REMEDIATION UPDATE REPORT
FOR
FEBRUARY 2009 – AUGUST 2009

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

DECEMBER 16, 2009

PREPARED ON BEHALF OF:

FLINT HILLS RESOURCES, LP

CATLIN PROJECT NO. 201-125

PREPARED BY:

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December 16, 2009

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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 2009 to August 2009**
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 Mr. Michael Christopher at (713) 544-9256 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

Dimitri Talbert
Project Scientist

Enclosure

CC: Mr. Michael Christopher - Reiss Remediation, LLC (w/ encl.)
Ms. Nicole Cory – Flint Hills Resources, LP (w/ encl.)
Ms. Donna Lazzari – INVISTA S.àr.l. (w/ encl.)
Mr. Todd Walton – North Carolina State Ports Authority (w/ encl.)
Mr. Eli Holland – Groundwater & Environmental Service of North Carolina, Inc. (w/ encl.)
Mr. Devon Watts – Sunoco (w/ encl.)

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

DECEMBER 16, 2009

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 soil and 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 2009 through August 2009 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 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

Document	Date	Author	Comments
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

NCDENR APS – North Carolina Department of Environment and Natural Resources Aquifer Protection Section

Based on 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), FHR understands that regulatory responsibility for the PX Facility was transferred from the Aquifer Protection Section (APS) to the Inactive Hazardous Sites Branch (IHSB). In response to IHSB's request, by a letter dated September 13, 2007, FHR and CATLIN submitted a Voluntary Cleanup Checklist (VCC) concerning the PX Facility on October 19, 2007. This VCC was prepared based on FHR and CATLIN's knowledge at that time of the on-site conditions, while assuming that off-site conditions were being addressed by others. The IHSB has evaluated the VCC, approved the PX Facility 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 (4) 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 is identified 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, regulatory responsibility for the other areas now resides with NCDENR – Division of Waste Management (DWM) – Underground Storage Tank (UST) Section. Accordingly, FHR regularly submits Remediation Update Reports for the other areas of concern under separate cover to NCDENR – Division of Waste Management (DWM) – Underground Storage Tank (UST) Section. 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.

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 PX Facility. 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 2009 through August 2009.

2.1.2 Contaminants of Concern

The NCDENR 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 Xylene concentrations to the 15A North Carolina Administrative Code 2L.0202 North Carolina Groundwater Quality Standard (2L GWQS) of 530 micrograms per Liter (µg/L) or for PX remediation data (graphical representation) to reach an asymptotic trend. Currently, PX Facility groundwater samples are analyzed by an independent analytical laboratory for M/P Xylenes concentration in µg/L per EPA Method 8260B to monitor the dissolved PX concentrations.

2.2 ADDITIONAL ASSESSMENT ACTIVITIES

In addition to the scheduled monitoring activities, the stormwater management improvements discussed in the previous update report were completed during the February to August 2009 reporting period. Air sparge well SS-1 was abandoned on April 22, 2009 due to interference with the stormwater management improvements installation. A North Carolina Well Abandonment Record, dated July 27, 2009 was submitted to NCDENR documenting the abandonment of SS-1. A copy of the

abandonment record is within the attached Appendix A. Replacement of pulse air sparge well SS-1 is not recommended since adjacent monitoring wells exhibit M/P Xylenes concentrations well below the 2L GWQS (530 ug/L).

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-4, 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, KRW-5, 101 (February 2009 only), 102, 104 (August 2009 only), 105 (August 2009 only), 106, 107, 108, 113, 117, and 119) for M/P Xylenes analysis per EPA Method 8260B. Monitoring wells were selected to provide data concerning PX plume boundary and high historical concentration conditions.
- In order to monitor the effectiveness of the air sparge system, dissolved oxygen concentrations were obtained from groundwater samples of selected monitoring wells (MW-1, MW-2, MW-3, MW-4, 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 (February 2009 only), 102, 104 (August 2009 only), 105 (August 2009 only), 106, 107, 108, 113, and 117).
- Submit the latest field and laboratory data in this 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 Remedial Approach

2.4.2.1 Pulse Air Sparge

The remedial approach implemented within the PX Facility during the time period from February 2009 through August 2009 included the use of various groundwater 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) Networks Zone 1 and Zone 2 were also operational during the time period of this report. Previous Remediation Update Reports documented modifications that have historically been implemented for both the continuous and PAS networks.

From February 2009 through May 2009, the PAS system was operational 67% of the time. The downtime was due to an equipment failure that resulted in the replacement of the site air compressor and site construction activities that necessitated the shutdown of the PAS system. From June 2009 through August 2009 the PAS system was operational 99% of the time.

2.4.2.2 Chemical Oxidation

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 parts per billion (ppb) at that time. The benefits of the chemical oxidation activities have been documented in previous Remediation Update Reports.

2.4.2.3 Groundwater Recovery Data

The remedial approach was modified in 2005 with NCDENR approval, in a letter dated June 7, 2005, 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.

2.4.3 Groundwater Field Data

2.4.3.1 Groundwater Table Data

On August 17, 2009 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.

2.4.3.2 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). 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.

The latest (August 2009) groundwater DO concentration data has been summarized in Table 2 and illustrated on Figure 5. 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	3.81 to 8.06
B	106, 107, MW-14	0.67 to 0.95
C	MW-32, MW-33	4.03 to 5.22
Pulse Zone 1	MW-18*, MW-19	4.92 to 5.01
Pulse Zone 2	102, 105, 117, MW-2, MW-15	0.78 to 5.57
Background wells	104, 108, 113, MW-1, MW-3, MW-4, MW-12, MW-16, MW-35, MW-36, KRW-5	0.61 to 6.71

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

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 overall 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.

2.4.3.3 Free-Phase PX Data

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

2.4.4 Groundwater Laboratory Data

CATLIN personnel obtained the latest representative groundwater samples from selected monitoring wells on August 18 and 19, 2009. Prior to obtaining a groundwater sample, select monitoring wells were developed a minimum of three well volumes utilizing a disposable bailer or pump. The selected monitoring wells were based on the recommendations of the previous Remediation Update Report. All groundwater samples from the August 2009 sample event were submitted to Pace Analytical Services, Inc. (NC Certification # 12) in Huntersville, North Carolina 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 B. 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 C. The current interpolated horizontal extent of dissolved M/P Xylenes within the site groundwater has been illustrated on Figure 6. Please note that monitoring well MW-37 was not sampled during this sampling event due to insufficient water in the monitoring well.

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 C, 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 downgradient property boundary have been predominantly successful. Flint Hills Resources, LP voluntarily implemented a more frequent sampling program of MW-19 beginning in March 2006 to evaluate the efficiency of the PAS System and the chemical oxidation activities. Generally, the well was sampled bi-weekly until the August 2006 semi-annual monitoring event, when a monthly sampling program was implemented. This program continued until August 2007 when a bi-monthly sampling program was implemented. An increase in the M/P Xylene concentration for MW-19 was observed in February 2009. The increased concentration was believed to be a result of a 13-day down period just prior to the sampling event when the PAS system was not operational due to an equipment failure that resulted in the replacement of the site air compressor. In order to better evaluate the conditions around this well and track the effectiveness of the PAS, a monthly sampling program was re-initiated in April 2009 that also included monthly sampling of the adjacent monitoring well MW-18. Results from the monthly sampling have also been included in Table 3, Appendix B and Appendix C of this report. The decreases in M/P Xylene concentrations for MW-18 and MW-19 observed during this reporting period indicate that additional remedial actions along the downgradient property boundary are not necessary at this time. The current remedial approach will continue along with a modified monitoring program (see Section 3.0 of this report) for MW-18 and MW-19.

2.4.5 Groundwater M/P Xylene Transport Modeling

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 previous reports.

The data from the August 2009 sampling event has been utilized to update the previous contaminant transport modeling based on the most current site data. The updated model 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 (based on current data) 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 indicated that natural attenuation would remediate current total Xylene concentrations upgradient of KRW-5 to current 2L GWQS (530 µg/L) within 7 to 10 years. These results were consistent with earlier modeling updates. Although our field knowledge of the project site leads us to believe that reaching 2L GWQS upgradient of KRW-5 within 7 to 10 years may be underestimated, model simulations continue to indicate that, so long as Xylene concentrations downgradient of monitoring well KRW-5 meet 2L GWQS, migration off the property of total Xylene concentrations above 2L GWQS is unlikely. Additional updated model simulations are recommended in the future to allow for continued 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 Appendix D of this report.

3.0 FUTURE ACTIVITIES AND RECOMMENDATIONS

- Monitoring and operation of air sparge system as follows:

  1) Continue to operate Networks A, B and C as a continuous air sparge system.
  2) Continue to operate Pulse Networks 1 and 2 as a PAS system.

- Modify sampling program at downgradient property boundary wells (MW-18 and MW-19) to be on a quarterly basis unless concentrations above 2L GWQS are observed again. In the event of 2L GWQS exceedances in this area, then a monthly sampling program should be re-implemented.

- Update contaminant transport modeling following the August 2010 sampling event.

- Since the groundwater concentration trend and remedial activities have remained consistent since implementation of the PAS system, it is recommended that the site semi-annual activities be reduced to annual activities. Therefore, the next sampling event will occur in August 2010.

- The number of monitoring wells sampled during future sampling events should be reduced to only wells deemed significant for the continual evaluation of remedial progress. Monitoring wells that have not changed over the past couple years should not be sampled; however, they should be maintained for future sampling as necessary. The following monitoring wells will be sampled during the next annual sampling event scheduled for August 2010:

  MW-2, MW-8, MW-10, MW-12, MW-13, MW-16, MW-18, MW-19, MW-20, MW-36, KRW-5, 107, and 117 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-2, MW-3, MW-12, MW-14, MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-32, MW-33, MW-36, KRW-5, 102, 105, 106, 107 and 117.

Jeffery K. Becken, P.E.
Project Manager

Dimitri Talbert
Project Scientist

TABLES

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2009

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 III 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
	2/11/2009		11.04	NMT	NA	28.41
	8/17/2009		10.48	NMT	NA	28.97
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
	2/11/2009		5.89	NMT	NA	23.22
	8/17/2009		5.12	NMT	NA	23.99
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
	2/11/2009		10.63	NMT	NA	27.21
	8/17/2009		10.07	NMT	NA	27.77
MW-4	8/2/2006	33.84	8.21	NMT	NA	25.63
	2/5/2007		6.65	NMT	NA	27.19
	2/11/2009		10.62	NMT	NA	23.22
	8/17/2009		10.06	NMT	NA	23.22
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
	2/11/2009		10.69	NMT	NA	28.87
	8/17/2009		10.12	NMT	NA	29.44
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
	2/11/2009		11.08	NMT	NA	28.77
	8/17/2009		10.51	NMT	NA	29.34
MW-9	NA	36.88	NM			

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2009

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-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
	2/11/2009		7.46	NMT	NA	27.99
	8/17/2009		6.91	NMT	NA	28.54
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
	2/11/2009		10.08	NMT	NA	25.15
	8/17/2009		9.25	NMT	NA	25.98
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
	2/11/2009		10.23	NMT	NA	23.67
	8/17/2009		8.48	NMT	NA	25.42
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
	2/11/2009		7.08	NMT	NA	22.31
	8/17/2009		6.56	NMT	NA	22.83
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
	2/11/2009		7.69	NMT	NA	21.13
	8/17/2009		7.31	NMT	NA	21.51
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
	2/11/2009		7.55	NMT	NA	20.66
	8/17/2009		7.08	NMT	NA	21.13

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2009

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-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
	2/11/2009		5.41	NMT	NA	20.16
	8/17/2009		4.65	NMT	NA	20.92
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
	2/11/2009		10.15	NMT	NA	16.77
	8/17/2009		9.73	NMT	NA	17.19
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
	9/29/2008		9.88	NMT	NA	17.71
	10/30/2008		10.50	NMT	NA	17.09
	12/1/2008		9.88	NMT	NA	17.71
	2/11/2009		10.80	NMT	NA	16.79
	8/17/2009		10.50	NMT	NA	17.09
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
	2/11/2009		12.47	NMT	NA	16.82
	8/17/2009		11.96	NMT	NA	17.33
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
	2/11/2009		9.27	NMT	NA	27.14
	8/17/2009		8.71	NMT	NA	27.70
MW-30	NA	35.20	NOT LOCATED			

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2009

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-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
	2/11/2009		10.40	NMT	NA	23.29
	8/17/2009		9.87	NMT	NA	23.82
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
	2/11/2009		11.40	NMT	NA	23.76
	8/17/2009		10.67	NMT	NA	24.49
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
	2/11/2009		9.42	NMT	NA	24.47
	8/17/2009		8.77	NMT	NA	25.12
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
	2/11/2009		4.50	NMT	NA	23.91
	8/17/2009		4.03	NMT	NA	24.38
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
	2/11/2009		7.80	NMT	NA	27.66
	8/17/2009		7.24	NMT	NA	28.22
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
	2/11/2009		Dry	NMT	NA	NA
	8/17/2009		6.97	NMT	NA	29.29

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2009

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)
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
	2/11/2009		5.45	NMT	NA	23.43
	8/17/2009		4.88	NMT	NA	24.00
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
	2/11/2009		6.42	NMT	NA	23.46
	8/17/2009		5.88	NMT	NA	24.00
104	8/17/2009	28.10	4.68	NMT	NA	23.42
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
	2/11/2009		Unable to gauge well - obstruction present.			
	8/17/2009		Well damaged - Previous top of casing measurment no longer valid			
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
	2/11/2009		3.38	NMT	NA	23.13
	8/17/2009		2.81	NMT	NA	23.70
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
	2/11/2009		7.07	NMT	NA	24.26
	8/17/2009		6.56	NMT	NA	24.77
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
	2/11/2009		8.75	NMT	NA	22.75
	8/17/2009		8.22	NMT	NA	23.28

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2009

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)
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
	2/11/2009		11.24	NMT	NA	22.66
	8/17/2009		10.77	NMT	NA	23.13
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
	2/11/2009		10.95	NMT	NA	20.38
	8/17/2009		10.51	NMT	NA	20.82
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
	2/11/2009		6.07	NMT	NA	20.61
	8/17/2009		5.87	NMT	NA	20.81
121	NA	29.20	NM			
PTW-1	NA	36.67	NM			
PTW-2	NA	36.68	NM			
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			

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED MONITORING WELLS – AUGUST 2006 THROUGH AUGUST 2009

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 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			
	2/11/2009		8.29	NMT	NA	24.29
	8/17/2009		7.74	NMT	NA	24.84
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 2009

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
	2/16/2009	0.56
102	8/9/2007	1.10
	2/25/2008	0.41
	8/18/2008	0.12
	2/16/2009	0.54
	8/25/2009	0.78
104	8/25/2009	0.61
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
	8/25/2009	0.83
106	8/8/2007	1.62
	2/27/2008	0.66
	8/18/2008	0.32
	2/16/2009	0.71
	8/25/2009	0.76
107	8/8/2007	0.86
	2/27/2008	0.43
	8/18/2008	0.20
	2/16/2009	0.56
	8/25/2009	0.67
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
	2/16/2009	0.59
	8/25/2009	0.91
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
	2/16/2009	0.57
	8/25/2009	0.98
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
	2/16/2009	6.56
	8/25/2009	0.89

TABLE 2

SUMMARY OF DISSOLVED OXYGEN MEASUREMENTS FROM SELECTED MONITORING WELLS - AUGUST 2006 THROUGH AUGUST 2009

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
	2/16/2009	7.55
	8/25/2009	6.71
MW-2	8/8/2007	5.61
	2/27/2008	1.43
	8/18/2008	0.17
	2/16/2009	0.62
	8/25/2009	0.84
MW-3	8/9/2007	1.56
	2/26/2008	0.81
	8/18/2008	0.19
	2/16/2009	0.52
	8/25/2009	0.73
MW-4	2/16/2009	0.56
	8/25/2009	0.98
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
	2/16/2009	0.53
	8/25/2009	0.78
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
	2/16/2009	0.46
	8/25/2009	0.95
MW-15	8/8/2007	0.69
	2/27/2008	0.38
	8/18/2008	9.60
	2/16/2009	0.52
	8/25/2009	5.57
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
	2/16/2009	0.56
	8/25/2009	0.63
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
	2/16/2009	3.18
	8/25/2009	8.06

TABLE 2

SUMMARY OF DISSOLVED OXYGEN MEASUREMENTS FROM SELECTED MONITORING WELLS - AUGUST 2006 THROUGH AUGUST 2009

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
	2/16/2009	0.56
	8/25/2009	4.92
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
	2/16/2009	0.80
	8/25/2009	5.01
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
	2/16/2009	0.57
	8/25/2009	3.81
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
	2/16/2009	8.28
	8/25/2009	4.03
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
	2/16/2009	0.75
	8/25/2009	5.22
MW-35	8/8/2007	1.27
	2/27/2008	0.42
	8/18/2008	0.20
	2/16/2009	0.48
	8/25/2009	0.84
MW-36	8/9/2007	1.29
	2/25/2008	0.40
	2/16/2009	0.53
	8/25/2009	0.92
KRW-5	2/16/2009	0.52
	8/25/2009	0.69

mg/L = milligrams per liter

TABLE 3

SUMMARY OF EPA METHOD 8260 (M/P XYLENE) 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
	2/11/2009	<0.53
	8/18/2009	<2.0
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
	2/11/2009	72,000
	8/19/2009	44,100

TABLE 3

SUMMARY OF EPA METHOD 8260 (M/P XYLENE) 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
	2/11/2009	91,000
	8/19/2009	69,400
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
	2/11/2009	130,000
	8/19/2009	77,300

TABLE 3

SUMMARY OF EPA METHOD 8260 (M/P XYLENE) 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
	2/11/2009	<0.53
	8/19/2009	2.0
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 XYLENE) 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
	2/11/2009	37,000
	8/18/2009	8,190
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
	2/11/2009	140,000
	8/19/2009	77,600
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 XYLENE) 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
	2/11/2009	120,000
	8/19/2009	83,200 E
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
	2/11/2009	85,000
	8/19/2009	57,700
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	180,000 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
	2/11/2009	140,000
	8/19/2009	76,900

TABLE 3

SUMMARY OF EPA METHOD 8260 (M/P XYLENE) 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
	2/11/2009	230
	8/19/2009	18.0
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
	2/11/2009	31,000
	8/19/2009	18,500 P8
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
	2/11/2009	2.5
	8/18/2009	64.0

TABLE 3

SUMMARY OF EPA METHOD 8260 (M/P XYLENE) 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
	2/11/2009	32,000
	4/2/2009	30,000
	5/5/2009	38,000
	5/27/2009	950
	6/30/2009	580
	7/29/2009	129
	8/18/2009	33.4
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

TABLE 3

SUMMARY OF EPA METHOD 8260 (M/P XYLENE) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
INVISTA, NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (ug/L)
MW-19 (continued)	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
	9/29/2008	<0.53
	10/30/2008	<0.53
	12/1/2008	<0.53
	2/11/2009	39,000
	4/2/2009	0.63 J
	5/5/2009	<0.53
	5/27/2009	<0.53
	6/30/2009	<0.20
	7/29/2009	<2.0
	8/18/2009	<2.0
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
	2/11/2009	1,200
	8/18/2009	926
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
	2/11/2009	160
	8/18/2009	2.1

TABLE 3

SUMMARY OF EPA METHOD 8260 (M/P XYLENE) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY

INVISTA, NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (ug/L)
MW-30	1/19/1999	<1
	7/14/1999	<1
	3/1/2000	<1
	6/13/2000	<1
	2/21/2001	<1
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
	2/11/2009	<0.53
	8/18/2009	<2.0
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
	2/11/2009	6,200
	8/18/2009	180
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
	2/11/2009	150,000
	8/19/2009	90,500 P8

TABLE 3

SUMMARY OF EPA METHOD 8260 (M/P XYLENE) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
INVISTA, NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (ug/L)
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
	2/11/2009	440
	8/18/2009	159
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
	2/11/2009	130,000
	8/19/2009	74,300 P8
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
	8/14/2008	Bailed Dry - No Recharge
	2/11/2009	Bailed Dry - No Recharge
	8/18/2009	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
	2/11/2009	19

TABLE 3

SUMMARY OF EPA METHOD 8260 (M/P XYLENE) 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
	2/11/2009	27
	8/18/2009	45.6
104	7/30/2002	<50
	2/20/2004	860
	8/18/2009	<2.0
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
	2/11/2009	Unable to sample well - Obstruction in well.
	8/18/2009	<2.0

TABLE 3

SUMMARY OF EPA METHOD 8260 (M/P XYLENE) 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	120000
	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
	2/11/2009	120,000
	8/19/2009	72,500
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
	2/11/2009	88,000
	8/19/2009	74,600
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
	2/11/2009	150,000
	8/19/2009	95,500

TABLE 3

SUMMARY OF EPA METHOD 8260 (M/P XYLENE) 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
	2/11/2009	2.4
	8/18/2009	<2.0
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
	2/11/2009	<0.53
	8/18/2009	199

TABLE 3

SUMMARY OF EPA METHOD 8260 (M/P XYLENE) 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
	2/11/2009	<0.53
	8/18/2009	<2.0
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 XYLENE) 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 ABANDONDED	
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 XYLENE) 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
	2/11/2009	96,000
	8/19/2009	78,000 P8
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	4/1994	11,900
HP-2	4/1994	11,500
303TW-1	3/28/2003	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
FP = Free-Phase Product
< = Less than method detection limit
* Temporary wells have been permanently abandoned
D = The reported result is from a secondary dilution
E = Analyte concentration exceeded the calibration range. Thr reported result is estimated.
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
P8 = Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.

FIGURES

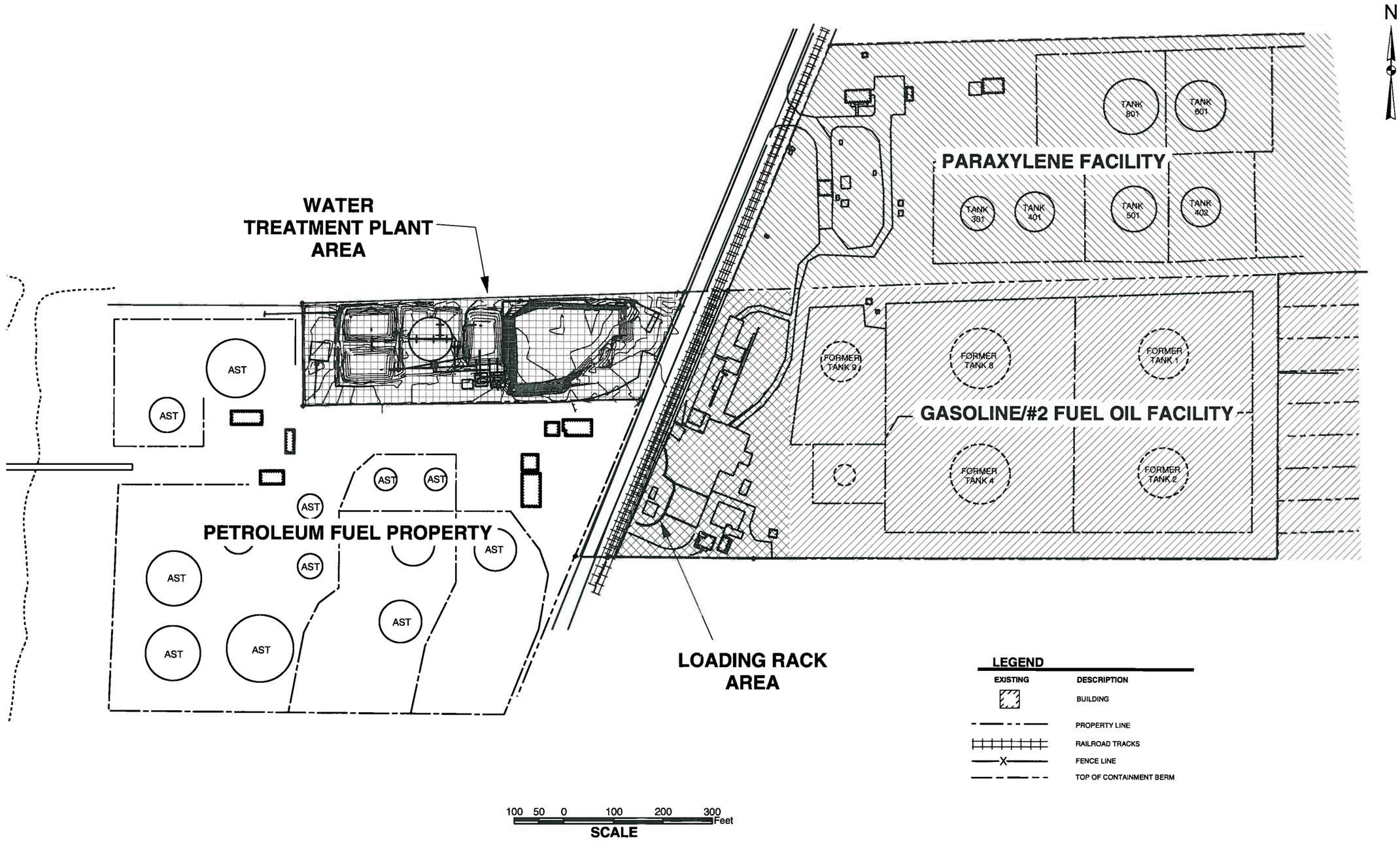
1,000 500 0 1,000 Feet

SCALE

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

CATLIN Engineers and Scientists 220 Old Dairy Road Wilmington, NC 28405 Corporate Licensure No. for Engineering Services C-585	PROJECT INVISTA S.ar.l. NORTH TERMINAL PARAXYLENE FACILITY RIVER ROAD WILMINGTON, N.C.		TITLE GENERAL LOCATION MAP			FIGURE 1
	JOB NO. 201-125	DATE SEPT 2009	SCALE 1"=1000'	DRAWN BY THW	CHECKED BY JKB	

GIS/Projects/FlintHills/NorthTerminal/SITES/PX FACILITY/ SEPT2009/Figure 1

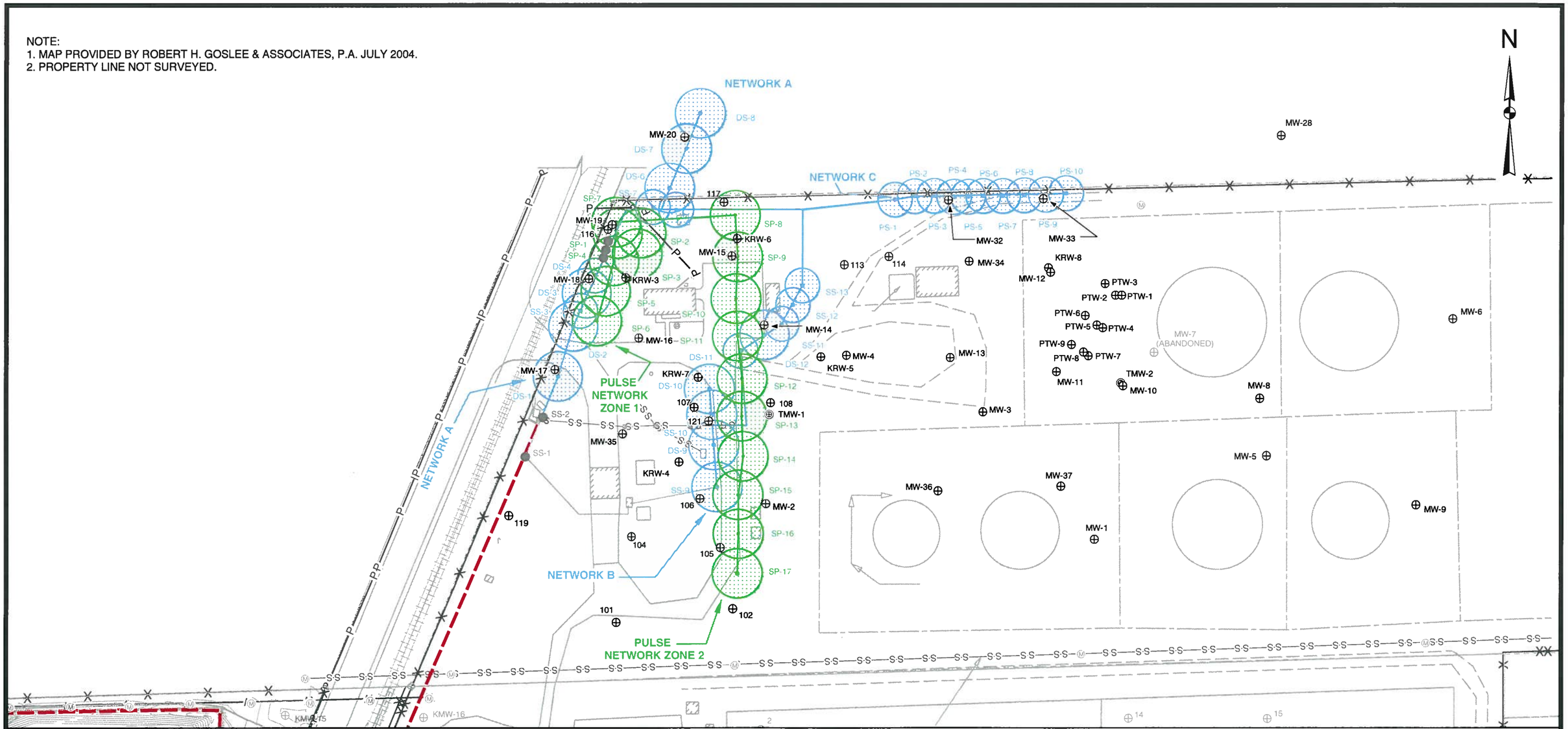


NOTE:
1. MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004
2. PROPERTY LINES NOT SURVEYED.
3. PETROLEUM FUEL PROPERTY BASED ON AERIAL PHOTOGRAPHS.

CATLIN Engineers and Scientists 220 Old Dairy Road Wilmington, NC 28405 Corporate Licensure No. for Engineering Services C-0585	PROJECT: INVISTA S.à.r.l. NORTH TERMINAL PARAXYLENE FACILITY RIVER ROAD WILMINGTON, NC	TITLE: SITE MAP			FIGURE 2
	JOB NO: 201-125	DATE: SEPT 2009	SCALE: AS SHOWN	DRAWN BY: THW	CHECKED BY: JKB

GIS_PROJECTS-FLINT HILLS-NORTH TERMINAL-PX FACILITY-SEPT2009-2

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



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 WITH ESTIMATED INFLUENCE
	PULSE AIR SPARGE WELL WITH ESTIMATED INFLUENCE
	MANHOLE
	ABANDONED SPARGE WELL
	OVERHEAD LIGHT
	PROPERTY LINE
S—S·S—S·S—	SANITARY SEWER
—W—W—W	WATER SUPPLY
—P—P—P	POWER LINE
—T—	TELEPHONE LINE
X—X—X	FENCE LINE
	INVISTA STORMWATER LINE

100 50 0 100 Feet

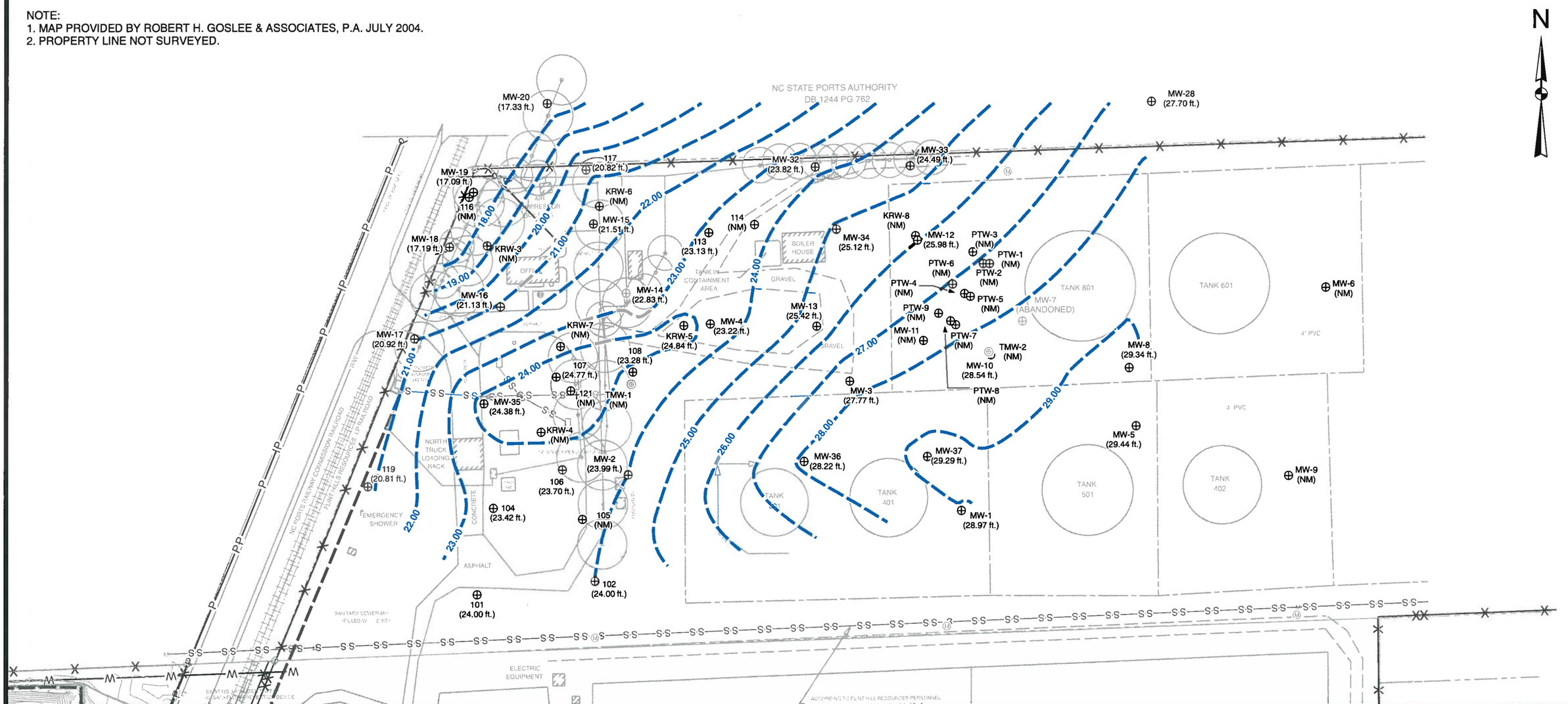
SCALE

CATLIN Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0585

PROJECT: INVISTA S.ar.l. NORTH TERMINAL PARAXYLENE FACILITY RIVER ROAD WILMINGTON, NC	TITLE: CURRENT LAYOUT OF SITE AT PARAXYLENE FACILITY AS OF AUGUST 2009		FIGURE 3
JOB NO: 201-125 / DATE: SEPT 2009	SCALE: AS SHOWN	DRAWN BY: THW	CHECKED BY: JKB

GIS_PROJECTS-FLINT HILLS-NORTH TERMINAL-PXFACILITY-SEPT2009-FIGURE 3

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



LEGEND

EXISTING	DESCRIPTION
	BUILDING
	TYPE II MONITORING WELL
	TYPE III MONITORING WELL
	RECOVERY WELL
	CATCH BASINS
	CLEAN OUT
	GROUNDWATER CONTOUR
	MANHOLE
	ABANDONED SPARGE WELL
	OVERHEAD LIGHT
	PROPERTY LINE
S—S·S—S·S—	SANITARY SEWER
—W——W——W	WATER SUPPLY
—P——P——P	POWER LINE
——T——	TELEPHONE LINE
X——X——X	FENCE LINE
	INVISTA STORMWATER LINE
( )	GROUNDWATER ELEVATION IN FEET
NM	NOT MEASURED

100 50 0 100 Feet

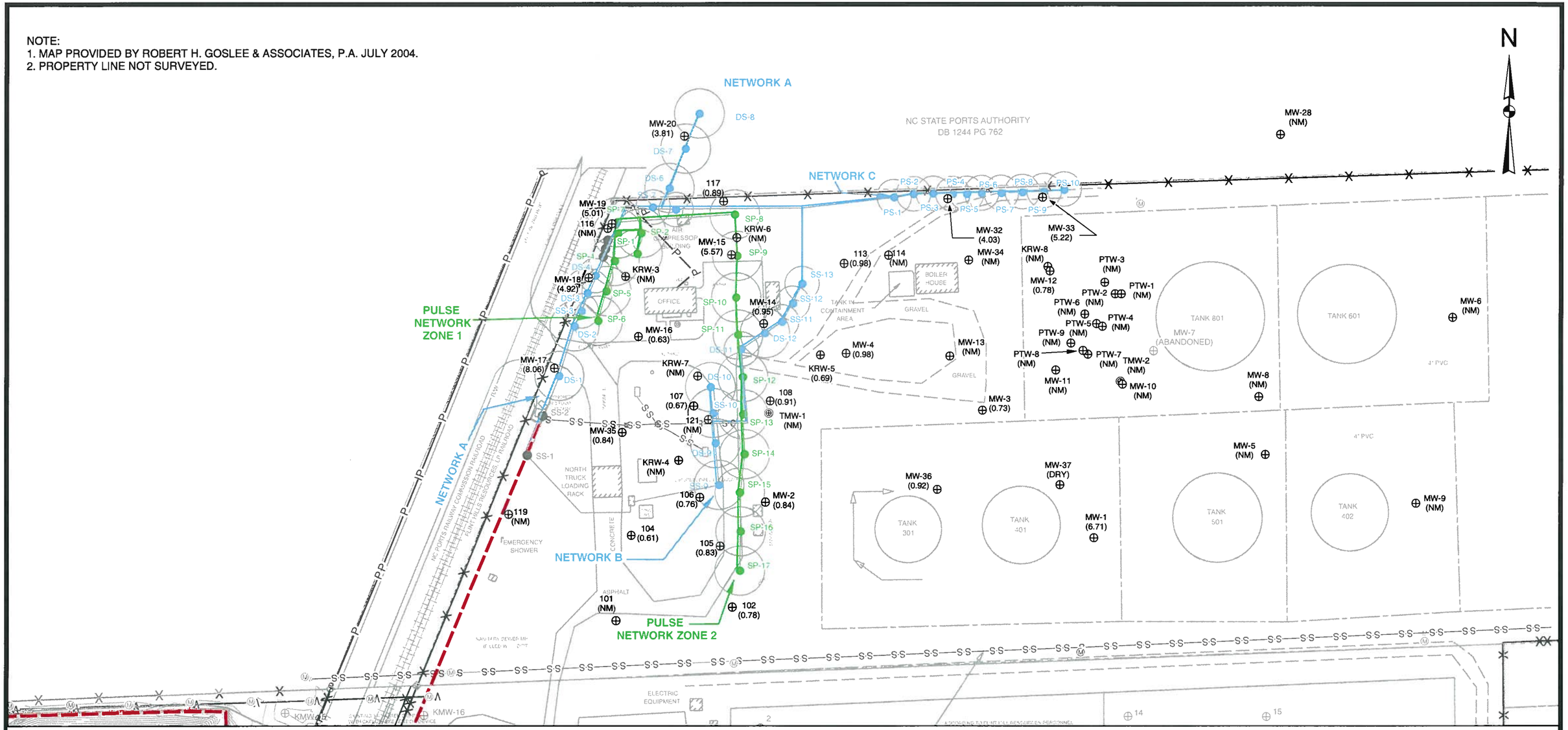
SCALE

CATLIN Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0585

PROJECT	INVISTA S.à.r.l. NORTH TERMINAL PARAXYLENE FACILITY RIVER ROAD WILMINGTON, NC
TITLE	GROUNDWATER CONTOURS AT PARAXYLENE FACILITY AS OF AUGUST 2009
FIGURE	4
JOB NO:	201-125
DATE:	SEPT 2009
SCALE:	AS SHOWN
DRAWN BY:	THW
CHECKED BY:	JKB

GIS_PROJECTS-FLINT HILLS-NORTH TERMINAL-PXFACILITY-SEPT09-FIGURE 4

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



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
( )	DISSOLVED OXYGEN CONCENTRATIONS IN mg/L
	MANHOLE
	ABANDONED SPARGE WELL
	OVERHEAD LIGHT
	PROPERTY LINE
S—S·S—S·S—	SANITARY SEWER
—W—W—W	WATER SUPPLY
—P—P—P	POWER LINE
—T—	TELEPHONE LINE
X—X—X	FENCE LINE
	INVISTA STORMWATER LINE

100 50 0 100 Feet

SCALE

CATLIN Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0585

PROJECT: INVISTA S.ar.l.
NORTH TERMINAL
PARAXYLENE FACILITY
RIVER ROAD
WILMINGTON, NC

JOB NO: 201-125
DATE: SEPT 2009

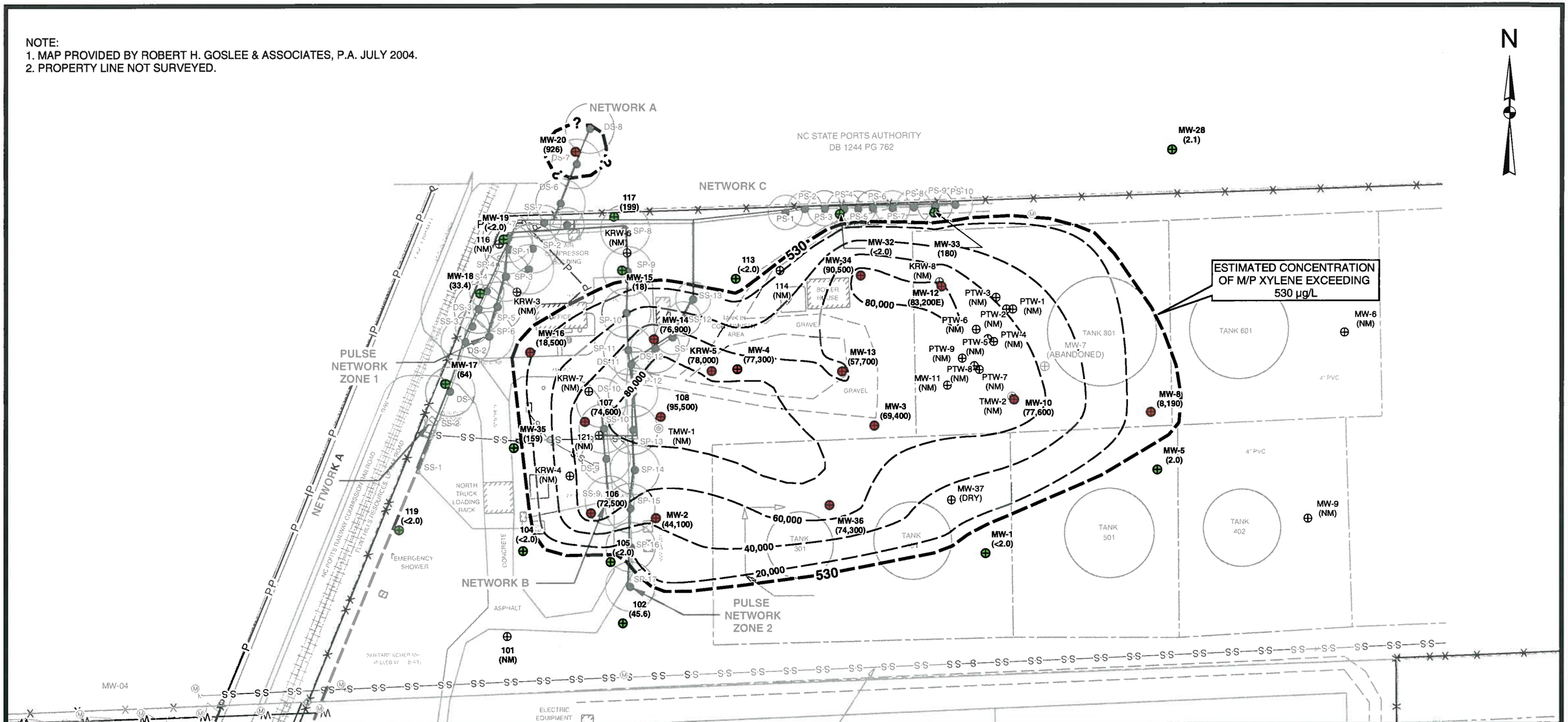
TITLE: DISSOLVED OXYGEN LEVELS AT PARAXYLENE FACILITY FOR AUGUST 2009 SAMPLING EVENT

SCALE: AS SHOWN
DRAWN BY: THW
CHECKED BY: JKB

FIGURE 5

GIS_PROJECTS-FLINT HILLS-NORTH TERMINAL-PXFACILITY-SEPT2009-FIGURE 5

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



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
	CONTOUR LINES
( )	M/P XYLENES CONCENTRATIONS IN ug/L
	M/P XYLENE CONCENTRATION EXCEED 530 mg/L
	M/P XYLENE CONCENTRATION DOES NOT EXCEED 530 mg/L
	MANHOLE
	ABANDONED SPARGE WELL
	OVERHEAD LIGHT
	PROPERTY LINE
S—S·S—S·S—	SANITARY SEWER
—W—W—W	WATER SUPPLY
—P—P—P	POWER LINE
—T—	TELEPHONE LINE
—X—X—X	FENCE LINE
	INVISTA STORMWATER LINE

100 50 0 100 Feet

SCALE

CATLIN Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0585

PROJECT	INVISTA S.ar.l. NORTH TERMINAL PARAXYLENE FACILITY RIVER ROAD WILMINGTON, NC
TITLE	GROUNDWATER M/P XYLENE CONTOURS AT PARAXYLENE FACILITY AS OF AUGUST 2009
FIGURE	6
JOB NO:	201-125
DATE:	SEPT 2009
SCALE:	AS SHOWN
DRAWN BY:	THW
CHECKED BY:	JKB

GIS_PROJECTS-FLINT HILLS-NORTH TERMINAL-PXFACILITY-SEPT09-FIGURE 6

APPENDICES

APPENDIX A

NORTH CAROLINA WELL ABANDONMENT RECORD FOR AIR SPARGE WELL SS-1

WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

WELL CONTRACTOR CERTIFICATION #: 2927

CATLIN PROJECT NO.: 201-125

1. WELL CONTRACTOR:

William J. Miller
Well Contractor (Individual) Name

CATLIN Engineers and Scientists
Well Contractor Company Name

STREET ADDRESS 220 Old Dairy Road

Wilmington North Carolina 28405
City or Town State Zip Code

(910) - 452-5861
Area code - Phone number

2. WELL INFORMATION

SITE WELL ID # (if applicable): SS-1
STATE WELL PERMIT # (if applicable): N.A.
COUNTY WELL PERMIT # (if applicable): N.A.
DWQ or OTHER PERMIT # (if applicable):
WELL USE (Check Applicable Box): Monitoring ☐ Residential ☐
Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐
Recovery ☐ Injection ☐ Irrigation ☐
Other (list use): Air Sparge

3. WELL LOCATION:

COUNTY: New Hanover QUADRANGLE:
NEAREST TOWN: Wilmington
3325 River Road, Wilmington, NC 28412,
(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code

TOPOGRAPHIC / LAND SETTING
Slope☐ Valley☐ Flat☐ Ridge☐ Other:

NORTHING: 161,570.6
EASTING: 2,317,718.9
NCSP NAD 83 (USft)

May be in degrees, minutes, seconds, or in a decimal

Latitude/longitude source: (GPS) Topo. map

(Location of well must be shown on a USGS topo map and attached to this form if not using a GPS.)

4a. FACILITY - The name of the business where the well is located. Complete 4a and 4b. (If a residential well, skip 4a; complete 4b, well owner information only)

FACILITY ID #(if applicable) Not Applicable
NAME OF FACILITY: INVISTA North Terminal
STREET ADDRESS: 3325 River Road, Wilmington, NC 28412
Wilmington North Carolina
City or Town State Zip Code

4b. CONTACT PERSON/WELL OWNER:

NAME: Flint Hills
STREET ADDRESS: 3334 River Road

Wilmington NC 28412
City or Town State Zip Code

(910) 799-0180
Area code - Phone number

5. WELL DETAILS:

a. Total Depth: 15 ft. Diameter: 1 in.
b. Water Level (Below Measuring Point): 5 ft.
Measuring point is 0 ft. above land surface

6. CASING:

	Length	Diameter
a. Casing Depth (if known):	12 ft.	____ in.
b. Casing Removed:	12 ft.	____ in.

7. DISINFECTION: N/A
(Amount of 70% calcium hypochlorite used)

8. SEALING MATERIAL:

Neat Cement
Cement ____ lb.
Water ____ gal.

Sand Cement
Cement ____ lb.
Water ____ gal.

Bentonite
Bentonite ____ lb.
Type: Slurry __ Pellets __
Water ____ gal.

Other
Type material Bentonite
Amount 25 lbs

9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:
Poured from surface

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 4/22/2009

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR **DATE** 4/27/09

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL **DATE**
(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113

William J. Miller
PRINTED NAME OF PERSON ABANDONING THE WELL

Submit a copy to the owner and the original to the Division of Water Quality within 30 days.
Attn: Information Management,1617 Mail Service Center - Raleigh, NC 27699167, Phone No. (919) 733-7015 ext 568.

Modified from Form GW-30 Rev. 5/06

APPENDIX B

GROUNDWATER ANALYTICAL LABORATORY REPORTS AND CHAIN-OF-CUSTODY RECORDS

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

September 02, 2009

Jeff Becken
Catlin Engineers & Scientists
PO Box 10279
Wilmington, NC 284040279

RE: Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Dear Jeff Becken:
Enclosed are the analytical results for sample(s) received by the laboratory on August 21, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ashley Nifong

Ashley Nifong

ashley.nifong@pacelabs.com
Project Manager

Enclosures

cc: Jeff Becken, Catlin Engineers & Scientists
Dimitri.Talbert, Catlin Engineers & Scientists
Dimitri Talbert, Catlin Engineers & Scientists

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(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Charlotte Certification IDs

West Virginia Certification #: 357
Virginia Certification #: 00213
Tennessee Certification #: 04010
South Carolina Drinking Water Cert. #: 990060003
South Carolina Certification #: 990060001
Pennsylvania Certification #: 68-00784
Connecticut Certification #: PH-0104
North Carolina Field Services Certification #: 5342
North Carolina Drinking Water Certification #: 37706
New Jersey Certification #: NC012
Louisiana/LELAP Certification #: 04034
Kentucky UST Certification #: 84
Florida/NELAP Certification #: E87627
North Carolina Wastewater Certification #: 12

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Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
9251439001	102	EPA 8260	AW	5	PASI-C
9251439002	104	EPA 8260	AW	5	PASI-C
9251439003	105	EPA 8260	AW	5	PASI-C
9251439004	106	EPA 8260	AW	5	PASI-C
9251439005	107	EPA 8260	AW	5	PASI-C
9251439006	108	EPA 8260	AW	5	PASI-C
9251439007	113	EPA 8260	AW	5	PASI-C
9251439008	117	EPA 8260	AW	5	PASI-C
9251439009	119	EPA 8260	AW	5	PASI-C
9251439010	MW-1	EPA 8260	AW	5	PASI-C
9251439011	MW-2	EPA 8260	AW	5	PASI-C
9251439012	MW-3	EPA 8260	AW	5	PASI-C
9251439013	MW-4	EPA 8260	AW	5	PASI-C
9251439014	MW-5	EPA 8260	AW	5	PASI-C
9251439015	MW-8	EPA 8260	AW	5	PASI-C
9251439016	MW-10	EPA 8260	AW	5	PASI-C
9251439017	MW-12	EPA 8260	AW, MCK	5	PASI-C
9251439018	MW-13	EPA 8260	AW, MCK	5	PASI-C
9251439019	MW-14	EPA 8260	AW	5	PASI-C
9251439020	MW-15	EPA 8260	AW	5	PASI-C
9251439021	MW-16	EPA 8260	AW	5	PASI-C
9251439022	MW-17	EPA 8260	MCK	5	PASI-C
9251439023	MW-18	EPA 8260	MCK	5	PASI-C
9251439024	MW-19	EPA 8260	MCK	5	PASI-C
9251439025	MW-20	EPA 8260	MCK	5	PASI-C
9251439026	MW-28	EPA 8260	MCK	5	PASI-C
9251439027	MW-32	EPA 8260	MCK	5	PASI-C
9251439028	MW-33	EPA 8260	MCK	5	PASI-C
9251439029	MW-34	EPA 8260	AW	5	PASI-C
9251439030	MW-35	EPA 8260	MCK	5	PASI-C
9251439031	MW-36	EPA 8260	AW	5	PASI-C
9251439032	KRW-5	EPA 8260	AW	5	PASI-C
9251439033	MW-4 DUP	EPA 8260	AW	5	PASI-C
9251439034	equip rinsate	EPA 8260	MCK	5	PASI-C
9251439035	TRIP BLANK	EPA 8260	MCK	5	PASI-C

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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: 102 **Lab ID: 9251439001** Collected: 08/18/09 16:00 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**45.6**	ug/L	2.0	1		08/26/09 04:19	1330-20-7	
4-Bromofluorobenzene (S)	102	%	87-109	1		08/26/09 04:19	460-00-4	
Dibromofluoromethane (S)	99	%	85-115	1		08/26/09 04:19	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	79-120	1		08/26/09 04:19	17060-07-0	
Toluene-d8 (S)	100	%	70-120	1		08/26/09 04:19	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: 104 **Lab ID: 9251439002** Collected: 08/18/09 15:30 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	ND	ug/L	2.0	1		08/24/09 02:00	1330-20-7	
4-Bromofluorobenzene (S)	101	%	87-109	1		08/24/09 02:00	460-00-4	
Dibromofluoromethane (S)	96	%	85-115	1		08/24/09 02:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	79-120	1		08/24/09 02:00	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		08/24/09 02:00	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: 105 **Lab ID: 9251439003** Collected: 08/18/09 14:20 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	ND	ug/L	2.0	1		08/24/09 02:24	1330-20-7	
4-Bromofluorobenzene (S)	101	%	87-109	1		08/24/09 02:24	460-00-4	
Dibromofluoromethane (S)	96	%	85-115	1		08/24/09 02:24	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	79-120	1		08/24/09 02:24	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		08/24/09 02:24	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: 106 **Lab ID: 9251439004** Collected: 08/19/09 10:40 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**72500**	ug/L	400	200		08/25/09 09:13	1330-20-7	
4-Bromofluorobenzene (S)	110	%	87-109	20		08/24/09 08:39	460-00-4	S2
Dibromofluoromethane (S)	90	%	85-115	20		08/24/09 08:39	1868-53-7	
1,2-Dichloroethane-d4 (S)	91	%	79-120	20		08/24/09 08:39	17060-07-0	
Toluene-d8 (S)	95	%	70-120	20		08/24/09 08:39	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: 107 **Lab ID: 9251439005** Collected: 08/19/09 09:55 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**74600**	ug/L	500	250		08/25/09 09:37	1330-20-7	
4-Bromofluorobenzene (S)	107	%	87-109	50		08/24/09 09:33	460-00-4	
Dibromofluoromethane (S)	88	%	85-115	50		08/24/09 09:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	88	%	79-120	50		08/24/09 09:33	17060-07-0	
Toluene-d8 (S)	96	%	70-120	50		08/24/09 09:33	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: 108 **Lab ID: 9251439006** Collected: 08/19/09 10:10 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**95500**	ug/L	500	250		08/25/09 10:01	1330-20-7	
4-Bromofluorobenzene (S)	108	%	87-109	50		08/24/09 09:59	460-00-4	
Dibromofluoromethane (S)	88	%	85-115	50		08/24/09 09:59	1868-53-7	
1,2-Dichloroethane-d4 (S)	88	%	79-120	50		08/24/09 09:59	17060-07-0	
Toluene-d8 (S)	95	%	70-120	50		08/24/09 09:59	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: 113 **Lab ID: 9251439007** Collected: 08/18/09 14:25 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	ND	ug/L	2.0	1		08/26/09 04:43	1330-20-7	
4-Bromofluorobenzene (S)	98	%	87-109	1		08/26/09 04:43	460-00-4	
Dibromofluoromethane (S)	97	%	85-115	1		08/26/09 04:43	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	79-120	1		08/26/09 04:43	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		08/26/09 04:43	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: 117 **Lab ID: 9251439008** Collected: 08/18/09 14:00 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**199**	ug/L	2.0	1		08/24/09 02:48	1330-20-7	
4-Bromofluorobenzene (S)	102	%	87-109	1		08/24/09 02:48	460-00-4	
Dibromofluoromethane (S)	96	%	85-115	1		08/24/09 02:48	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	79-120	1		08/24/09 02:48	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		08/24/09 02:48	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: 119 **Lab ID: 9251439009** Collected: 08/18/09 14:40 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	ND	ug/L	2.0	1		08/24/09 03:12	1330-20-7	
4-Bromofluorobenzene (S)	100	%	87-109	1		08/24/09 03:12	460-00-4	
Dibromofluoromethane (S)	97	%	85-115	1		08/24/09 03:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	79-120	1		08/24/09 03:12	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		08/24/09 03:12	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-1 **Lab ID: 9251439010** Collected: 08/18/09 13:20 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	ND	ug/L	2.0	1		08/24/09 03:36	1330-20-7	
4-Bromofluorobenzene (S)	101	%	87-109	1		08/24/09 03:36	460-00-4	
Dibromofluoromethane (S)	95	%	85-115	1		08/24/09 03:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	79-120	1		08/24/09 03:36	17060-07-0	
Toluene-d8 (S)	97	%	70-120	1		08/24/09 03:36	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-2 **Lab ID: 9251439011** Collected: 08/19/09 11:10 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**44100**	ug/L	400	200		08/25/09 10:25	1330-20-7	
4-Bromofluorobenzene (S)	115	%	87-109	1		08/24/09 04:00	460-00-4	S2
Dibromofluoromethane (S)	102	%	85-115	1		08/24/09 04:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	79-120	1		08/24/09 04:00	17060-07-0	
Toluene-d8 (S)	91	%	70-120	1		08/24/09 04:00	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-3 **Lab ID: 9251439012** Collected: 08/19/09 10:55 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**69400**	ug/L	400	200		08/26/09 05:07	1330-20-7	
4-Bromofluorobenzene (S)	111	%	87-109	10		08/24/09 07:46	460-00-4	S2
Dibromofluoromethane (S)	90	%	85-115	10		08/24/09 07:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	89	%	79-120	10		08/24/09 07:46	17060-07-0	
Toluene-d8 (S)	95	%	70-120	10		08/24/09 07:46	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-4 **Lab ID: 9251439013** Collected: 08/19/09 10:30 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**77300**	ug/L	400	200		08/26/09 05:31	1330-20-7	
4-Bromofluorobenzene (S)	111	%	87-109	10		08/24/09 08:13	460-00-4	S2
Dibromofluoromethane (S)	91	%	85-115	10		08/24/09 08:13	1868-53-7	
1,2-Dichloroethane-d4 (S)	92	%	79-120	10		08/24/09 08:13	17060-07-0	
Toluene-d8 (S)	94	%	70-120	10		08/24/09 08:13	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-5 **Lab ID: 9251439014** Collected: 08/19/09 09:35 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**2.0**	ug/L	2.0	1		08/26/09 05:55	1330-20-7	
4-Bromofluorobenzene (S)	99	%	87-109	1		08/26/09 05:55	460-00-4	
Dibromofluoromethane (S)	98	%	85-115	1		08/26/09 05:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	79-120	1		08/26/09 05:55	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		08/26/09 05:55	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-8 **Lab ID: 9251439015** Collected: 08/18/09 16:00 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**8190**	ug/L	50.0	25		08/24/09 15:58	1330-20-7	
4-Bromofluorobenzene (S)	113	%	87-109	1		08/24/09 04:48	460-00-4	S2
Dibromofluoromethane (S)	94	%	85-115	1		08/24/09 04:48	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	79-120	1		08/24/09 04:48	17060-07-0	
Toluene-d8 (S)	95	%	70-120	1		08/24/09 04:48	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-10 **Lab ID: 9251439016** Collected: 08/19/09 12:30 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**77600**	ug/L	400	200		08/26/09 06:19	1330-20-7	
4-Bromofluorobenzene (S)	118	%	87-109	1		08/24/09 05:12	460-00-4	S2
Dibromofluoromethane (S)	101	%	85-115	1		08/24/09 05:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	79-120	1		08/24/09 05:12	17060-07-0	
Toluene-d8 (S)	90	%	70-120	1		08/24/09 05:12	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-12 **Lab ID: 9251439017** Collected: 08/19/09 12:00 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**83200**	ug/L	400	200		08/30/09 19:30	1330-20-7	E
4-Bromofluorobenzene (S)	117	%	87-109	5		08/24/09 06:53	460-00-4	S2
Dibromofluoromethane (S)	93	%	85-115	5		08/24/09 06:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	94	%	79-120	5		08/24/09 06:53	17060-07-0	
Toluene-d8 (S)	93	%	70-120	5		08/24/09 06:53	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-13 **Lab ID: 9251439018** Collected: 08/19/09 11:00 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**57700**	ug/L	400	200		08/30/09 19:54	1330-20-7	
4-Bromofluorobenzene (S)	114	%	87-109	5		08/24/09 07:19	460-00-4	S2
Dibromofluoromethane (S)	91	%	85-115	5		08/24/09 07:19	1868-53-7	
1,2-Dichloroethane-d4 (S)	92	%	79-120	5		08/24/09 07:19	17060-07-0	
Toluene-d8 (S)	94	%	70-120	5		08/24/09 07:19	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-14 **Lab ID: 9251439019** Collected: 08/19/09 11:40 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**76900**	ug/L	400	200		08/26/09 07:31	1330-20-7	
4-Bromofluorobenzene (S)	119	%	87-109	1		08/24/09 05:36	460-00-4	S2
Dibromofluoromethane (S)	99	%	85-115	1		08/24/09 05:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	79-120	1		08/24/09 05:36	17060-07-0	
Toluene-d8 (S)	89	%	70-120	1		08/24/09 05:36	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-15 **Lab ID: 9251439020** Collected: 08/19/09 13:20 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**18.0**	ug/L	2.0	1		08/26/09 07:55	1330-20-7	
4-Bromofluorobenzene (S)	98	%	87-109	1		08/26/09 07:55	460-00-4	
Dibromofluoromethane (S)	98	%	85-115	1		08/26/09 07:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	79-120	1		08/26/09 07:55	17060-07-0	
Toluene-d8 (S)	99	%	70-120	1		08/26/09 07:55	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-16 **Lab ID: 9251439021** Collected: 08/19/09 10:15 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**18500**	ug/L	100	50		08/24/09 16:22	1330-20-7	P8
4-Bromofluorobenzene (S)	104	%	87-109	50		08/24/09 16:22	460-00-4	
Dibromofluoromethane (S)	89	%	85-115	50		08/24/09 16:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	89	%	79-120	50		08/24/09 16:22	17060-07-0	
Toluene-d8 (S)	96	%	70-120	50		08/24/09 16:22	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-17 **Lab ID: 9251439022** Collected: 08/18/09 13:05 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**64.0**	ug/L	2.0	1		08/27/09 01:12	1330-20-7	
4-Bromofluorobenzene (S)	99	%	87-109	1		08/27/09 01:12	460-00-4	
Dibromofluoromethane (S)	98	%	85-115	1		08/27/09 01:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	79-120	1		08/27/09 01:12	17060-07-0	
Toluene-d8 (S)	97	%	70-120	1		08/27/09 01:12	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-18 **Lab ID: 9251439023** Collected: 08/18/09 14:35 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**33.4**	ug/L	2.0	1		08/27/09 01:36	1330-20-7	
4-Bromofluorobenzene (S)	99	%	87-109	1		08/27/09 01:36	460-00-4	
Dibromofluoromethane (S)	101	%	85-115	1		08/27/09 01:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	79-120	1		08/27/09 01:36	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		08/27/09 01:36	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-19 **Lab ID: 9251439024** Collected: 08/18/09 13:10 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	ND	ug/L	2.0	1		08/27/09 02:00	1330-20-7	
4-Bromofluorobenzene (S)	98	%	87-109	1		08/27/09 02:00	460-00-4	
Dibromofluoromethane (S)	99	%	85-115	1		08/27/09 02:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	79-120	1		08/27/09 02:00	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		08/27/09 02:00	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-20 **Lab ID: 9251439025** Collected: 08/18/09 15:20 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**926**	ug/L	10.0	5		08/27/09 02:24	1330-20-7	
4-Bromofluorobenzene (S)	99	%	87-109	5		08/27/09 02:24	460-00-4	
Dibromofluoromethane (S)	100	%	85-115	5		08/27/09 02:24	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	79-120	5		08/27/09 02:24	17060-07-0	
Toluene-d8 (S)	99	%	70-120	5		08/27/09 02:24	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-28 **Lab ID: 9251439026** Collected: 08/18/09 14:55 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**2.1**	ug/L	2.0	1		08/27/09 02:48	1330-20-7	
4-Bromofluorobenzene (S)	99	%	87-109	1		08/27/09 02:48	460-00-4	
Dibromofluoromethane (S)	98	%	85-115	1		08/27/09 02:48	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	79-120	1		08/27/09 02:48	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		08/27/09 02:48	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-32 **Lab ID: 9251439027** Collected: 08/18/09 15:00 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	ND	ug/L	2.0	1		08/27/09 03:12	1330-20-7	
4-Bromofluorobenzene (S)	100	%	87-109	1		08/27/09 03:12	460-00-4	
Dibromofluoromethane (S)	101	%	85-115	1		08/27/09 03:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	79-120	1		08/27/09 03:12	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		08/27/09 03:12	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-33 **Lab ID: 9251439028** Collected: 08/18/09 13:35 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**180**	ug/L	2.0	1		08/29/09 11:47	1330-20-7	
4-Bromofluorobenzene (S)	100	%	87-109	1		08/29/09 11:47	460-00-4	
Dibromofluoromethane (S)	100	%	85-115	1		08/29/09 11:47	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	79-120	1		08/29/09 11:47	17060-07-0	
Toluene-d8 (S)	97	%	70-120	1		08/29/09 11:47	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-34 **Lab ID: 9251439029** Collected: 08/19/09 12:35 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**90500**	ug/L	500	250		08/24/09 17:10	1330-20-7	P8
4-Bromofluorobenzene (S)	104	%	87-109	250		08/24/09 17:10	460-00-4	
Dibromofluoromethane (S)	89	%	85-115	250		08/24/09 17:10	1868-53-7	
1,2-Dichloroethane-d4 (S)	90	%	79-120	250		08/24/09 17:10	17060-07-0	
Toluene-d8 (S)	97	%	70-120	250		08/24/09 17:10	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-35 **Lab ID: 9251439030** Collected: 08/18/09 15:40 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**159**	ug/L	5.0	2.5		08/27/09 08:16	1330-20-7	
4-Bromofluorobenzene (S)	100	%	87-109	2.5		08/27/09 08:16	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	2.5		08/27/09 08:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	79-120	2.5		08/27/09 08:16	17060-07-0	
Toluene-d8 (S)	99	%	70-120	2.5		08/27/09 08:16	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-36 **Lab ID: 9251439031** Collected: 08/19/09 10:00 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**74300**	ug/L	400	200		08/24/09 17:58	1330-20-7	P8
4-Bromofluorobenzene (S)	106	%	87-109	200		08/24/09 17:58	460-00-4	
Dibromofluoromethane (S)	90	%	85-115	200		08/24/09 17:58	1868-53-7	
1,2-Dichloroethane-d4 (S)	91	%	79-120	200		08/24/09 17:58	17060-07-0	
Toluene-d8 (S)	96	%	70-120	200		08/24/09 17:58	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: KRW-5 **Lab ID: 9251439032** Collected: 08/19/09 12:25 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**78000**	ug/L	400	200		08/24/09 18:22	1330-20-7	P8
4-Bromofluorobenzene (S)	106	%	87-109	200		08/24/09 18:22	460-00-4	
Dibromofluoromethane (S)	88	%	85-115	200		08/24/09 18:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	89	%	79-120	200		08/24/09 18:22	17060-07-0	
Toluene-d8 (S)	95	%	70-120	200		08/24/09 18:22	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: MW-4 DUP **Lab ID: 9251439033** Collected: 08/19/09 10:35 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	**71700**	ug/L	400	200		08/24/09 18:46	1330-20-7	P8
4-Bromofluorobenzene (S)	106	%	87-109	200		08/24/09 18:46	460-00-4	
Dibromofluoromethane (S)	90	%	85-115	200		08/24/09 18:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	91	%	79-120	200		08/24/09 18:46	17060-07-0	
Toluene-d8 (S)	97	%	70-120	200		08/24/09 18:46	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: equip rinsate **Lab ID: 9251439034** Collected: 08/19/09 10:40 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	ND	ug/L	2.0	1		08/30/09 11:55	1330-20-7	
4-Bromofluorobenzene (S)	98	%	87-109	1		08/30/09 11:55	460-00-4	
Dibromofluoromethane (S)	102	%	85-115	1		08/30/09 11:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	79-120	1		08/30/09 11:55	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		08/30/09 11:55	2037-26-5	

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ANALYTICAL RESULTS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Sample: TRIP BLANK **Lab ID: 9251439035** Collected: 08/19/09 00:00 Received: 08/21/09 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
m&p-Xylene	ND	ug/L	2.0	1		08/30/09 12:18	1330-20-7	
4-Bromofluorobenzene (S)	99	%	87-109	1		08/30/09 12:18	460-00-4	
Dibromofluoromethane (S)	100	%	85-115	1		08/30/09 12:18	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	79-120	1		08/30/09 12:18	17060-07-0	
Toluene-d8 (S)	98	%	70-120	1		08/30/09 12:18	2037-26-5	

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QUALITY CONTROL DATA

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

QC Batch: MSV/8064 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9251439021, 9251439029, 9251439031, 9251439032, 9251439033

METHOD BLANK: 326484 Matrix: Water
Associated Lab Samples: 9251439021, 9251439029, 9251439031, 9251439032, 9251439033

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	9.0	2.0	08/24/09 13:57	B+
1,2-Dichloroethane-d4 (S)	%	89	79-120	08/24/09 13:57	
4-Bromofluorobenzene (S)	%	102	87-109	08/24/09 13:57	
Dibromofluoromethane (S)	%	89	85-115	08/24/09 13:57	
Toluene-d8 (S)	%	97	70-120	08/24/09 13:57	

LABORATORY CONTROL SAMPLE: 326485

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
m&p-Xylene	ug/L	100	109	109	82-127	
1,2-Dichloroethane-d4 (S)	%			90	79-120	
4-Bromofluorobenzene (S)	%			105	87-109	
Dibromofluoromethane (S)	%			91	85-115	
Toluene-d8 (S)	%			97	70-120	

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Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

QC Batch: MSV/8071 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9251439028

METHOD BLANK: 326867 — Matrix: Water
Associated Lab Samples: 9251439028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	ND	2.0	08/28/09 14:23	
1,2-Dichloroethane-d4 (S)	%	102	79-120	08/28/09 14:23	
4-Bromofluorobenzene (S)	%	101	87-109	08/28/09 14:23	
Dibromofluoromethane (S)	%	99	85-115	08/28/09 14:23	
Toluene-d8 (S)	%	99	70-120	08/28/09 14:23	

LABORATORY CONTROL SAMPLE: 326868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
m&p-Xylene	ug/L	100	99.1	99	82-127	
1,2-Dichloroethane-d4 (S)	%			104	79-120	
4-Bromofluorobenzene (S)	%			103	87-109	
Dibromofluoromethane (S)	%			101	85-115	
Toluene-d8 (S)	%			99	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 328252 328253

Parameter	Units	9251432001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2-Dichloroethane-d4 (S)	%						103	102	79-120		
4-Bromofluorobenzene (S)	%						98	98	87-109		
Dibromofluoromethane (S)	%						101	100	85-115		
Toluene-d8 (S)	%						100	100	70-120		

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(704)875-9092

QUALITY CONTROL DATA

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

QC Batch: MSV/8051 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9251439001, 9251439002, 9251439003, 9251439004, 9251439005, 9251439006, 9251439007, 9251439008, 9251439009, 9251439010, 9251439011, 9251439012, 9251439013, 9251439014, 9251439015, 9251439016, 9251439017

METHOD BLANK: 326259 — Matrix: Water
Associated Lab Samples: 9251439001, 9251439002, 9251439003, 9251439004, 9251439005, 9251439006, 9251439007, 9251439008, 9251439009, 9251439010, 9251439011, 9251439012, 9251439013, 9251439014, 9251439015, 9251439016, 9251439017, 9251439018, 9251439019, 9251439020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	ND	2.0	08/24/09 00:48	
1,2-Dichloroethane-d4 (S)	%	97	79-120	08/24/09 00:48	
4-Bromofluorobenzene (S)	%	100	87-109	08/24/09 00:48	
Dibromofluoromethane (S)	%	95	85-115	08/24/09 00:48	
Toluene-d8 (S)	%	98	70-120	08/24/09 00:48	

LABORATORY CONTROL SAMPLE: 326260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
m&p-Xylene	ug/L	100	110	110	82-127	
1,2-Dichloroethane-d4 (S)	%			96	79-120	
4-Bromofluorobenzene (S)	%			106	87-109	
Dibromofluoromethane (S)	%			95	85-115	
Toluene-d8 (S)	%			98	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 326274 326275

Parameter	Units	9251439009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2-Dichloroethane-d4 (S)	%						90	91	79-120		
4-Bromofluorobenzene (S)	%						104	106	87-109		
Dibromofluoromethane (S)	%						89	91	85-115		
Toluene-d8 (S)	%						96	96	70-120		

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

QC Batch: MSV/8126 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9251439034, 9251439035

METHOD BLANK: 329678 — Matrix: Water
Associated Lab Samples: 9251439034, 9251439035

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	ND	2.0	08/30/09 11:31	
1,2-Dichloroethane-d4 (S)	%	104	79-120	08/30/09 11:31	
4-Bromofluorobenzene (S)	%	98	87-109	08/30/09 11:31	
Dibromofluoromethane (S)	%	99	85-115	08/30/09 11:31	
Toluene-d8 (S)	%	97	70-120	08/30/09 11:31	

LABORATORY CONTROL SAMPLE: 329679

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
m&p-Xylene	ug/L	100	102	102	82-127	
1,2-Dichloroethane-d4 (S)	%			104	79-120	
4-Bromofluorobenzene (S)	%			103	87-109	
Dibromofluoromethane (S)	%			102	85-115	
Toluene-d8 (S)	%			100	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 329680 329681

Parameter	Units	9251688040 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2-Dichloroethane-d4 (S)	%						101	103	79-120		
4-Bromofluorobenzene (S)	%						101	101	87-109		
Dibromofluoromethane (S)	%						100	100	85-115		
Toluene-d8 (S)	%						98	98	70-120		

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QUALITY CONTROL DATA

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

QC Batch: MSV/8065 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 9251439022, 9251439023, 9251439024, 9251439025, 9251439026, 9251439027, 9251439030

METHOD BLANK: 326490 Matrix: Water
Associated Lab Samples: 9251439022, 9251439023, 9251439024, 9251439025, 9251439026, 9251439027, 9251439030

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	ND	2.0	08/27/09 00:24	
1,2-Dichloroethane-d4 (S)	%	101	79-120	08/27/09 00:24	
4-Bromofluorobenzene (S)	%	98	87-109	08/27/09 00:24	
Dibromofluoromethane (S)	%	98	85-115	08/27/09 00:24	
Toluene-d8 (S)	%	98	70-120	08/27/09 00:24	

LABORATORY CONTROL SAMPLE: 326491

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
m&p-Xylene	ug/L	100	102	102	82-127	
1,2-Dichloroethane-d4 (S)	%			101	79-120	
4-Bromofluorobenzene (S)	%			101	87-109	
Dibromofluoromethane (S)	%			100	85-115	
Toluene-d8 (S)	%			99	70-120	

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QUALIFIERS

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

B+	Analyte was detected in the associated method blank as well as in the sample.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
P8	Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.
S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: INVISTA PX TEXMINAL 201-125
Pace Project No.: 9251439

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
9251439001	102	EPA 8260	MSV/8051		
9251439002	104	EPA 8260	MSV/8051		
9251439003	105	EPA 8260	MSV/8051		
9251439004	106	EPA 8260	MSV/8051		
9251439005	107	EPA 8260	MSV/8051		
9251439006	108	EPA 8260	MSV/8051		
9251439007	113	EPA 8260	MSV/8051		
9251439008	117	EPA 8260	MSV/8051		
9251439009	119	EPA 8260	MSV/8051		
9251439010	MW-1	EPA 8260	MSV/8051		
9251439011	MW-2	EPA 8260	MSV/8051		
9251439012	MW-3	EPA 8260	MSV/8051		
9251439013	MW-4	EPA 8260	MSV/8051		
9251439014	MW-5	EPA 8260	MSV/8051		
9251439015	MW-8	EPA 8260	MSV/8051		
9251439016	MW-10	EPA 8260	MSV/8051		
9251439017	MW-12	EPA 8260	MSV/8051		
9251439018	MW-13	EPA 8260	MSV/8051		
9251439019	MW-14	EPA 8260	MSV/8051		
9251439020	MW-15	EPA 8260	MSV/8051		
9251439021	MW-16	EPA 8260	MSV/8064		
9251439029	MW-34	EPA 8260	MSV/8064		
9251439031	MW-36	EPA 8260	MSV/8064		
9251439032	KRW-5	EPA 8260	MSV/8064		
9251439033	MW-4 DUP	EPA 8260	MSV/8064		
9251439022	MW-17	EPA 8260	MSV/8065		
9251439023	MW-18	EPA 8260	MSV/8065		
9251439024	MW-19	EPA 8260	MSV/8065		
9251439025	MW-20	EPA 8260	MSV/8065		
9251439026	MW-28	EPA 8260	MSV/8065		
9251439027	MW-32	EPA 8260	MSV/8065		
9251439030	MW-35	EPA 8260	MSV/8065		
9251439028	MW-33	EPA 8260	MSV/8071		
9251439034	equip rinsate	EPA 8260	MSV/8126		
9251439035	TRIP BLANK	EPA 8260	MSV/8126		

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Sample Condition Upon Receipt

Pace Analytical

Client Name: CATLIN Eng Project # 9251439

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

Optional
Proj. Due Date: N/A
Proj. Name: N/A

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Thermometer Used T060 Type of Ice: (Wet) Blue None ☑ Samples on ice, cooling process has begun

Cooler Temperature 3.1 Biological Tissue is Frozen: Yes No (N/A)

Date and Initials of person examining contents: KAC 8/21/09

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16. Recived Trip Blanks ~~not on COC~~ SPCC
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	No Time or Dates
Pace Trip Blank Lot # (if purchased): N/A		

Client Notification/ Resolution: Field Data Required? Y / N / N/A

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: KAA Date: 8/24/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1324427

Section A Required Client Information:

Company: CATLIN ENGINEERS & SCIENTISTS
Address: 2220 OLD DAIRY ROAD, WILMINGTON, NC 28405
Email To: jeff.becken@catlinusa.com
Phone: 910-452-5861 Fax: 910-452-7563
Requested Due Date/TAT: STANDARD

Section B Required Project Information:

Report To: JEFF BECKEN
Copy To: DIMITRI TALBERT
Purchase Order No.:
Project Name: INVISTA PX TERMINAL
Project Number: 201-125

Section C Invoice Information:

Attention: MICHAEL CHRISTOPHER
Company Name: REISS REMEDIATION, LLC
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): MTBE XYLENES PER 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 9251439
1	MW-4	WT	G		19AUG09		1030		3				X					X		013
2	MW-5	↓	↓		19AUG09		0935		↓				↓					↓		14
3	MW-8	↓	↓		18AUG09		1600		↓				↓					↓		15
4	MW-10	↓	↓		19AUG09		1230		↓				↓					↓		16
5	MW-12	↓	↓		19AUG09		1200		↓				↓					↓		17
6	MW-13	↓	↓		19AUG09		1100		↓				↓					↓		18
7	MW-14	↓	↓		19AUG09		1140		↓				↓					↓		19
8	MW-15	↓	↓		19AUG09		1320		↓				↓					↓		20
9	MW-16	↓	↓		19AUG09		1015		↓				↓					↓		21
10	MW-17	↓	↓		18AUG09		1305		↓				↓					↓		22
11	MW-18	↓	↓		18AUG09		1435		↓				↓					↓		23
12	MW-19	↓	↓		18AUG09		1310		↓				↓					↓		24

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Tom Stt (Catlin)	8-20-09	4:00p	[illegible]	8/20/09	1600		Y		
	[illegible]	8/21/09	830	[illegible]	8/21/09	0830	3.1	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: DIMITRI TALBERT
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 08/20/09

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 1 of 3

1324429

Section A Required Client Information:

Company: CATLIN ENGINEERS & SCIENTISTS
Address: 220 OLD DAIRY ROAD
WILMINGTON, NC 28405
Email To: jeff.becken@catlinusa.com
Phone: 910-452-5861 Fax: 910-452-7563
Requested Due Date/TAT: STANDARD

Section B Required Project Information:

Report To: JEFF BECKEN
Copy To: DIMITRI TALBERT
Purchase Order No.:
Project Name: INVISTA PX TERMINAL
Project Number: 201-125

Section C Invoice Information:

Attention: MICHAEL CHRISTOPHER
Company Name: REISS REMEDIATION, LLC
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 3446-1

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): Analysis Test: M/P XYLENES PER 8260

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	102	WT	G			18AUG09	1600		3				X					X		001
2	104					19AUG09	1530													002
3	105					18AUG09	1420													003
4	106					19AUG09	1040													004
5	107					19AUG09	0955													005
6	108					19AUG09	1010													006
7	113					18AUG09	1425													007
8	117					18AUG09	1400													008
9	119					18AUG09	1440													009
10	MW-1					18AUG09	1320													010
11	MW-2					19AUG09	1110													011
12	MW-3					19AUG09	1055													012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Tim Stt (Catlin)	8-20-09	4:00p	[illegible]	8/20/09	1600		Y		
	[illegible]	8/20/09	1600	[illegible] TALE	8/20/09	0830	3.1	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: DIMITRI TALBERT
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 08/20/09

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1324428

Section A Required Client Information:

Company: CATLIN ENGINEERS & SCIENTISTS
Address: 220 OLD DAIRY RD, WILMINGTON, NC 28405
Email To: jeff.becken@catlinusa.com
Phone: 910-452-5861 Fax: 910-452-7563
Requested Due Date/TAT: STANDARD

Section B Required Project Information:

Report To: JEFF BECKEN
Copy To: DIMITRI TALBERT
Purchase Order No.:
Project Name: INVISTA PX TERMINAL
Project Number: 201-125

Section C Invoice Information:

Attention: MICHAEL CHRISTOPHER
Company Name: REISS REMEDIATION, LLC
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): MIP XYLENES PER 8260B

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-20	WT	G			18AUG09	1520		3				X					X		25
2	MW-28	↓	↓			18AUG09	1455		↓				↓					↓		26
3	MW-32	↓	↓			18AUG09	1500		↓				↓					↓		27
4	MW-33	↓	↓			18AUG09	1335		↓				↓					↓		28
5	MW-34	↓	↓			19AUG09	1235		↓				↓					↓		29
6	MW-35	↓	↓			18AUG09	1540		↓				↓					↓		30
7	MW-36	↓	↓			19AUG09	1000		↓				↓					↓		31
8	[redacted] OT																			
9	KRW-5	WT	G			19AUG09	1225		3				X					X		31
10	MW-4 DUP	↓	↓			19AUG09	1035		↓				↓					↓		32
11	EQUIP. RINSATE	↓	↓			19AUG09	1040		↓				↓					↓		33
12	TRIP BLANK																			35

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Tom Stutz (Catlin)	8-20-09	4:00p	[signature]	8/20/09	1600		Y		
	[signature]	8/21/09	830	[signature] PACE	8/21/09	0830	3.1	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: DIMITRI TALBERT
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 08/20/09

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-48648-1

Job Description: Invista North (201-125)

For:
Catlin Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405

Attention: Mr. Jeff Becken

Kathryn Smith

Approved for release.
Kathryn Smith
Project Manager I
7/14/2009 4:39 PM

Kathryn Smith
Project Manager I
kathye.smith@testamericainc.com
07/14/2009

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

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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

ACCREDITED IN ACCORDANCE WITH nelac

METHOD SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-48648-1

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: 680-48648-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB

SAMPLE SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-48648-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-48648-1	MW-18	Water	06/30/2009 0915	07/01/2009 1015
680-48648-2	MW-19	Water	06/30/2009 0900	07/01/2009 1015

Client: Catlin Engineers and Scientists

Job Number: 680-48648-1

Client Sample ID: **MW-18**

Lab Sample ID: 680-48648-1

Client Matrix: Water

Date Sampled: 06/30/2009 0915

Date Received: 07/01/2009 1015

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-142397	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0123.d
Dilution:	10		Initial Weight/Volume:	5 mL
Date Analyzed:	07/09/2009 1345		Final Weight/Volume:	5 mL
Date Prepared:	07/09/2009 1345			

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	580		2.0	20

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		75 - 120
Dibromofluoromethane	102		75 - 121
Toluene-d8 (Surr)	101		75 - 120

Client: Catlin Engineers and Scientists

Job Number: 680-48648-1

Client Sample ID: **MW-19**

Lab Sample ID: 680-48648-2

Client Matrix: Water

Date Sampled: 06/30/2009 0900

Date Received: 07/01/2009 1015

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 680-142303	Instrument ID:	MSO
Preparation:	5030B		Lab File ID:	o0117.d
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/08/2009 1623		Final Weight/Volume:	5 mL
Date Prepared:	07/08/2009 1623			

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.20	U	0.20	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	93		75 - 120
Dibromofluoromethane	111		75 - 121
Toluene-d8 (Surr)	100		75 - 120

DATA REPORTING QUALIFIERS

Client: Catlin Engineers and Scientists

Job Number: 680-48648-1

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

Client: Catlin Engineers and Scientists

Job Number: 680-48648-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-48648-1	MW-18	97	102	101
680-48648-2	MW-19	93	111	100
MB 680-142303/9		95	106	99
MB 680-142397/8		93	110	99
LCS 680-142303/6		95	103	98
LCS 680-142397/6		96	100	98
LCSD 680-142303/7		97	102	100
LCSD 680-142397/7		97	100	98

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

Client: Catlin Engineers and Scientists

Job Number: 680-48648-1

Method Blank - Batch: 680-142303

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-142303/9	Analysis Batch:	680-142303	Instrument ID:	GC/MS Volatiles - O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq545.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/08/2009 1007			Final Weight/Volume:	5 mL
Date Prepared:	07/08/2009 1007				

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.20	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	95	75 - 120
Dibromofluoromethane	106	75 - 121
Toluene-d8 (Surr)	99	75 - 120

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-142303

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-142303/6	Analysis Batch:	680-142303	Instrument ID:	GC/MS Volatiles - O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq541.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/08/2009 0848			Final Weight/Volume:	5 mL
Date Prepared:	07/08/2009 0848				

LCSD Lab Sample ID:	LCSD 680-142303/7	Analysis Batch:	680-142303	Instrument ID:	GC/MS Volatiles - O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq542.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/08/2009 0908			Final Weight/Volume:	5 mL
Date Prepared:	07/08/2009 0908				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
m-Xylene & p-Xylene	99	101	83 - 118	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	95	97	75 - 120
Dibromofluoromethane	103	102	75 - 121
Toluene-d8 (Surr)	98	100	75 - 120

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

Client: Catlin Engineers and Scientists

Job Number: 680-48648-1

Method Blank - Batch: 680-142397

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-142397/8	Analysis Batch:	680-142397	Instrument ID:	GC/MS Volatiles - O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq561.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/09/2009 1317			Final Weight/Volume:	5 mL
Date Prepared:	07/09/2009 1317				

Analyte	Result	Qual	MDL	RL
m-Xylene & p-Xylene	0.20	U	0.20	2.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	93	75 - 120
Dibromofluoromethane	110	75 - 121
Toluene-d8 (Surr)	99	75 - 120

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-142397

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-142397/6	Analysis Batch:	680-142397	Instrument ID:	GC/MS Volatiles - O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq551.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/09/2009 0952			Final Weight/Volume:	5 mL
Date Prepared:	07/09/2009 0952				

LCSD Lab Sample ID:	LCSD 680-142397/7	Analysis Batch:	680-142397	Instrument ID:	GC/MS Volatiles - O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq553.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	07/09/2009 1021			Final Weight/Volume:	5 mL
Date Prepared:	07/09/2009 1021				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
m-Xylene & p-Xylene	101	100	83 - 118	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	96	97	75 - 120
Dibromofluoromethane	100	100	75 - 121
Toluene-d8 (Surr)	98	98	75 - 120

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

Serial Number 002200

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

201-125

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 - NORTH	PROJECT NO.: 201-125	PROJECT LOCATION (STATE): NC
TAL (LAB) PROJECT MANAGER: KATHY SMITH	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: JEFF BECKEN	CLIENT PHONE: 910 452 5861	CLIENT FAX: 910 452 7563
CLIENT NAME: Catlin Eng. & Scientists	CLIENT E-MAIL: jeff.becken@catlinusa.com	
CLIENT ADDRESS: 220 Old Dairy Rd., Wilmington, NC 28405		
COMPANY CONTRACTING THIS WORK (if applicable): REISS REMEDIATION		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ☒
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE _____
NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

REQUIRED ANALYSIS: M/P XYLENES PER 8260

PRESERVATIVE: HCl

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
30 JUN	0915	MW 18	G	X				3	See Kathy Smith
30 JUN	0900	MW 19	G	X				3	for QC & EDD
									format

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	6-30-09	1435						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	7-1-09	10:15	YES ○ NO ○	680	48648	TEMP 5.8

TAL8240-680 (1207)

Login Sample Receipt Check List

Client: Catlin Engineers and Scientists

Job Number: 680-48648-1

Login Number: 48648
Creator: Kicklighter, Marilyn
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	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	
Is the Field Sampler's name present on COC?	False	
Sample Preservation Verified	True	

Serial Number 002200

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

201-125

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 - NORTH	PROJECT NO.: 201-125	PROJECT LOCATION (STATE): NC
TAL (LAB) PROJECT MANAGER: KATHY SMITH	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: JEFF BECKEN	CLIENT PHONE: 910 452 5861	CLIENT FAX: 910 452 7563
CLIENT NAME: Catlin Eng. + Scientists	CLIENT E-MAIL: jeff.becken@catlinusa.com	
CLIENT ADDRESS: 220 Old Dairy Rd., Wilmington, NC 28405		
COMPANY CONTRACTING THIS WORK (if applicable): REISS REMEDIATION		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ☒

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

REQUIRED ANALYSIS: M/P XYLENES PER 8260

PRESERVATIVE: HCl

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
30JUN	0915	MW18	G	X				3	See Kathy Smith
30JUN	0900	MW19	G	X				3	for QC & EDD
									format

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	6-30-09	1435						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	7-1-09	10:15	YES ○ NO ○	680	48648	TEMP 5.8

TAL8240-680 (1207)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-47694-1

Job Description: Invista North (201-125)

For:
Catlin Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405

Attention: Mr. Jeff Becken

Kathryn Smith

Approved for release.
Kathryn Smith
Project Manager I
6/5/2009 12:22 PM

Kathryn Smith
Project Manager I
kathye.smith@testamericainc.com
06/05/2009

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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

ACCREDITED IN ACCORDANCE WITH nelac

METHOD SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-47694-1

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: 680-47694-1

Method	Analyst	Analyst ID
SW846 8260B	Lanier, Carolyn	CL

SAMPLE SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-47694-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-47694-1	MW 18	Water	05/27/2009 1530	05/29/2009 1009
680-47694-2	MW 19	Water	05/27/2009 1510	05/29/2009 1009

Analytical Data

Client: Catlin Engineers and Scientists

Job Number: 680-47694-1

Client Sample ID: **MW 18**

Lab Sample ID: 680-47694-1
Client Matrix: Water

Date Sampled: 05/27/2009 1530
Date Received: 05/29/2009 1009

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 200
Date Analyzed: 06/03/2009 1725
Date Prepared: 06/03/2009 1725

Analysis Batch: 680-139506

Instrument ID: GC/MS Volatiles - A C2
Lab File ID: a3676.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	950		110	400

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	90	75 - 120
Dibromofluoromethane	102	75 - 121
Toluene-d8 (Surr)	91	75 - 120

Client: Catlin Engineers and Scientists

Job Number: 680-47694-1

Client Sample ID: **MW 19**

Lab Sample ID: 680-47694-2
Client Matrix: Water

Date Sampled: 05/27/2009 1510
Date Received: 05/29/2009 1009

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 06/03/2009 1754
Date Prepared: 06/03/2009 1754

Analysis Batch: 680-139506

Instrument ID: GC/MS Volatiles - A C2
Lab File ID: a3678.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

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	104	75 - 121
Toluene-d8 (Surr)	93	75 - 120

DATA REPORTING QUALIFIERS

Client: Catlin Engineers and Scientists

Job Number: 680-47694-1

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

Client: Catlin Engineers and Scientists

Job Number: 680-47694-1

Method Blank - Batch: 680-139506

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-139506/9	Analysis Batch:	680-139506	Instrument ID:	GC/MS Volatiles - A C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	aq290.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2009 1225			Final Weight/Volume:	5 mL
Date Prepared:	06/03/2009 1225				

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

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	91	75 - 120
Dibromofluoromethane	105	75 - 121
Toluene-d8 (Surr)	94	75 - 120

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-139506

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-139506/6	Analysis Batch:	680-139506	Instrument ID:	GC/MS Volatiles - A C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	aq282.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2009 1012			Final Weight/Volume:	5 mL
Date Prepared:	06/03/2009 1012				

LCSD Lab Sample ID:	LCSD 680-139506/7	Analysis Batch:	680-139506	Instrument ID:	GC/MS Volatiles - A C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	aq284.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	06/03/2009 1042			Final Weight/Volume:	5 mL
Date Prepared:	06/03/2009 1042				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
m-Xylene & p-Xylene	109	108	83 - 118	0	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	101	101	75 - 120
Dibromofluoromethane	100	96	75 - 121
Toluene-d8 (Surr)	109	101	75 - 120

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

TEST AMERICA Serial Number 51104

SEVERN TRENT

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TEST AMERICA ~~STL~~ 201-125

(X) STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404

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

( ) Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE: INVISTA - NORTH	PROJECT NO.: 201-125	PROJECT LOCATION (STATE): NC
STL (LAB) PROJECT MANAGER: KATHY SMITH	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: JEFF BECKEN	CLIENT PHONE: 910-452-5861	CLIENT FAX: 910-452-7563
CLIENT NAME: Cotlin Eng. & Scientists	CLIENT E-MAIL: jeff.becken@cotlinusa.com	
CLIENT ADDRESS: 220 Old Dairy Rd., Wilmington, NC 28405		
COMPANY CONTRACTING THIS WORK (if applicable): Reiss Remediation, LLC		

PAGE ___ OF ___

STANDARD REPORT DELIVERY (X)
DATE DUE ___
EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
DATE DUE ___
NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

REQUIRED ANALYSIS: M/P XYLENES PER 8260; HCl

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT,...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
27 May 09	1530	MW 18	G	X				3	See: Kathy Smith - COC, EDD formats
27 May 09	1510	MW 19	G	X				3	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	28May	1200						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
Beth A. Daughtry	5/29/09	1009	YES ( ) NO ( )		L80-47694	TEMPERATURE 3.6

STL8240-680 (12/02)

TEST AMERICA

Serial Number 31104

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TEST AMERICA

SEVERN TRENT STL

201-125

(X) STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404

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

( ) Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE: INVISTA - NORTH	PROJECT NO.: 201-125	PROJECT LOCATION (STATE): NC
STL (LAB) PROJECT MANAGER: KATHY SMITH	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: JEFF BECKEN	CLIENT PHONE: 910-452-5861	CLIENT FAX: 910-452-7563
CLIENT NAME: Cotlin Eng. & Scientists	CLIENT E-MAIL: jeff.becken@cotlinusa.com	
CLIENT ADDRESS: 220 Old Dairy Rd., Wilmington, NC 28405		
COMPANY CONTRACTING THIS WORK (if applicable): Reiss Remediation, LLC		

PAGE ___ OF ___

STANDARD REPORT DELIVERY (X)

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ( )

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

REQUIRED ANALYSIS: MTBE/BTEX XYLENES PER 8260 (NUMBER OF CONTAINERS SUBMITTED); HCl

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT,...)	MTBE/BTEX XYLENES PER 8260	HCl	REMARKS
27 May 09	1530	MW 18	G	X				3		See: Kathy Smith - COC, EDD formats
27 May 09	1510	MW 19	G	X				3		

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	28 May	1200						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
Beth A Daughtry	5/29/9	1009	YES ( ) NO ( )		L80-47694	TEMPERATURE 3.6

STL8240-680 (12/02)

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MAY 18 2009

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-47062-1

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

For:
Catlin Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405

Attention: Mr. Jeff Becken

Kathryn Smith

Approved for release.
Kathryn Smith
Project Manager I
5/14/2009 9:50 AM

Kathryn Smith
Project Manager I
kathye.smith@testamericainc.com
05/14/2009

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

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

ACCREDITED IN ACCORDANCE WITH nelac

METHOD SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-47062-1

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: 680-47062-1

Method	Analyst	Analyst ID
SW846 8260B	Lanier, Carolyn	CL

SAMPLE SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-47062-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-47062-1	MW-19	Water	05/05/2009 1000	05/07/2009 1000
680-47062-2	MW-18	Water	05/05/2009 1030	05/07/2009 1000

Client: Catlin Engineers and Scientists

Job Number: 680-47062-1

Client Sample ID: **MW-19**

Lab Sample ID: 680-47062-1
Client Matrix: Water

Date Sampled: 05/05/2009 1000
Date Received: 05/07/2009 1000

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 05/11/2009 1617
Date Prepared: 05/11/2009 1617

Analysis Batch: 680-137556

Instrument ID: GC/MS Volatiles - A C2
Lab File ID: a3218.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

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	90	75 - 121
Toluene-d8 (Surr)	98	75 - 120

Client: Catlin Engineers and Scientists

Job Number: 680-47062-1

Client Sample ID: **MW-18**

Lab Sample ID: 680-47062-2
Client Matrix: Water

Date Sampled: 05/05/2009 1030
Date Received: 05/07/2009 1000

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 200
Date Analyzed: 05/12/2009 1839
Date Prepared: 05/12/2009 1839

Analysis Batch: 680-137710

Instrument ID: GC/MS Volatiles - A C2
Lab File ID: a3258.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	38000		110	400

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	92	75 - 120
Dibromofluoromethane	85	75 - 121
Toluene-d8 (Surr)	102	75 - 120

DATA REPORTING QUALIFIERS

Client: Catlin Engineers and Scientists

Job Number: 680-47062-1

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

Client: Catlin Engineers and Scientists

Job Number: 680-47062-1

Method Blank - Batch: 680-137556

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-137556/18
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/11/2009 1253
Date Prepared: 05/11/2009 1253

Analysis Batch: 680-137556
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - A C2
Lab File ID: aq050.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	86	75 - 121
Toluene-d8 (Surr)	99	75 - 120

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-137556

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-137556/15
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/11/2009 1057
Date Prepared: 05/11/2009 1057

Analysis Batch: 680-137556
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - A C2
Lab File ID: aq042.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-137556/16
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/11/2009 1126
Date Prepared: 05/11/2009 1126

Analysis Batch: 680-137556
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - A C2
Lab File ID: aq044.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
m-Xylene & p-Xylene	96	97	83 - 118	0	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	99	97	75 - 120
Dibromofluoromethane	84	84	75 - 121
Toluene-d8 (Surr)	97	98	75 - 120

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

Client: Catlin Engineers and Scientists

Job Number: 680-47062-1

Method Blank - Batch: 680-137710

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 680-137710/23
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/12/2009 1211
Date Prepared: 05/12/2009 1211

Analysis Batch: 680-137710
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - A C2
Lab File ID: aq064.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	89	75 - 121
Toluene-d8 (Surr)	99	75 - 120

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 680-137710

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 680-137710/20
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/12/2009 1015
Date Prepared: 05/12/2009 1015

Analysis Batch: 680-137710
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - A C2
Lab File ID: aq056.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

LCSD Lab Sample ID: LCSD 680-137710/21
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/12/2009 1044
Date Prepared: 05/12/2009 1044

Analysis Batch: 680-137710
Prep Batch: N/A
Units: ug/L

Instrument ID: GC/MS Volatiles - A C2
Lab File ID: aq058.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
m-Xylene & p-Xylene	103	104	83 - 118	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	105	103	75 - 120
Dibromofluoromethane	86	86	75 - 121
Toluene-d8 (Surr)	97	100	75 - 120

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

Serial Number 002191

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: Inrisda North	PROJECT NO.: 201-125	PROJECT LOCATION (STATE): NC
TAL (LAB) PROJECT MANAGER: Kathy Smith	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Jeff Becken	CLIENT PHONE: 910-452-5861	CLIENT FAX: 910-452-7563
CLIENT NAME: Catlin Eng & Sci	CLIENT E-MAIL: jeff.becken@CatlinUSA.com	
CLIENT ADDRESS: 220 Old Dairy Rd Wilmington, NC 28405		
COMPANY CONTRACTING THIS WORK (If applicable): REISS REMEDIATION, LLC		

PAGE 1 OF 1

STANDARD REPORT DELIVERY ☒

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	REQUIRED ANALYSIS: MTBE XYLENES PER 8260B	NUMBER OF CONTAINERS SUBMITTED	REMARKS
								PRESERVATIVE: HCL		
5Mar09	1000	MW-19	G	X					2	SEE KATHY SMITH FOR COC & EDD FORMAT
5Mar09	1030	MW-18	↓	↓					↓	

Page 10 of 11

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Roger Castle	5Mar09	1245						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
Michael Lightsey	5/7/09	10:00	YES ☒ NO ○		680-47062	TEMPERATURE 2.4

TAL8240-680 (1207)

Login Sample Receipt Check List

Client: Catlin Engineers and Scientists

Job Number: 680-47062-1

Login Number: 47062
Creator: Kicklighter, Marilyn
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	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	

Serial Number 002191

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

(X) 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	PROJECT NO.	PROJECT LOCATION (STATE)
Invista North	201-125	NC
TAL (LAB) PROJECT MANAGER: Kathy Smith	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Jeff Becker	CLIENT PHONE: 910-452-5861	CLIENT FAX: 910-452-7563
CLIENT NAME: Catlin Eng & Sc.	CLIENT E-MAIL: jeff.becker@CatlinUSA.com	
CLIENT ADDRESS: 220 Old Dairy Rd Wilmington, NC 28405		
COMPANY CONTRACTING THIS WORK (if applicable): REISS REMEDIATION, LLC		

PAGE 1 OF 1

STANDARD REPORT DELIVERY (X)
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ( )
DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	REQUIRED ANALYSIS: M/P XYLENES PER 8260B	REMARKS
								HCL	
5 Mar 09	1000	MW-19	G	X				2	SEE KATHY
5 Mar 09	1030	MW-18	↓	↓				↓	SMITH FOR
									COC & EDD
									FORMAT

NUMBER OF CONTAINERS SUBMITTED

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Roger Carlton	5 Mar 09	1245						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
M. Kulchytska	5/7/09	10:00	YES (X) NO ( )		680-47062	TEMPERATURE 2.4

TAL8240-680 (1207)

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 680-46060-1

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

Approved for release
Kathryn Smith
Project Manager I
4/15/2009 9 26 AM

Kathryn Smith
Project Manager I
kathye.smith@testamericainc.com
04/15/2009

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

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

ACCREDITED IN ACCORDANCE WITH nelac

METHOD SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-46060-1

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: 680-46060-1

Method	Analyst	Analyst ID
SW846 8260B	Bearden, Robert	RB

SAMPLE SUMMARY

Client: Catlin Engineers and Scientists

Job Number: 680-46060-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-46060-1	MW19	Water	04/02/2009 0945	04/03/2009 1020
680-46060-2	MW18	Water	04/02/2009 1020	04/03/2009 1020

Client: Catlin Engineers and Scientists

Job Number: 680-46060-1

Client Sample ID: **MW19**

Lab Sample ID: 680-46060-1
Client Matrix: Water

Date Sampled: 04/02/2009 0945
Date Received: 04/03/2009 1020

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 04/10/2009 1420
Date Prepared: 04/10/2009 1420

Analysis Batch: 680-135021

Instrument ID: GC/MS Volatiles - O
Lab File ID: o8643.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	0.63	J	0.53	2.0

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

Client: Catlin Engineers and Scientists

Job Number: 680-46060-1

Client Sample ID: **MW18**

Lab Sample ID: 680-46060-2

Client Matrix: Water

Date Sampled: 04/02/2009 1020

Date Received: 04/03/2009 1020

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B

Preparation: 5030B

Dilution: 100

Date Analyzed: 04/13/2009 1116

Date Prepared: 04/13/2009 1116

Analysis Batch: 680-135037

Instrument ID: GC/MS Volatiles - O C2

Lab File ID: o8680.d

Initial Weight/Volume: 5 mL

Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
m-Xylene & p-Xylene	30000		53	200

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	95	75 - 120
Dibromofluoromethane	106	75 - 121
Toluene-d8 (Surr)	103	75 - 120

DATA REPORTING QUALIFIERS

Client: Catlin Engineers and Scientists

Job Number: 680-46060-1

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.

Client: Catlin Engineers and Scientists

Job Number: 680-46060-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	BFB %Rec	DBFM %Rec	TOL %Rec
680-46060-1	MW19	95	102	99
680-46060-2	MW18	95	106	103
MB 680-135021/8		92	103	100
MB 680-135037/12		93	109	106
LCS 680-135021/5		95	103	98
LCS 680-135037/9		97	102	99
LCSD 680-135021/6		96	105	100
LCSD 680-135037/10		99	105	101

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

Client: Catlin Engineers and Scientists

Job Number: 680-46060-1

Method Blank - Batch: 680-135021

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-135021/8	Analysis Batch:	680-135021	Instrument ID:	GC/MS Volatiles - O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq693.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	04/10/2009 1322			Final Weight/Volume:	5 mL
Date Prepared:	04/10/2009 1322				

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

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	92	75 - 120
Dibromofluoromethane	103	75 - 121
Toluene-d8 (Surr)	100	75 - 120

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 680-135021

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-135021/5	Analysis Batch:	680-135021	Instrument ID:	GC/MS Volatiles - O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq685.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	04/10/2009 1111			Final Weight/Volume:	5 mL
Date Prepared:	04/10/2009 1111				

LCSD Lab Sample ID:	LCSD 680-135021/6	Analysis Batch:	680-135021	Instrument ID:	GC/MS Volatiles - O
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq687.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	04/10/2009 1140			Final Weight/Volume:	5 mL
Date Prepared:	04/10/2009 1140				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
m-Xylene & p-Xylene	99	100	83 - 118	1	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	95	96	75 - 120
Dibromofluoromethane	103	105	75 - 121
Toluene-d8 (Surr)	98	100	75 - 120

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

Client: Catlin Engineers and Scientists

Job Number: 680-46060-1

Method Blank - Batch: 680-135037

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 680-135037/12	Analysis Batch:	680-135037	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq708.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	04/13/2009 1033			Final Weight/Volume:	5 mL
Date Prepared:	04/13/2009 1033				

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	109	75 - 121
Toluene-d8 (Surr)	106	75 - 120

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 680-135037

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 680-135037/9	Analysis Batch:	680-135037	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq700.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	04/13/2009 0834			Final Weight/Volume:	5 mL
Date Prepared:	04/13/2009 0834				

LCSD Lab Sample ID:	LCSD 680-135037/10	Analysis Batch:	680-135037	Instrument ID:	GC/MS Volatiles - O C2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	oq702.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	5 mL
Date Analyzed:	04/13/2009 0902			Final Weight/Volume:	5 mL
Date Prepared:	04/13/2009 0902				

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

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	97	99	75 - 120
Dibromofluoromethane	102	105	75 - 121
Toluene-d8 (Surr)	99	101	75 - 120

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

Serial Number 002201

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

201-125

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	PROJECT NO.	PROJECT LOCATION (STATE)
INVISTA - NORTH TERMINAL	201-125	NC

TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
KATHY SMITH		

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Jeff Becken	910-452-5861	910-452-7563

CLIENT NAME	CLIENT E-MAIL
Catlin Engineers & Scientist	jeff.becken@catlinusa.com

CLIENT ADDRESS: 220 Old Dairy Rd, Wilmington, NC 28405

COMPANY CONTRACTING THIS WORK (if applicable): Reiss Remediation, LLC

PAGE 1 OF 1

STANDARD REPORT DELIVERY ☒

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

REQUIRED ANALYSIS: MVP XYLENES PER 8260

PRESERVATIVE: HCl

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
2Apr09	0945	MW19	G	X				3	See Kathy Smith
2Apr09	1020	MW18	G	X				3	for COC & EDD
									format

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2Apr09	1500						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
KL	4/3/09	1020	YES ○ NO ○		680-46060	0.4

TAL8240-680 (1207)

Login Sample Receipt Check List

Client: Catlin Engineers and Scientists

Job Number: 680-46060-1

Login Number: 46060
Creator: Conner, Keaton
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.	True	
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	

Serial Number 002201

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

201-125

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	PROJECT NO.	PROJECT LOCATION (STATE)
INVISTA - NORTH TERMINAL	201-125	NC
TAL (LAB) PROJECT MANAGER: KATHY SMITH	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Jeff Becken	CLIENT PHONE: 910-452-5861	CLIENT FAX: 910-452-7563
CLIENT NAME: Catlin Engineers & Scientist	CLIENT E-MAIL: jeff.becken@catlinusa.com	
CLIENT ADDRESS: 220 Old Dairy Rd, Wilmington, NC 28405		
COMPANY CONTRACTING THIS WORK (if applicable): Reiss Remediation, LLC		

MATRIX TYPE

REQUIRED ANALYSIS

PAGE 1 OF 1

STANDARD REPORT DELIVERY ☒

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: 1

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	MTBE/BTEX/XYLENES PER 8260	REMARKS
2Apr09	0945	MW19	G	X				3	See Kathy Smith for COC & EDD format
2Apr09	1020	MW18	G	X				3	

NUMBER OF CONTAINERS SUBMITTED

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2Apr09	1500						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
KL	4/3/09	1020	YES ○ NO ○		680-46060	0.4

TAL8240-680 (1207)

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

9249894

Page: 1 of 1

Section A Required Client Information:

Company:	CATLIN Engineers and Scientists
Address:	220 Old Dairy Road
	Wilmington, NC 28405
Email To:	jeff.becken@catlinusa.com
Phone: 910-452-5861	Fax: 910-452-7563
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeff Becken
Copy To:	
Purchase Order No.:	
Project Name:	Invista North Terminal
Project Number:	201-125

Section C Invoice Information:

Attention:	Michael Christopher
Company Name:	Reiss Remediation, LLC c/o Koch Industries, Inc.
Address:	20 Greenway Plaza, Houston Texas 77046
Pace Quote Reference:	
Pace Project Manager:	MGN
Pace Profile #:	# 3446-1

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER_____

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☑ NC ☐ OH ☐ SC ☐ WI ☐ OTHER____

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis: RTP XYLENES REK 8260	Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No. Lab I.D.
1	MW-18	WT	G			29JUL09	1020		4				X					X		N	9249894001
2	MW-19	WT	G			29JUL09	1040		4				X					X		N	002
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] / CATLIN	30JUL09	1535	[signature]	30/07/09	1535
			J Moore	7/31	900

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
4.1	Y/N (Y)	Y/N (Y)	Y/N (Y)
	Y/N (Y)	Y/N (Y)	Y/N (Y)
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: LARRY WESSELL

SIGNATURE of SAMPLER: [signature] FOR LARRY WESSELL

DATE Signed (MM / DD / YY): 07/30/09

Pace Analytical

Sample Condition Upon Receipt

Client Name: Caitlin Project # 9249894

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used T060 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Cooler Temperature 4.1 Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Optional
Proj. Due Date: N/A
Proj. Name: N/A

Date and Initials of person examining contents: 8/1 YM

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☐Yes ☑No ☐N/A	10. 1 vial broken tmw19
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): N/A		

Client Notification/ Resolution: Field Data Required? Y / N / N/A

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: BMH Date: 08-01-09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical™
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

9249894

Page: 1 of 1

Section A Required Client Information:

Company:	CATLIN Engineers and Scientists
Address:	220 Old Dairy Road
	Wilmington, NC 28405
Email To:	jeff.becken@catlinusa.com
Phone: 910-452-5861	Fax: 910-452-7563
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Jeff Becken
Copy To:	
Purchase Order No.:	
Project Name:	Invista North Terminal
Project Number:	201-125

Section C Invoice Information:

Attention:	Michael Christopher
Company Name:	Reiss Remediation, LLC c/o Koch Industries, Inc.
Address:	20 Greenway Plaza, Houston Texas 77046
Pace Quote Reference:	
Pace Project Manager:	MGN
Pace Profile #:	# 34416-1

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER____

SITE LOCATION: ☐ GA ☐ IL ☐ IN ☐ MI ☑ NC ☐ OH ☐ SC ☐ WI ☐ OTHER____

Filtered (Y/N): N

Requested Analysis: MTP XYLENES RER 8260

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Residual Chlorine (Y/N)	Pace Project No. Lab I.D.
1	MW-18	WT	G			29JUL09	1020		4				X					N	9249894001
2	MW-19	WT	G			29JUL09	1040		4				X					N	002
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] / CATLIN	30JUL09	1535	[signature]	30/07/09	1535
			[signature]	6/1	900

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
4.1	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: LARRY WESSELL

SIGNATURE of SAMPLER: [signature] FOR LARRY WESSELL

DATE Signed (MM / DD / YY): 07/30/09

e-File(ALLQ020rev.3,31Mar05))22Jun2005

Pace Analytical

Sample Condition Upon Receipt

Client Name: Catlin Project # 9249894

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☑ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used T060 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Cooler Temperature 4.1 Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: JM 8/1

Optional:
Proj. Due Date: N/A
Proj. Name: N/A

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☐Yes ☑No ☐N/A	10. 1 vial broken tmw19
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): N/A		

Client Notification/ Resolution: Field Data Required? Y / N / N/A

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

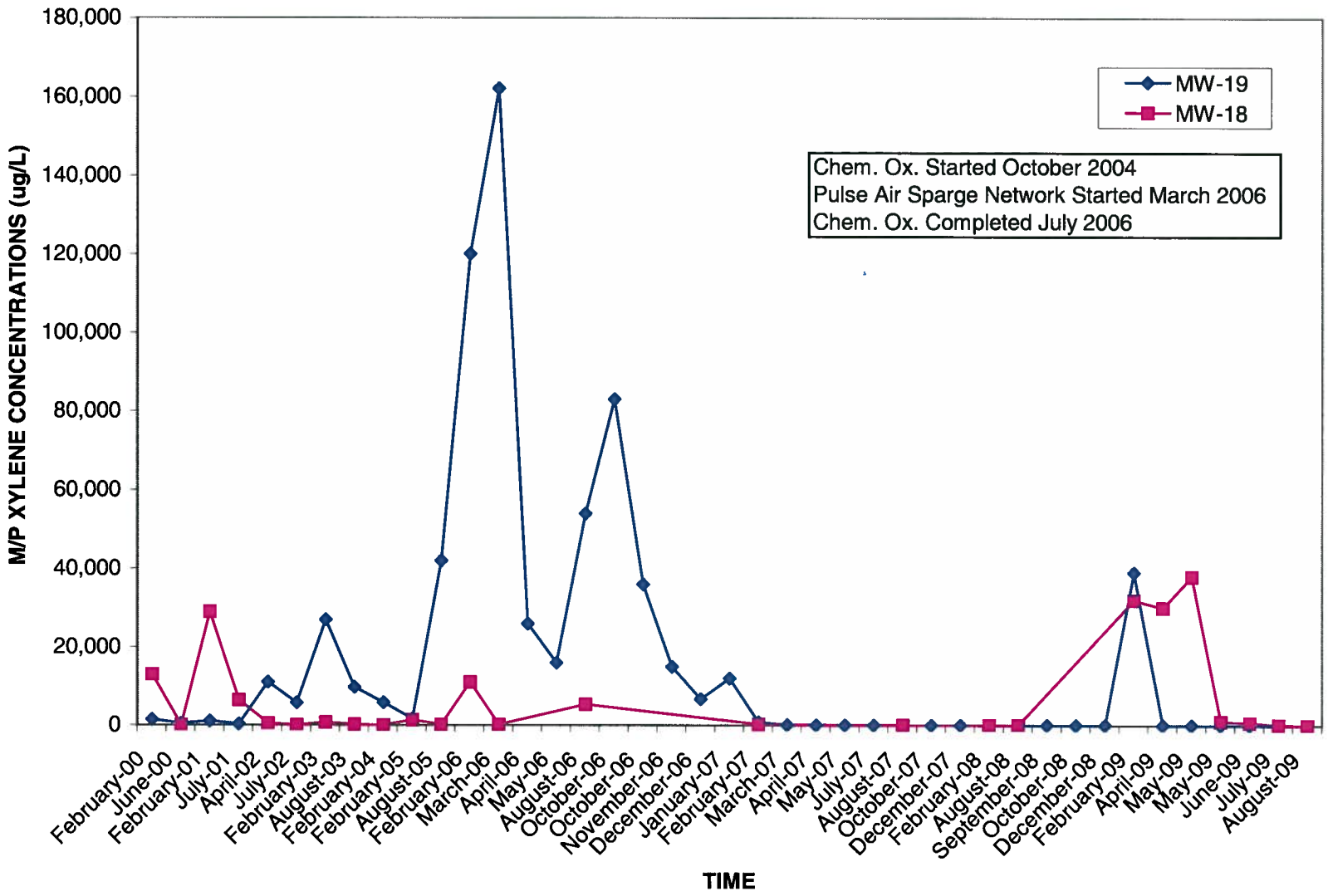
Project Manager Review: BMH Date: 08-01-09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

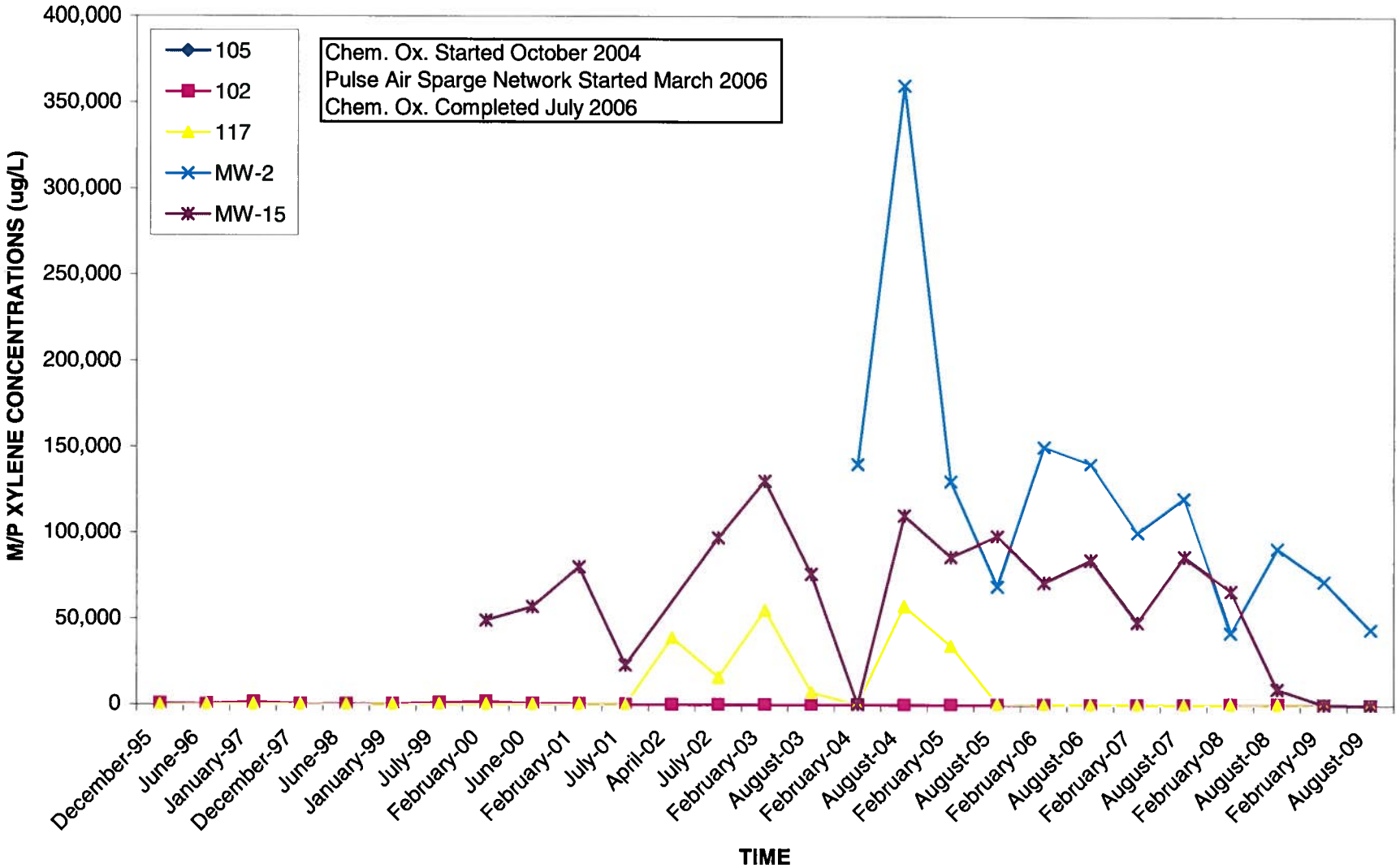
APPENDIX C

GRAPHS – GROUNDWATER QUALITY DATA FOR SELECTED MONITORING WELLS

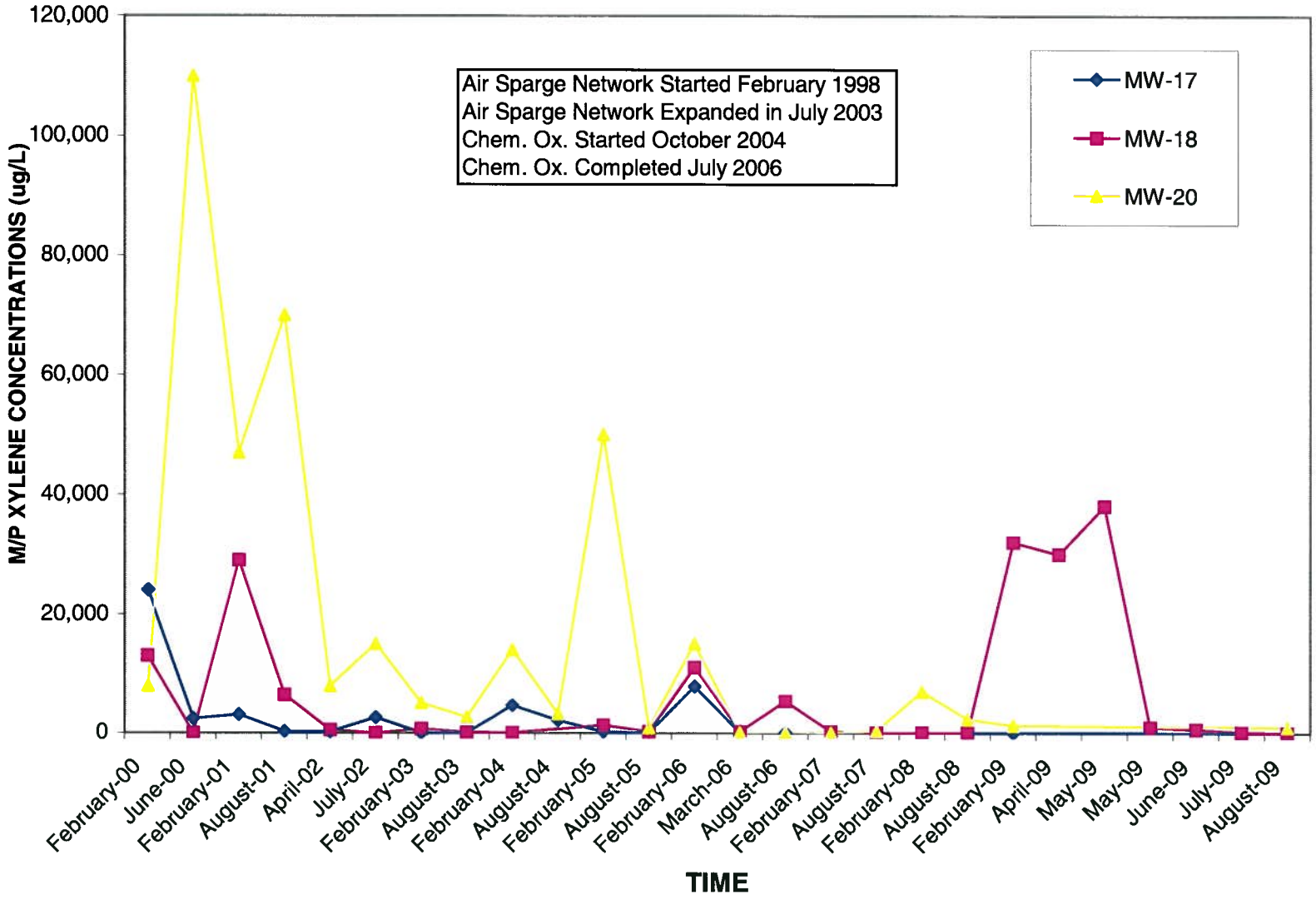
MONITORING WELLS ASSOCIATED WITH THE PULSE AIR SPARGE NETWORK ZONE 1



MONITORING WELLS ASSOCIATED WITH PULSE AIR SPARGE NETWORK ZONE 2



MONITORING WELLS ASSOCIATED WITH AIR SPARGE NETWORK A



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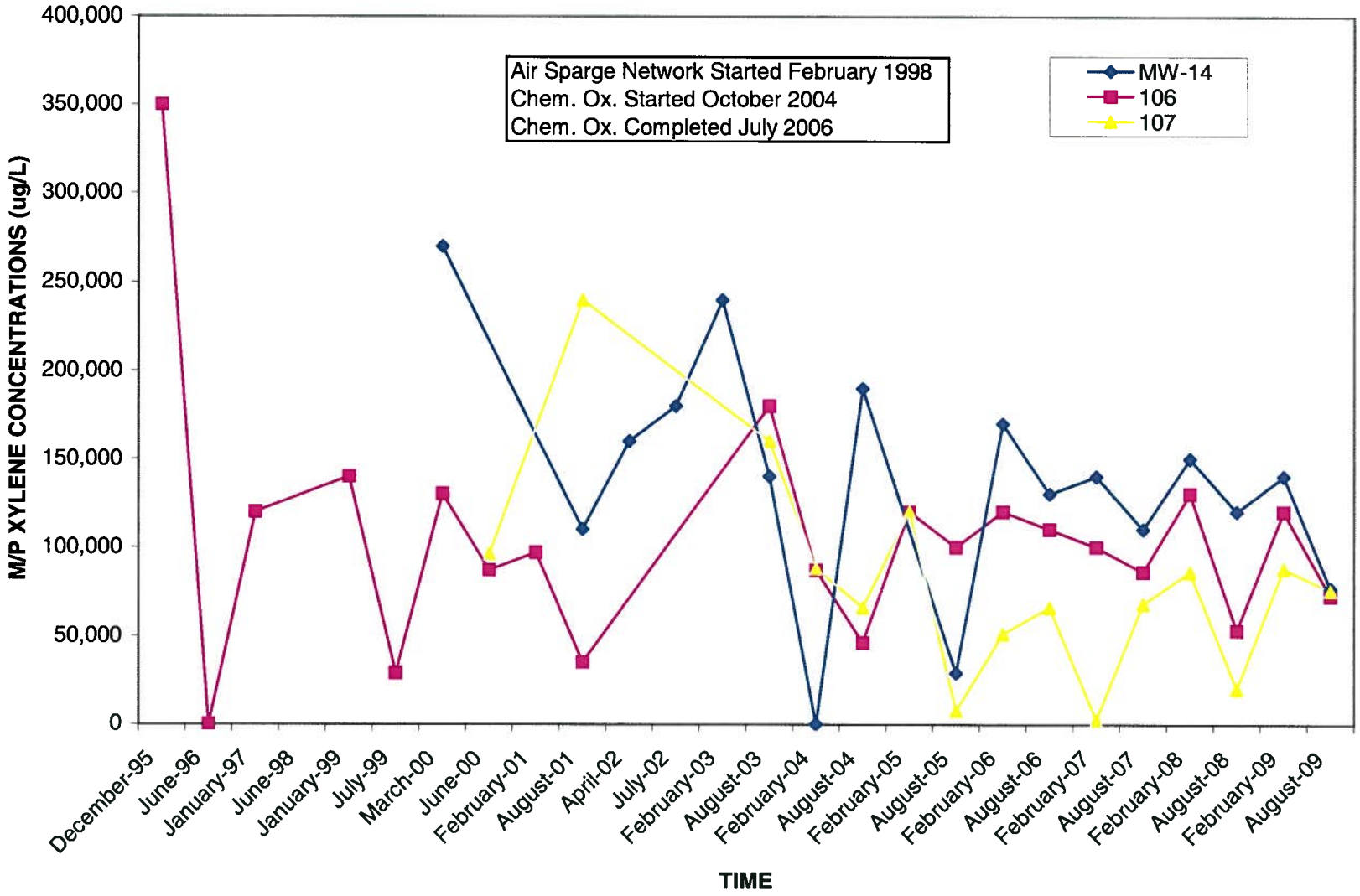
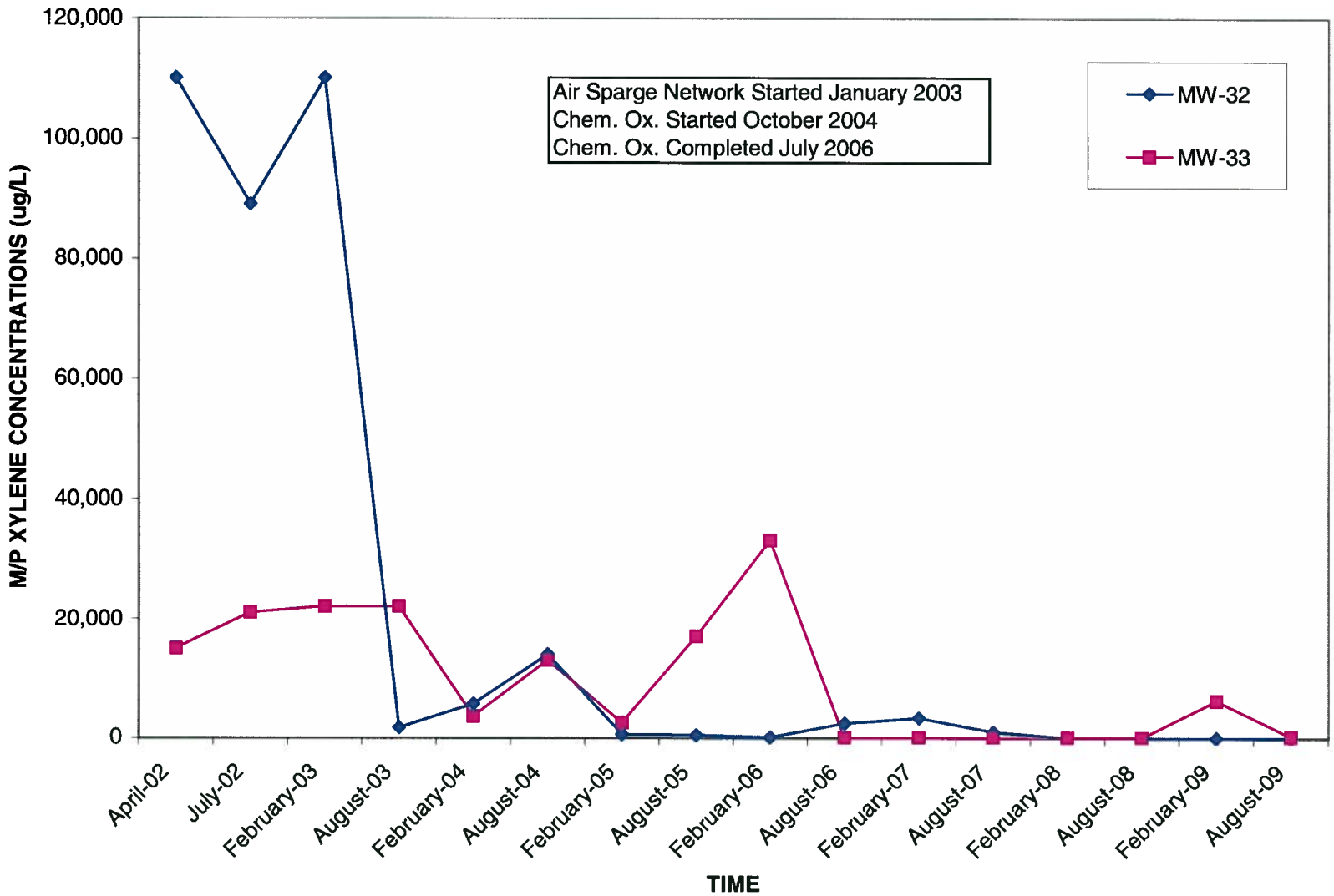
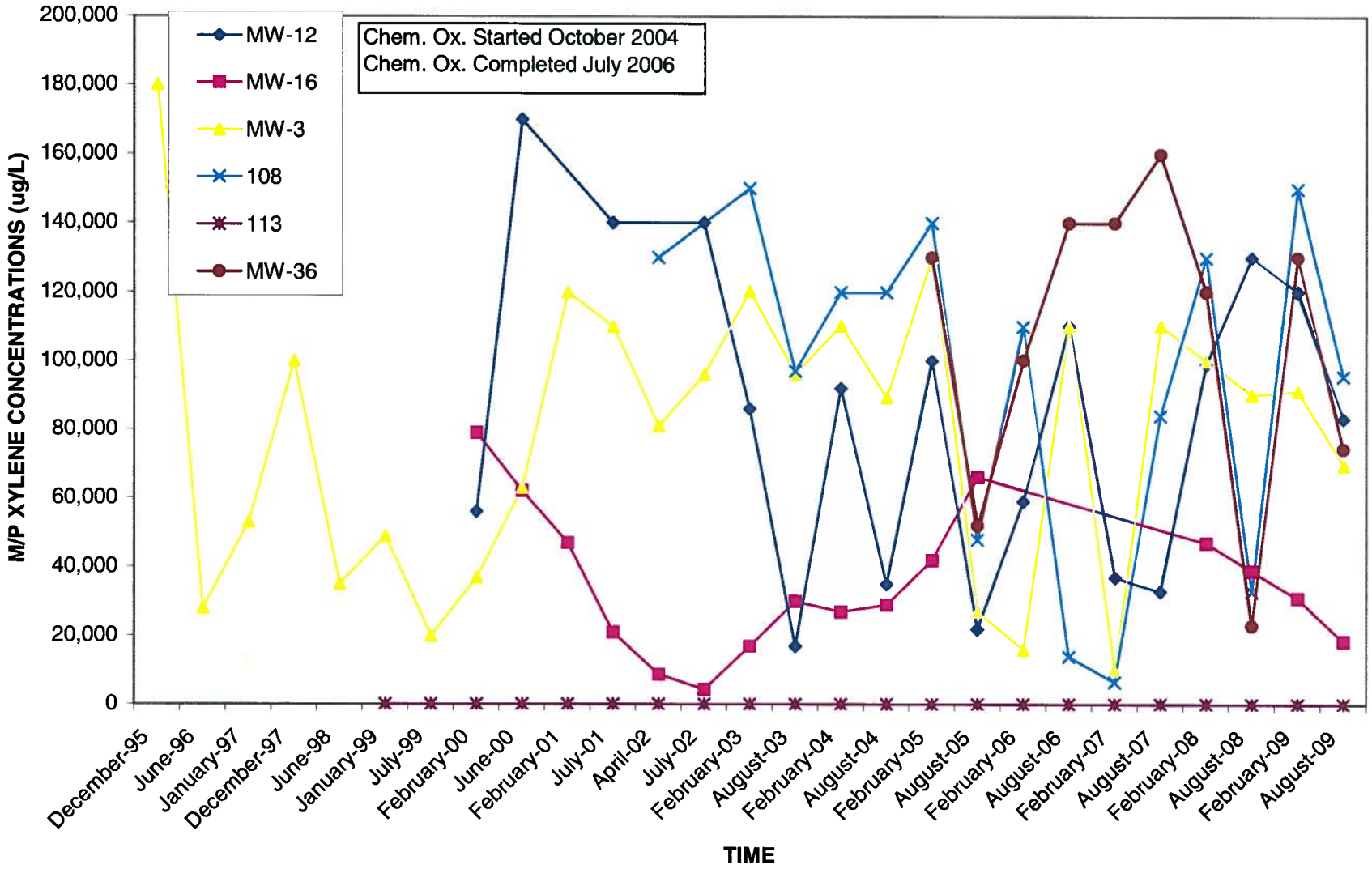


MONITORING WELLS ASSOCIATED WITH AIR SPARGE NETWORK C



SELECTED BACKGROUND WELLS



APPENDIX D

CONTAMINANT TRANSPORT MODELING AT PARAXYLENE FACILITY

CONTAMINANT TRANSPORT MODELING

Flint Hills Resources, LP
North Terminal - Paraxylene Facility
River Road
Wilmington, NC

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 2009 sampling event. However, for modeling natural attenuation of existing portions of the North Terminal, the portion of the project site between River Rd. 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 2009, Total Xylenes concentrations (August 2009) 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 Standard (2L GWQS) of 530 µg/L.

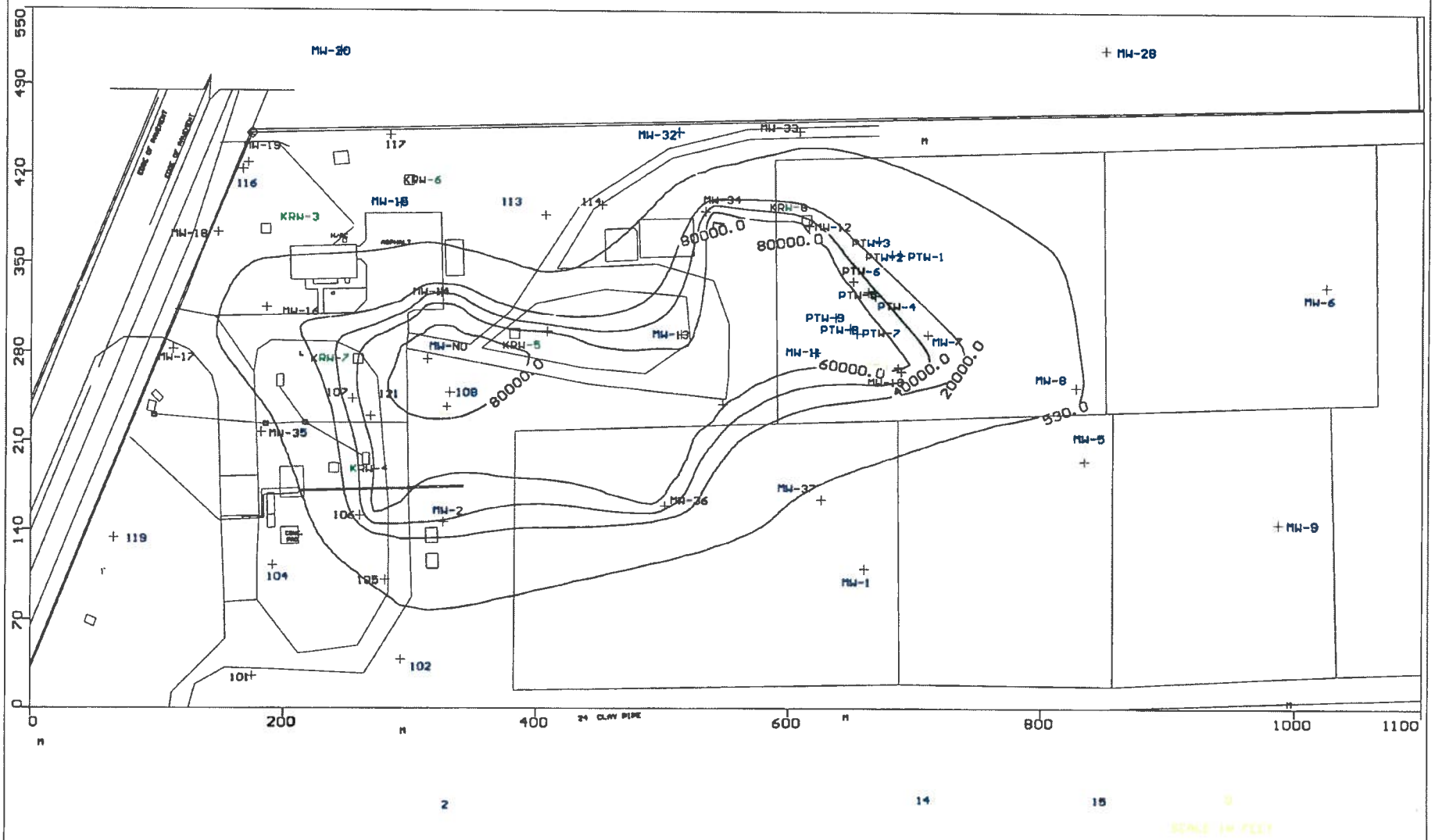
According to the model based on the stated assumptions, the dissolved Total Xylenes concentrations should meet current 2L GWQS within approximately 7-10 years in the event that only natural attenuation was utilized within the area up gradient of monitoring well KRW-5. Please refer to the attached Figures 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
HYDROGEOLOGY		
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
DISPERSION		
Longitudinal Dispersivity	35 ft.	Calculated based on plume dimensions
Dispersion Coefficient	6.21×10^{-6} cm^2/s	Assumed value based on EPA literature
BOUNDARY CONDITIONS		
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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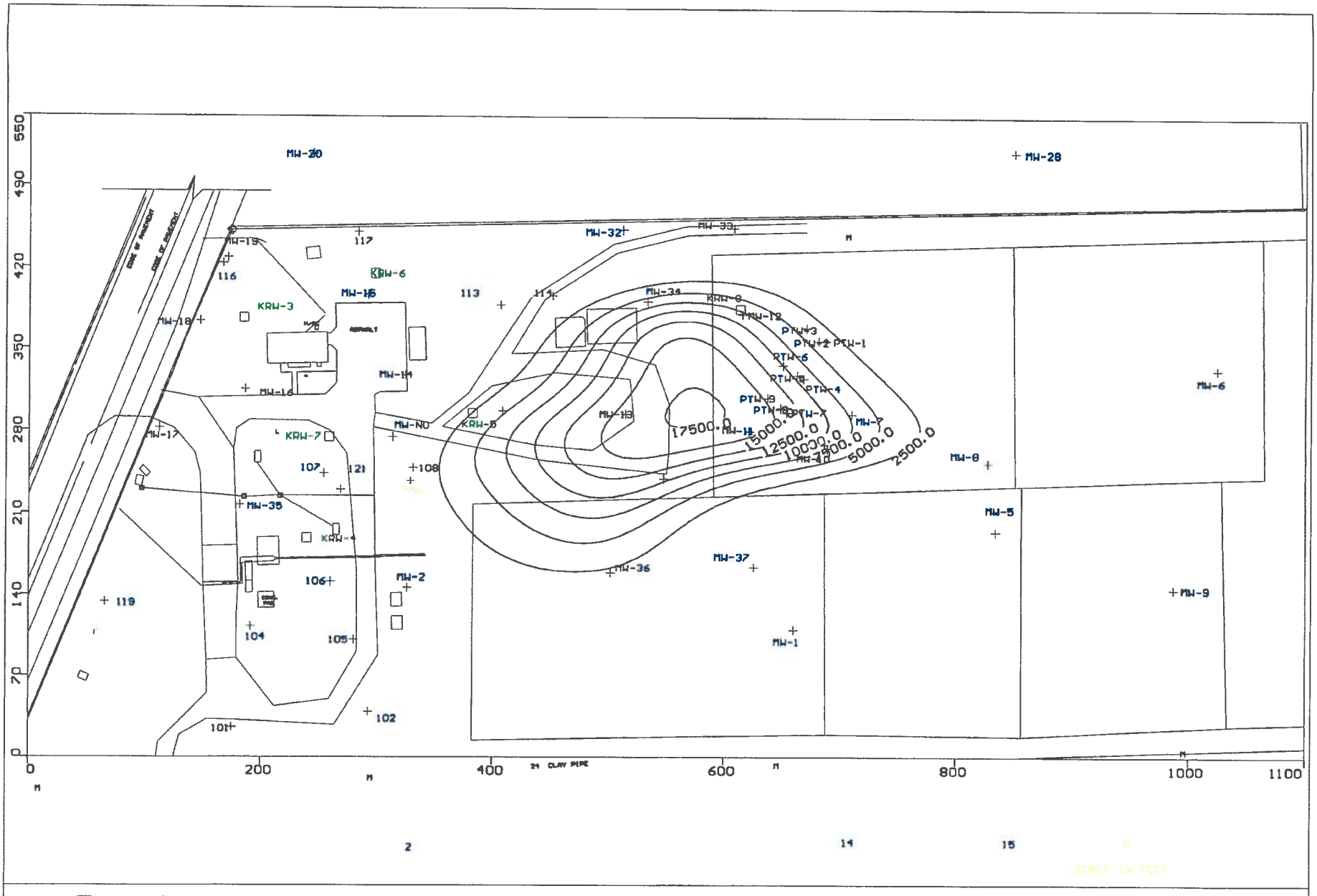
INITIAL MODEL CONDITIONS



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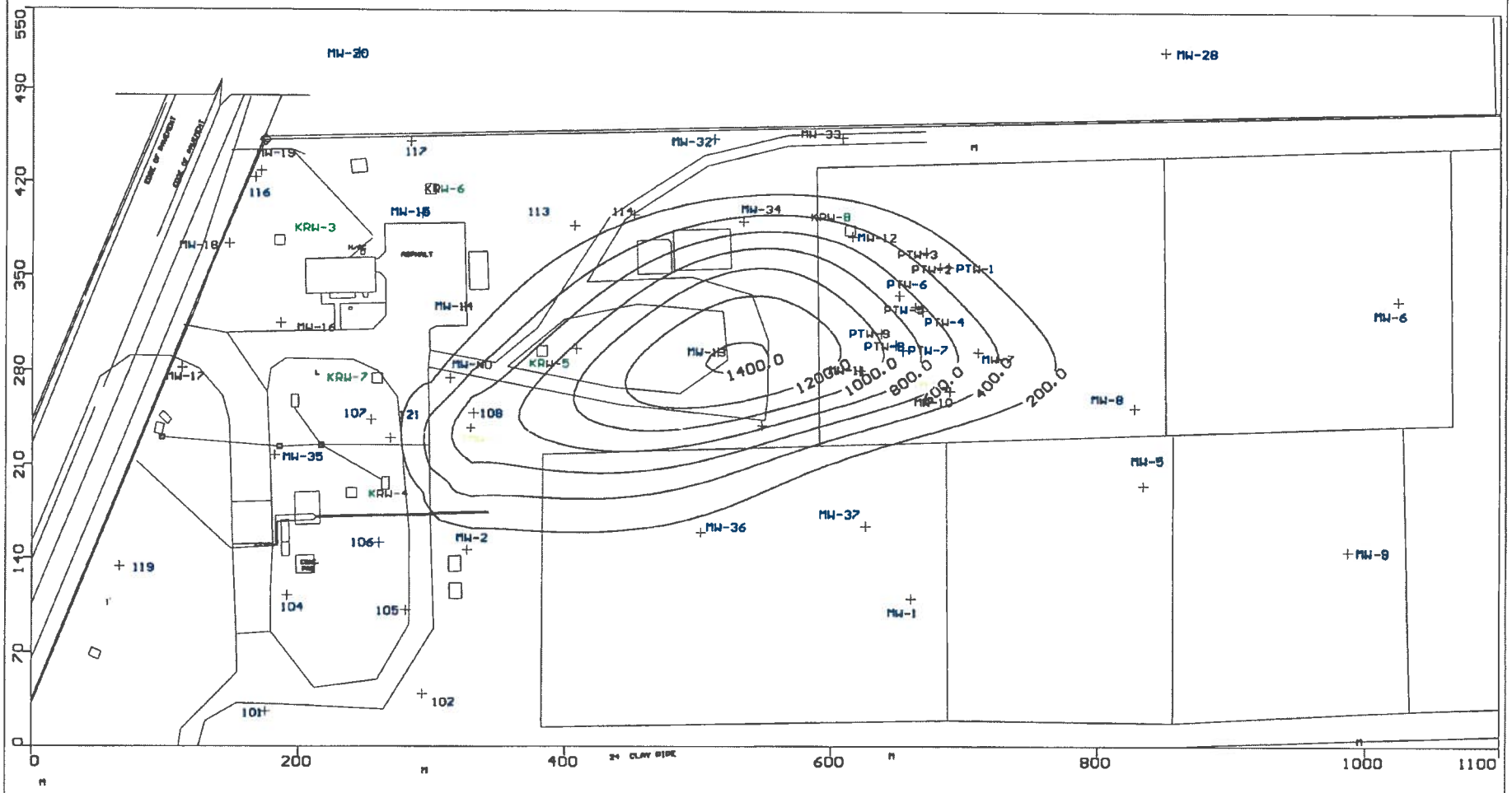
1-YEAR RUN SIMULATION



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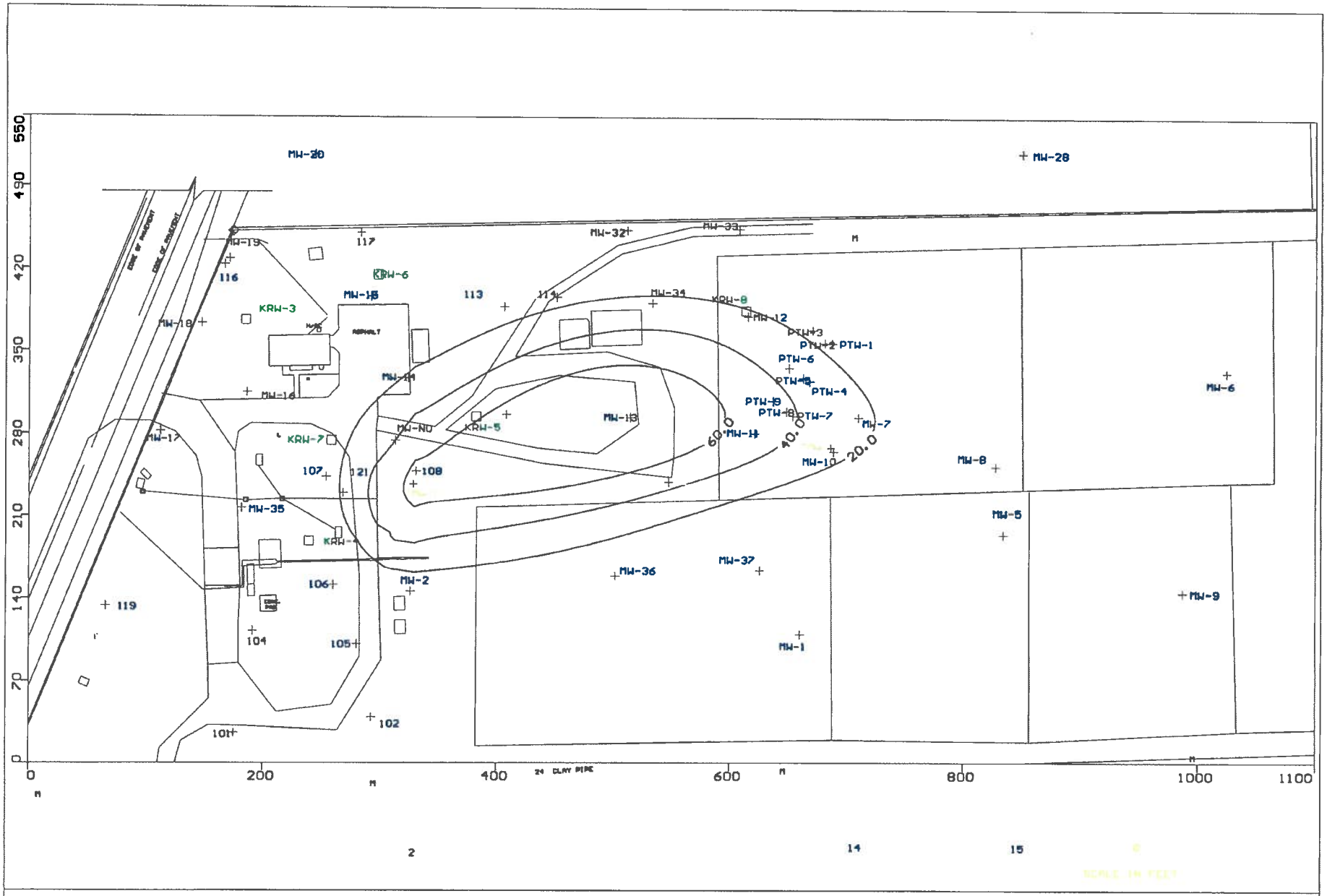
5-YEAR RUN SIMULATION



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10-YEAR RUN SIMULATION