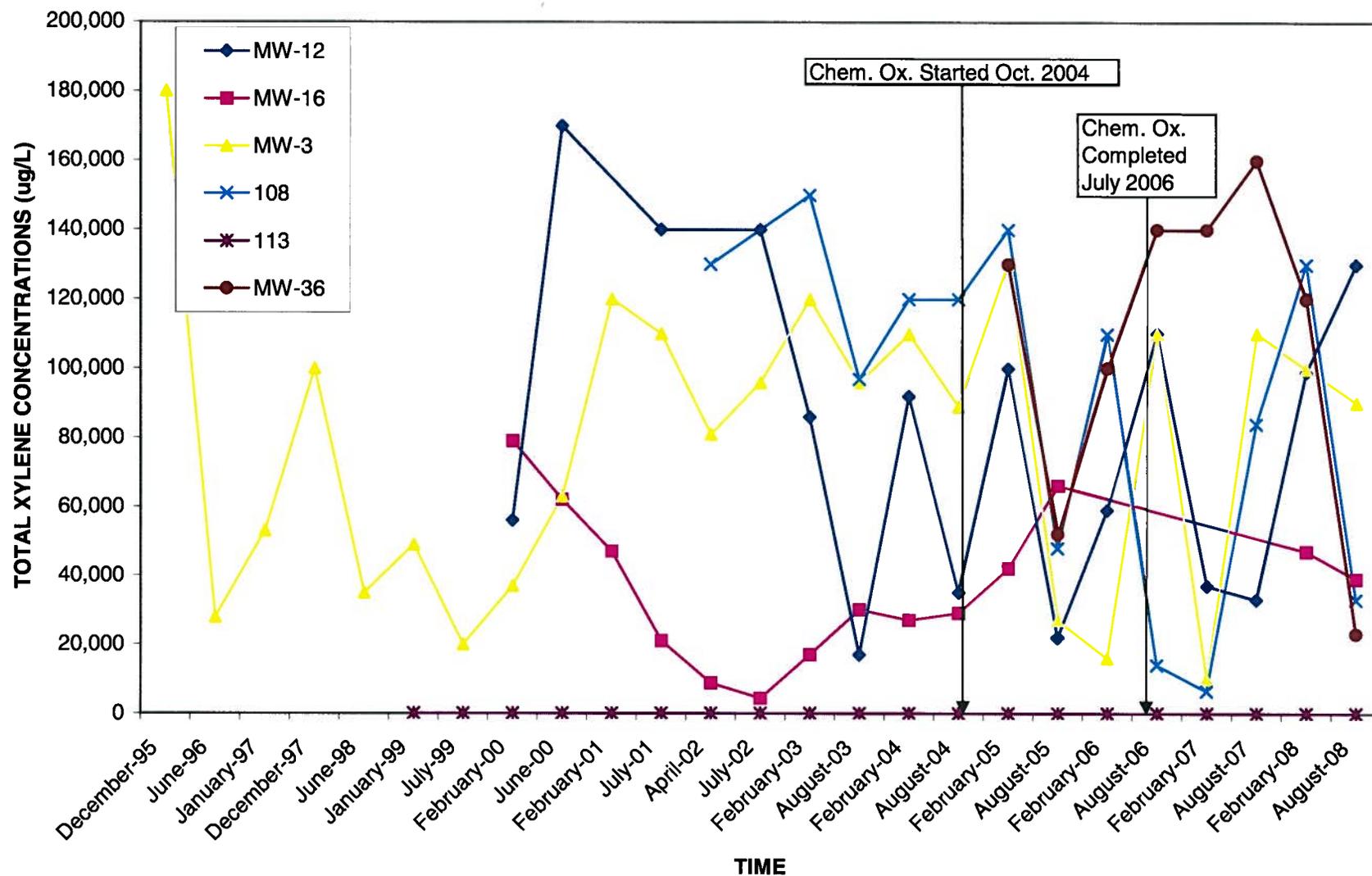
MONITORING WELLS ASSOCIATED WITH THE PULSE AIR SPARGE NETWORK ZONE 1



MONITORING WELLS ASSOCIATED WITH PULSE AIR SPARGE NETWORK ZONE 2



SELECTED BACKGROUND WELLS



APPENDIX C
CONTAMINANT TRANSPORT MODELING AT PARAXYLENE FACILITY

CONTAMINANT TRANSPORT MODELING

INVISTA S.à.r.l.
North Terminal - Paraxylene Facility
3325 River Road
Wilmington, North Carolina

GENERAL MODEL DESCRIPTION

Visual MODFLOW 4.2 (MODFLOW) is a three dimensional analytical transport model based on finite-difference analysis. MODFLOW can be used for a variety of applications including water supply evaluation, contaminant remediation and many other applications. MODFLOW supports several different contaminant transport modeling programs (MT3D, MT3DMS, RT3D, PHT3D) for simulating single species, multiple species or reactive multiple species transport. For the purposes of modeling the dissolved Total Xylene concentrations at the Paraxylene Facility within the Invista North Terminal, herein known as the Paraxylene Facility, the MT3D numerical transport model was utilized.

MT3D is a transport model that simulates advection, dispersion, and chemical reactions of contaminants in groundwater flow systems. MT3D solves the transport equation after the flow solution has been obtained from the groundwater flow system, MODFLOW. Like MODFLOW, MT3D utilizes finite-difference solutions for modeling contaminant transport.

MODEL ASSUMPTIONS

The assumptions for the Visual MODFLOW model included:

1. Steady-state groundwater flow conditions.
2. Saturated flow simulation with constant density.
3. Irreversible soil sorption with first-order contaminant decay.
4. The aquifer flow fields are homogenous and isotropic (sandy soil).
5. Irreversible first order decay of dissolved contaminants concentrations.
6. Input values for Total Xylene concentrations are from August 2008 sampling event. However, for modeling natural attenuation of existing portions of the North Terminal, the portion of the project site between River Road. and monitoring well KRW-5 was considered clean. Please refer to the Figure titled *Initial Modeling Conditions*.

MODEL SIMULATION

The objective of modeling the groundwater conditions at the Paraxylene Facility was to simulate the transport of dissolved Total Xylenes over time if the area of contamination is only located east of monitoring well KRW-5.

In order to effectively model the Paraxylene Facility, multiple input parameters were required to be incorporated into the MODFLOW program. These input parameters included topographic elevation data, groundwater elevations (August 2008, Total Xylene concentrations (August 2008) at select monitoring wells, soil characteristic data and other parameters indicated in the Table titled *MODFLOW Input Parameters*. Input parameter values were determined from previous sampling/gauging events, topographic survey data, well construction documents, published research documents and the Comprehensive Site Assessment dated August 7, 2000 for this area of interest.

Once input parameters were integrated into the model, the model was calibrated to insure the correct input parameters were incorporated into the model. Generally, model calibrations are conducted by comparing contaminant concentrations across the entire project site for specific time periods. It is important to note that due to air sparging and chemical oxidation implementation, it was difficult to utilize calibration techniques for the entire project site. Therefore, model calibrations were limited to select point locations throughout the project site. Point locations used for model calibration were monitoring wells MW-10, MW-12, MW-17, MW-18 and MW-19.

RESULTS

The model was executed for 1-year, 5-year and 10-year run simulations. Each run simulation was evaluated and concentrations compared to the Total Xylenes NCAC T15A:02L Groundwater Quality Standards (2L GWQS) of 530 µg/L.

According to the model based on the stated assumptions, the dissolved Total Xylene concentrations should meet current 2L GWQS within approximately 10 years in the event that only natural attenuation was utilized within the area up gradient of monitoring well KRW-5. Please refer to the attached Figures for each of the model run simulations. Please note that our knowledge of the project site leads us to believe this time period is most likely underestimated. However, model simulations indicate if groundwater contamination is remediated down gradient of monitoring well KRW-5, migration of Total Xylenes concentrations above 2L GWQS is unlikely. It is recommended that model simulations be performed on an annual basis to allow for improved calibration of the model.

MODFLOW INPUT PARAMETERS

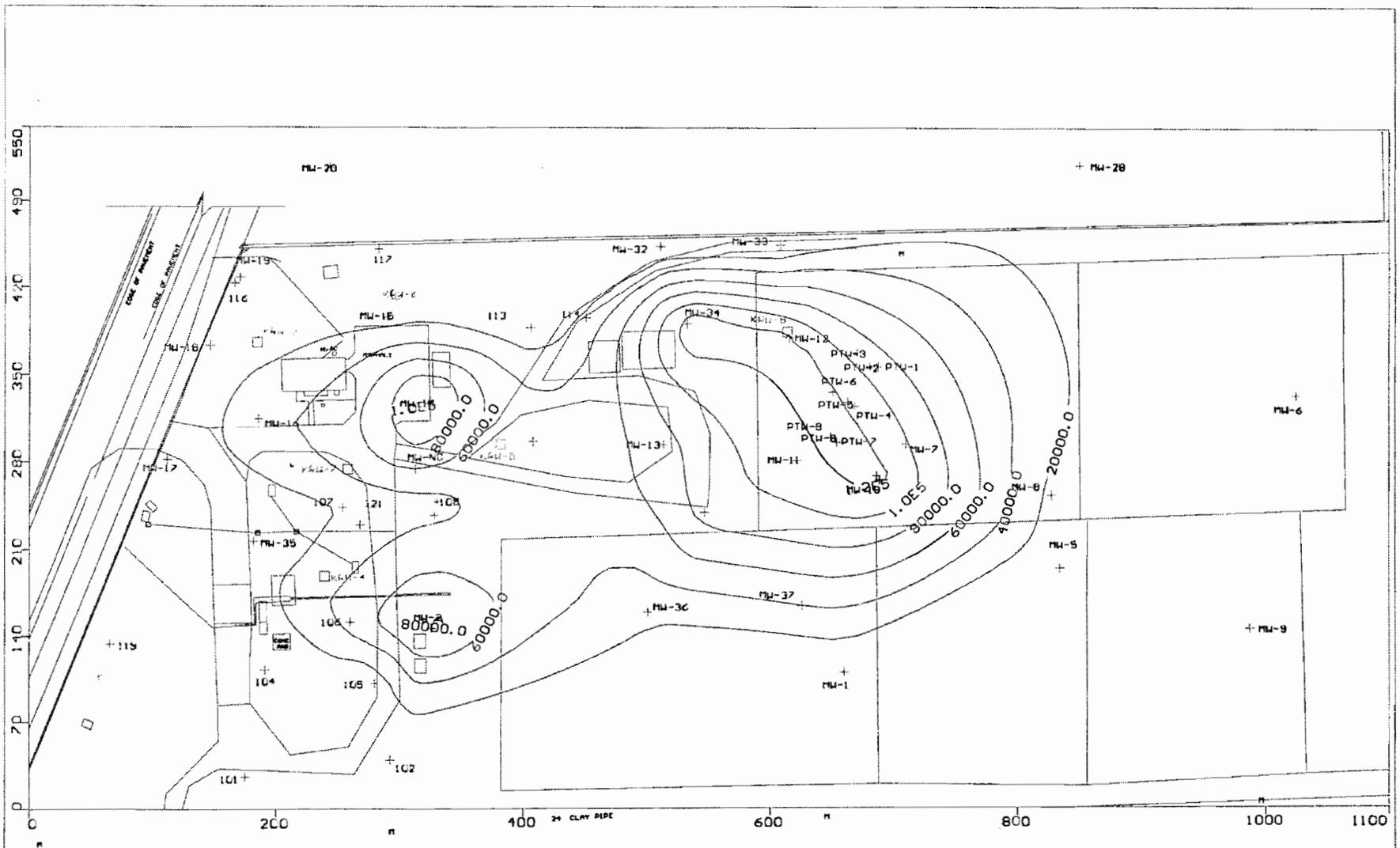
Paraxylene Facility
River Road
Wilmington, NC

PARAMETER	VALUE	COMMENTS
<i>HYDROGEOLOGY</i>		
Hydraulic Conductivity (K)	11.62 ft/d	Value presented in CSA
Effective Porosity (n_{eff})	0.39	Value presented in CSA
Total Porosity (n_{tot})	0.43	Assumed value based on literature based on soil type
Specific Storage (S_s)	3.04×10^{-6} 1/ft	Assumed value based on literature based on soil type
Specific Yield (S_y)	0.2	Assumed value based on literature based on soil type
Soil Bulk Density	1.47 g/cm ³	Assumed value based on literature based on soil type
<i>DISPERSION</i>		
Longitudinal Dispersivity	32.8 ft.	Calculated based on plume dimensions
Dispersion Coefficient	6.21×10^{-6} cm ² /s	Assumed value based on EPA literature
<i>BOUNDARY CONDITIONS</i>		
Evapotranspiration Rate	1.14 mm/d	Assumed value based on USGS literature
Recharge Rate	8.14 in/yr	Assumed value based on USGS literature

CSA - Comprehensive Site Assessment

EPA - Environmental Protection Agency

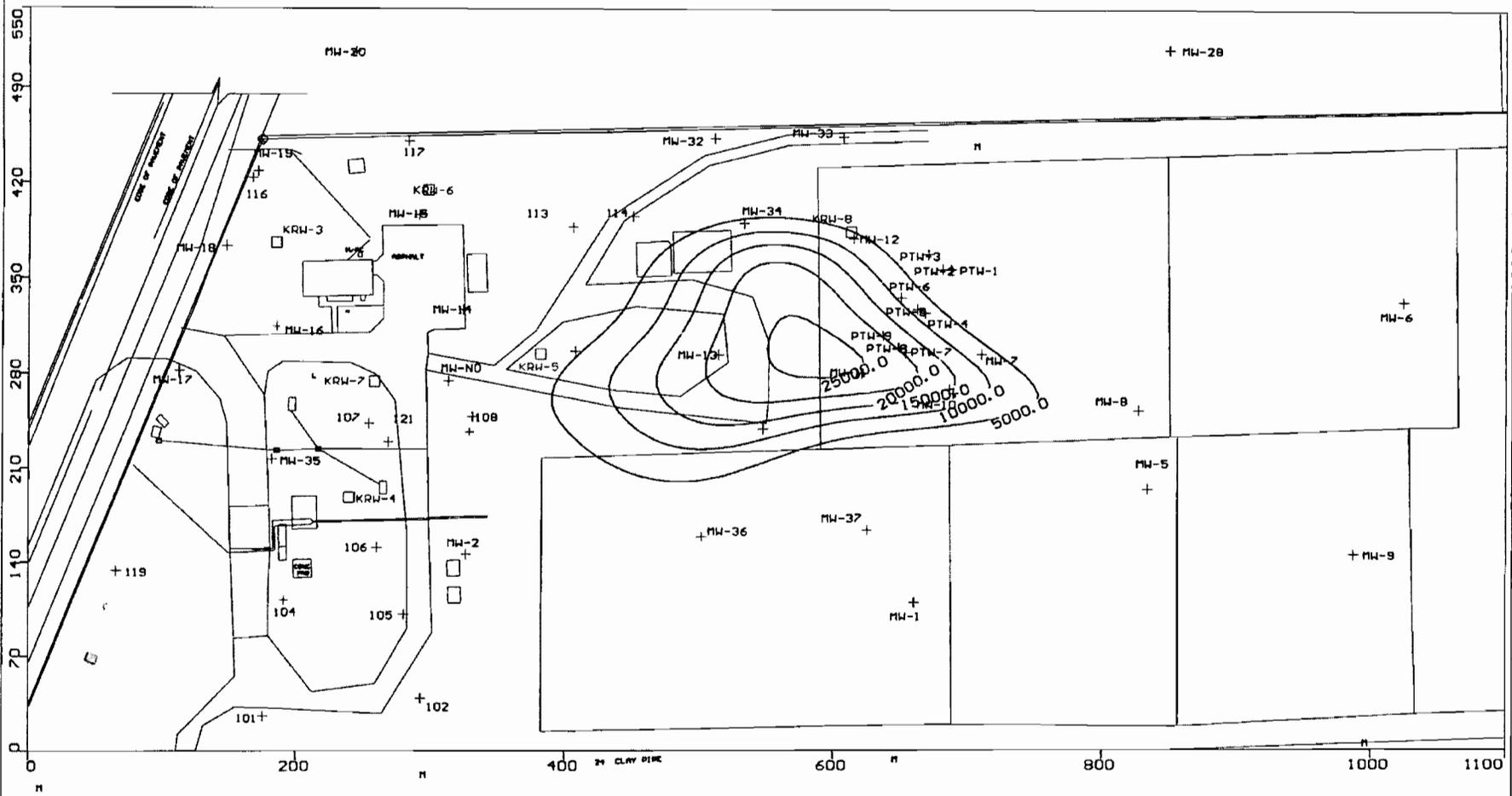
USGS - United States Geological Survey



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14

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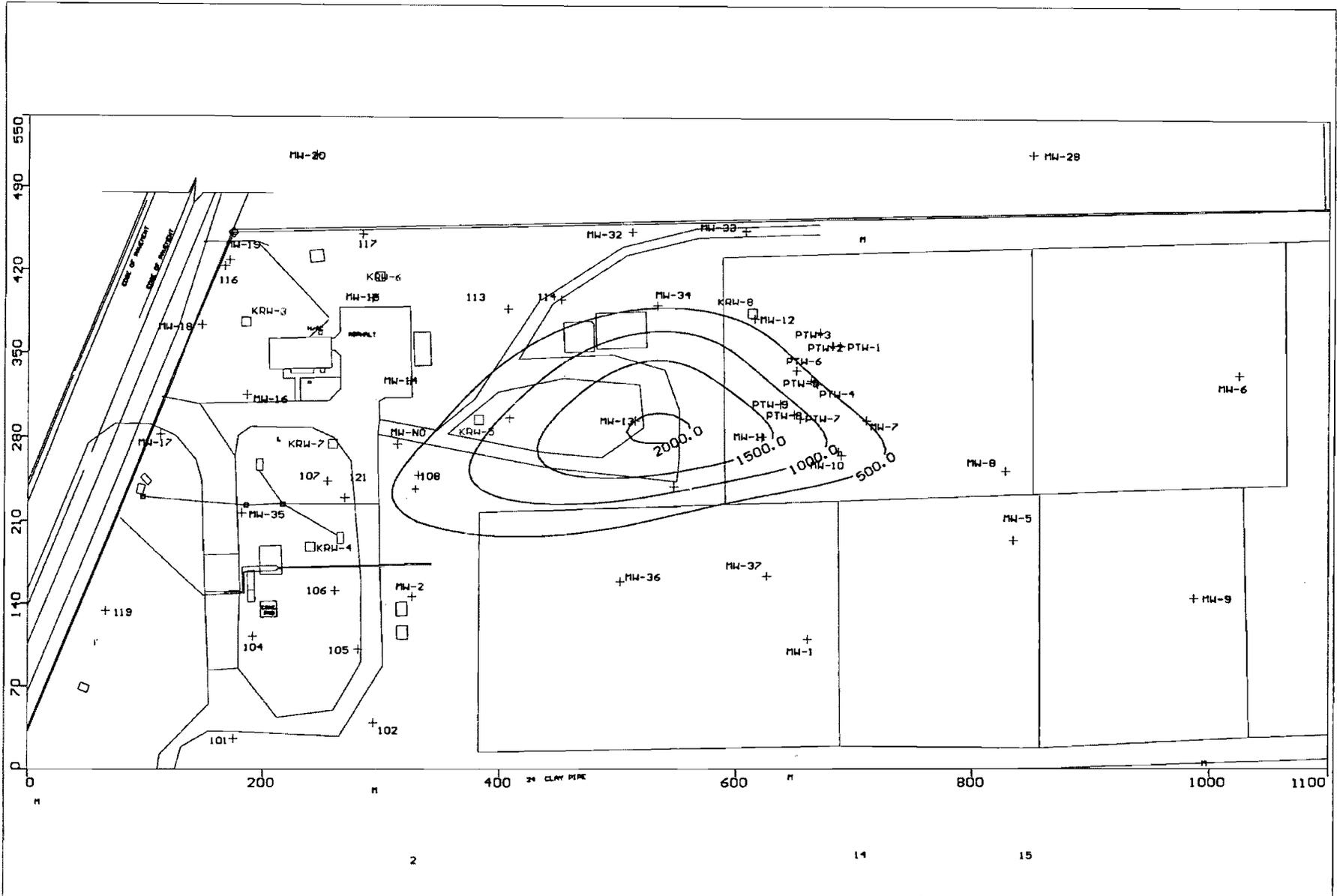


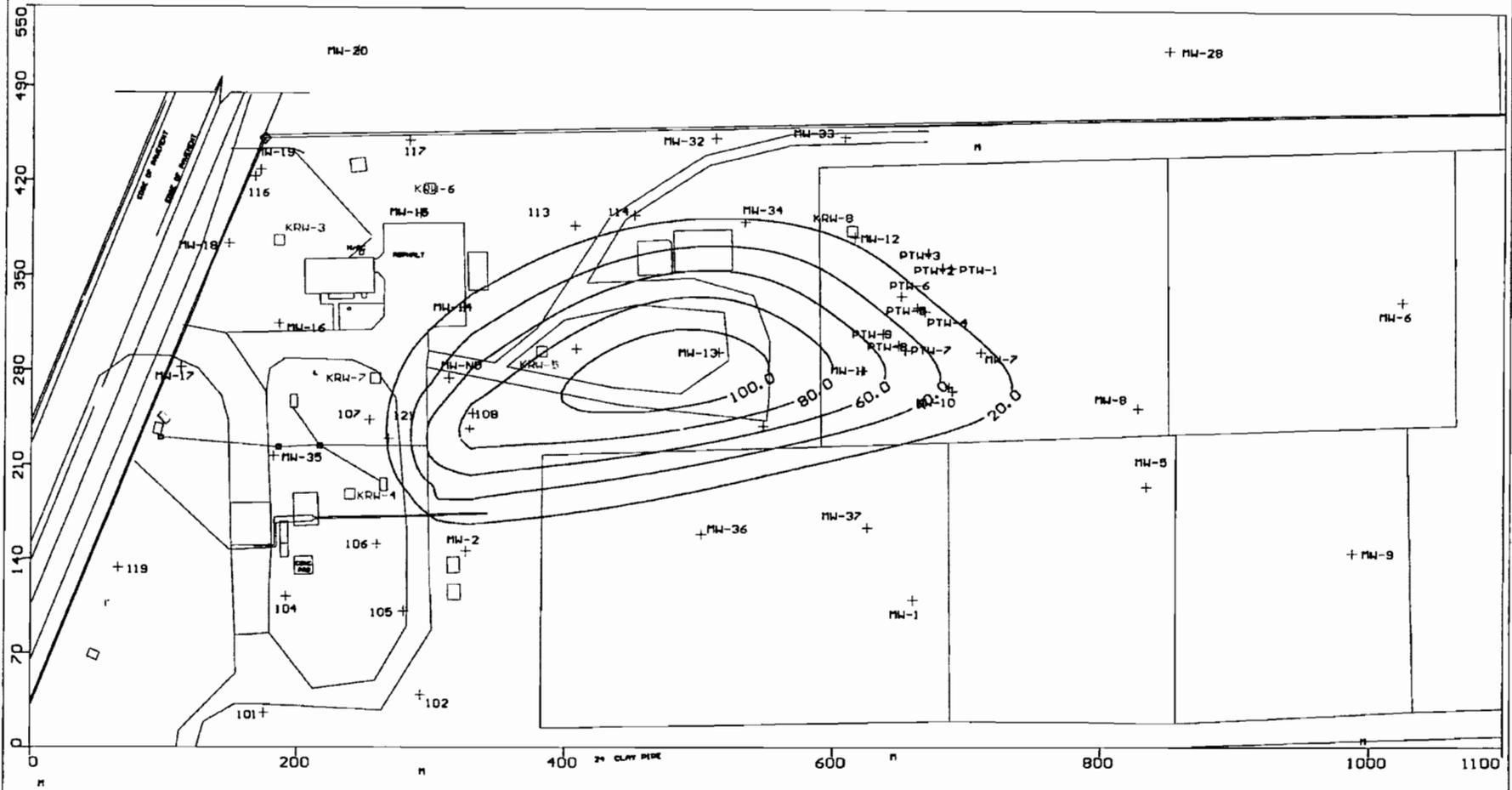
1-YEAR RUN SIMULATION

2

14

15





2

14

15



10-YEAR RUN SIMULATION