REMEDIATION UPDATE REPORT
FOR
APRIL 2002 TO FEBRUARY 2003

FLINT HILLS RESOURCES, LP
NORTH TERMINAL
3325 RIVER ROAD
WILMINGTON, NORTH CAROLINA

JUNE 16, 2003

PREPARED FOR:

REISS REMEDIATION COMPANY
4111 EAST 37TH STREET NORTH
WICHITA, KANSAS 67220

CATLIN PROJECT NO. 195-033/201-125

PREPARED BY:

CATLIN ENGINEERS AND SCIENTISTS
P.O. BOX 10279
WILMINGTON, NORTH CAROLINA 28404-0279
(910) 452-5861

CATLIN
ENGINEERS and SCIENTISTS

Post Office Box 10279
Wilmington, NC 28404-0279
Telephone: (910) 452-5861
Fax: (910) 452-7563

JUN 1 7 2003

June 16, 2003

North Carolina Department of Environment
and Natural Resources
Division of Water Quality
Attn: Dr. Charles L. Stehman, P.G.
127 Cardinal Drive Extension
Wilmington, North Carolina 28405-3845

Re: Remediation Update Report
Flint Hills Resources, LP - North Terminal
Wilmington, North Carolina
CATLIN Project No. 195-033

Dear Dr. Stehman:

On behalf of Reiss Remediation Co. for the Flint Hills Resources, LP, attached is the Remediation Update Report concerning the above-referenced site.

Upon your review of this report, please contact Mr. Frank Van Ryn if you should have any questions concerning this project.

Sincerely,

Stephan A. Tyler
Project Manager

Jeffery K. Becken, P.E.
Project Engineer

cc: Mr. Frank Van Ryn, Reiss Remediation Co. (w/enc.)

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REMEDIATION UPDATE REPORT
FOR
APRIL 2002 TO FEBRUARY 2003

FLINT HILLS RESOURCES, LP
NORTH TERMINAL
3325 RIVER ROAD
WILMINGTON, NORTH CAROLINA

June 16, 2003

1.0 INTRODUCTION

1.1 PURPOSE

CATLIN Engineers and Scientists (CATLIN) is submitting this Remediation Update Report on behalf of Reiss Remediation Company for the Flint Hills Resources, L.P. (FHR) North Terminal at 3325 River Road, Wilmington, North Carolina (see Figure 1).

The purpose of this report is to update the status of the subsurface soil and surficial groundwater remediation activities and to present current environmental findings, from April 2002 to February 2003, at two areas of concern within the FHR-North Terminal in Wilmington, North Carolina. CATLIN prepared a Corrective Action Plan Addendum (CAPA) dated August 9, 2002 that evaluated the subsurface soil and groundwater remediation associated with this Remediation Update Report. North Carolina Department of Environment and Natural Resources (NCDENR), Groundwater Section (GWS) personnel reviewed the CAPA and submitted a Statement of General Agreement in October 2002.

1.2 SITE INFORMATION

The FHR North Terminal is a bulk chemical and fuel storage and transfer facility, which occupies an area of approximately 37 acres. Thirty-three (33) of the 37 acres are located on the east side of River Road, and the remaining four acres are located west of River Road. The North Terminal is subdivided into two facilities as illustrated on Figure 2. These facilities are identified as the PX Facility and the Gasoline/#2 Fuel Oil Facility. The following is a brief description of each facility:

Paraxylene Facility - The Paraxylene facility has 7 Above Ground Storage Tanks (ASTs) and associated pipelines for the storage and transfer of Paraxylene (PX). In addition there is a PX truck loading rack and a railcar loading rack area. This facility is still active.

Gasoline/Fuel Oil Facility – This facility has 7 ASTs and associated pipelines, which had been utilized for the storage and transfer of gasoline and fuel oil. Gasoline additives were stored in 5 additional ASTs. This facility also has a truck and railcar

loading rack area. The areas of concern within the Gasoline/Fuel Oil Facility addressed in this report are referred to as the Loading Rack Area. Since April of 2001 the gasoline and fuel oil ASTs, associated pipelines, and the truck and railcar loading rack areas have been inactive and no longer contain product.

2.0 BACKGROUND INFORMATION

2.1 PARAXYLENE FACILITY

2.1.1 Brief Incident History

Since Phillips Petroleum constructed the facility in 1929, it has been utilized to handle various gasolines, additives, #2 fuel oils and PX. Since 1929 there have been several product releases at the subject site. Former and ongoing assessment, remediation and monitoring activities for product releases since 1980 have been well documented and are on file at the North Carolina Department of Environment and Natural Resources (NCDENR) Wilmington Regional Office (WiRO) Groundwater Section (GWS). This report focuses on the current PX remediation efforts referenced in the CAPA.

2.1.2 Contaminants of Concern

The primary contaminants of concern (as agreed upon by NCDENR) at the PX Facility are PX. As detailed in the CAPA, the goal for surficial groundwater remediation is to reduce dissolved M/P xylene concentrations to a level below the 15A NCAC 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. Groundwater laboratory samples are analyzed for M/P xylene concentrations in µg/L per EPA Method 602 to evaluate the dissolved concentrations per the monitoring plan discussed in Section 5.0 of this report.

2.2 LOADING RACK AREA

2.2.1 Brief Incident History

A specific event that may have caused the groundwater contamination is not known for the Loading Rack area. However, since the surficial groundwater has been impacted with dissolved gasoline, fuel oil and paraxylene constituents, it has been assumed that historical operation of the truck and railcar loading rack areas has resulted in several minor releases. Therefore, this report focuses on the activities associated with the remediation of the contaminated subsurface soils and surficial groundwater from the historical operation of the truck loading rack area within the Loading Rack area.

2.2.2 Contaminants of Concern

As documented in the CAPA, the initial investigation of the Loading Rack area revealed the following gasoline, fuel oil and paraxylene compounds: Benzene, sec-Butylbenzene, Ethyl Benzene, Isopropylbenzene, Naphthalene, MTBE, n-Propylbenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, and Total Xylene concentrations in excess of the current and interim 2L GWQS. As detailed in the CAPA, the goal for surficial groundwater remediation is to reduce dissolved concentrations to a level below the current and interim 2L GWQS. Groundwater laboratory samples are analyzed for volatile compounds in µg/L per EPA Method 8260B to evaluate the dissolved concentrations per the monitoring plan discussed in Section 5.0 of this report.

3.0 ADDITIONAL ASSESSMENT ACTIVITIES

3.1 PARAXYLENE FACILITY

Dr. Charles Stehman of the WiRo of NCDENR - Groundwater Section requested that FHR further define the extent of the impacted surficial groundwater on the adjacent State Ports Authority East Equipment Storage Yard (SPA) property located to the North of the PX Facility. In order to further assess this area, CATLIN installed four temporary monitoring wells identified as 303TW-1, 303TW-2, 303TW-3, and 303TW-4 on the SPA property. The locations of these wells are illustrated on Figure 3. The following Sections discuss the activities associated with installation, sampling and abandonment of these temporary monitoring wells.

3.1.1 Temporary Well Installation Activities

The previously referenced temporary monitoring wells were installed in boreholes advanced by use of a Gemco articulating all terrain vehicle (ATV) mounted Central Mine Equipment (CME) 45B drilling rig utilizing hollow stem auger and mud rotary drilling techniques to a depth of at least 5 feet below the depth of the surficial groundwater table. A qualified driller, licensed in the Sate of North Carolina, installed the temporary monitoring wells. The wells were installed in general accordance with the North Carolina Well Construction Standards (NCAC T15:02C). A field geologist logged the temporary monitoring well construction detail on a CATLIN field form. The temporary monitoring well construction details were submitted to the appropriate section of NCDENR.

3.1.2 Temporary Well Sampling Activities

Upon installation, the temporary monitoring wells were developed by removing a minimum of three volumes of groundwater by use of a pump. CATLIN personnel obtained representative groundwater samples from the temporary monitoring wells on March 28, 2003. The temporary monitoring

wells were developed (a minimum of three volumes) utilizing a disposable bailer prior to sampling. All site groundwater samples were submitted to PACE Analytical Services, Inc. (PACE) (North Carolina Wastewater Classification No. 12) for analysis of dissolved M/P-xylene concentrations per EPA Method 602.

A copy of the laboratory report has been provided in Appendix A. Section 6.1.2 of this report summarizes the laboratory results of these temporary monitoring wells along with the laboratory results of the permanent monitoring wells.

3.1.3 Temporary Well Abandonment Activities

The temporary monitoring wells were removed from the boreholes following completion of the sampling activities. A licensed driller then properly abandoned the borehole in general accordance with the North Carolina Well Construction Standards (NCAC T15:02C) by use of bentonite.

3.2 LOADING RACK AREA

Dr. Charles Stehman of the WiRo of NCDENR - Groundwater Section requested that FHR define the extent of the impacted surficial groundwater on the down gradient APEX property located to the west of the Loading Rack area. During the time period referenced in this report, FHR and APEX have been negotiating the terms of an access agreement to perform this work. CATLIN will provide the status of this assessment activity within a future Remediation Update Report.

4.0 SITE REMEDIATION ACTIVITIES

4.1 PARAXYLENE FACILITY

A summary of the on-site soil, groundwater and free-phase product remediation activities are summarized below.

4.1.1 Soil

As part of the initial remedial activities, a horseshoe oriented SVE galley was installed four feet below grade along the north, west, and south edge of the AST 301 foundation (see Figure 3). A 2-HP soil vent unit was installed on March 21, 1995 and was operated continuously until January 2003. The system has not been operational since January 2003 due to an equipment failure. Based on the minimal M/P xylene concentrations of the recent SVE exhaust air data (See Section 6.0 of this report) and the future pump and treat remediation activities, FHR determined to discontinue operation of the SVE unit.

4.1.2 Surficial Groundwater

4.1.2.1 Air Sparge System

Air sparging is an in situ remediation method involving the injection of ambient air beneath the impacted groundwater elevation through a strategically located network of sparging wells. The injected air travels through the groundwater thereby volatilizing the contaminants dissolved in the groundwater. As the air bubbles are released into the groundwater, they travel upward through the saturated zone allowing dissolved hydrocarbon compounds to partition (volatilize) into the vapor phase. Due to the relative proximity of the groundwater table to the ground surface and the lack of potential receptors being adversely affected by vapors, vapors will naturally vent to the atmosphere.

In addition, the air sparging increases the dissolve oxygen concentrations in the groundwater, which enhances biological degradation of petroleum hydrocarbons by indigenous microorganisms in the soil and groundwater.

The air sparge system for this site is a vertical well network designed to remediate the dissolved PX in the site surficial groundwater along two well networks located as follows: 1) along the northwest property boundary between monitoring wells 119 and MW-20 and 2) up-gradient of the area between monitoring wells 106 and 113. The location of the current air sparge remediation system is provided on the attached Figure 3. This portion of the air sparge system began operation on February 6, 1998. The portion of the air sparge system identified as new has been installed since the submittal of the CAPA.

The effectiveness of the air sparge system is predominantly determined by evaluating the dissolved oxygen data along the northwest site property boundary and the surficial groundwater PX concentration data. A discussion of the current dissolved oxygen data is presented in Section 6.1.2.1.

A discussion of the current surficial groundwater data is presented in Section 6.1.2 of this report.

4.1.2.2 Groundwater Recovery Operations

The FHR North Terminal has a Facility Wastewater Treatment Plant (FWTP), National Pollution Discharge Elimination System (NPDES) Permit No. NC00076732, for treatment of site surficial groundwater, AST water bottoms and collected stormwater runoff. FHR site

personnel conduct the FWTP operation, maintenance and reporting activities. Currently, impacted surficial groundwater from five recovery well locations (RW-2, KRW-3, KRW-4, KRW-5 and KRW-6) is pumped into the FWTP. Refer to Figure 3 for recovery well locations. Effluent from RW-2, KRW-4, and KRW-5 is pumped through a 500-gallon oil/water separator prior to draining into lift station SD-1. Area stormwater runoff, as well as the recovery well effluent, is pumped from lift station SD-1 to the FWTP. Effluent from recovery wells KRW-3 and KRW-6 are pumped directly to the FWTP. A discussion of the volumes of groundwater pumped from the recovery wells to the FWTP is included in Section 6.1.2 of this report.

4.1.2.3 Proposed Groundwater Remediation System Expansion

The CAPA proposed the installation of two additional groundwater recovery wells (KRW-7 and KRW-8) that, along with existing recovery well KRW-5, would pump recovered groundwater to a groundwater remediation system (referred to as the pretreatment system in CAPA) that discharges into an infiltration gallery. The primary components of the remediation system will consist of an oil/water separator, an air stripper and an effluent tank.

During the current period of April 2002 to February 2003, the recovery wells KRW-7 and KRW-8 have been installed but are currently not in use. A Non-Discharge Permit is required for the proposed groundwater remediation system and is currently being prepared by CATLIN.

The addition of a third vertical air sparge network was also detailed in the CAPA. This network along with a larger air compressor (40 horsepower) has been installed and fully operational since January 2003.

4.1.3 Free-Phase PX

Shortly after installation of recovery well KRW-5 in November 1997, free-phase PX began to accumulate in the recovery well. At that time, a number of piezometers were installed in the vicinity of KRW-5 to delineate the PX plume. Free-phase PX accumulated in KRW-5 and the surrounding piezometers. In an attempt to determine the source, FHR personnel initiated precautionary system checks of the active PX pipelines and ASTs. All active above ground pipelines, associated valves, pumps, etc. were inspected and hydrostatic tested. Also, all site AST PX inventory checks indicated no loss of product. During this time period an abnormality was detected which consisted of a low surficial groundwater table level. In completing the

August 7, 2000 site Comprehensive Site Assessment (CSA), it became evident that several subsurface PX smear zones remain from previous significant PX releases. The accumulation of free-phase PX appears to coincide with periods when low surficial groundwater table levels allow the liberation of free product trapped in the remnant smear zone.

During this monitoring period of April 2002 to February 2003, levels of free-phase PX have not been observed in this recovery well. Therefore, no free-phase PX remediation activities were conducted during this time period.

4.2 LOADING RACK AREA

A summary of the on-site soil, groundwater and free-phase product remediation activities are summarized below.

4.2.1 Soil

The impacted soil within the Loading Rack area was proposed in the CAPA to be treated in combination with the groundwater remediation systems discussed in Section 4.2.2. Please refer to this section for the status of these remediation systems.

4.2.2 Surficial Groundwater

The remediation of the surficial groundwater in the Loading Rack area was proposed in the CAPA to be completed by use of a combination of remediation systems. The following is a summary of the status of these systems:

4.2.2.2 Proposed On-Contact Remediation Process®

The CAPA proposed the use of the On-Contact Remediation Process® at the Loading Rack Area. Specifically, the area between the fence line along the western edge of FHR's property and the West side of River Road (See Figure 6). As documented in the CAPA, the On-Contact Remediation Process® consists of the injection of a proprietary oxidation mixture to degrade target contaminants. Therefore, a NCDENR Permit to Construct and/or Use A Well(s) for Injection (Class 5I Wells) is required. This permit requires a Risk Assessment for Product Applied to Groundwater or Soil-Containing Microorganisms to be completed by the North Carolina Department of Health and Human Services Occupational and Environmental Epidemiology Branch.

During the current period of April 2002 to February 2003, the permit application and the information for the risk assessment were being

prepared. Additionally, during this period the shallow injection wells along the west side the FHR property fence line was installed. These wells were installed as monitoring wells and will be converted to injection wells in the future upon approval of the injection permit. The location of these wells is provided on the attached Figure 4 as new monitoring wells.

4.2.2.2 Proposed Groundwater Remediation System

The CAPA proposed the use of a groundwater remediation system (referred to as a pretreatment system in the CAPA) to circulate groundwater extracted from down gradient recovery wells through an up gradient infiltration gallery. The primary components of the remediation system will consist of an oil/water separator, an air stripper and an effluent tank.

During the current period of April 2002 to February 2003, the recovery wells have been installed but are currently not in use. A Non-Discharge Permit is required for the proposed groundwater remediation system and is currently being prepared by CATLIN.

4.2.3 Free-Phase Product

Free-phase product was reported in the CAPA to periodically accumulate in monitoring well KMW-9 and KMW-13. Please note that monitoring well KMW-9 was damaged during this time period and was unable to be sampled. Free-phase product that accumulates in these monitoring wells is manually recovered on a regular basis. During this monitoring period of April 2002 to February 2003, levels of free-phase product have not been observed in these monitoring wells. Therefore, no free-phase product remediation activities were conducted during this time period.

5.0 MONITORING PLAN

The following sections discuss the monitoring plan that was generally followed during the time period of April 2002 to February 2003.

5.1 PARAXYLENE FACILITY

Monthly

- Check and maintain operation of all recovery wells
- Check and maintain operation of the air sparge system.
- Gauge all recovery wells and selected monitoring wells for depth to surficial groundwater table and possible free-phase product.

Semi-Annual (February and August)

The following activities are completed in addition to the tasks performed on a monthly basis:

- Obtain representative groundwater samples from selected site monitoring wells for M/P-Xylenes analysis per EPA Method 602. Monitoring wells would be selected to provide data concerning PX plume boundary and historical concentration high conditions.
- In order to monitor the effectiveness of the air sparge system, dissolved oxygen concentration are obtained from surficial groundwater of selected monitoring wells.
- Obtain an air sample from the SVE system exhaust for analyses of M/P Xylenes and Total Petroleum Hydrocarbon concentrations per Method TO-14 Source. Note – As discussed in Section 4.1.1, the SVE system has not been operational since January 2003.
- Submit a semi-annual site remediation report.

5.2 LOADING RACK AREA

Monthly

- Gauging of selected monitoring wells for depth to surficial groundwater table and possible free-phase product.

Semi-Annual (February and August)

The following activities are completed in addition to the tasks performed on a monthly basis:

- Obtain representative groundwater samples from selected site monitoring wells for VOC analysis per EPA Method 8260B.
- Submit a semi-annual Site Remediation Report.

6.0 SITE REMEDIATION PROGRESS

6.1 PARAXYLENE FACILITY

6.1.1 Soil

As previously documented, subsurface soil was being remediated in the PX Facility by use of a SVE system. To establish the PX concentrations removed from the soil, air samples are periodically obtained and submitted to an independent analytical laboratory for analysis of M/P xylenes concentration per EPA Method TO-14 Source. On August 5, 2002, CATLIN personnel obtained an SVE exhaust air sample for analysis. A copy of the laboratory report has been provided in Appendix A.

PX vapor emitted from the SVE system are a combination of PX from remnant soil and groundwater contamination. To determine the approximate volume (gallons) of PX extracted between each sampling event, the following calculation is utilized:

$$M = (CFM)\ (PPMV)\ (10^{-6})\ (P_q)$$

Where:
- M = Discharge of PX in pounds per minute
- CFM = Cubic feet per minute of air being discharged (55 CFM)
- PPMV = Parts per million per volume: 10 ppmv
- P_q = Vapor Density of PX (0.298 pounds/cubic foot)

$$M = (55\ CFM)\ (10\ ppmv)\ (10^{-6})\ (0.298\ lbs/FT^3)$$
$$M = 0.00016\ lbs/minute\ or\ 0.24\ lbs/day$$

Approximate Volume of PX Extracted this past period 8/1/01 – 8/5/02:
87.6 lbs. or 87.6 lbs / 7.2 lbs/gallon = 12.2 gallons

Approximate Volume of PX Extracted from March 21, 1995 to August 5, 2002: 2,271.8 gals.

6.1.2 Surficial Groundwater

6.1.2.1 Dissolved Oxygen Data

Historical site surficial groundwater natural dissolved oxygen levels have been greater than one (1) mg/L. As previously stated, the goal of an air sparge system is to maintain aerobic activity, which can be illustrated by dissolved oxygen in surrounding recovery wells greater than one (1) mg/L.

On February 24, 2003, CATLIN personnel utilized an YSI model 51B water quality meter to obtain dissolved oxygen concentration samples from selected monitoring wells. These dissolved oxygen concentration are summarized in Table 2 and illustrated on Figure 7. Please note that dissolved oxygen levels of monitoring wells located up-gradient of the air sparge networks ranged from 0.4 to 0.8 mg/L. Whereas, dissolved oxygen levels of monitoring wells located down-gradient or adjacent of the air sparge networks ranged from 2.2 to 8.4 mg/L.

6.1.2.2 Surficial Groundwater Table Data

On February 24, 2003, CATLIN personnel visited the site in order to gauge site monitoring wells, depth to water, potential free-phase product and obtain representative groundwater samples from selected monitoring wells. Table 1 lists the water table data and interpolated water table isocontour elevations have been illustrated on Figure 5. The overall surficial groundwater migration trend appears to remain toward the northwest, which is toward the Cape Fear River. Note that the pumping influences at recovery wells KRW-3, KRW-4, KRW-5 and KRW-6 are evident in the contour patterns.

6.1.2.3 Surficial Groundwater Recovery Data

In order to monitor current groundwater recovery well operations, recovery well pumping records are maintained and the effluent laboratory samples from the recovery wells are collected for analysis for M/P xylenes per EPA Method 602. On February 24, 2003, CATLIN personnel obtained the latest effluent samples from selected recovery wells. Copies of the laboratory test results are provided in the attached Appendix A.

The following calculation is utilized to determine the approximate volume (gallons) of PX recovered from each recovery well between sampling events:

$$PXV = V \times \frac{3.7854\ L}{gal.} \times \frac{1\ g}{1{,}000\ mg} \times \frac{1\ lb.}{453.59\ g} \times \frac{7.48\ lb.}{gal.} \times SG \times PX\ conc.$$

PX concentration:

PXV = Volume of PX (gallons)
V = Total Removed Volume from Recovery Well Flow Meter (gallons)
PX conc. = Average of PX concentration during the selected time period (parts per million)
SG = Specific Gravity of PX = 0.861

Recovery well pumping records and analytical data has been utilized to estimate the amount of dissolved PX recovered since March 19, 1995 to the current period, February 2003. The total volumes recovered are summarized in Table 6.

6.1.2.4 Dissolved PX Concentration Data

As previously stated, CATLIN personnel obtained representative groundwater samples from selected monitoring wells on February 24 and 25, 2003. Additionally, CATLIN obtained representative groundwater samples from the previously referenced (Section 3.1) temporary monitoring wells on March 28, 2003. The selected wells were first developed (a minimum of three volumes) utilizing either a disposable bailer or a Geopump (peristaltic). All site groundwater samples were submitted to PACE Analytical Services, Inc. (North Carolina Wastewater Classification No. 12) for analysis of dissolved M/P-xylene concentrations per EPA Method 602.

A copy of the laboratory report has been provided in Appendix A. Results of the latest, as well as historical, M/P-xylene concentration data are summarized on Table 3. The interpolated impact of dissolved M/P-xylenes on the site surficial groundwater is illustrated on Figure 8. Please note that Figure 8 includes data interpreted by CATLIN for the State Ports Authority (SPA) Property from the Groundwater Monitoring Report dated March 12, 2003 Groundwater & Environmental Services of NC, Inc. (GES) to illustrate the surficial groundwater M/P xylene concentrations adjacent to River Road.

As illustrated on Figure 8, the current laboratory results indicate two areas of high PX concentrations. One location is illustrated around KRW-5 and the other is on the west side of AST 801.

A review of Table 3 and Figure 8 indicate a progressive decline in the surficial groundwater PX plume along River Road or along the northwest property boundary air sparge network. The PX concentrations along the other air sparge network, between monitoring wells 106 and 113, have varied from a general decline in monitoring well 106 (350,000 μg/L to 35,000 μg/L) while PX concentrations at monitoring well MW-14 have demonstrated limited progress fluctuating (2/29/00 to 2/24/03) from 270,000 to 110,000 μg/L, and then back up to 240,000 μg/L. Although the air sparge network upgradient of monitoring well MW-14 has been operating as planned, future site monitoring plans will include reevaluating this network's radius of influence.

As previously discussed, temporary monitoring wells 303TW-1 through 303TW-4 were installed to define the extent of the impacted surficial groundwater on the adjacent SPA property located to the North of the PX Facility. In order to compare current concentrations to historical concentrations on the SPA property, temporary monitoring wells 303TW-1 and 303TW-2 were installed in the vicinity of two temporary monitoring wells installed in 1994, which were identified as HP-1 and HP-2, respectively. The results of these temporary monitoring wells is also provided on Table 3 and Figure 8. The results indicate a decrease in the PX concentrations within the SPA property since 1994, which also suggests that natural attenuation or attenuation enhanced by the air sparge network is probable.

6.2 LOADING RACK AREA

6.2.1 Soil

The impacted soil within the Loading Rack area was proposed in the CAPA to be treated in combination with the groundwater remediation systems discussed in Section 4.2.2. As stated in Section 4.2.2 of this report, the groundwater remediation activities associated with the Loading Rack area were being prepared by CATLIN during the time period of April 2002 to February 2003. Therefore, impacted soil remediation activities were not conducted during this period.

6.2.2 Surficial Groundwater

6.2.2.1 Surficial Groundwater Table Data

On February 28, 2003, CATLIN personnel visited the site in order to gauge site monitoring wells, depth to water, potential free-phase product and obtain representative groundwater samples from selected monitoring wells. Table 4 lists the water table data and interpolated water table isocontour elevations have been illustrated on Figure 6. The relatively steep surficial groundwater table gradient across River Road documented in the CAPA was also observed during this current period of April 2002 to February 2003.

6.2.2.2 Dissolved Oxygen Data

Due to the previously mentioned status of the remediation activities at the Loading Rack area, dissolved oxygen concentrations were not collected during the time period of April 2002 and February 2003.

6.2.2.3 Dissolved Volatile Concentration Data

As previously stated, CATLIN personnel obtained representative groundwater samples from selected monitoring wells on February 28, 2003. The selected wells were first developed (a minimum of three volumes) utilizing either a disposable bailer or a Geopump (peristaltic). All site groundwater samples were submitted to PACE Analytical Services, Inc. (North Carolina Wastewater Classification No. 12) for analysis of dissolved volatile compounds per EPA Method 8260B.

A copy of the laboratory report has been provided in Appendix A. Table 5 provides a summary of the historical volatile compounds above the 2L GWQS. Figures 9, 10, and 11 illustrate selected volatile concentrations of monitoring wells within the Loading Rack area. Based on a review of the historical data, it appears that a general decline in volatile concentrations has occurred.

6.2.3 Free-Phase Product Data

As previously stated, during the time period of April 2002 to February 2003 free product was not detected in selected monitoring wells at the PX Facility and the Loading Rack area.

7.0 FUTURE ACTIVITIES

7.1 PARAXYLENE FACILITY

- The monitoring activities discussed in Section 5.1 of this report will be continued.
- The operation of new air sparge wells discussed in Section 4.1.2.1 will be added to the monthly monitoring activities.
- Submittal of the Non-Discharge Permit application. If approval is received then CATLIN intends to proceed with the implementation of the permit.
- The next semi-annual event is scheduled for August 2003.

7.2 LOADING RACK AREA

- The monitoring activities discussed in Section 5.2 of this report will be continued.
- Replace monitoring well KMW-9.
- Submittal of the UIC Permit application. If approval is received then CATLIN intends to proceed with off-site encroachment agreements and then with the implementation of the permit.
- Submittal of the Non-Discharge Permit application. If approval is received then CATLIN intends to proceed with the implementation of the permit.
- The next semi-annual event is scheduled for August 2003.
- If approval is received then CATLIN intends to proceed with the installation of Type II monitoring wells on the down-gradient APEX property.

Stephen A. Tyler
Project Scientist

Jeffery K. Becken, P.E.
Project Engineer

TABLES

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS AT
SELECTED MONITORING WELLS – FEBRUARY 24, 2003

PARAXYLENE FACILITY

FLINT HILLS RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

DATA POINT	TOP OF CASING ELEVATION (in feet)	DEPTH TO WATER (in feet)	FREE PRODUCT THICKNESS (in feet)	SPECIFIC GRAVITY ADJUSTMENT	WATER TABLE ELEVATION (IN FEET)
TYPE II MONITORING WELLS					
MW-1	39.45	9.42	NMT	--	30.03
MW-3	37.84	9.21	NMT	--	28.63
MW-5	39.56	8.84	NMT	--	30.72
MW-6	NA	7.74	NMT	--	NA
MW-7	38.71	9.20	NMT	--	29.51
MW-8	39.85	9.27	NMT	--	30.58
MW-9	NA	5.49	NMT	--	NA
MW-10	NA	6.98	NMT	--	NA
MW-11	35.14	6.13	NMT	--	29.01
MW-12	35.23	8.61	NMT	--	26.62
MW-13	33.90	9.15	NMT	--	24.75
MW-14	29.39	10.21	NMT	--	19.18
MW-15	28.82	10.16	NMT	--	18.66
MW-16	28.21	9.61	NMT	--	18.60
MW-17	25.57	7.06	NMT	--	18.51
MW-18	26.92	11.66	NMT	--	15.26
MW-19	27.59	12.23	NMT	--	15.36
MW-20	29.29	13.40	NMT	--	15.89
MW-28	36.41	7.9	NMT	--	28.51
MW-30	35.20	NM	NM	--	NM
MW-32	33.69	10.91	NMT	--	22.78
MW-33	35.16	11.72	NMT	--	23.44
101	28.88	7.60	NMT	--	21.28
102	29.88	8.57	NMT	--	21.31
104	NA	8.04	NMT	--	NA
105	NA	8.83	NMT	--	NA
106	30.62	8.82	NMT	--	21.80
107	31.33	10.12	NMT	--	21.21
108	31.50	12.19	NMT	--	19.31
113	33.90	11.56	NMT	--	22.34
117	31.33	12.58	NMT	--	18.75
119	26.68	7.67	NMT	--	19.01
121	29.20	10.11	NMT	--	19.09

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED MONITORING WELLS – FEBRUARY 24, 2003

PARAXYLENE FACILITY

FLINT HILLS RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

DATA POINT	TOP OF CASING ELEVATION (in feet)	DEPTH TO WATER (in feet)	FREE PRODUCT THICKNESS (in feet)	SPECIFIC GRAVITY ADJUSTMENT	WATER TABLE ELEVATION (IN FEET)
TYPE III MONITORING WELLS					
TMW-1	30.43	14.18	NMT	--	16.25
TMW-2	35.40	NM	NMT	--	NM
RECOVERY WELLS					
RW-2	36.18	NM	NMT	--	NM
KRW-3	29.07	16.58	NMT	--	12.49
KRW-4	27.82	15.41	NMT	--	12.41
KRW-5 *	32.58	19.04	NMT	--	13.54
KRW-6 *	30.90	18.85	NMT	--	12.05
SUN PIEZOMETERS					
S-1	26.80	11.92	NMT	--	14.88
S-2	27.46	12.69	NMT	--	14.77
S-3	27.47	12.92	NMT	--	14.55

Notes:
Specific gravity adjustment for para-xylene is 0.86.
NMT = No Measurable Thickness
* = Measured on 2/19/03
NM = Not Measured
NA = Not Available

TABLE 2

SUMMARY OF DISSOLVED OXYGEN ANALYSIS FROM SELECTED MONITORING WELLS

PARAXYLENE FACILITY

FLINT HILLS RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	DISSOLVED OXYGEN (PPM)
108	2/24/03	0.6
117	2/24/03	0.6
119	2/24/03	0.8
121	2/24/03	2.4
MW-12	2/24/03	0.8
MW-14	2/24/03	1.4
MW-15	2/24/03	0.8
MW-16	2/24/03	0.4
MW-17	2/24/03	8.4
MW-18	2/24/03	2.2
MW-19	2/24/03	2.4
MW-20	2/24/03	2.8
MW-32	2/24/03	4.3
MW-33	2/24/03	3.2

PPM = Parts Per Million

TABLE 3

SUMMARY OF EPA METHOD 602 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
FLINT HILL RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (µg/L)
TYPE II MONITORING WELLS		
MW-1	12/8/95	29,000
	2/13/96	11,000
	6/24/96	9,400
	1/28/97	340
	12/4/97	4,000
	6/13/98	360
	1/19/99	250
	7/14/99	26
	2/29/00	<1.0
	6/13/00	470
	2/21/01	<1.0
	7/31/01	2.3
	4/1/02	260
	7/31/02	4,200
	2/24/03	<1.0
MW-3	12/8/95	180,000
	6/24/96	28,000
	1/28/97	53,000
	12/4/97	100,000
	6/13/98	35,000
	1/19/99	49,000
	7/14/99	20,000
	2/29/00	37,000
	6/13/00	63,000
	2/21/01	120,000
	7/31/01	110,000
	4/1/02	81,000
	7/31/02	96,000
	2/24/03	120,000

TABLE 3

SUMMARY OF EPA METHOD 602 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
FLINT HILL RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (µg/L)
MW-4	12/8/95	1,600,000
	2/13/96	140,000
	6/24/96	140,000
	1/28/97	190,000
	12/4/97	220,000
	6/13/98	180,000
	1/19/99	190,000
	7/14/99	300,000
	2/29/00	100,000
	6/13/00	45,000
MW-5	2/13/96	9,800
	6/24/96	2,500
	1/28/97	1,400
	12/4/97	790
	6/13/98	7,800
	1/19/99	2,400
	7/14/99	4,900
	2/29/00	2,100
	6/13/00	2,800
	7/31/01	12,000
	4/1/02	2,000
	7/31/02	<5.0
	2/24/03	1,200
MW-7	10/15/99	150,000
	2/29/00	130,000
	2/21/01	150,000
	7/31/01	120,000
	4/2/02	140,000
	2/24/03	400,000

TABLE 3

SUMMARY OF EPA METHOD 602 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
FLINT HILL RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (µg/L)
MW-8	10/5/99	4,400
	2/29/00	12,000
	2/21/01	5,500
	7/31/01	8,500
	4/2/02	17,000
	2/24/03	15,000
MW-9	2/29/00	<1
	2/24/03	<1.0
MW-10	2/29/00	96,000
	2/21/01	89,000
	7/31/01	110,000
MW-11	2/29/00	110,000
	7/31/01	100,000
	4/1/02	63,000
	2/24/03	130,000
MW-12	2/29/00	56,000
	2/21/01	170,000
	7/31/01	140,000
	7/31/02	140,000
	2/24/03	86,000
MW-13	2/29/00	85,000
	2/21/01	43,000
	7/31/01	41,000
	4/1/02	76,000
	7/31/02	30,000
	2/24/03	99

TABLE 3

SUMMARY OF EPA METHOD 602 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
FLINT HILL RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (µg/L)
MW-14	2/29/00	270,000
	7/31/01	110,000
	4/1/02	160,000
	7/31/02	180,000
	2/24/03	240,000
MW-15	2/29/00	49,000
	6/13/00	57,000
	2/21/01	80,000
	7/31/01	23,000
	7/30/02	97,000
	2/24/03	130,000
MW-16	2/29/00	79,000
	6/13/00	62,000
	2/21/01	47,000
	7/31/01	21,000
	4/1/02	8,700
	7/30/02	4,300
	2/25/03	17,000
MW-17	2/29/00	24,000
	6/13/00	2,400
	2/21/01	3,100
	8/1/01	290
	4/1/02	170
	7/30/02	2,600
	2/24/03	<1.0
MW-18	2/29/00	13,000
	6/13/00	21
	2/21/01	29,000
	7/31/01	6,400
	4/1/02	510
	7/30/02	<10
	2/25/03	670

TABLE 3

SUMMARY OF EPA METHOD 602 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
FLINT HILL RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (µg/L)
MW-19	2/29/00	1,400
	6/13/00	430
	2/21/01	1,000
	7/31/01	260
	4/1/02	11,000
	7/30/02	5,700
	2/25/03	27,000
MW-20	2/29/00	7,900
	6/13/00	110,000
	2/21/01	47,000
	7/31/01	70,000
	4/2/02	7,900
	7/31/02	15,000
	2/25/03	5,000
MW-28	4/94	2,240
	2/13/96	370
	6/24/96	740
	1/28/97	14
	12/4/97	2,300
	6/13/98	59
	7/14/99	BQL
	3/1/00	<1
	6/13/00	<1
	2/21/01	4
	7/31/01	<1.0
	2/25/03	22
MW-30	1/19/99	BQL
	7/14/99	BQL
	3/1/00	<1
	6/13/00	<1
	2/21/01	<1

TABLE 3

SUMMARY OF EPA METHOD 602 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
FLINT HILL RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (µg/L)
MW-32	4/1/02	110,000
	7/31/02	89,000
	2/25/03	110,000
MW-33	4/1/02	15,000
	7/31/02	21,000
	2/25/03	22,000
101	2/24/03	1,300
102	12/8/95	800
	6/24/96	200
	1/28/97	1,100
	12/4/97	26
	6/13/98	270
	1/19/99	49
	7/14/99	760
	2/29/00	1,300
	6/13/00	230
	2/21/01	100
	8/1/01	9.1
	4/2/02	<5.0
	7/30/02	<10
	2/24/03	21
104	7/30/02	<50
105	7/30/02	<50

TABLE 3

SUMMARY OF EPA METHOD 602 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
FLINT HILL RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (µg/L)
106	12/8/95	350,000
	6/24/96	<10
	1/28/97	120,000
	6/13/98	No Data
	1/19/99	140,000
	7/14/99	29,000
	3/1/00	130,000
	6/13/00	87,000
	2/21/01	97,000
	8/1/01	35,000
107	6/13/00	96,000
	7/31/02	240,000
108	4/1/02	130,000
	2/24/03	150,000
113	1/19/99	11
	7/14/99	BQL
	2/29/00	370
	6/13/00	460
	2/21/01	<1
	7/31/01	71
	4/1/02	3.5
	7/31/02	<1.0
	2/25/03	2.2
114	6/13/98	42

TABLE 3

SUMMARY OF EPA METHOD 602 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
FLINT HILL RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (µg/L)
117	12/8/95	86,000
	6/24/96	59,000
	1/28/97	80,000
	12/4/97	46,000
	6/13/98	130,000
	1/19/99	120,000
	7/14/99	140,000
	2/29/00	78,000
	6/13/00	100,000
	2/21/01	81,000
	7/31/01	45,000
	4/1/02	39,000
	7/30/02	16,000
	2/25/03	55,000
119	6/24/96	<2
	1/28/97	1,500
	12/4/97	15
	6/13/98	3,000
	1/19/99	390
	7/14/99	420
	2/29/00	4,900
	6/13/00	1,300
	2/21/01	37
	7/31/01	1,800
	4/1/02	320
	7/30/02	<100
	2/24/03	9,000

TABLE 3

SUMMARY OF EPA METHOD 602 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
FLINT HILL RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (µg/L)
120	12/8/95	1,600
	6/24/96	600
	1/28/97	4,300
	12/4/97	1,500
	6/13/98	1,500
	1/19/99	1,000
	7/14/99	400
	WELL WAS DAMAGED	
	6/13/00	800
	2/21/01	1,200
	8/1/01	2,300
	4/1/02	33,000
121	12/8/95	300,000
	6/24/96	100,000
	1/28/97	100,000
	12/4/97	140,000
	6/13/98	160,000
	1/19/99	110,000
	7/14/99	140,000
	3/1/00	190,000
	2/24/03	140,000
D-O	12/8/95	160,000
	6/24/96	62,000
	1/28/97	3,400
TYPE III MONITORING WELLS		
TMW-1	12/8/95	220
	2/29/00	300
TMW-2	2/29/00	4.2

TABLE 3

SUMMARY OF EPA METHOD 602 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
FLINT HILL RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (µg/L)
	RECOVERY WELLS	
RW-2	12/4/97	8,100
	6/13/98	14,000
	1/19/99	8,200
	7/14/99	9,200
	3/1/00	26,000
	4/1/02	17,000
	7/31/02	13,000
KRW-3	12/4/97	87,000
	6/13/98	120,000
	1/19/99	67,000
	7/14/99	86,000
	2/29/00	17,000
	6/13/00	85,000
	2/21/01	100,000
	7/31/01	140,000
	4/1/02	47,000
	7/31/02	57,000
	2/25/03	45,000
KRW-4	12/4/97	27,000
	6/13/98	60,000
	1/19/99	18,000
	7/14/99	86,000
	2/29/00	61,000
	6/13/00	29,000
	2/21/01	15,000
	8/1/01	13,000
	4/1/02	11,000
	7/31/02	16,000
	2/24/03	11,000

TABLE 3

SUMMARY OF EPA METHOD 602 (M/P XYLENES) LABORATORY RESULTS - GROUNDWATER

PARAXYLENE FACILITY
FLINT HILL RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	M/P XYLENE (µg/L)
KRW-5	12/4/97	180,000
	6/13/98	130,000
	1/19/99	84,000
	7/14/99	390,000
	2/29/00	150,000
	6/13/00	100,000
	2/21/01	FP
	7/31/01	79,000
	4/1/02	170,000
	7/31/02	60,000
	2/24/03	66,000
KRW-6	2/21/01	64,000
	7/31/01	95,000
	4/1/02	93,000
	7/31/02	53,000
	2/25/03	60,000
TEMPORARY MONITORING WELLS		
HP-1	4/94	11,900
HP-2	4/94	11,500
303TW-1	3/28/03	480
303TW-2	3/28/03	1
303TW-3	3/28/03	2,200
303TW-4	3/28/03	31,000

FP = Free Product

TABLE 4

SUMMARY OF GROUNDWATER ELEVATIONS AT
SELECTED MONITORING WELLS – FEBRUARY 28, 2003

LOADING RACK AREA

FLINT HILLS RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

DATA POINT	TOP OF CASING ELEVATION (in feet)	DEPTH TO WATER (in feet)	FREE PRODUCT THICKNESS (in feet)	SPECIFIC GRAVITY ADJUSTMENT	WATER TABLE ELEVATION (IN FEET)
TYPE II MONITORING WELLS					
KMW-1	19.62	7.58	NMT	--	12.04
KMW-3	14.63	5.68	NMT	--	8.95
KMW-4	20.15	11.16	NMT	--	8.99
KMW-5	16.29	3.34	NMT	--	12.95
KMW-6	24.90	2.19	NMT	--	22.71
KMW-7	25.11	2.03	NMT	--	23.08
KMW-8	25.86	2.41	NMT	--	23.45
KMW-9	25.48	NM	NM	--	NM
KMW-10	24.92	2.36	NMT	--	22.56
KMW-11	27.34	2.68	NMT	--	24.66
KMW-12	24.19	12.27	NMT	--	11.92
KMW-13	23.84	11.82	NMT	--	12.02
KMW-14	23.31	11.13	NMT	--	12.18

Notes:
Specific gravity adjustment for para-xylene is 0.86.
NMT = No Measurable Thickness
NM = Not Measured

TABLE 5

SUMMARY OF GROUNDWATER DISSOLVED VOLATILES DATA
EPA METHOD 8260B

LOADING RACK AREA

FLINT HILLS RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL ID	DATE	Benzene	n-Butylbenzene	sec-Butylbenzene	Ethylbenzene	Isopropylbenzene	MTBE	Naphthalene	n-Propylbenzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m/p-Xylenes	o-Xylene	All Other 8260B Analytes
T15A NCAC 2L.0202 Groundwater Standards		1	70	70	29	70	200	21	70	1,000	350	350	530		Varies
T-1	8/1/01	-	-	-	-	-	-	-	-	-	-	-	1,100	-	-
T-2	8/1/01	-	-	-	-	-	-	-	-	-	-	-	4.9*	-	-
T-3	8/24/01	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	210	<5.0	ND
T-4	8/24/01	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	44	<5.0	ND
T-5	8/24/01	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	34,000	<500	ND
T-6	8/24/01	8,300	<500	<500	<500	<500	48,000	830	<500	4,100	1,700	<500	11,000	860	ND
T-8	8/24/01	20	<5.0	<5.0	<5.0	<5.0	21	<5.0	<5.0	18	<5.0	<5.0	22	<5.0	ND
KMW-1	4/94	-	-	-	-	-	-	-	-	-	-	-	7,900*	-	-
	2/10/99	-	-	-	-	-	-	-	-	-	-	-	780*	-	-
	2/24/00	-	-	-	-	-	-	-	-	-	-	-	66.9*	-	-
	9/21/00	-	-	-	-	-	-	-	-	-	-	-	128*	-	-
	2/14/01	-	-	-	-	-	-	-	-	-	-	-	16,000*	-	-
	7/10/01	-	-	-	-	-	-	-	-	-	-	-	7,600*	<500	-
	8/1/01	-	-	-	-	-	-	-	-	-	-	-	4,900*	-	-
	8/24/01	<500	<500	<500	3,400	<500	<500	<500	<500	<500	<500	<500	4,500	<500	ND
	9/18/01	<50	<50	81	<50	<50	<50	<50	<50	<50	340	170	3,000	<50	BQL
	1/3/02	<5.0	<5.0	37	<5.0	<5.0	<5.0	5.5	9	<5.0	39	<5.0	<10	<5.0	ND
	2/27/02	<5.0	5.7	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	51	43	<10	<5.0	ND
	2/28/03	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	540	<50	ND
KMW-2	4/94	-	-	-	-	-	-	-	-	-	-	-	19,000*	-	-
	2/10/99	-	-	-	-	-	-	-	-	-	-	-	5*	-	-

All results in µg/l
- = No data
ND = Not detected
BQL = Below Quantitation Limits
Shaded values indicate conentrations in excess of applicable 2L Groundwater Standards.
* = Determined with EPA Method 602 analysis
J = Value is estimated since concentration was below calibration range.

TABLE 5

SUMMARY OF GROUNDWATER DISSOLVED VOLATILES DATA
EPA METHOD 8260B

LOADING RACK AREA

FLINT HILLS RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL ID	DATE	Benzene	n-Butylbenzene	sec-Butylbenzene	Ethylbenzene	Isopropylbenzene	MTBE	Naphthalene	n-Propylbenzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m/p-Xylenes	o-Xylene	All Other 8260B Analytes
T15A NCAC 2L.0202 Groundwater Standards		1	70	70	29	70	200	21	70	1,000	350	350	530		Varies
KMW-3	4/94	-	-	-	-	-	-	-	-	-	-	-	6.5*	-	-
	2/10/99	-	-	-	-	-	-	-	-	-	-	-	96*	-	-
	2/14/01	-	-	-	-	-	-	-	-	-	-	-	62*	-	-
	8/24/01	<5.0	<5.0	<5.0	33	<5.0	13	6.7	5.7	<5.0	17	<5.0	59	<5.0	ND
	9/18/01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	BQL
	1/3/02	<5.0	<5.0	99	17	13	<5.0	16	48	<5.0	110	38	32	<5.0	ND
	2/27/02	<5.0	8.4	<5.0	12	<5.0	<5.0	5.3	44	<5.0	48	29	23	<5.0	ND
	2/28/03	<5.0	<5.0	<5.0	12	<5.0	<5.0	<5.0	<5.0	<5.0	37	11	38	<5.0	ND[2]
KMW-4	4/94	-	-	-	-	-	-	-	-	-	-	-	28,000*	-	-
	2/24/00	-	-	-	-	-	-	-	-	-	-	-	9.4*	-	-
	9/21/00	-	-	-	-	-	-	-	-	-	-	-	198*	-	-
	2/14/01	-	-	-	-	-	-	-	-	-	-	-	110*	-	-
	8/24/01	<5.0	<5.0	<5.0	<5.0	<5.0	210	7.1	<5.0	<5.0	7.7	<5.0	<10	<5.0	ND
	9/17/01	1	1	1	<1	8	17	8	12	<1	12	10	28	<1	BQL
	1/3/02	<5.0	<5.0	<5.0	41	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	52	<5.0	ND
	2/27/02	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	ND
	2/28/03	<5.0	<5.0	<5.0	<5.0	<5.0	9	<5.0	<5.0	<5.0	15	11	<5.0	<5.0	ND
KMW-5	9/17/01	<20	<20	<20	<20	<20	<20	33	26	<20	210	56	800	<20	BQL
	1/3/02	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	ND
	2/27/02	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	ND[1]
	2/28/03	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	78,000	<500	ND
KMW-6	9/17/01	<4.4	<8.4	<6.2	410	<7.4	<9.3	<14	<7.1	66	<9.7	<7.4	160,000	270	50
	1/3/02	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	19,000	<250	ND
	2/27/02	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	37,000	<500	ND
	2/28/03	67	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	6,300	<50	ND
KMW-7	9/17/01	370	<10	<10	88	<10	330	48	12	450	120	36	570	330	BQL
	1/3/02	160	5.4	<5.0	24	<5.0	94	19	<5.0	44	20	7.1	100	16	ND
	2/27/02	270	<5.0	32	41	<5.0	110	41	5.5	210	33	31	180	140	ND
	2/28/03	120	<5.0	<5.0	74	<5.0	5.4	32	7.8	31	40	33	180	20	ND
KMW-8	9/17/01	3,400	<200	450	840	<200	6,300	530	<200	600	2,300	580	12,000	650	BQL
	1/3/02	1,300	<100	<100	190	<100	3,700	180	130	<100	390	130	930	<100	ND
	2/27/02	0.17' FREE PHASE PRODUCT													
	2/28/03	1,400	<250	<250	550	<250	1,400	320	<250	<250	1,700	630	8,000	340	ND

All results in µg/l
- = No data
ND = Not detected

BQL = Below Quantitation Limits
* = Determined with EPA Method 602 analysis
J = Value is estimated since concentration was below calibration range.

Shaded values indicate conentrations in excess of applicable 2L Groundwater Standards.
ND[1] = Chloroform was also detected in KMW-5 with a result of 7.5 µg/l.
ND[2] = Tert-butylbenzene was detected in KMW-3 with a result of 5.2 µg/l.

TABLE 5

SUMMARY OF GROUNDWATER DISSOLVED VOLATILES DATA
EPA METHOD 8260B

LOADING RACK AREA

FLINT HILLS RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL ID	DATE	Benzene	n-Butylbenzene	sec-Butylbenzene	Ethylbenzene	Isopropylbenzene	MTBE	Naphthalene	n-Propylbenzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m/p-Xylenes	o-Xylene	All Other 8260B Analytes
T15A NCAC 2L.0202 Groundwater Standards		**1**	**70**	**70**	**29**	**70**	**200**	**21**	**70**	**1,000**	**350**	**350**	**530**		**Varies**
KMW-9	9/17/01	6,200	<200	260	2,800	<200	3,900	540	360	1,100	1,000	<200	3,700	440	BQL
	1/3/02	0.21' FREE PHASE PRODUCT													
	2/27/02	0.12' FREE PHASE PRODUCT													
	2/28/03	NOT MEASURED, WELL DAMAGED													
KMW-10	9/17/01	88	<20	<20	<20	<20	750	<20	<20	<20	<20	<20	<40	<20	BQL
	1/3/02	37	<10	<10	12	<10	120	15	<10	18	12	<10	37	18	ND
	2/27/02	32	<10	<10	<10	<10	69	10	<10	<10	<10	<10	<20	<10	ND
	2/28/03	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND
KMW-11	9/17/01	110	<80	<80	610	<80	<80	89	<80	2,000	650	130	2,500	1,200	BQL
	1/3/02	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	19	11	ND
	2/27/02	6	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	32	5.2	<5.0	81	<5.0	ND
	2/28/03	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND
KMW-12	1/3/02	0.30' FREE PHASE PRODUCT													
	2/27/02	1,400	<5.0	14	190	77	670	200	160	39	760	130	1,800	47	Varies
	2/28/03	3,500	<250	<250	730	<250	990	340	<250	<250	1,100	360	5,800	<250	ND
KMW-13	1/3/02	2.51' FREE PHASE PRODUCT													
	2/27/02	690	<5.0	<5.0	140	24	1,800	160	46	34	100	38	35,000	74	ND
	2/28/03	690	<1,200	<1,200	<1,200	<1,200	1,100 J	<1,200	<1,200	<1,200	210 J	<1,200	19,000	<1,200	ND
KMW-14	1/3/02	8.5	<5.0	<5.0	<5.0	<5.0	38	<5.0	<5.0	<5.0	<5.0	<5.0	2,900	<5.0	ND
	2/27/02	6.9	<5.0	<5.0	66	5	27	13	<5.0	<5.0	25	11	30,000	59	ND
	2/28/03	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	23,000	<120	ND

All results in µg/l
- = No data
Shaded values indicate conentrations in excess of applicable 2L Groundwater Standards.

ND = Not detected
BQL = Below Quantitation Limits

* = Determined with EPA Method 602 analysis
J = Value is estimated since concentration was below calibration range.

TABLE 6

SURFICIAL GROUNDWATER RECOVERY DATA
FOR PERIOD APRIL 2002 TO FEBRUARY 2003

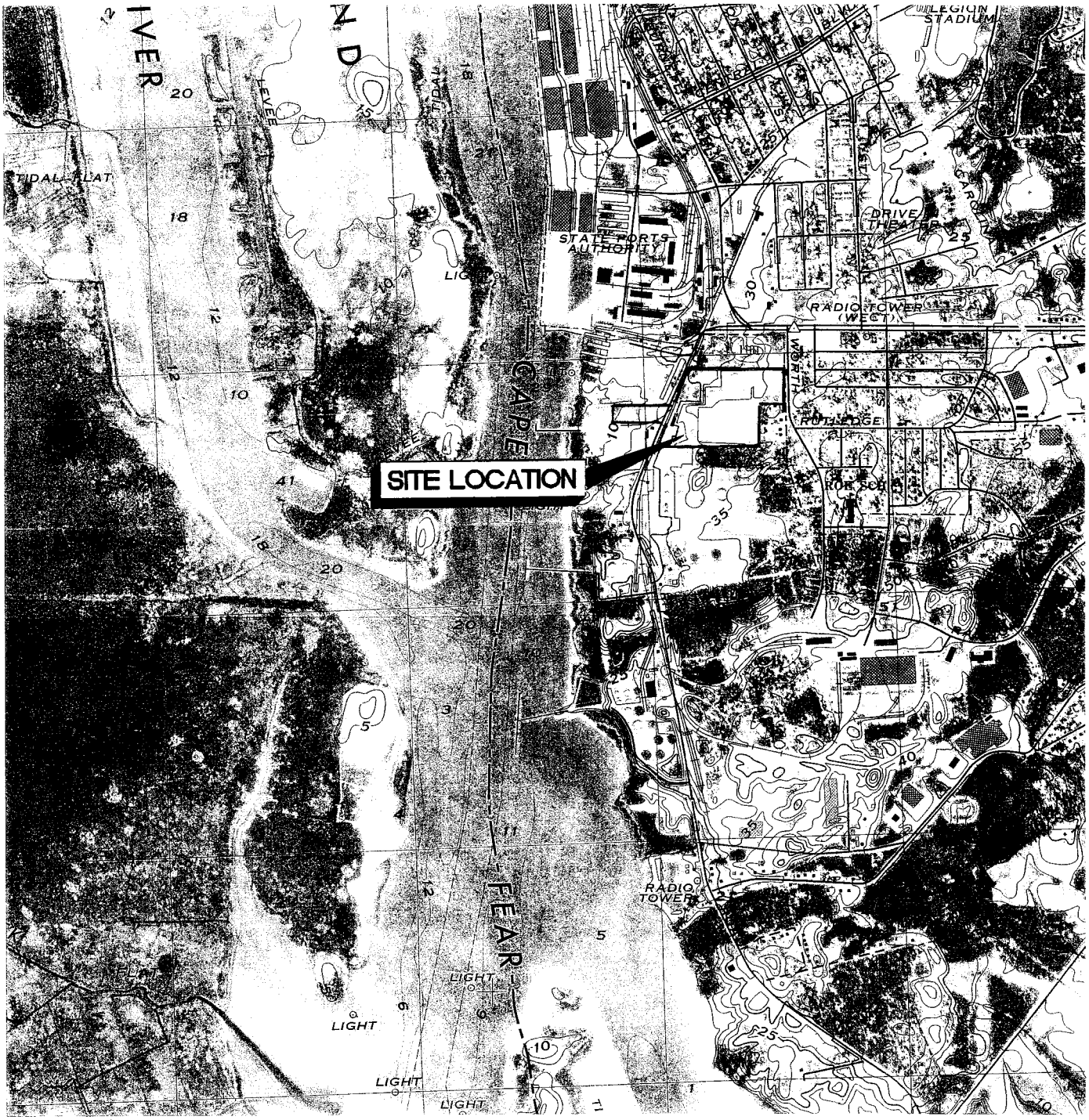
PARAXYLENE FACILITY

FLINT HILLS RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	CURRENT PERIOD		TO DATE	
	Volume of Groundwater Recovered (gal.)	Approx. Volume of PX Removed (gal.)	Volume of Groundwater Recovered (gal.)	Approx. Volume of PX Removed (gal.)
RW-2 (Operating since March 25, 1995)	0	0	4,249,488	46
KRW-3 (Operating since prior to March 19, 1995 event)	1,421,280	83	17,150,692	816
KRW-4 (Operating since November 3, 1997)	6,624,900	94	19,159,869	423
KRW-5 (Operating since November 3, 1997)	7,514,400	643	20,071,849	2,574
KRW-6 (Operating since January 17, 2001)	1,658,160	129	2,306,160	179

NOTE: Since October of 2000, the surficial water table at RW-2 has been too low for this pump to operate.

FIGURES

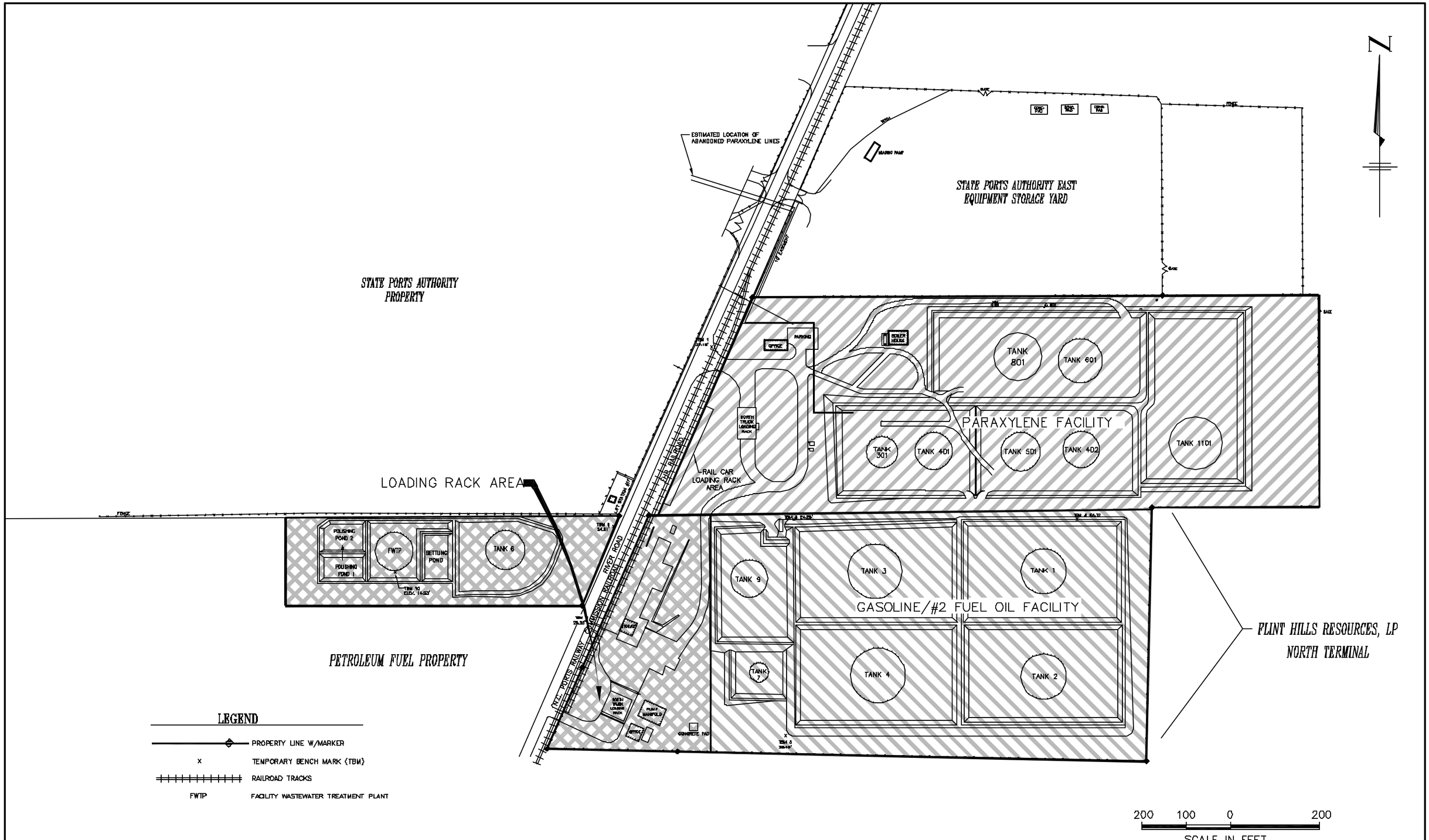


CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT	TITLE	FIGURE
FLINT HILL RESOURCES NORTH TERMINAL RIVER ROAD WILMINGTON, N.C.	GENERAL LOCATION USGS TOPOGRAPHIC QUADRANGLE	1

JOB NO:	DATE:	SCALE:	DRAWN BY:	CHECKED BY:
201125-03	MAY 2003	1"=2000'	WHW	JKB

201125-03MAY-03-01

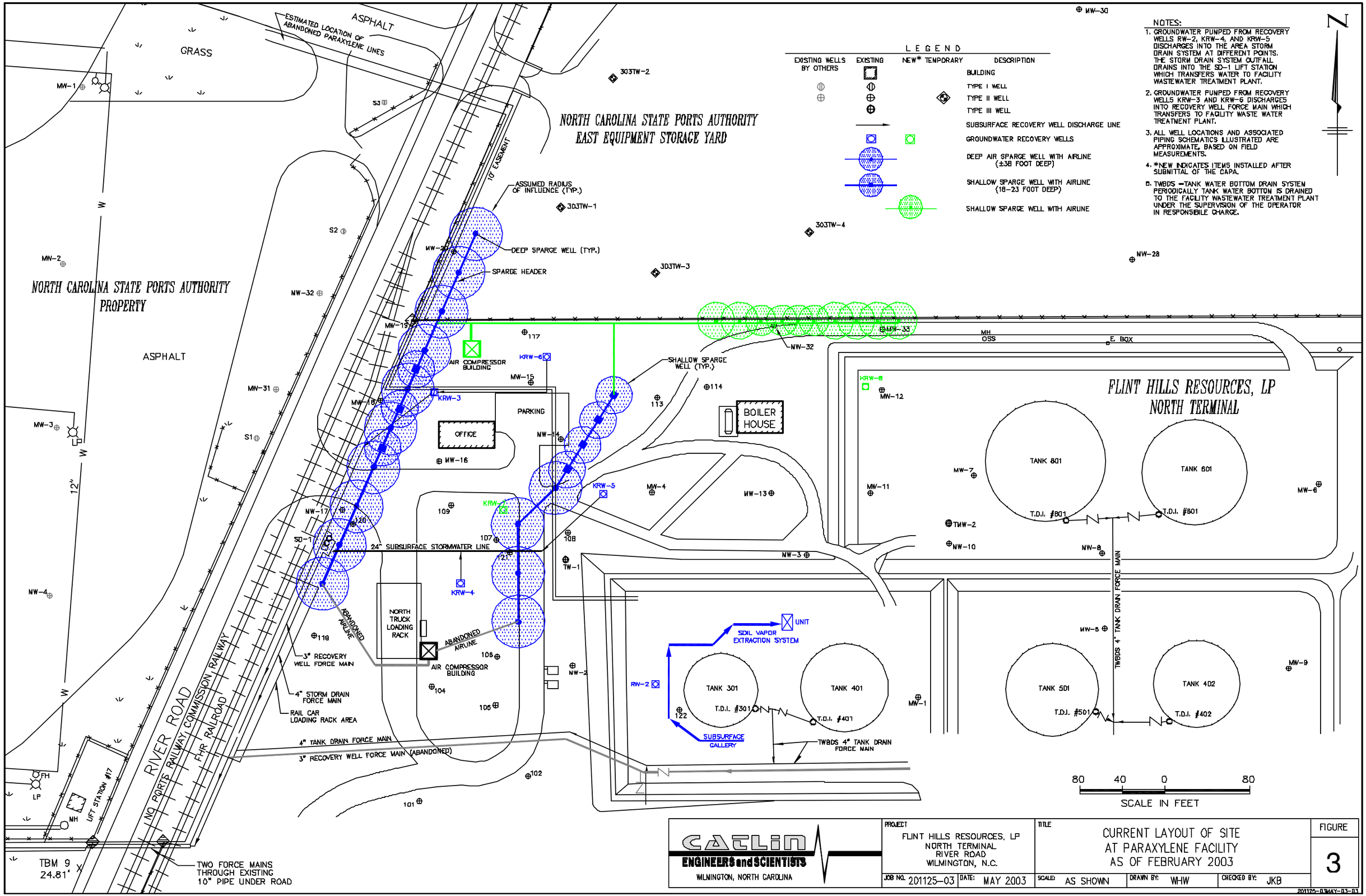


CATLIN
ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT	TITLE	FIGURE
FLINT HILLS RESOURCES, LP NORTH TERMINAL RIVER ROAD WILMINGTON, N.C.	SITE MAP	2

JOB NO.	DATE	SCALE	DRAWN BY	CHECKED BY
201125-03	MAY 2003	AS SHOWN	WHW	JKB

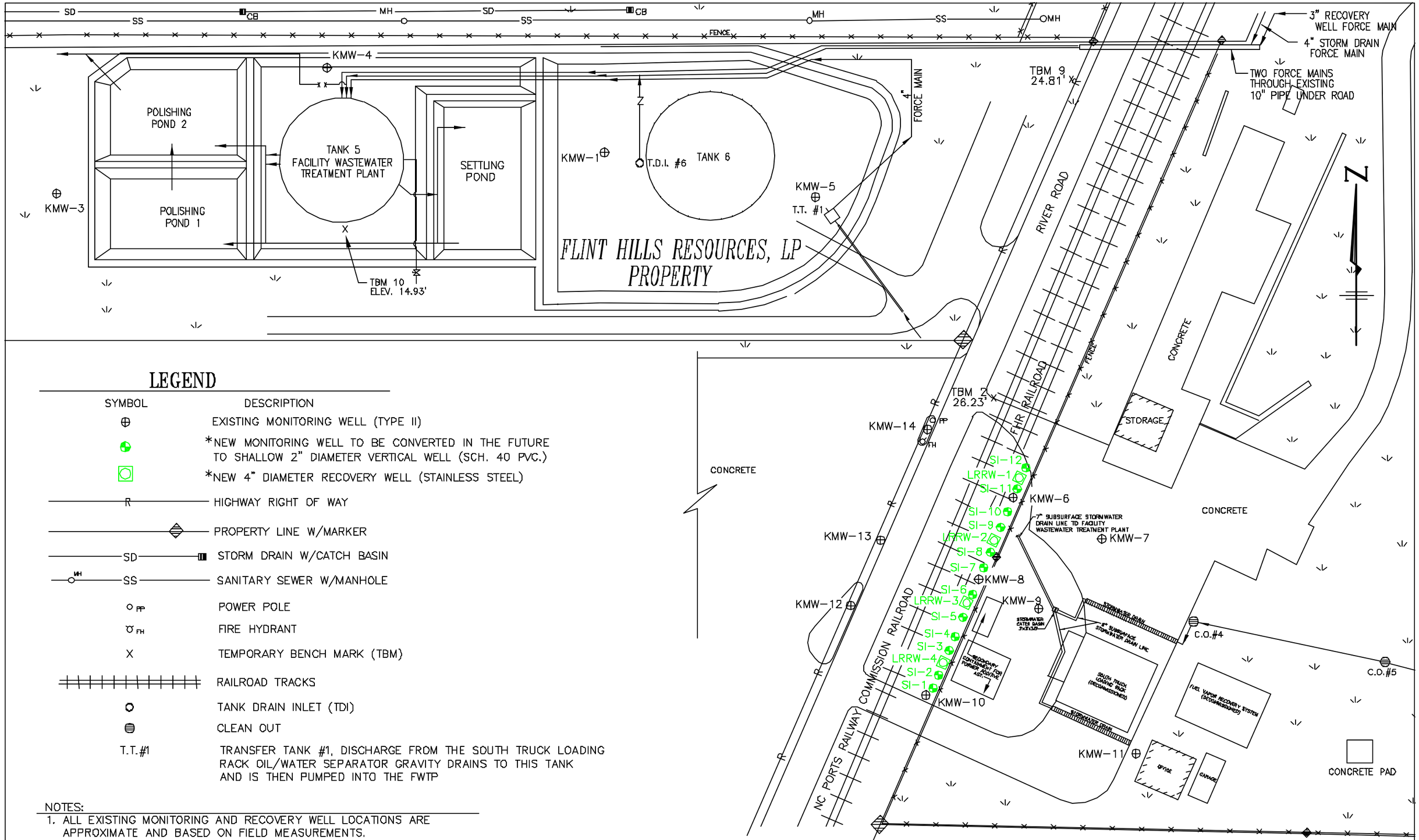
201125-03MAY-03-02



CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT: FLINT HILLS RESOURCES, LP NORTH TERMINAL RIVER ROAD WILMINGTON, N.C.	TITLE: CURRENT LAYOUT OF SITE AT PARAXYLENE FACILITY AS OF FEBRUARY 2003		FIGURE 3
JOB NO. 201125-03 DATE: MAY 2003	SCALE: AS SHOWN	DRAWN BY: WHW	CHECKED BY: JKB

201125-03MAY-03-03



LEGEND

SYMBOL	DESCRIPTION
⊕	EXISTING MONITORING WELL (TYPE II)
	*NEW MONITORING WELL TO BE CONVERTED IN THE FUTURE TO SHALLOW 2" DIAMETER VERTICAL WELL (SCH. 40 PVC.)
	*NEW 4" DIAMETER RECOVERY WELL (STAINLESS STEEL)
R	HIGHWAY RIGHT OF WAY
	PROPERTY LINE W/MARKER
SD	STORM DRAIN W/CATCH BASIN
MH SS	SANITARY SEWER W/MANHOLE
PP	POWER POLE
FH	FIRE HYDRANT
X	TEMPORARY BENCH MARK (TBM)
	RAILROAD TRACKS
	TANK DRAIN INLET (TDI)
	CLEAN OUT
T.T.#1	TRANSFER TANK #1, DISCHARGE FROM THE SOUTH TRUCK LOADING RACK OIL/WATER SEPARATOR GRAVITY DRAINS TO THIS TANK AND IS THEN PUMPED INTO THE FWTP

NOTES:

1. ALL EXISTING MONITORING AND RECOVERY WELL LOCATIONS ARE APPROXIMATE AND BASED ON FIELD MEASUREMENTS.
2. *NEW INDICATES ITEMS INSTALLED AFTER SUBMITTAL OF THE CAPA.

60 30 0 60

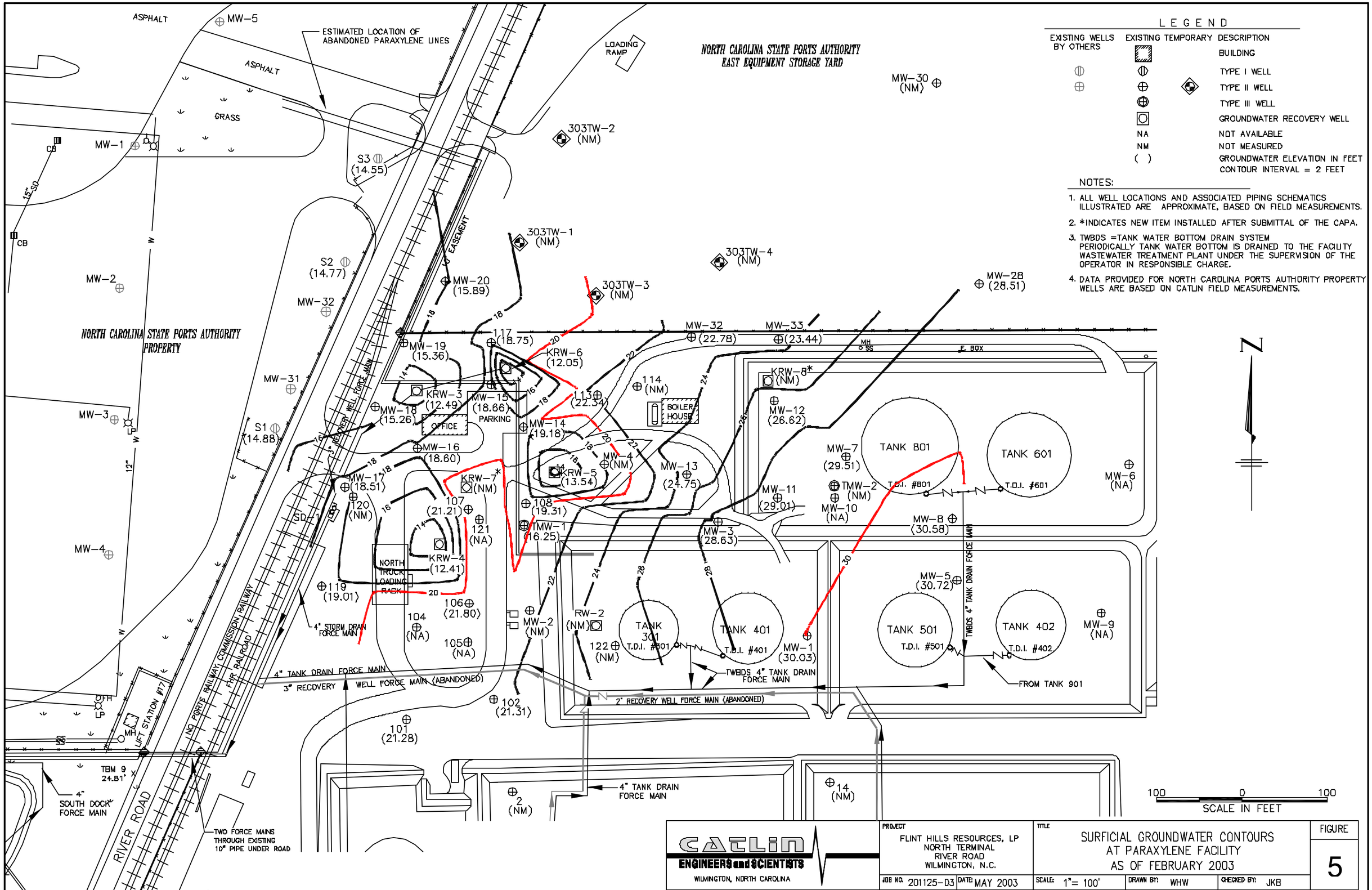
SCALE IN FEET

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT	TITLE	FIGURE
FLINT HILLS RESOURCES, LP NORTH TERMINAL RIVER ROAD WILMINGTON, N.C.	CURRENT LAYOUT OF SITE AT LOADING RACK AREA AS OF FEBRUARY 2003	4

JOB NO.	DATE	SCALE	DRAWN BY	CHECKED BY
201125-03	MAY 2003	1"=60'	WHW	JKB

201125-03MAY-03-04



LEGEND

EXISTING WELLS BY OTHERS	EXISTING TEMPORARY	DESCRIPTION
		BUILDING
		TYPE I WELL
		TYPE II WELL
		TYPE III WELL
		GROUNDWATER RECOVERY WELL
	NA	NOT AVAILABLE
	NM	NOT MEASURED
	( )	GROUNDWATER ELEVATION IN FEET CONTOUR INTERVAL = 2 FEET

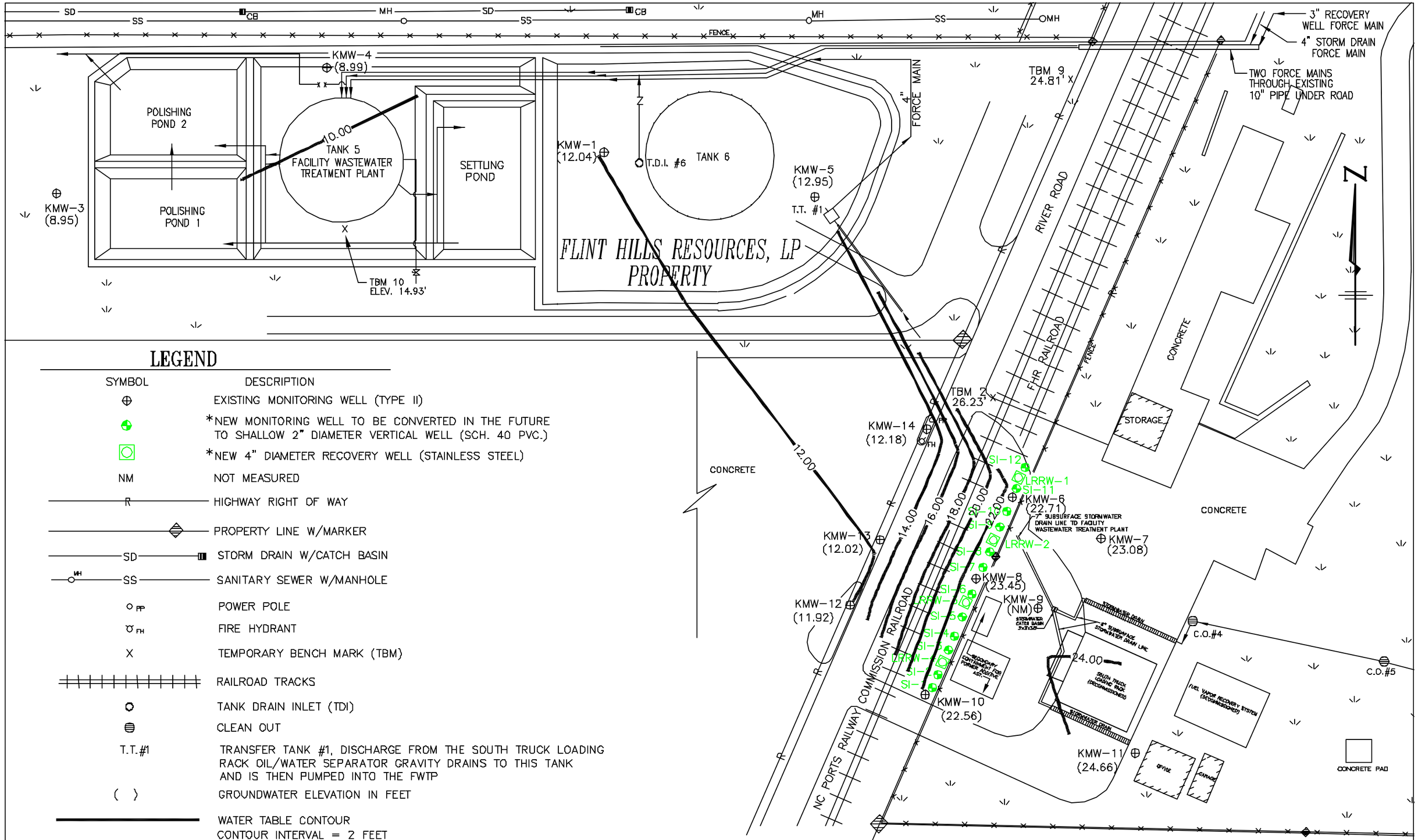
NOTES:

1. ALL WELL LOCATIONS AND ASSOCIATED PIPING SCHEMATICS ILLUSTRATED ARE APPROXIMATE, BASED ON FIELD MEASUREMENTS.
2. *INDICATES NEW ITEM INSTALLED AFTER SUBMITTAL OF THE CAPA.
3. TWBDS =TANK WATER BOTTOM DRAIN SYSTEM PERIODICALLY TANK WATER BOTTOM IS DRAINED TO THE FACILITY WASTEWATER TREATMENT PLANT UNDER THE SUPERVISION OF THE OPERATOR IN RESPONSIBLE CHARGE.
4. DATA PROVIDED FOR NORTH CAROLINA PORTS AUTHORITY PROPERTY WELLS ARE BASED ON CATLIN FIELD MEASUREMENTS.

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT: FLINT HILLS RESOURCES, LP NORTH TERMINAL RIVER ROAD WILMINGTON, N.C.	TITLE: SURFICIAL GROUNDWATER CONTOURS AT PARAXYLENE FACILITY AS OF FEBRUARY 2003		FIGURE 5
JOB NO. 201125-D3 DATE: MAY 2003	SCALE: 1"= 100'	DRAWN BY: WHW	CHECKED BY: JKB

201125-03MAY-03-05



LEGEND

SYMBOL	DESCRIPTION
⊕	EXISTING MONITORING WELL (TYPE II)
	*NEW MONITORING WELL TO BE CONVERTED IN THE FUTURE TO SHALLOW 2" DIAMETER VERTICAL WELL (SCH. 40 PVC.)
	*NEW 4" DIAMETER RECOVERY WELL (STAINLESS STEEL)
NM	NOT MEASURED
R	HIGHWAY RIGHT OF WAY
	PROPERTY LINE W/MARKER
SD	STORM DRAIN W/CATCH BASIN
MH SS	SANITARY SEWER W/MANHOLE
PP	POWER POLE
FH	FIRE HYDRANT
X	TEMPORARY BENCH MARK (TBM)
	RAILROAD TRACKS
	TANK DRAIN INLET (TDI)
	CLEAN OUT
T.T.#1	TRANSFER TANK #1, DISCHARGE FROM THE SOUTH TRUCK LOADING RACK OIL/WATER SEPARATOR GRAVITY DRAINS TO THIS TANK AND IS THEN PUMPED INTO THE FWTP
( )	GROUNDWATER ELEVATION IN FEET
	WATER TABLE CONTOUR CONTOUR INTERVAL = 2 FEET

NOTES:

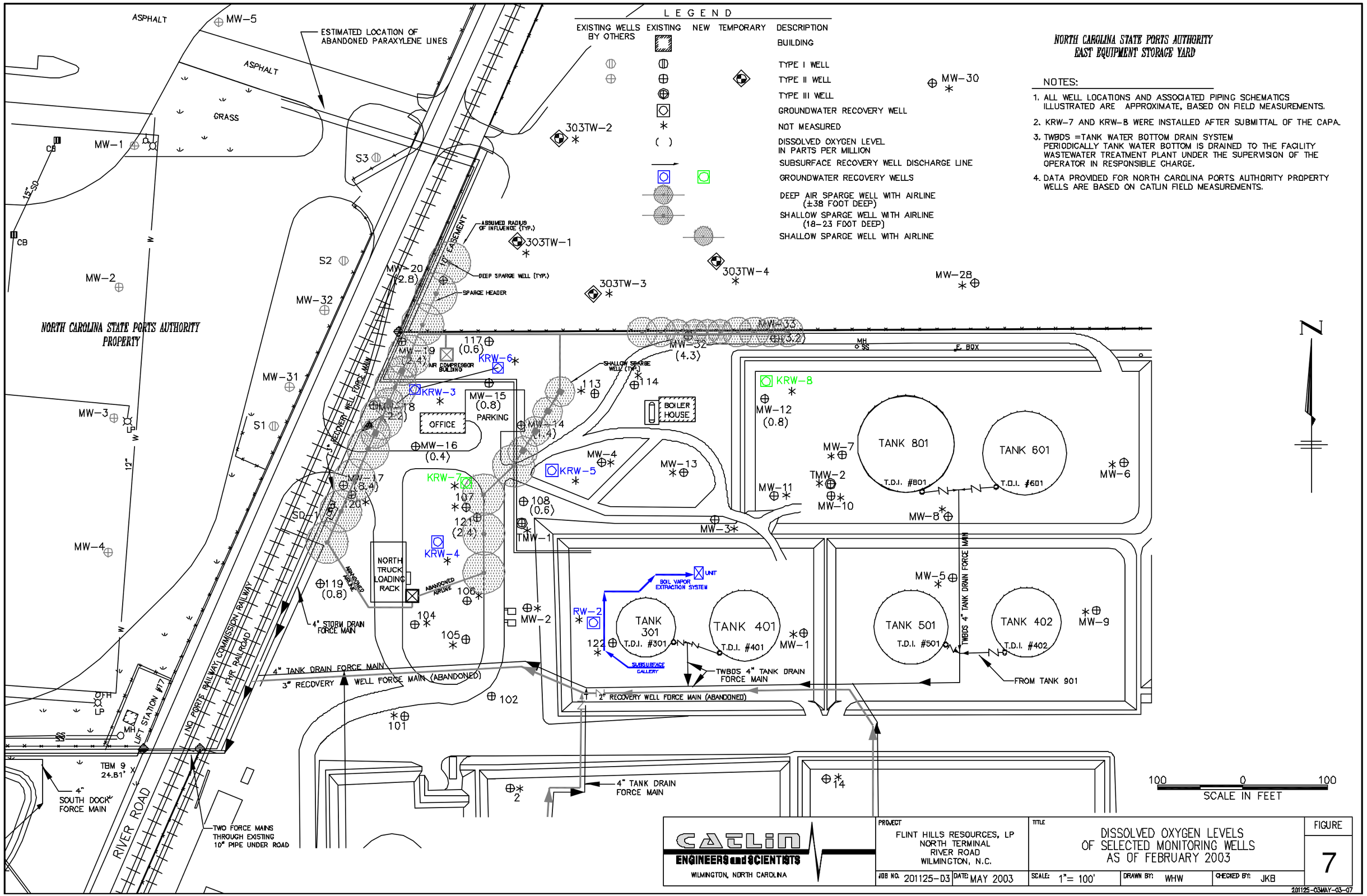
1. ALL EXISTING MONITORING AND RECOVERY WELL LOCATIONS ARE APPROXIMATE AND BASED ON FIELD MEASUREMENTS.
2. *NEW INDICATES ITEMS INSTALLED AFTER SUBMITTAL OF THE CAPA.
3. SI-# AND LRRW-# WELLS WERE NOT MEASURED.

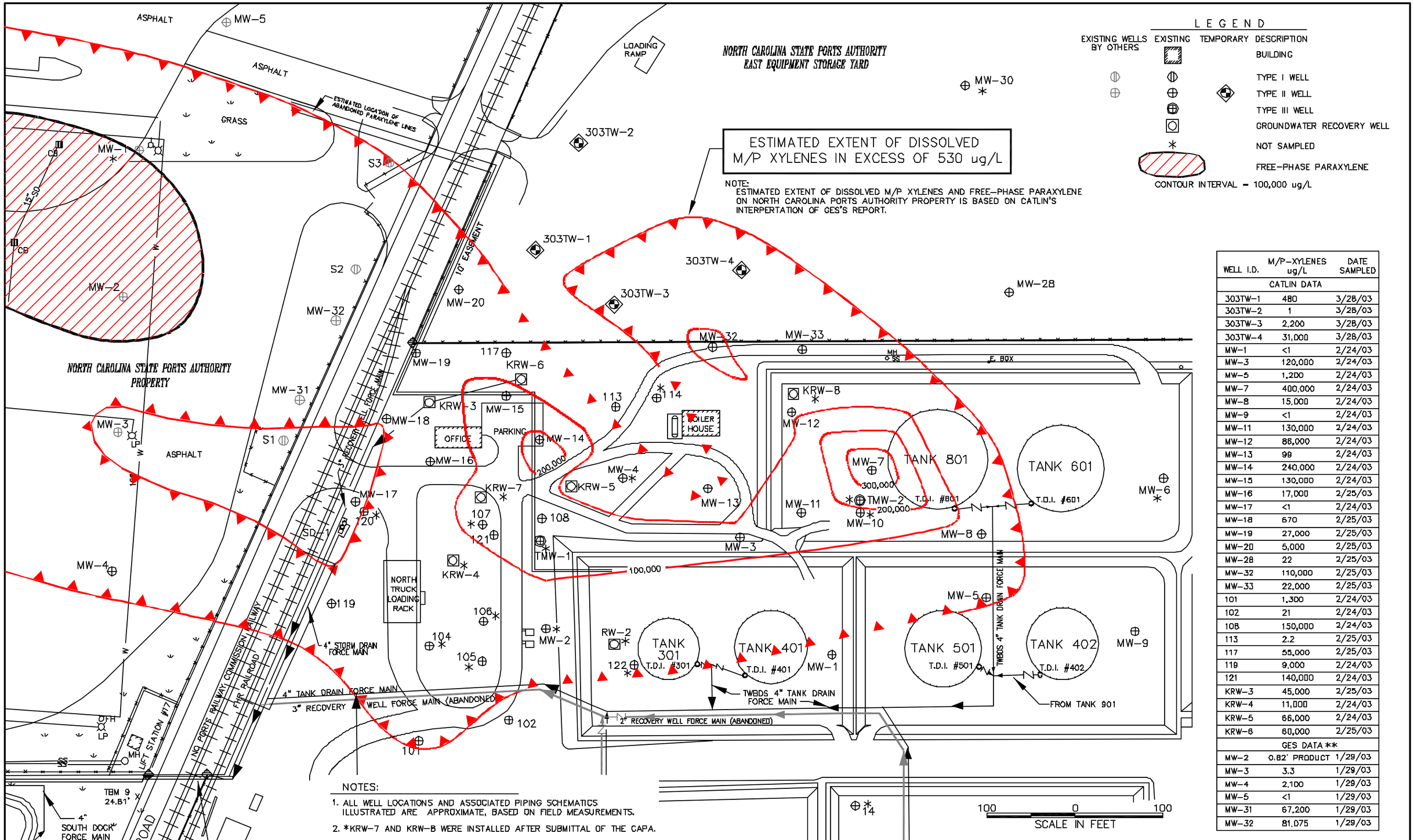
60 30 0 60
SCALE IN FEET

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT	TITLE	FIGURE
FLINT HILLS RESOURCES, LP NORTH TERMINAL RIVER ROAD WILMINGTON, N.C.	SURFICIAL GROUNDWATER CONTOURS AT LOADING RACK AREA AS OF FEBRUARY 2003	6
JOB NO. 201125-03 DATE MAY 2003	SCALE: 1"=60' DRAWN BY: JRC CHECKED BY: JKB	

201125-03MAY-03-06


LEGEND
EXISTING WELLS BY OTHERS
EXISTING
NEW
TEMPORARY
DESCRIPTION
BUILDING
TYPE I WELL
TYPE II WELL
TYPE III WELL
GROUNDWATER RECOVERY WELL
NOT MEASURED
DISSOLVED OXYGEN LEVEL IN PARTS PER MILLION
SUBSURFACE RECOVERY WELL DISCHARGE LINE
GROUNDWATER RECOVERY WELLS
DEEP AIR SPARGE WELL WITH AIRLINE (±38 FOOT DEEP)
SHALLOW SPARGE WELL WITH AIRLINE (18-23 FOOT DEEP)
SHALLOW SPARGE WELL WITH AIRLINE
NORTH CAROLINA STATE PORTS AUTHORITY
EAST EQUIPMENT STORAGE YARD
NOTES:
1. ALL WELL LOCATIONS AND ASSOCIATED PIPING SCHEMATICS ILLUSTRATED ARE APPROXIMATE, BASED ON FIELD MEASUREMENTS.
2. KRW-7 AND KRW-8 WERE INSTALLED AFTER SUBMITTAL OF THE CAPA.
3. TWBDS =TANK WATER BOTTOM DRAIN SYSTEM PERIODICALLY TANK WATER BOTTOM IS DRAINED TO THE FACILITY WASTEWATER TREATMENT PLANT UNDER THE SUPERVISION OF THE OPERATOR IN RESPONSIBLE CHARGE.
4. DATA PROVIDED FOR NORTH CAROLINA PORTS AUTHORITY PROPERTY WELLS ARE BASED ON CATLIN FIELD MEASUREMENTS.
N
100 0 100
SCALE IN FEET
NORTH CAROLINA STATE PORTS AUTHORITY PROPERTY
ASPHALT
GRASS
ESTIMATED LOCATION OF ABANDONED PARAXYLENE LINES
ASSUMED RADIUS OF INFLUENCE (TYP.)
DEEP SPARGE WELL (TYP.)
SPARGE HEADER
10' EASEMENT
RECOVERY WELL FORCE MAIN
AIR COMPRESSOR BUILDING
OFFICE
PARKING
BOILER HOUSE
SHALLOW SPARGE WELL (TYP.)
NORTH TRUCK LOADING RACK
ABANDONED AIRLINE
4" STORM DRAIN FORCE MAIN
4" TANK DRAIN FORCE MAIN
3" RECOVERY WELL FORCE MAIN (ABANDONED)
2" RECOVERY WELL FORCE MAIN (ABANDONED)
BOIL VAPOR EXTRACTION SYSTEM
UNIT
SUBSURFACE GALLERY
TWBDS 4" TANK DRAIN FORCE MAIN
FROM TANK 901
TANK 801
T.D.I. #801
TANK 601
T.D.I. #601
TANK 301
T.D.I. #301
TANK 401
T.D.I. #401
TANK 501
T.D.I. #501
TANK 402
T.D.I. #402
LIFT STATION #17
NC PORTS RAILWAY COMMISSION RAILWAY
FHR RAILROAD
RIVER ROAD
4" SOUTH DOCK FORCE MAIN
TWO FORCE MAINS THROUGH EXISTING 10" PIPE UNDER ROAD
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
MW-17
MW-18
MW-19
MW-20
MW-28
MW-30
MW-31
MW-32
MW-33
303TW-1
303TW-2
303TW-3
303TW-4
KRW-3
KRW-4
KRW-5
KRW-6
KRW-7
KRW-8
RW-2
TMW-1
TMW-2
S1
S2
S3
SD-1
TEM 9 24.81'
CATLIN
ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA
PROJECT
FLINT HILLS RESOURCES, LP
NORTH TERMINAL
RIVER ROAD
WILMINGTON, N.C.
TITLE
DISSOLVED OXYGEN LEVELS OF SELECTED MONITORING WELLS AS OF FEBRUARY 2003
FIGURE
7
JOB NO. 201125-D3
DATE MAY 2003
SCALE: 1"= 100'
DRAWN BY: WHW
CHECKED BY: JKB
201125-03MAY-03-07



WELL I.D.	M/P-XYLENES ug/L	DATE SAMPLED
CATLIN DATA		
303TW-1	480	3/28/03
303TW-2	1	3/28/03
303TW-3	2,200	3/28/03
303TW-4	31,000	3/28/03
MW-1	<1	2/24/03
MW-3	120,000	2/24/03
MW-5	1,200	2/24/03
MW-7	400,000	2/24/03
MW-8	15,000	2/24/03
MW-9	<1	2/24/03
MW-11	130,000	2/24/03
MW-12	86,000	2/24/03
MW-13	99	2/24/03
MW-14	240,000	2/24/03
MW-15	130,000	2/24/03
MW-16	17,000	2/25/03
MW-17	<1	2/24/03
MW-18	670	2/25/03
MW-19	27,000	2/25/03
MW-20	5,000	2/25/03
MW-28	22	2/25/03
MW-32	110,000	2/25/03
MW-33	22,000	2/25/03
101	1,300	2/24/03
102	21	2/24/03
108	150,000	2/24/03
113	2.2	2/25/03
117	55,000	2/25/03
119	9,000	2/24/03
121	140,000	2/24/03
KRW-3	45,000	2/25/03
KRW-4	11,000	2/24/03
KRW-5	66,000	2/24/03
KRW-6	60,000	2/25/03
GES DATA **		
MW-2	0.82' PRODUCT	1/29/03
MW-3	3.3	1/29/03
MW-4	2,100	1/29/03
MW-5	<1	1/29/03
MW-31	67,200	1/29/03
MW-32	81,075	1/29/03

NOTES:

1. ALL WELL LOCATIONS AND ASSOCIATED PIPING SCHEMATICS ILLUSTRATED ARE APPROXIMATE, BASED ON FIELD MEASUREMENTS.
2. *KRW-7 AND KRW-8 WERE INSTALLED AFTER SUBMITTAL OF THE CAPA.
3. TWBDS =TANK WATER BOTTOM DRAIN SYSTEM PERIODICALLY TANK WATER BOTTOM IS DRAINED TO THE FACILITY WASTEWATER TREATMENT PLANT UNDER THE SUPERVISION OF THE OPERATOR IN RESPONSIBLE CHARGE.
4. ** DATA FROM GROUNDWATER MONITORING REPORT FOR FORMER SUNOCO, INC. BULK TERMINAL BY GROUNDWATER AND ENVIRONMENTAL SERVICES OF N.C., INC. (GES) DATED MARTCH 12, 2003.

CATLIN
ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

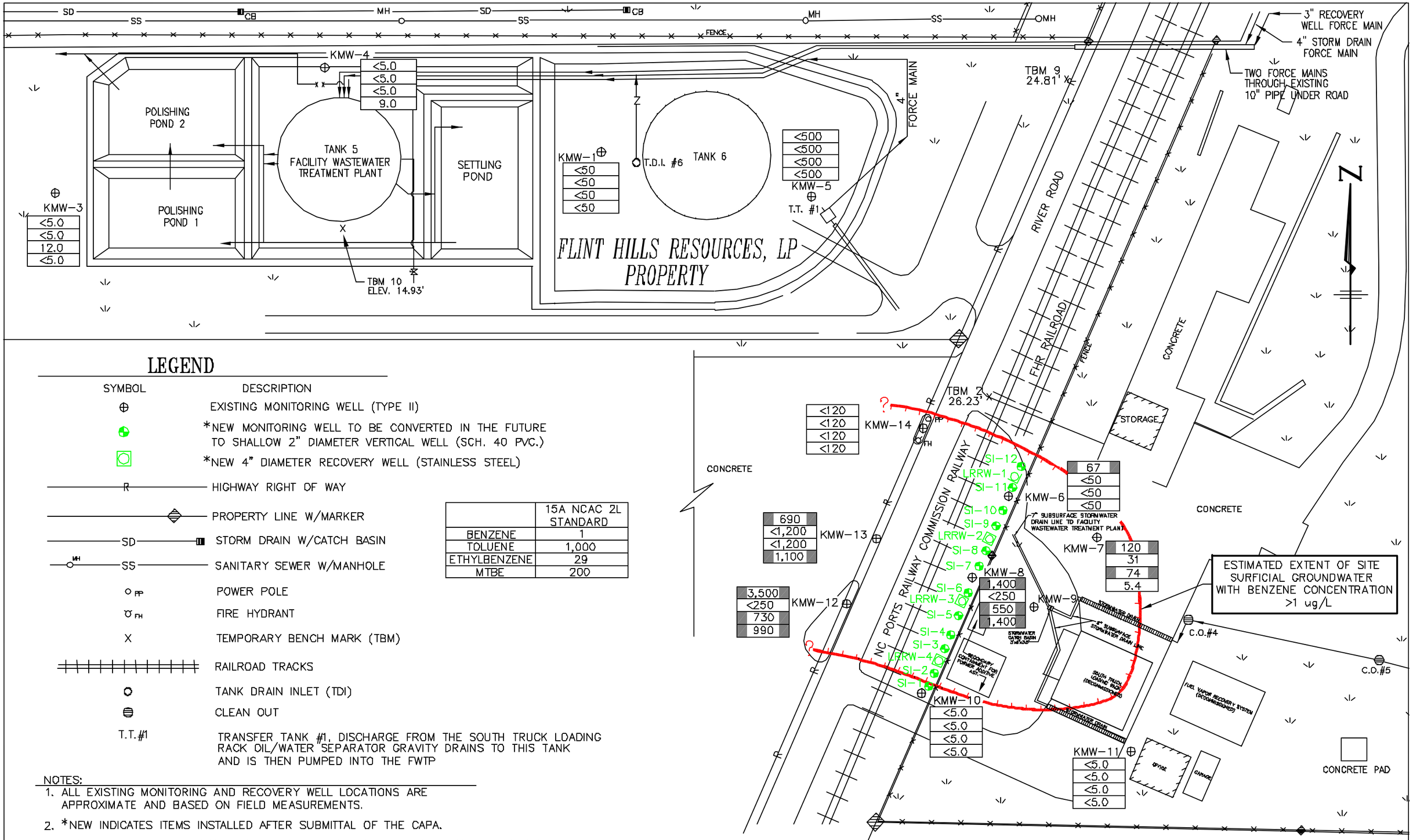
PROJECT: FLINT HILLS RESOURCES, LP
NORTH TERMINAL
RIVER ROAD
WILMINGTON, N.C.

TITLE: SURFICIAL GROUNDWATER M/P XYLENE CONTOURS AT PARAXYLENE FACILITY AS OF MARCH 2003

FIGURE 8

JOB NO. 201125-D3 | DATE: MAY 2003 | SCALE: 1"= 100' | DRAWN BY: WHW | CHECKED BY: JKB

201125-03MAY-03-08



LEGEND

SYMBOL	DESCRIPTION
⊕	EXISTING MONITORING WELL (TYPE II)
	*NEW MONITORING WELL TO BE CONVERTED IN THE FUTURE TO SHALLOW 2" DIAMETER VERTICAL WELL (SCH. 40 PVC.)
	*NEW 4" DIAMETER RECOVERY WELL (STAINLESS STEEL)
R	HIGHWAY RIGHT OF WAY
	PROPERTY LINE W/MARKER
SD	STORM DRAIN W/CATCH BASIN
MH SS	SANITARY SEWER W/MANHOLE
PP	POWER POLE
FH	FIRE HYDRANT
X	TEMPORARY BENCH MARK (TBM)
	RAILROAD TRACKS
	TANK DRAIN INLET (TDI)
	CLEAN OUT
T.T.#1	TRANSFER TANK #1, DISCHARGE FROM THE SOUTH TRUCK LOADING RACK OIL/WATER SEPARATOR GRAVITY DRAINS TO THIS TANK AND IS THEN PUMPED INTO THE FWTP

	15A NCAC 2L STANDARD
BENZENE	1
TOLUENE	1,000
ETHYLBENZENE	29
MTBE	200

NOTES:

1. ALL EXISTING MONITORING AND RECOVERY WELL LOCATIONS ARE APPROXIMATE AND BASED ON FIELD MEASUREMENTS.
2. *NEW INDICATES ITEMS INSTALLED AFTER SUBMITTAL OF THE CAPA.
3. SHADED DATA INDICATES CONCENTRATION IS ABOVE CURRENT 15A NCAC 2L STANDARD.
4. SI-# AND LRRW-# WELLS WERE NOT SAMPLED.

60 30 0 60

SCALE IN FEET

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

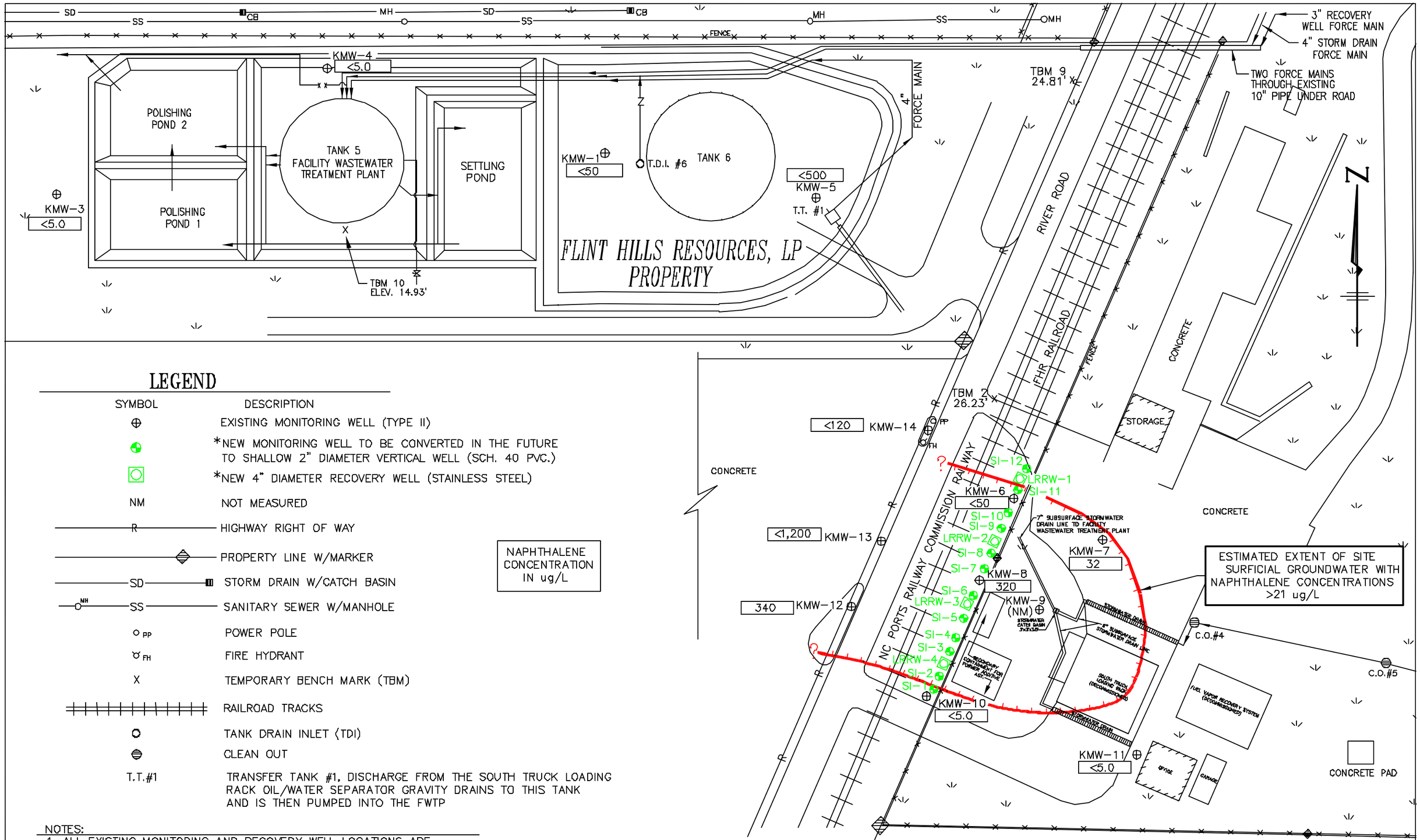
PROJECT: FLINT HILLS RESOURCES, LP
NORTH TERMINAL
RIVER ROAD
WILMINGTON, N.C.

TITLE: SURFICIAL GROUNDWATER BTE AND MTBE DATA AT LOADING RACK AREA AS OF FEBRUARY 2003

FIGURE 9

JOB NO. 201125-03 | DATE: MAY 2003 | SCALE: 1"=60' | DRAWN BY: WHW | CHECKED BY: JKB

201125-03MAY-03-09



LEGEND

SYMBOL	DESCRIPTION
⊕	EXISTING MONITORING WELL (TYPE II)
	*NEW MONITORING WELL TO BE CONVERTED IN THE FUTURE TO SHALLOW 2" DIAMETER VERTICAL WELL (SCH. 40 PVC.)
	*NEW 4" DIAMETER RECOVERY WELL (STAINLESS STEEL)
NM	NOT MEASURED
R	HIGHWAY RIGHT OF WAY
	PROPERTY LINE W/MARKER
SD	STORM DRAIN W/CATCH BASIN
MH SS	SANITARY SEWER W/MANHOLE
PP	POWER POLE
FH	FIRE HYDRANT
X	TEMPORARY BENCH MARK (TBM)
	RAILROAD TRACKS
	TANK DRAIN INLET (TDI)
	CLEAN OUT
T.T.#1	TRANSFER TANK #1, DISCHARGE FROM THE SOUTH TRUCK LOADING RACK OIL/WATER SEPARATOR GRAVITY DRAINS TO THIS TANK AND IS THEN PUMPED INTO THE FWTP

NAPHTHALENE CONCENTRATION IN ug/L

NOTES:

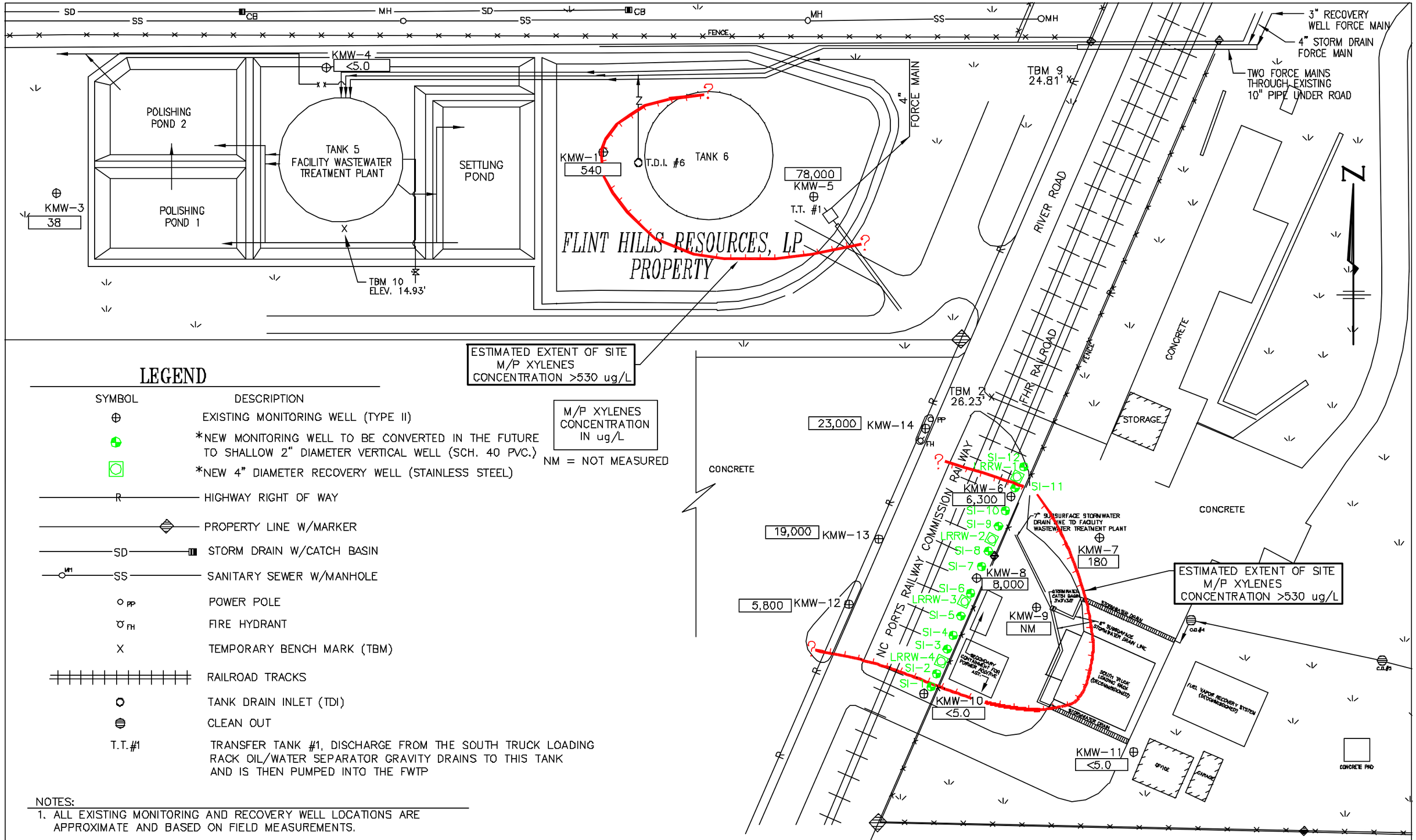
1. ALL EXISTING MONITORING AND RECOVERY WELL LOCATIONS ARE APPROXIMATE AND BASED ON FIELD MEASUREMENTS.
2. *NEW INDICATES ITEMS INSTALLED AFTER SUBMITTAL OF THE CAPA.
3. SI-1-# AND LRRW-# WELLS WERE NOT SAMPLED.

60 30 0 60
SCALE IN FEET

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT	TITLE	FIGURE
FLINT HILLS RESOURCES, LP NORTH TERMINAL RIVER ROAD WILMINGTON, N.C.	SURFICIAL GROUNDWATER NAPHTHALENE DATA AT LOADING RACK AREA AS OF FEBRUARY 2003	10
JOB NO. 201125-03 DATE MAY 2003	SCALE: 1"=60' DRAWN BY: WHW CHECKED BY: JKB	

201125-03MAY-03-10



LEGEND

SYMBOL	DESCRIPTION
⊕	EXISTING MONITORING WELL (TYPE II)
	*NEW MONITORING WELL TO BE CONVERTED IN THE FUTURE TO SHALLOW 2" DIAMETER VERTICAL WELL (SCH. 40 PVC.)
	*NEW 4" DIAMETER RECOVERY WELL (STAINLESS STEEL)
R	HIGHWAY RIGHT OF WAY
	PROPERTY LINE W/MARKER
SD	STORM DRAIN W/CATCH BASIN
SS	SANITARY SEWER W/MANHOLE
PP	POWER POLE
FH	FIRE HYDRANT
X	TEMPORARY BENCH MARK (TBM)
	RAILROAD TRACKS
	TANK DRAIN INLET (TDI)
	CLEAN OUT
T.T.#1	TRANSFER TANK #1, DISCHARGE FROM THE SOUTH TRUCK LOADING RACK OIL/WATER SEPARATOR GRAVITY DRAINS TO THIS TANK AND IS THEN PUMPED INTO THE FWTP

M/P XYLENES CONCENTRATION IN ug/L

NM = NOT MEASURED

NOTES:

1. ALL EXISTING MONITORING AND RECOVERY WELL LOCATIONS ARE APPROXIMATE AND BASED ON FIELD MEASUREMENTS.
2. *NEW INDICATES ITEMS INSTALLED AFTER SUBMITTAL OF THE CAPA.
3. SI-# AND LRRW-# WELLS WERE NOT SAMPLED.

60 30 0 60

SCALE IN FEET

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT: FLINT HILLS RESOURCES, LP NORTH TERMINAL RIVER ROAD WILMINGTON, N.C.

TITLE: SURFICIAL GROUNDWATER M/P XYLENES DATA AT LOADING RACK AREA AS OF FEBRUARY 2003

FIGURE 11

JOB NO. 201125-03 | DATE: MAY 2003 | SCALE: 1"=60' | DRAWN BY: WHW | CHECKED BY: JKB

201125-03MAY-03-11

APPENDIX A

LABORATORY REPORTS AND CHAIN-OF-CUSTODY RECORDS

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FILE COPY

Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

August 12, 2002

Mr. Steve Tyler
Catlin Engineers & Scientist
220 Old Dairy Road
P.O. Box 10279
Wilmington, NC 28405

RE: Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Dear Mr. Tyler:

Enclosed are the analytical results for sample(s) received by the laboratory on August 1, 2002. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Sherri Howard
Sherri.Howard@pacelabs.com
Project Manager

Enclosures

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
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Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424312 | Project Sample Number: 9235117-001 | Date Collected: 07/30/02 13:15
Client Sample ID: 102 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	ND	ug/l	10.	10.0	08/08/02	STC		1	
1-Chloro-3-fluorobenzene (S)	92	%		1.0	08/08/02	STC	625-98-9		

Date: 08/12/02

Laboratory Certification IDs

NC Wastewater	12
NC Drinking Water	37706
SC	99006

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Laboratory Certification IDs

LA Wastewater	04034
VA Drinking Water	213
FL NELAP	E87627

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424320 | Project Sample Number: 9235117-002 | Date Collected: 07/30/02 12:45
Client Sample ID: 119 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	ND	ug/l	100	100	08/07/02	STC		1	
1-Chloro-3-fluorobenzene (S)	92	%		1.0	08/07/02	STC	625-98-9		

Laboratory Certification IDs
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NC Drinking Water 37706
SC 99006

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Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424338 | Project Sample Number: 9235117-003 | Date Collected: 07/30/02 13:00
Client Sample ID: 104 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	ND	ug/l	50.	50.0	08/07/02	STC		1	
1-Chloro-3-fluorobenzene (S)	93	%		1.0	08/07/02	STC	625-98-9		

Laboratory Certification IDs
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Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424346 | Project Sample Number: 9235117-004 | Date Collected: 07/30/02 14:15
Client Sample ID: MW-18 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	ND	ug/l	10.	10.0	08/07/02	STC		1	
1-Chloro-3-fluorobenzene (S)	92	%		1.0	08/07/02	STC	625-98-9		

Laboratory Certification IDs
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NC Drinking Water 37706
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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424353 | Project Sample Number: 9235117-005 | Date Collected: 07/30/02 14:00
Client Sample ID: MW-19 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	5700	ug/l	200	200	08/09/02	STC			
1-Chloro-3-fluorobenzene (S)	96	%		1.0	08/09/02	STC	625-98-9		

Date: 08/12/02

Laboratory Certification IDs
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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424361 | Project Sample Number: 9235117-006 | Date Collected: 07/30/02 13:30
Client Sample ID: MW-16 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	4300	ug/l	100	100	08/07/02 15:29	STC			
1-Chloro-3-fluorobenzene (S)	96	%		1.0	08/07/02 15:29	STC	625-98-9		

Laboratory Certification IDs

NC Wastewater	12
NC Drinking Water	37706
SC	99006

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FL NELAP	E87627

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Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424379 | Project Sample Number: 9235117-007 | Date Collected: 07/30/02 13:50
Client Sample ID: MW-17 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	2600	ug/l	100	100	08/08/02	STC			
1-Chloro-3-fluorobenzene (S)	94	%		1.0	08/08/02	STC	625-98-9		

Laboratory Certification IDs
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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424387 | Project Sample Number: 9235117-008 | Date Collected: 07/30/02 14:45
Client Sample ID: MW-15 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	97000	ug/l	2000	2000	08/08/02	STC			
1-Chloro-3-fluorobenzene (S)	94	%		1.0	08/08/02	STC	625-98-9		

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

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Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424395 | Project Sample Number: 9235117-009 | Date Collected: 07/30/02 14:30
Client Sample ID: 117 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	16000	ug/l	500	500	08/09/02	STC			
1-Chloro-3-fluorobenzene (S)	94	%		1.0	08/09/02	STC	625-98-9		

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424403 | Project Sample Number: 9235117-010 | **Date Collected:** 07/31/02 10:30
Client Sample ID: MW-33 | Matrix: Water | **Date Received:** 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	21000	ug/l	500	500	08/07/02 21:44	STC			
1-Chloro-3-fluorobenzene (S)	92	%		1.0	08/07/02 21:44	STC	625-98-9		

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424411 | Project Sample Number: 9235117-011 | Date Collected: 07/31/02 10:00
Client Sample ID: MW-32 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	89000	ug/l	5000	5000	08/07/02 22:26	STC			
1-Chloro-3-fluorobenzene (S)	94	%		1.0	08/07/02 22:26	STC	625-98-9		

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

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Laboratory Certification IDs
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VA Drinking Water 213
FL NELAP E87627

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424429 | Project Sample Number: 9235117-012 | Date Collected: 07/31/02 11:45
Client Sample ID: MW-12 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	140000	ug/l	20000	20000	08/09/02	STC			
1-Chloro-3-fluorobenzene (S)	90	%		1.0	08/09/02	STC	625-98-9		

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

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Laboratory Certification IDs
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VA Drinking Water 213
FL NELAP E87627

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424437 | Project Sample Number: 9235117-013 | **Date Collected:** 07/31/02 11:05
Client Sample ID: MW-1 | Matrix: Water | **Date Received:** 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	4200	ug/l	50.	50.0	08/08/02	STC			
1-Chloro-3-fluorobenzene (S)	94	%		1.0	08/08/02	STC	625-98-9		

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SC 99006

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VA Drinking Water 213
FL NELAP E87627

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424445 | Project Sample Number: 9235117-014 | Date Collected: 07/31/02 11:20
Client Sample ID: MW-5 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	ND	ug/l	5.0	5.0	08/09/02	STC		2	
1-Chloro-3-fluorobenzene (S)	91	%		1.0	08/09/02	STC	625-98-9		

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Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424452 | Project Sample Number: 9235117-015 | Date Collected: 07/31/02 10:45
Client Sample ID: MW-13 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	30000	ug/l	1000	1000	08/08/02 01:12	STC			
1-Chloro-3-fluorobenzene (S)	91	%		1.0	08/08/02 01:12	STC	625-98-9		

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Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424460 | Project Sample Number: 9235117-016 | Date Collected: 07/31/02 11:00
Client Sample ID: 113 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	ND	ug/l	1.0	1.0	08/09/02	STC			
1-Chloro-3-fluorobenzene (S)	95	%		1.0	08/09/02	STC	625-98-9		

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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424478 | Project Sample Number: 9235117-017 | Date Collected: 07/31/02 11:30
Client Sample ID: 107 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	240000	ug/l	5000	5000	08/09/02 01:25	STC			
1-Chloro-3-fluorobenzene (S)	93	%		1.0	08/09/02 01:25	STC	625-98-9		

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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424486 | Project Sample Number: 9235117-018 | **Date Collected: 07/31/02 11:20**
Client Sample ID: MW-14 | Matrix: Water | **Date Received: 08/01/02 10:05**

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	180000	ug/l	5000	5000	08/09/02 02:07	STC			
1-Chloro-3-fluorobenzene (S)	92	%		1.0	08/09/02 02:07	STC	625-98-9		

Laboratory Certification IDs
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NC Drinking Water 37706
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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424494 | Project Sample Number: 9235117-019 | Date Collected: 07/31/02 11:50
Client Sample ID: MW-3 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	96000	ug/l	1000	1000	08/09/02 02:49	STC			
1-Chloro-3-fluorobenzene (S)	92	%		1.0	08/09/02 02:49	STC	625-98-9		

Laboratory Certification IDs
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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424502 | Project Sample Number: 9235117-020 | **Date Collected:** 07/31/02 12:15
Client Sample ID: RW-2 | Matrix: Water | **Date Received:** 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	13000	ug/l	500	500	08/09/02 03:31	STC			
1-Chloro-3-fluorobenzene (S)	94	%		1.0	08/09/02 03:31	STC	625-98-9		

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Phone: 704.875.9092
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Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424510 | Project Sample Number: 9235117-021 | Date Collected: 07/31/02 13:20
Client Sample ID: MW-20 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	15000	ug/l	200	200	08/09/02 04:13	STC			
1-Chloro-3-fluorobenzene (S)	93	%		1.0	08/09/02 04:13	STC	625-98-9		

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Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424528 | Project Sample Number: 9235117-022 | Date Collected: 07/31/02 12:40
Client Sample ID: KRW-3 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	57000	ug/l	1000	1000	08/09/02 04:55	STC			
1-Chloro-3-fluorobenzene (S)	94	%		1.0	08/09/02 04:55	STC	625-98-9		

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Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424536 | Project Sample Number: 9235117-023 | Date Collected: 07/31/02 12:10
Client Sample ID: KRW-4 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	16000	ug/l	500	500	08/09/02 05:37	STC			
1-Chloro-3-fluorobenzene (S)	92	%		1.0	08/09/02 05:37	STC	625-98-9		

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Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424544 | Project Sample Number: 9235117-024 | Date Collected: 07/31/02 12:00
Client Sample ID: KRW-5 | Matrix: Water | Date Received: 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	60000	ug/l	5000	5000	08/09/02 06:19	STC			
1-Chloro-3-fluorobenzene (S)	95	%		1.0	08/09/02 06:19	STC	625-98-9		

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Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

Lab Sample No: 922424551 | Project Sample Number: 9235117-025 | **Date Collected:** 07/31/02 12:30
Client Sample ID: KRW-6 | Matrix: Water | **Date Received:** 08/01/02 10:05

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	53000	ug/l	2000	2000	08/09/02 07:01	STC			
1-Chloro-3-fluorobenzene (S)	92	%		1.0	08/09/02 07:01	STC	625-98-9		

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Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
(S)	Surrogate
[1]	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
[2]	Insufficient sample for re-analysis.

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QUALITY CONTROL DATA

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

QC Batch: 61294 — Analysis Method: EPA 602
QC Batch Method: EPA 602 — Analysis Description: Purgeable Aromatics
Associated Lab Samples: 922424312, 922424320, 922424338, 922424346, 922424353, 922424361, 922424379, 922424387, 922424395, 922424403, 922424411, 922424429, 922424437, 922424445, 922424452, 922424460

METHOD BLANK: 922434204
Associated Lab Samples: 922424312, 922424320, 922424338, 922424346, 922424353, 922424361, 922424379, 922424387, 922424395, 922424403, 922424411, 922424429, 922424437, 922424445, 922424452, 922424460

Parameter	Units	Blank Result	Reporting Limit	Footnotes
m&p-Xylene	ug/l	0.00	1.0	
1-Chloro-3-fluorobenzene (S)	%	92		

LABORATORY CONTROL SAMPLE & LCSD: 922434220 922434238

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	RPD	Footnotes
m&p-Xylene	ug/l	40.00	41.03	38.51	103	96	6	
1-Chloro-3-fluorobenzene (S)					98	94		

SAMPLE DUPLICATE: 922434212

Parameter	Units	922423892 Result	DUP Result	RPD	Footnotes
m&p-Xylene	ug/l	180000	130000	32	1
1-Chloro-3-fluorobenzene (S)	%	96	92		

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QUALITY CONTROL DATA

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

QC Batch: 61383 — Analysis Method: EPA 602
QC Batch Method: EPA 602 — Analysis Description: Purgeable Aromatics
Associated Lab Samples: 922424478 922424486 922424494 922424502 922424510 922424528 922424536 922424544 922424551

METHOD BLANK: 922438486
Associated Lab Samples: 922424478 922424486 922424494 922424502 922424510 922424528 922424536 922424544 922424551

Parameter	Units	Blank Result	Reporting Limit	Footnotes
m&p-Xylene	ug/l	0.00	1.0	
1-Chloro-3-fluorobenzene (S)	%	93		

LABORATORY CONTROL SAMPLE: 922438494

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
m&p-Xylene	ug/l	40.00	40.29	101	
1-Chloro-3-fluorobenzene (S)				93	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 922438502 922438510

Parameter	Units	922436993 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	RPD	Footnotes
m&p-Xylene	ug/l	1.895	40.00	40.29	40.71	96	97	1	
1-Chloro-3-fluorobenzene (S)						97	100		

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Fax: 704.875.9091

Lab Project Number: 9235117
Client Project ID: FHR No. 195-033

QUALITY CONTROL DATA PARAMETER FOOTNOTES

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

LCS(D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
DUP	Sample Duplicate
ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
RPD	Relative Percent Difference
(S)	Surrogate
[1]	RPD value was outside of control limits, however % Recoveries were acceptable. Samples for QC batch accepted based on % recoveries and completeness of QC data.

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Page: 1 of 3

Section A — Required Client Information:

Company: FHR No.
Address: 3334 River Rd.
Wilmington NC 28412
Phone:
Fax:

Section B — Required Client Information:

Report To: Frank Van Ryn
Copy To: Steve Tyler
Invoice To: Frank Van Ryn
P.O.:
Project Name: FHR No.
Project Number: 195-033

Client Information (Check quote/contract):
Requested Due Date: ~~7/31/02~~ 8/1/02
*TAT: 14

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:
Project Manager: Sherry Howard
Project #: 9235117
Profile #: 8560 1

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
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED (mm / dd / yy)	TIME COLLECTED (hh:mm a/p)	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	MTBE Xylenes per 602	Remarks / Lab ID
1	102	WT	7/30/02	1315	2				✓					✓	9122924312
2	119			1245	2				✓					✓	9122924320
3	104			1300	2				✓					✓	9122924339
4	MW-13			1415	3				✓					✓	9122924346
5	MW-19			1400	3				✓					✓	9122924 [illegible]
6	MW-16			1330	2									✓	9122924361
7	MW-17			1350	2				✓					✓	9122924 [illegible]
8	MW-15			1445	3				✓					✓	9122924 [illegible]
9	117			1130	3				✓					✓	9122924393
10	MW-33		7/31/02	1030	3				✓					✓	9122924 [illegible]
11	MW-32			1000	3				✓					✓	9122924411
12	MW-12			1115	3				✓					✓	9122924419

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Steve Tyler / CATCO	7/31/02	1600	[illegible]	8/1	1005

SAMPLE CONDITION

Temp in °C	2.3
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Steve Tyler
SIGNATURE of SAMPLER: [signature]
DATE Signed: (MM / DD / YY) 7/31/02

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Chain-of-Custody / Analytical Request Document

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Section A — Required Client Information:

Company: FHR No.
Address: 3334 River Rd.
Wilmington NC
Phone:
Fax:

Section B — Required Client Information:

Report To: Frank Van Ryn
Copy To: Steve Tyler
Invoice To: Frank Van Ryn
P.O.:
Project Name: FHR No.
Project Number: 195-033

Client Information (Check quote/contract):
Requested Due Date: 7 ~~[illegible]~~ 8/14/02 *TAT: 14

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:
Project Manager: Sherry Howard
Project #: 9135117
Profile #:

Section D — Required Client Information:

Valid Matrix Codes

MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID (One character per box. (A–Z, 0–9 / .–) Sample IDs MUST BE UNIQUE)	MATRIX CODE	DATE COLLECTED (mm / dd / yy)	TIME COLLECTED (hh: mm a/p)	# Containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: M/P Xylenes, Pbnl EPA 602	Remarks / Lab ID
1	MW-1	WT	7/31/02	1105	3				✓					✓	912424437
2	MW-5			1120	3				✓					✓	912424445
3	MW-13			1045	3				✓					✓	912424452
4	113			1100	3				✓					✓	912424460
5	107			1130	2				✓					✓	912424473
6	MW-14			1120	4				✓					✓	912424436
7	MW-3			1150	4				✓					✓	912424494
8	~~[illegible]~~ RW-2			1215	2				✓					✓	912424502
9	MW-20			1320	4				✓					✓	912424510
10	KRW-3			1240	3				✓					✓	912424529
11	KRW-4			1210	2				✓					✓	912424536
12	KRW-5			1200	4				✓					✓	912424544

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Steve Tyler / CATLIN	7/31/02	1600	[signature]	8/1	1005

SAMPLE CONDITION

Temp in °C	2.3
Received on Ice	(Y)/N
Sealed Cooler	(Y)/N
Samples Intact	(Y)/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Steve Tyler
SIGNATURE of SAMPLER: [signature]
DATE Signed: (MM / DD / YY) 7/31/02

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677057

Page: 3 of 3

Section A — Required Client Information:

Company: FHR No.
Address: 3334 River Rd
Wilmington NC 28412
Phone:
Fax:

Section B — Required Client Information:

Report To: Frank Van Ryn
Copy To: Steve Tyler
Invoice To: Frank Van Ryn
P.O.:
Project Name: FHR No.
Project Number: 195-033

Client Information (Check quote/contract):
Requested Due Date: ~~7/31/02~~ 8/14/02 *TAT: 14

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:
Project Manager: Sherry Howard
Project #: 913511
Profile #:

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
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

Requested Analysis: M/P Xylenes, MAL 602

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED (mm / dd / yy)	TIME COLLECTED (hh:mm a/p)	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	M/P Xylenes	MAL 602	Remarks / Lab ID
1	KRW-6	W	7/31/02	1230	4				✓					✓		912924551
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
				[illegible]	8/1	1005

SAMPLE CONDITION

Temp in °C	2.3
Received on Ice	(Y)/N
Sealed Cooler	(Y)/N
Samples Intact	(Y)/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:
SIGNATURE of SAMPLER:
DATE Signed: (MM / DD / YY)

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Fax: 704.875.9091

March 14, 2003

Mr. Steve Tyler
Catlin Engineers & Scientist
220 Old Dairy Road
P.O. Box 10279
Wilmington, NC 28405

RE: Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Dear Mr. Tyler:

Enclosed are the analytical results for sample(s) received by the laboratory on March 4, 2003. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Sherri Stabel
Sherri.Stabel@pacelabs.com
Project Manager

Enclosures

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Phone: 704.875.9092
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Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830096
Client Sample ID: ~~RMW-1~~ KMW-1 5/12/03

Project Sample Number: 9241906-001
Matrix: Water

Date Collected: 02/28/03 12:45
Date Received: 03/04/03 12:00

GC/MS Volatiles

GC/MS VOCs by 8260 — Method: EPA 8260

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Benzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	71-43-2		
Bromobenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	108-86-1		
Bromochloromethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	74-97-5		
Bromodichloromethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	75-27-4		
Bromoform	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	75-25-2		
Bromomethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	74-83-9		
n-Butylbenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	104-51-8		
sec-Butylbenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	135-98-8		
tert-Butylbenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	98-06-6		
Carbon tetrachloride	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	56-23-5		
Chlorobenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	108-90-7		
Chloroethane	ND	ug/l	100	10.0	03/10/03 18:26	DLK	75-00-3		
Chloroform	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	67-66-3		
Chloromethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	74-87-3		
2-Chlorotoluene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	95-49-8		
4-Chlorotoluene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	96-12-8		
Dibromochloromethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	106-93-4		
Dibromomethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	74-95-3		
1,2-Dichlorobenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	563-58-6		
Diisopropyl ether	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	108-20-3		
Ethylbenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	98-82-8		

Date: 03/14/03

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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830096 | Project Sample Number: 9241906-001 | Date Collected: 02/28/03 12:45
Client Sample ID: ~~RMW-1~~ KMW-1 5/12/03 | Matrix: Water | Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	99-87-6		
Methylene chloride	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	75-09-2		
Methyl-tert-butyl ether	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	1634-04-4		
Naphthalene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	91-20-3		
n-Propylbenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	103-65-1		
Styrene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	79-34-5		
Tetrachloroethene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	127-18-4		
Toluene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	79-00-5		
Trichloroethene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/l	100	10.0	03/10/03 18:26	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	108-67-8		
Vinyl chloride	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	75-01-4		
m&p-Xylene	590	ug/l	100	10.0	03/10/03 18:26	DLK			
o-Xylene	ND	ug/l	50.	10.0	03/10/03 18:26	DLK	95-47-6		
Toluene-d8 (S)	100	%		1.0	03/10/03 18:26	DLK	2037-26-5		
4-Bromofluorobenzene (S)	98	%		1.0	03/10/03 18:26	DLK	460-00-4		
Dibromofluoromethane (S)	89	%		1.0	03/10/03 18:26	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	84	%		1.0	03/10/03 18:26	DLK	17060-07-0		

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830104
Client Sample ID: ~~RMW-3~~ KMW-3 5/12/03

Project Sample Number: 9241906-002
Matrix: Water

Date Collected: 02/28/03 12:00
Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260	Method: EPA 8260								
Benzene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	71-43-2		
Bromobenzene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	108-86-1		
Bromochloromethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	74-97-5		
Bromodichloromethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	75-27-4		
Bromoform	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	75-25-2		
Bromomethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	74-83-9		
n-Butylbenzene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	104-51-8		
sec-Butylbenzene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	135-98-8		
tert-Butylbenzene	5.2	ug/l	5.0	1.0	03/10/03 19:24	DLK	98-06-6		
Carbon tetrachloride	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	56-23-5		
Chlorobenzene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	108-90-7		
Chloroethane	ND	ug/l	10.	1.0	03/10/03 19:24	DLK	75-00-3		
Chloroform	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	67-66-3		
Chloromethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	74-87-3		
2-Chlorotoluene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	95-49-8		
4-Chlorotoluene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	96-12-8		
Dibromochloromethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	106-93-4		
Dibromomethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	74-95-3		
1,2-Dichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	563-58-6		
Diisopropyl ether	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	108-20-3		
Ethylbenzene	12.	ug/l	5.0	1.0	03/10/03 19:24	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	98-82-8		

Date: 03/14/03

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830104 | Project Sample Number: 9241906-002 | Date Collected: 02/28/03 12:00
Client Sample ID: ~~RMW-3~~ KMW-3 AP 5/12/03 | Matrix: Water | Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	99-87-6		
Methylene chloride	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	75-09-2		
Methyl-tert-butyl ether	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	1634-04-4		
Naphthalene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	91-20-3		
n-Propylbenzene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	103-65-1		
Styrene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	79-34-5		
Tetrachloroethene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	127-18-4		
Toluene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	79-00-5		
Trichloroethene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/l	10.	1.0	03/10/03 19:24	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	96-18-4		
1,2,4-Trimethylbenzene	37.	ug/l	5.0	1.0	03/10/03 19:24	DLK	95-63-6		
1,3,5-Trimethylbenzene	11.	ug/l	5.0	1.0	03/10/03 19:24	DLK	108-67-8		
Vinyl chloride	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	75-01-4		
m&p-Xylene	38.	ug/l	10.	1.0	03/10/03 19:24	DLK			
o-Xylene	ND	ug/l	5.0	1.0	03/10/03 19:24	DLK	95-47-6		
Toluene-d8 (S)	97	%		1.0	03/10/03 19:24	DLK	2037-26-5		
4-Bromofluorobenzene (S)	100	%		1.0	03/10/03 19:24	DLK	460-00-4		
Dibromofluoromethane (S)	90	%		1.0	03/10/03 19:24	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	84	%		1.0	03/10/03 19:24	DLK	17060-07-0		

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830112
Client Sample ID: ~~RMW-4~~ KMW-4 5/12/03

Project Sample Number: 9241906-003
Matrix: Water

Date Collected: 02/28/03 12:20
Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260	Method: EPA 8260								
Benzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	71-43-2		
Bromobenzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	108-86-1		
Bromochloromethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	74-97-5		
Bromodichloromethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	75-27-4		
Bromoform	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	75-25-2		
Bromomethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	74-83-9		
n-Butylbenzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	104-51-8		
sec-Butylbenzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	135-98-8		
tert-Butylbenzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	98-06-6		
Carbon tetrachloride	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	56-23-5		
Chlorobenzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	108-90-7		
Chloroethane	ND	ug/l	10.	1.0	03/10/03 19:54	DLK	75-00-3		
Chloroform	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	67-66-3		
Chloromethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	74-87-3		
2-Chlorotoluene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	95-49-8		
4-Chlorotoluene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	96-12-8		
Dibromochloromethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	106-93-4		
Dibromomethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	74-95-3		
1,2-Dichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	563-58-6		
Diisopropyl ether	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	108-20-3		
Ethylbenzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	98-82-8		

Date: 03/14/03

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Huntersville, NC 28078
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Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830112 | Project Sample Number: 9241906-003 | Date Collected: 02/28/03 12:20
Client Sample ID: ~~RMW-4~~ KMW-4 | Matrix: Water | Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	99-87-6		
Methylene chloride	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	75-09-2		
Methyl-tert-butyl ether	9.0	ug/l	5.0	1.0	03/10/03 19:54	DLK	1634-04-4		
Naphthalene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	91-20-3		
n-Propylbenzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	103-65-1		
Styrene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	79-34-5		
Tetrachloroethene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	127-18-4		
Toluene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	79-00-5		
Trichloroethene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/l	10.	1.0	03/10/03 19:54	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	96-18-4		
1,2,4-Trimethylbenzene	15.	ug/l	5.0	1.0	03/10/03 19:54	DLK	95-63-6		
1,3,5-Trimethylbenzene	11.	ug/l	5.0	1.0	03/10/03 19:54	DLK	108-67-8		
Vinyl chloride	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	75-01-4		
m&p-Xylene	ND	ug/l	10.	1.0	03/10/03 19:54	DLK			
o-Xylene	ND	ug/l	5.0	1.0	03/10/03 19:54	DLK	95-47-6		
Toluene-d8 (S)	98	%		1.0	03/10/03 19:54	DLK	2037-26-5		
4-Bromofluorobenzene (S)	98	%		1.0	03/10/03 19:54	DLK	460-00-4		
Dibromofluoromethane (S)	92	%		1.0	03/10/03 19:54	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	84	%		1.0	03/10/03 19:54	DLK	17060-07-0		

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Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830120
Client Sample ID: ~~RMW-5~~ KMW-5 5/12/03

Project Sample Number: 9241906-004
Matrix: Water

Date Collected: 02/28/03 13:00
Date Received: 03/04/03 12:00

GC/MS Volatiles

GC/MS VOCs by 8260 — Method: EPA 8260

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Benzene	ND	ug/l	500	100	03/08/03 06:08	DLK	71-43-2		
Bromobenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	108-86-1		
Bromochloromethane	ND	ug/l	500	100	03/08/03 06:08	DLK	74-97-5		
Bromodichloromethane	ND	ug/l	500	100	03/08/03 06:08	DLK	75-27-4		
Bromoform	ND	ug/l	500	100	03/08/03 06:08	DLK	75-25-2		
Bromomethane	ND	ug/l	500	100	03/08/03 06:08	DLK	74-83-9		
n-Butylbenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	104-51-8		
sec-Butylbenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	135-98-8		
tert-Butylbenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	98-06-6		
Carbon tetrachloride	ND	ug/l	500	100	03/08/03 06:08	DLK	56-23-5		
Chlorobenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	108-90-7		
Chloroethane	ND	ug/l	1000	100	03/08/03 06:08	DLK	75-00-3		
Chloroform	ND	ug/l	500	100	03/08/03 06:08	DLK	67-66-3		
Chloromethane	ND	ug/l	500	100	03/08/03 06:08	DLK	74-87-3		
2-Chlorotoluene	ND	ug/l	500	100	03/08/03 06:08	DLK	95-49-8		
4-Chlorotoluene	ND	ug/l	500	100	03/08/03 06:08	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/l	500	100	03/08/03 06:08	DLK	96-12-8		
Dibromochloromethane	ND	ug/l	500	100	03/08/03 06:08	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	500	100	03/08/03 06:08	DLK	106-93-4		
Dibromomethane	ND	ug/l	500	100	03/08/03 06:08	DLK	74-95-3		
1,2-Dichlorobenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/l	500	100	03/08/03 06:08	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/l	500	100	03/08/03 06:08	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/l	500	100	03/08/03 06:08	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/l	500	100	03/08/03 06:08	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	500	100	03/08/03 06:08	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	500	100	03/08/03 06:08	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/l	500	100	03/08/03 06:08	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/l	500	100	03/08/03 06:08	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/l	500	100	03/08/03 06:08	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/l	500	100	03/08/03 06:08	DLK	563-58-6		
Diisopropyl ether	ND	ug/l	500	100	03/08/03 06:08	DLK	108-20-3		
Ethylbenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/l	500	100	03/08/03 06:08	DLK	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/l	500	100	03/08/03 06:08	DLK	98-82-8		

Date: 03/14/03

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830120 | Project Sample Number: 9241906-004 | Date Collected: 02/28/03 13:00
Client Sample ID: ~~RMW-5~~ KMW-5 3/12/03 | Matrix: Water | Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/l	500	100	03/08/03 06:08	DLK	99-87-6		
Methylene chloride	ND	ug/l	500	100	03/08/03 06:08	DLK	75-09-2		
Methyl-tert-butyl ether	ND	ug/l	500	100	03/08/03 06:08	DLK	1634-04-4		
Naphthalene	ND	ug/l	500	100	03/08/03 06:08	DLK	91-20-3		
n-Propylbenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	103-65-1		
Styrene	ND	ug/l	500	100	03/08/03 06:08	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/l	500	100	03/08/03 06:08	DLK	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/l	500	100	03/08/03 06:08	DLK	79-34-5		
Tetrachloroethene	ND	ug/l	500	100	03/08/03 06:08	DLK	127-18-4		
Toluene	ND	ug/l	500	100	03/08/03 06:08	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/l	500	100	03/08/03 06:08	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	500	100	03/08/03 06:08	DLK	79-00-5		
Trichloroethene	ND	ug/l	500	100	03/08/03 06:08	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/l	1000	100	03/08/03 06:08	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/l	500	100	03/08/03 06:08	DLK	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/l	500	100	03/08/03 06:08	DLK	108-67-8		
Vinyl chloride	ND	ug/l	500	100	03/08/03 06:08	DLK	75-01-4		
m&p-Xylene	78000	ug/l	10000	1000	03/08/03 06:08	DLK			
o-Xylene	ND	ug/l	500	100	03/08/03 06:08	DLK	95-47-6		
Toluene-d8 (S)	99	%		1.0	03/08/03 06:08	DLK	2037-26-5		
4-Bromofluorobenzene (S)	97	%		1.0	03/08/03 06:08	DLK	460-00-4		
Dibromofluoromethane (S)	94	%		1.0	03/08/03 06:08	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	94	%		1.0	03/08/03 06:08	DLK	17060-07-0		

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Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830138
Client Sample ID: ~~RMW-6~~ KMW-6 5/8/03

Project Sample Number: 9241906-005
Matrix: Water

Date Collected: 02/28/03 13:20
Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260	Method: EPA 8260								
Benzene	67.	ug/l	50.	10.0	03/10/03 18:17	RWS	71-43-2		
Bromobenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	108-86-1		
Bromochloromethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	74-97-5		
Bromodichloromethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	75-27-4		
Bromoform	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	75-25-2		
Bromomethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	74-83-9		
n-Butylbenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	104-51-8		
sec-Butylbenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	135-98-8		
tert-Butylbenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	98-06-6		
Carbon tetrachloride	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	56-23-5		
Chlorobenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	108-90-7		
Chloroethane	ND	ug/l	100	10.0	03/10/03 18:17	RWS	75-00-3		
Chloroform	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	67-66-3		
Chloromethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	74-87-3		
2-Chlorotoluene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	95-49-8		
4-Chlorotoluene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	96-12-8		
Dibromochloromethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	106-93-4		
Dibromomethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	74-95-3		
1,2-Dichlorobenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	106-46-7		
Dichlorodifluoromethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	75-71-8		
1,1-Dichloroethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	75-34-3		
1,2-Dichloroethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	107-06-2		
1,1-Dichloroethene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	156-60-5		
1,2-Dichloropropane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	78-87-5		
1,3-Dichloropropane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	142-28-9		
2,2-Dichloropropane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	594-20-7		
1,1-Dichloropropene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	563-58-6		
Diisopropyl ether	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	108-20-3		
Ethylbenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	98-82-8		

Date: 03/14/03

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830138 | Project Sample Number: 9241906-005 | Date Collected: 02/28/03 13:20
Client Sample ID: ~~RMW-6~~ RMW-6 5/2/03 | Matrix: Water | Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	99-87-6		
Methylene chloride	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	75-09-2		
Methyl-tert-butyl ether	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	1634-04-4		
Naphthalene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	91-20-3		
n-Propylbenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	103-65-1		
Styrene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	79-34-5		
Tetrachloroethene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	127-18-4		
Toluene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	120-82-1		
1,1,1-Trichloroethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	79-00-5		
Trichloroethene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	79-01-6		
Trichlorofluoromethane	ND	ug/l	100	10.0	03/10/03 18:17	RWS	75-69-4		
1,2,3-Trichloropropane	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	108-67-8		
Vinyl chloride	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	75-01-4		
m&p-Xylene	6300	ug/l	1000	100	03/10/03 18:17	RWS			
o-Xylene	ND	ug/l	50.	10.0	03/10/03 18:17	RWS	95-47-6		
Toluene-d8 (S)	104	%		1.0	03/10/03 18:17	RWS	2037-26-5		
4-Bromofluorobenzene (S)	87	%		1.0	03/10/03 18:17	RWS	460-00-4		
Dibromofluoromethane (S)	106	%		1.0	03/10/03 18:17	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	115	%		1.0	03/10/03 18:17	RWS	17060-07-0		

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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830146
Client Sample ID: ~~RMW-7~~ KMW-7 5/2/03

Project Sample Number: 9241906-006
Matrix: Water

Date Collected: 02/28/03 14:10
Date Received: 03/04/03 12:00

GC/MS Volatiles

GC/MS VOCs by 8260 — Method: EPA 8260

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Benzene	120	ug/l	5.0	1.0	03/13/03 15:15	DLK	71-43-2		
Bromobenzene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	108-86-1		
Bromochloromethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	74-97-5		
Bromodichloromethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	75-27-4		
Bromoform	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	75-25-2		
Bromomethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	74-83-9		
n-Butylbenzene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	104-51-8		
sec-Butylbenzene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	135-98-8		
tert-Butylbenzene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	98-06-6		
Carbon tetrachloride	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	56-23-5		
Chlorobenzene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	108-90-7		
Chloroethane	ND	ug/l	10.	1.0	03/13/03 15:15	DLK	75-00-3		
Chloroform	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	67-66-3		
Chloromethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	74-87-3		
2-Chlorotoluene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	95-49-8		
4-Chlorotoluene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	96-12-8		
Dibromochloromethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	106-93-4		
Dibromomethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	74-95-3		
1,2-Dichlorobenzene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	563-58-6		
Diisopropyl ether	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	108-20-3		
Ethylbenzene	74.	ug/l	5.0	1.0	03/13/03 15:15	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	98-82-8		

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830146 | Project Sample Number: 9241906-006 | Date Collected: 02/28/03 14:10
Client Sample ID: ~~RMW-7~~ KMW-7 3/2/03 | Matrix: Water | Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	99-87-6		
Methylene chloride	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	75-09-2		
Methyl-tert-butyl ether	5.4	ug/l	5.0	1.0	03/13/03 15:15	DLK	1634-04-4		
Naphthalene	32.	ug/l	5.0	1.0	03/13/03 15:15	DLK	91-20-3		
n-Propylbenzene	7.8	ug/l	5.0	1.0	03/13/03 15:15	DLK	103-65-1		
Styrene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	79-34-5		
Tetrachloroethene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	127-18-4		
Toluene	31.	ug/l	5.0	1.0	03/13/03 15:15	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	79-00-5		
Trichloroethene	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/l	10.	1.0	03/13/03 15:15	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	96-18-4		
1,2,4-Trimethylbenzene	40.	ug/l	5.0	1.0	03/13/03 15:15	DLK	95-63-6		
1,3,5-Trimethylbenzene	33.	ug/l	5.0	1.0	03/13/03 15:15	DLK	108-67-8		
Vinyl chloride	ND	ug/l	5.0	1.0	03/13/03 15:15	DLK	75-01-4		
m&p-Xylene	180	ug/l	10.	1.0	03/13/03 15:15	DLK			
o-Xylene	20.	ug/l	5.0	1.0	03/13/03 15:15	DLK	95-47-6		
Toluene-d8 (S)	96	%		1.0	03/13/03 15:15	DLK	2037-26-5		
4-Bromofluorobenzene (S)	93	%		1.0	03/13/03 15:15	DLK	460-00-4		
Dibromofluoromethane (S)	96	%		1.0	03/13/03 15:15	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	91	%		1.0	03/13/03 15:15	DLK	17060-07-0		

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830153
Client Sample ID: ~~RMW-8~~ KMW-8 5/12/03

Project Sample Number: 9241906-007
Matrix: Water

Date Collected: 02/28/03 13:30
Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260	Method: EPA 8260								
Benzene	1400	ug/l	250	50.0	03/11/03 21:59	RWS	71-43-2		
Bromobenzene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	108-86-1		
Bromochloromethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	74-97-5		
Bromodichloromethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	75-27-4		
Bromoform	ND	ug/l	250	50.0	03/11/03 21:59	RWS	75-25-2		
Bromomethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	74-83-9		
n-Butylbenzene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	104-51-8		
sec-Butylbenzene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	135-98-8		
tert-Butylbenzene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	98-06-6		
Carbon tetrachloride	ND	ug/l	250	50.0	03/11/03 21:59	RWS	56-23-5		
Chlorobenzene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	108-90-7		
Chloroethane	ND	ug/l	500	50.0	03/11/03 21:59	RWS	75-00-3		
Chloroform	ND	ug/l	250	50.0	03/11/03 21:59	RWS	67-66-3		
Chloromethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	74-87-3		
2-Chlorotoluene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	95-49-8		
4-Chlorotoluene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	96-12-8		
Dibromochloromethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	250	50.0	03/11/03 21:59	RWS	106-93-4		
Dibromomethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	74-95-3		
1,2-Dichlorobenzene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	106-46-7		
Dichlorodifluoromethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	75-71-8		
1,1-Dichloroethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	75-34-3		
1,2-Dichloroethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	107-06-2		
1,1-Dichloroethene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	156-60-5		
1,2-Dichloropropane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	78-87-5		
1,3-Dichloropropane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	142-28-9		
2,2-Dichloropropane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	594-20-7		
1,1-Dichloropropene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	563-58-6		
Diisopropyl ether	ND	ug/l	250	50.0	03/11/03 21:59	RWS	108-20-3		
Ethylbenzene	550	ug/l	250	50.0	03/11/03 21:59	RWS	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/l	250	50.0	03/11/03 21:59	RWS	98-82-8		

Date: 03/14/03

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Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830153 | Project Sample Number: 9241906-007 | Date Collected: 02/28/03 13:30
Client Sample ID: ~~RMW-8~~ KMW-8 5/12/03 | Matrix: Water | Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	99-87-6		
Methylene chloride	ND	ug/l	250	50.0	03/11/03 21:59	RWS	75-09-2		
Methyl-tert-butyl ether	1400	ug/l	250	50.0	03/11/03 21:59	RWS	1634-04-4		
Naphthalene	320	ug/l	250	50.0	03/11/03 21:59	RWS	91-20-3		
n-Propylbenzene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	103-65-1		
Styrene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	79-34-5		
Tetrachloroethene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	127-18-4		
Toluene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	120-82-1		
1,1,1-Trichloroethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	79-00-5		
Trichloroethene	ND	ug/l	250	50.0	03/11/03 21:59	RWS	79-01-6		
Trichlorofluoromethane	ND	ug/l	500	50.0	03/11/03 21:59	RWS	75-69-4		
1,2,3-Trichloropropane	ND	ug/l	250	50.0	03/11/03 21:59	RWS	96-18-4		
1,2,4-Trimethylbenzene	1700	ug/l	250	50.0	03/11/03 21:59	RWS	95-63-6		
1,3,5-Trimethylbenzene	630	ug/l	250	50.0	03/11/03 21:59	RWS	108-67-8		
Vinyl chloride	ND	ug/l	250	50.0	03/11/03 21:59	RWS	75-01-4		
m&p-Xylene	8000	ug/l	500	50.0	03/11/03 21:59	RWS			
o-Xylene	340	ug/l	250	50.0	03/11/03 21:59	RWS	95-47-6		
Toluene-d8 (S)	102	%		1.0	03/11/03 21:59	RWS	2037-26-5		
4-Bromofluorobenzene (S)	89	%		1.0	03/11/03 21:59	RWS	460-00-4		
Dibromofluoromethane (S)	110	%		1.0	03/11/03 21:59	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	121	%		1.0	03/11/03 21:59	RWS	17060-07-0		

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Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830161
Client Sample ID: ~~RMW-10~~ KMW-10 5/12/03

Project Sample Number: 9241906-008
Matrix: Water

Date Collected: 02/28/03 13:45
Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260	Method: EPA 8260								
Benzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	71-43-2		
Bromobenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	108-86-1		
Bromochloromethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	74-97-5		
Bromodichloromethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	75-27-4		
Bromoform	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	75-25-2		
Bromomethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	74-83-9		
n-Butylbenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	104-51-8		
sec-Butylbenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	135-98-8		
tert-Butylbenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	98-06-6		
Carbon tetrachloride	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	56-23-5		
Chlorobenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	108-90-7		
Chloroethane	ND	ug/l	10.	1.0	03/10/03 17:44	RWS	75-00-3		
Chloroform	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	67-66-3		
Chloromethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	74-87-3		
2-Chlorotoluene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	95-49-8		
4-Chlorotoluene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	96-12-8		
Dibromochloromethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	106-93-4		
Dibromomethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	74-95-3		
1,2-Dichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	106-46-7		
Dichlorodifluoromethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	75-71-8		
1,1-Dichloroethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	75-34-3		
1,2-Dichloroethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	107-06-2		
1,1-Dichloroethene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	156-60-5		
1,2-Dichloropropane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	78-87-5		
1,3-Dichloropropane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	142-28-9		
2,2-Dichloropropane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	594-20-7		
1,1-Dichloropropene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	563-58-6		
Diisopropyl ether	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	108-20-3		
Ethylbenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	98-82-8		

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830161 Project Sample Number: 9241906-008 Date Collected: 02/28/03 13:45
Client Sample ID: ~~RMW-10~~ KMW-10 5/12/03 Matrix: Water Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	99-87-6		
Methylene chloride	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	75-09-2		
Methyl-tert-butyl ether	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	1634-04-4		
Naphthalene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	91-20-3		
n-Propylbenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	103-65-1		
Styrene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	79-34-5		
Tetrachloroethene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	127-18-4		
Toluene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	120-82-1		
1,1,1-Trichloroethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	79-00-5		
Trichloroethene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	79-01-6		
Trichlorofluoromethane	ND	ug/l	10.	1.0	03/10/03 17:44	RWS	75-69-4		
1,2,3-Trichloropropane	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	108-67-8		
Vinyl chloride	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	75-01-4		
m&p-Xylene	ND	ug/l	10.	1.0	03/10/03 17:44	RWS			
o-Xylene	ND	ug/l	5.0	1.0	03/10/03 17:44	RWS	95-47-6		
Toluene-d8 (S)	104	%		1.0	03/10/03 17:44	RWS	2037-26-5		
4-Bromofluorobenzene (S)	78	%		1.0	03/10/03 17:44	RWS	460-00-4		
Dibromofluoromethane (S)	110	%		1.0	03/10/03 17:44	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	124	%		1.0	03/10/03 17:44	RWS	17060-07-0		

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830179
Client Sample ID: ~~RMW-11~~ KMW-11 5/12/03

Project Sample Number: 9241906-009
Matrix: Water

Date Collected: 02/28/03 14:25
Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260	Method: EPA 8260								
Benzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	71-43-2		
Bromobenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	108-86-1		
Bromochloromethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	74-97-5		
Bromodichloromethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	75-27-4		
Bromoform	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	75-25-2		
Bromomethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	74-83-9		
n-Butylbenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	104-51-8		
sec-Butylbenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	135-98-8		
tert-Butylbenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	98-06-6		
Carbon tetrachloride	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	56-23-5		
Chlorobenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	108-90-7		
Chloroethane	ND	ug/l	10.	1.0	03/10/03 18:01	RWS	75-00-3		
Chloroform	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	67-66-3		
Chloromethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	74-87-3		
2-Chlorotoluene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	95-49-8		
4-Chlorotoluene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	96-12-8		
Dibromochloromethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	106-93-4		
Dibromomethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	74-95-3		
1,2-Dichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	106-46-7		
Dichlorodifluoromethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	75-71-8		
1,1-Dichloroethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	75-34-3		
1,2-Dichloroethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	107-06-2		
1,1-Dichloroethene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	156-60-5		
1,2-Dichloropropane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	78-87-5		
1,3-Dichloropropane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	142-28-9		
2,2-Dichloropropane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	594-20-7		
1,1-Dichloropropene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	563-58-6		
Diisopropyl ether	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	108-20-3		
Ethylbenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	98-82-8		

Date: 03/14/03

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830179 Project Sample Number: 9241906-009 Date Collected: 02/28/03 14:25
Client Sample ID: ~~RMW-II~~ RMW-11 5/12/03 Matrix: Water Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	99-87-6		
Methylene chloride	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	75-09-2		
Methyl-tert-butyl ether	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	1634-04-4		
Naphthalene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	91-20-3		
n-Propylbenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	103-65-1		
Styrene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	79-34-5		
Tetrachloroethene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	127-18-4		
Toluene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	120-82-1		
1,1,1-Trichloroethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	79-00-5		
Trichloroethene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	79-01-6		
Trichlorofluoromethane	ND	ug/l	10.	1.0	03/10/03 18:01	RWS	75-69-4		
1,2,3-Trichloropropane	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	108-67-8		
Vinyl chloride	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	75-01-4		
m&p-Xylene	ND	ug/l	10.	1.0	03/10/03 18:01	RWS			
o-Xylene	ND	ug/l	5.0	1.0	03/10/03 18:01	RWS	95-47-6		
Toluene-d8 (S)	105	%		1.0	03/10/03 18:01	RWS	2037-26-5		
4-Bromofluorobenzene (S)	83	%		1.0	03/10/03 18:01	RWS	460-00-4		
Dibromofluoromethane (S)	109	%		1.0	03/10/03 18:01	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	117	%		1.0	03/10/03 18:01	RWS	17060-07-0		

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830187
Client Sample ID: ~~RMW-12~~ KMW-12 5/12/03

Project Sample Number: 9241906-010
Matrix: Water

Date Collected: 02/28/03 15:00
Date Received: 03/04/03 12:00

GC/MS Volatiles

GC/MS VOCs by 8260 — Method: EPA 8260

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Benzene	3500	ug/l	250	50.0	03/10/03 19:07	RWS	71-43-2		
Bromobenzene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	108-86-1		
Bromochloromethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	74-97-5		
Bromodichloromethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	75-27-4		
Bromoform	ND	ug/l	250	50.0	03/10/03 19:07	RWS	75-25-2		
Bromomethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	74-83-9		
n-Butylbenzene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	104-51-8		
sec-Butylbenzene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	135-98-8		
tert-Butylbenzene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	98-06-6		
Carbon tetrachloride	ND	ug/l	250	50.0	03/10/03 19:07	RWS	56-23-5		
Chlorobenzene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	108-90-7		
Chloroethane	ND	ug/l	500	50.0	03/10/03 19:07	RWS	75-00-3		
Chloroform	ND	ug/l	250	50.0	03/10/03 19:07	RWS	67-66-3		
Chloromethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	74-87-3		
2-Chlorotoluene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	95-49-8		
4-Chlorotoluene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	96-12-8		
Dibromochloromethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	250	50.0	03/10/03 19:07	RWS	106-93-4		
Dibromomethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	74-95-3		
1,2-Dichlorobenzene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	106-46-7		
Dichlorodifluoromethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	75-71-8		
1,1-Dichloroethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	75-34-3		
1,2-Dichloroethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	107-06-2		
1,1-Dichloroethene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	156-60-5		
1,2-Dichloropropane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	78-87-5		
1,3-Dichloropropane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	142-28-9		
2,2-Dichloropropane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	594-20-7		
1,1-Dichloropropene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	563-58-6		
Diisopropyl ether	ND	ug/l	250	50.0	03/10/03 19:07	RWS	108-20-3		
Ethylbenzene	730	ug/l	250	50.0	03/10/03 19:07	RWS	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/l	250	50.0	03/10/03 19:07	RWS	98-82-8		

Date: 03/14/03

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830187 Project Sample Number: 9241906-010 Date Collected: 02/28/03 15:00
Client Sample ID: ~~RMW-12~~ KMW-12 5/12/03 Matrix: Water Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	99-87-6		
Methylene chloride	ND	ug/l	250	50.0	03/10/03 19:07	RWS	75-09-2		
Methyl-tert-butyl ether	990	ug/l	250	50.0	03/10/03 19:07	RWS	1634-04-4		
Naphthalene	340	ug/l	250	50.0	03/10/03 19:07	RWS	91-20-3		
n-Propylbenzene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	103-65-1		
Styrene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	79-34-5		
Tetrachloroethene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	127-18-4		
Toluene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	120-82-1		
1,1,1-Trichloroethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	79-00-5		
Trichloroethene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	79-01-6		
Trichlorofluoromethane	ND	ug/l	500	50.0	03/10/03 19:07	RWS	75-69-4		
1,2,3-Trichloropropane	ND	ug/l	250	50.0	03/10/03 19:07	RWS	96-18-4		
1,2,4-Trimethylbenzene	1100	ug/l	250	50.0	03/10/03 19:07	RWS	95-63-6		
1,3,5-Trimethylbenzene	360	ug/l	250	50.0	03/10/03 19:07	RWS	108-67-8		
Vinyl chloride	ND	ug/l	250	50.0	03/10/03 19:07	RWS	75-01-4		
m&p-Xylene	5800	ug/l	500	50.0	03/10/03 19:07	RWS			
o-Xylene	ND	ug/l	250	50.0	03/10/03 19:07	RWS	95-47-6		
Toluene-d8 (S)	102	%		1.0	03/10/03 19:07	RWS	2037-26-5		
4-Bromofluorobenzene (S)	84	%		1.0	03/10/03 19:07	RWS	460-00-4		
Dibromofluoromethane (S)	110	%		1.0	03/10/03 19:07	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	121	%		1.0	03/10/03 19:07	RWS	17060-07-0		

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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830195
Client Sample ID: ~~RMW-13~~ KMW-13 GRL 5/12/03

Project Sample Number: 9241906-011
Matrix: Water

Date Collected: 02/28/03 15:30
Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260	Method: EPA 8260								
Benzene	690	J ug/l	1200	250	03/11/03 22:16	RWS	71-43-2	1	
Bromobenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	108-86-1		
Bromochloromethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	74-97-5		
Bromodichloromethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	75-27-4		
Bromoform	ND	ug/l	1200	250	03/11/03 22:16	RWS	75-25-2		
Bromomethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	74-83-9		
n-Butylbenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	104-51-8		
sec-Butylbenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	135-98-8		
tert-Butylbenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	98-06-6		
Carbon tetrachloride	ND	ug/l	1200	250	03/11/03 22:16	RWS	56-23-5		
Chlorobenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	108-90-7		
Chloroethane	ND	ug/l	2500	250	03/11/03 22:16	RWS	75-00-3		
Chloroform	ND	ug/l	1200	250	03/11/03 22:16	RWS	67-66-3		
Chloromethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	74-87-3		
2-Chlorotoluene	ND	ug/l	1200	250	03/11/03 22:16	RWS	95-49-8		
4-Chlorotoluene	ND	ug/l	1200	250	03/11/03 22:16	RWS	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/l	1200	250	03/11/03 22:16	RWS	96-12-8		
Dibromochloromethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	1200	250	03/11/03 22:16	RWS	106-93-4		
Dibromomethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	74-95-3		
1,2-Dichlorobenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	106-46-7		
Dichlorodifluoromethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	75-71-8		
1,1-Dichloroethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	75-34-3		
1,2-Dichloroethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	107-06-2		
1,1-Dichloroethene	ND	ug/l	1200	250	03/11/03 22:16	RWS	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	1200	250	03/11/03 22:16	RWS	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	1200	250	03/11/03 22:16	RWS	156-60-5		
1,2-Dichloropropane	ND	ug/l	1200	250	03/11/03 22:16	RWS	78-87-5		
1,3-Dichloropropane	ND	ug/l	1200	250	03/11/03 22:16	RWS	142-28-9		
2,2-Dichloropropane	ND	ug/l	1200	250	03/11/03 22:16	RWS	594-20-7		
1,1-Dichloropropene	ND	ug/l	1200	250	03/11/03 22:16	RWS	563-58-6		
Diisopropyl ether	ND	ug/l	1200	250	03/11/03 22:16	RWS	108-20-3		
Ethylbenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/l	1200	250	03/11/03 22:16	RWS	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/l	1200	250	03/11/03 22:16	RWS	98-82-8		

Date: 03/14/03

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Huntersville, NC 28078
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Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830195 | Project Sample Number: 9241906-011 | Date Collected: 02/28/03 15:30
Client Sample ID: ~~RMW-13~~ KMW-13 5/12/03 | Matrix: Water | Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/l	1200	250	03/11/03 22:16	RWS	99-87-6		
Methylene chloride	ND	ug/l	1200	250	03/11/03 22:16	RWS	75-09-2		
Methyl-tert-butyl ether	1100	J ug/l	1200	250	03/11/03 22:16	RWS	1634-04-4	1	
Naphthalene	ND	ug/l	1200	250	03/11/03 22:16	RWS	91-20-3		
n-Propylbenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	103-65-1		
Styrene	ND	ug/l	1200	250	03/11/03 22:16	RWS	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	79-34-5		
Tetrachloroethene	ND	ug/l	1200	250	03/11/03 22:16	RWS	127-18-4		
Toluene	ND	ug/l	1200	250	03/11/03 22:16	RWS	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	120-82-1		
1,1,1-Trichloroethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	1200	250	03/11/03 22:16	RWS	79-00-5		
Trichloroethene	ND	ug/l	1200	250	03/11/03 22:16	RWS	79-01-6		
Trichlorofluoromethane	ND	ug/l	2500	250	03/11/03 22:16	RWS	75-69-4		
1,2,3-Trichloropropane	ND	ug/l	1200	250	03/11/03 22:16	RWS	96-18-4		
1,2,4-Trimethylbenzene	210	J ug/l	1200	250	03/11/03 22:16	RWS	95-63-6	1	
1,3,5-Trimethylbenzene	ND	ug/l	1200	250	03/11/03 22:16	RWS	108-67-8		
Vinyl chloride	ND	ug/l	1200	250	03/11/03 22:16	RWS	75-01-4		
m&p-Xylene	19000	ug/l	2500	250	03/11/03 22:16	RWS			
o-Xylene	ND	ug/l	1200	250	03/11/03 22:16	RWS	95-47-6		
Toluene-d8 (S)	103	%		1.0	03/11/03 22:16	RWS	2037-26-5		
4-Bromofluorobenzene (S)	85	%		1.0	03/11/03 22:16	RWS	460-00-4		
Dibromofluoromethane (S)	112	%		1.0	03/11/03 22:16	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	120	%		1.0	03/11/03 22:16	RWS	17060-07-0		

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830203
Client Sample ID: ~~RMW-14~~ KMW-14 5/12/03

Project Sample Number: 9241906-012
Matrix: Water

Date Collected: 02/28/03 14:45
Date Received: 03/04/03 12:00

GC/MS Volatiles

GC/MS VOCs by 8260 — Method: EPA 8260

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Benzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	71-43-2		
Bromobenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	108-86-1		
Bromochloromethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	74-97-5		
Bromodichloromethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	75-27-4		
Bromoform	ND	ug/l	120	25.0	03/10/03 19:39	RWS	75-25-2		
Bromomethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	74-83-9		
n-Butylbenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	104-51-8		
sec-Butylbenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	135-98-8		
tert-Butylbenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	98-06-6		
Carbon tetrachloride	ND	ug/l	120	25.0	03/10/03 19:39	RWS	56-23-5		
Chlorobenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	108-90-7		
Chloroethane	ND	ug/l	250	25.0	03/10/03 19:39	RWS	75-00-3		
Chloroform	ND	ug/l	120	25.0	03/10/03 19:39	RWS	67-66-3		
Chloromethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	74-87-3		
2-Chlorotoluene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	95-49-8		
4-Chlorotoluene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	96-12-8		
Dibromochloromethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/l	120	25.0	03/10/03 19:39	RWS	106-93-4		
Dibromomethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	74-95-3		
1,2-Dichlorobenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	106-46-7		
Dichlorodifluoromethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	75-71-8		
1,1-Dichloroethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	75-34-3		
1,2-Dichloroethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	107-06-2		
1,1-Dichloroethene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	156-60-5		
1,2-Dichloropropane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	78-87-5		
1,3-Dichloropropane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	142-28-9		
2,2-Dichloropropane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	594-20-7		
1,1-Dichloropropene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	563-58-6		
Diisopropyl ether	ND	ug/l	120	25.0	03/10/03 19:39	RWS	108-20-3		
Ethylbenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/l	120	25.0	03/10/03 19:39	RWS	98-82-8		

Date: 03/14/03

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Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

Lab Sample No: 922830203
Client Sample ID: ~~RMW-14~~ KMW-14 5/12/03

Project Sample Number: 9241906-012
Matrix: Water

Date Collected: 02/28/03 14:45
Date Received: 03/04/03 12:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	99-87-6		
Methylene chloride	ND	ug/l	120	25.0	03/10/03 19:39	RWS	75-09-2		
Methyl-tert-butyl ether	ND	ug/l	120	25.0	03/10/03 19:39	RWS	1634-04-4		
Naphthalene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	91-20-3		
n-Propylbenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	103-65-1		
Styrene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	79-34-5		
Tetrachloroethene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	127-18-4		
Toluene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	120-82-1		
1,1,1-Trichloroethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	79-00-5		
Trichloroethene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	79-01-6		
Trichlorofluoromethane	ND	ug/l	250	25.0	03/10/03 19:39	RWS	75-69-4		
1,2,3-Trichloropropane	ND	ug/l	120	25.0	03/10/03 19:39	RWS	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	108-67-8		
Vinyl chloride	ND	ug/l	120	25.0	03/10/03 19:39	RWS	75-01-4		
m&p-Xylene	23000	ug/l	2500	250	03/10/03 19:39	RWS			
o-Xylene	ND	ug/l	120	25.0	03/10/03 19:39	RWS	95-47-6		
Toluene-d8 (S)	106	%		1.0	03/10/03 19:39	RWS	2037-26-5		
4-Bromofluorobenzene (S)	86	%		1.0	03/10/03 19:39	RWS	460-00-4		
Dibromofluoromethane (S)	105	%		1.0	03/10/03 19:39	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	114	%		1.0	03/10/03 19:39	RWS	17060-07-0		

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Fax: 704.875.9091

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
(S)	Surrogate
[1]	Detected but below the PRL; therefore, result is an estimated concentration (CLP J-Flag).

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Phone: 704.875.9092
Fax: 704.875.9091

QUALITY CONTROL DATA

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

QC Batch: 71165 — Analysis Method: EPA 8260
QC Batch Method: EPA 8260 — Analysis Description: GC/MS VOCs by 8260
Associated Lab Samples: 922830138 922830146 922830153 922830161 922830179 922830187 922830195 922830203

METHOD BLANK: 922840681
Associated Lab Samples: 922830138 922830146 922830153 922830161 922830179 922830187 922830195 922830203

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Benzene	ug/l	ND	5.0	
Bromobenzene	ug/l	ND	5.0	
Bromochloromethane	ug/l	ND	5.0	
Bromodichloromethane	ug/l	ND	5.0	
Bromoform	ug/l	ND	5.0	
Bromomethane	ug/l	ND	5.0	
n-Butylbenzene	ug/l	ND	5.0	
sec-Butylbenzene	ug/l	ND	5.0	
tert-Butylbenzene	ug/l	ND	5.0	
Carbon tetrachloride	ug/l	ND	5.0	
Chlorobenzene	ug/l	ND	5.0	
Chloroethane	ug/l	ND	10.	
Chloroform	ug/l	ND	5.0	
Chloromethane	ug/l	ND	5.0	
2-Chlorotoluene	ug/l	ND	5.0	
4-Chlorotoluene	ug/l	ND	5.0	
1,2-Dibromo-3-chloropropane	ug/l	ND	5.0	
Dibromochloromethane	ug/l	ND	5.0	
1,2-Dibromoethane (EDB)	ug/l	ND	5.0	
Dibromomethane	ug/l	ND	5.0	
1,2-Dichlorobenzene	ug/l	ND	5.0	
1,3-Dichlorobenzene	ug/l	ND	5.0	
1,4-Dichlorobenzene	ug/l	ND	5.0	
Dichlorodifluoromethane	ug/l	ND	5.0	
1,1-Dichloroethane	ug/l	ND	5.0	
1,2-Dichloroethane	ug/l	ND	5.0	
1,1-Dichloroethene	ug/l	ND	5.0	
cis-1,2-Dichloroethene	ug/l	ND	5.0	
trans-1,2-Dichloroethene	ug/l	ND	5.0	

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QUALITY CONTROL DATA

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

METHOD BLANK: 922840681
Associated Lab Samples: 922830138 922830146 922830153 922830161 922830179 922830187 922830195 922830203

Parameter	Units	Blank Result	Reporting Limit	Footnotes
1,2-Dichloropropane	ug/l	ND	5.0	
1,3-Dichloropropane	ug/l	ND	5.0	
2,2-Dichloropropane	ug/l	ND	5.0	
1,1-Dichloropropene	ug/l	ND	5.0	
Diisopropyl ether	ug/l	ND	5.0	
Ethylbenzene	ug/l	ND	5.0	
Hexachloro-1,3-butadiene	ug/l	ND	5.0	
Isopropylbenzene (Cumene)	ug/l	ND	5.0	
p-Isopropyltoluene	ug/l	ND	5.0	
Methylene chloride	ug/l	ND	5.0	
Methyl-tert-butyl ether	ug/l	ND	5.0	
Naphthalene	ug/l	ND	5.0	
n-Propylbenzene	ug/l	ND	5.0	
Styrene	ug/l	ND	5.0	
1,1,1,2-Tetrachloroethane	ug/l	ND	5.0	
1,1,2,2-Tetrachloroethane	ug/l	ND	5.0	
Tetrachloroethene	ug/l	ND	5.0	
Toluene	ug/l	ND	5.0	
1,2,3-Trichlorobenzene	ug/l	ND	5.0	
1,2,4-Trichlorobenzene	ug/l	ND	5.0	
1,1,1-Trichloroethane	ug/l	ND	5.0	
1,1,2-Trichloroethane	ug/l	ND	5.0	
Trichloroethene	ug/l	ND	5.0	
Trichlorofluoromethane	ug/l	ND	10.	
1,2,3-Trichloropropane	ug/l	ND	5.0	
1,2,4-Trimethylbenzene	ug/l	ND	5.0	
1,3,5-Trimethylbenzene	ug/l	ND	5.0	
Vinyl chloride	ug/l	ND	5.0	
m&p-Xylene	ug/l	ND	10.	
o-Xylene	ug/l	ND	5.0	
Toluene-d8 (S)	%	98		
4-Bromofluorobenzene (S)	%	89		
Dibromofluoromethane (S)	%	103		
1,2-Dichloroethane-d4 (S)	%	102		

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QUALITY CONTROL DATA

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

LABORATORY CONTROL SAMPLE: 922840699

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
Benzene	ug/l	50.00	45.74	92	
Bromobenzene	ug/l	50.00	45.86	92	
Bromochloromethane	ug/l	50.00	42.55	85	
Bromodichloromethane	ug/l	50.00	41.47	83	
Bromoform	ug/l	50.00	38.65	77	
Bromomethane	ug/l	50.00	81.79	164	1
n-Butylbenzene	ug/l	50.00	47.82	96	
sec-Butylbenzene	ug/l	50.00	48.41	97	
tert-Butylbenzene	ug/l	50.00	46.46	93	
Carbon tetrachloride	ug/l	50.00	43.04	86	
Chlorobenzene	ug/l	50.00	44.77	90	
Chloroethane	ug/l	50.00	44.60	89	
Chloroform	ug/l	50.00	41.66	83	
Chloromethane	ug/l	50.00	34.23	68	
2-Chlorotoluene	ug/l	50.00	47.30	95	
4-Chlorotoluene	ug/l	50.00	47.28	95	
1,2-Dibromo-3-chloropropane	ug/l	50.00	38.79	78	
Dibromochloromethane	ug/l	50.00	38.28	77	
1,2-Dibromoethane (EDB)	ug/l	50.00	39.39	79	
Dibromomethane	ug/l	50.00	45.60	91	
1,2-Dichlorobenzene	ug/l	50.00	46.20	92	
1,3-Dichlorobenzene	ug/l	50.00	47.85	96	
1,4-Dichlorobenzene	ug/l	50.00	45.32	91	
Dichlorodifluoromethane	ug/l	50.00	38.62	77	
1,1-Dichloroethane	ug/l	50.00	40.16	80	
1,2-Dichloroethane	ug/l	50.00	40.24	80	
1,1-Dichloroethene	ug/l	50.00	42.18	84	
cis-1,2-Dichloroethene	ug/l	50.00	44.78	90	
trans-1,2-Dichloroethene	ug/l	50.00	39.93	80	
1,2-Dichloropropane	ug/l	50.00	44.03	88	
1,3-Dichloropropane	ug/l	50.00	37.92	76	
2,2-Dichloropropane	ug/l	50.00	43.77	88	
1,1-Dichloropropene	ug/l	50.00	42.37	85	
Diisopropyl ether	ug/l	50.00	44.17	88	
Ethylbenzene	ug/l	50.00	47.02	94	
Hexachloro-1,3-butadiene	ug/l	50.00	43.33	87	
Isopropylbenzene (Cumene)	ug/l	50.00	48.73	98	

Date: 03/14/03

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QUALITY CONTROL DATA

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

LABORATORY CONTROL SAMPLE: 922840699

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
p-Isopropyltoluene	ug/l	50.00	47.55	95	
Methylene chloride	ug/l	50.00	48.80	98	
Methyl-tert-butyl ether	ug/l	50.00	41.33	83	
Naphthalene	ug/l	50.00	40.34	81	
n-Propylbenzene	ug/l	50.00	47.73	96	
Styrene	ug/l	50.00	50.24	100	
1,1,1,2-Tetrachloroethane	ug/l	50.00	40.15	80	
1,1,2,2-Tetrachloroethane	ug/l	50.00	47.21	94	
Tetrachloroethene	ug/l	50.00	46.54	93	
Toluene	ug/l	50.00	53.40	107	
1,2,3-Trichlorobenzene	ug/l	50.00	36.70	73	
1,2,4-Trichlorobenzene	ug/l	50.00	42.89	86	
1,1,1-Trichloroethane	ug/l	50.00	42.17	84	
1,1,2-Trichloroethane	ug/l	50.00	50.43	101	
Trichloroethene	ug/l	50.00	45.71	91	
Trichlorofluoromethane	ug/l	50.00	40.92	82	
1,2,3-Trichloropropane	ug/l	50.00	47.66	95	
1,2,4-Trimethylbenzene	ug/l	50.00	47.37	95	
1,3,5-Trimethylbenzene	ug/l	50.00	47.01	94	
Vinyl chloride	ug/l	50.00	41.04	82	
m&p-Xylene	ug/l	100.00	97.33	97	
o-Xylene	ug/l	50.00	48.97	98	
Toluene-d8 (S)				116	2
4-Bromofluorobenzene (S)				100	
Dibromofluoromethane (S)				86	
1,2-Dichloroethane-d4 (S)				95	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 922840707 922840715

Parameter	Units	922831383 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	RPD	Footnotes
Benzene	ug/l	0	50.00	37.89	40.33	76	81	6	
Chlorobenzene	ug/l	0	50.00	33.81	37.19	68	74	10	
1,1-Dichloroethene	ug/l	0	50.00	38.10	40.61	76	81	6	
Toluene	ug/l	0	50.00	35.40	39.07	71	78	10	
Trichloroethene	ug/l	0	50.00	36.80	41.59	74	83	12	

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QUALITY CONTROL DATA

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 922840707 922840715

Parameter	Units	922831383 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	RPD	Footnotes
Toluene-d8 (S)						99	101		
4-Bromofluorobenzene (S)						84	89		
Dibromofluoromethane (S)						82	84		3,3
1,2-Dichloroethane-d4 (S)						104	101		

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QUALITY CONTROL DATA

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

QC Batch: 71166 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: GC/MS VOCs by 8260
Associated Lab Samples: 922830096 922830104 922830112 922830120

METHOD BLANK: 922840723
Associated Lab Samples: 922830096 922830104 922830112 922830120

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Benzene	ug/l	ND	5.0	
Bromobenzene	ug/l	ND	5.0	
Bromochloromethane	ug/l	ND	5.0	
Bromodichloromethane	ug/l	ND	5.0	
Bromoform	ug/l	ND	5.0	
Bromomethane	ug/l	ND	5.0	
n-Butylbenzene	ug/l	ND	5.0	
sec-Butylbenzene	ug/l	ND	5.0	
tert-Butylbenzene	ug/l	ND	5.0	
Carbon tetrachloride	ug/l	ND	5.0	
Chlorobenzene	ug/l	ND	5.0	
Chloroethane	ug/l	ND	10.	
Chloroform	ug/l	ND	5.0	
Chloromethane	ug/l	ND	5.0	
2-Chlorotoluene	ug/l	ND	5.0	
4-Chlorotoluene	ug/l	ND	5.0	
1,2-Dibromo-3-chloropropane	ug/l	ND	5.0	
Dibromochloromethane	ug/l	ND	5.0	
1,2-Dibromoethane (EDB)	ug/l	ND	5.0	
Dibromomethane	ug/l	ND	5.0	
1,2-Dichlorobenzene	ug/l	ND	5.0	
1,3-Dichlorobenzene	ug/l	ND	5.0	
1,4-Dichlorobenzene	ug/l	ND	5.0	
Dichlorodifluoromethane	ug/l	ND	5.0	
1,1-Dichloroethane	ug/l	ND	5.0	
1,2-Dichloroethane	ug/l	ND	5.0	
1,1-Dichloroethene	ug/l	ND	5.0	
cis-1,2-Dichloroethene	ug/l	ND	5.0	
trans-1,2-Dichloroethene	ug/l	ND	5.0	
1,2-Dichloropropane	ug/l	ND	5.0	
1,3-Dichloropropane	ug/l	ND	5.0	

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QUALITY CONTROL DATA

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

METHOD BLANK: 922840723
Associated Lab Samples: 922830096 922830104 922830112 922830120

Parameter	Units	Blank Result	Reporting Limit	Footnotes
2,2-Dichloropropane	ug/l	ND	5.0	
1,1-Dichloropropene	ug/l	ND	5.0	
Diisopropyl ether	ug/l	ND	5.0	
Ethylbenzene	ug/l	ND	5.0	
Hexachloro-1,3-butadiene	ug/l	7.8	5.0	4
Isopropylbenzene (Cumene)	ug/l	ND	5.0	
p-Isopropyltoluene	ug/l	ND	5.0	
Methylene chloride	ug/l	ND	5.0	
Methyl-tert-butyl ether	ug/l	ND	5.0	
Naphthalene	ug/l	6.6	5.0	4
n-Propylbenzene	ug/l	ND	5.0	
Styrene	ug/l	ND	5.0	
1,1,1,2-Tetrachloroethane	ug/l	ND	5.0	
1,1,2,2-Tetrachloroethane	ug/l	ND	5.0	
Tetrachloroethene	ug/l	ND	5.0	
Toluene	ug/l	ND	5.0	
1,2,3-Trichlorobenzene	ug/l	9.1	5.0	4
1,2,4-Trichlorobenzene	ug/l	5.8	5.0	4
1,1,1-Trichloroethane	ug/l	ND	5.0	
1,1,2-Trichloroethane	ug/l	ND	5.0	
Trichloroethene	ug/l	ND	5.0	
Trichlorofluoromethane	ug/l	ND	10.	
1,2,3-Trichloropropane	ug/l	ND	5.0	
1,2,4-Trimethylbenzene	ug/l	ND	5.0	
1,3,5-Trimethylbenzene	ug/l	ND	5.0	
Vinyl chloride	ug/l	ND	5.0	
m&p-Xylene	ug/l	ND	10.	
o-Xylene	ug/l	ND	5.0	
Toluene-d8 (S)	%	98		
4-Bromofluorobenzene (S)	%	88		
Dibromofluoromethane (S)	%	94		
1,2-Dichloroethane-d4 (S)	%	96		

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QUALITY CONTROL DATA

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

LABORATORY CONTROL SAMPLE: 922840731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
Benzene	ug/l	50.00	46.89	94	
Bromobenzene	ug/l	50.00	47.71	95	
Bromochloromethane	ug/l	50.00	45.14	90	
Bromodichloromethane	ug/l	50.00	43.15	86	
Bromoform	ug/l	50.00	45.05	90	
Bromomethane	ug/l	50.00	73.35	147	
n-Butylbenzene	ug/l	50.00	48.16	96	
sec-Butylbenzene	ug/l	50.00	50.10	100	
tert-Butylbenzene	ug/l	50.00	55.11	110	
Carbon tetrachloride	ug/l	50.00	49.92	100	
Chlorobenzene	ug/l	50.00	46.16	92	
Chloroethane	ug/l	50.00	166.7	333	
Chloroform	ug/l	50.00	48.23	96	1
Chloromethane	ug/l	50.00	39.48	79	
2-Chlorotoluene	ug/l	50.00	48.96	98	
4-Chlorotoluene	ug/l	50.00	48.52	97	
1,2-Dibromo-3-chloropropane	ug/l	50.00	37.88	76	
Dibromochloromethane	ug/l	50.00	44.87	90	
1,2-Dibromoethane (EDB)	ug/l	50.00	42.95	86	
Dibromomethane	ug/l	50.00	44.41	89	
1,2-Dichlorobenzene	ug/l	50.00	47.15	94	
1,3-Dichlorobenzene	ug/l	50.00	47.35	95	
1,4-Dichlorobenzene	ug/l	50.00	47.91	96	
Dichlorodifluoromethane	ug/l	50.00	44.50	89	
1,1-Dichloroethane	ug/l	50.00	48.96	98	
1,2-Dichloroethane	ug/l	50.00	44.85	90	
1,1-Dichloroethene	ug/l	50.00	50.94	102	
cis-1,2-Dichloroethene	ug/l	50.00	46.18	92	
trans-1,2-Dichloroethene	ug/l	50.00	50.26	101	
1,2-Dichloropropane	ug/l	50.00	45.09	90	
1,3-Dichloropropane	ug/l	50.00	43.57	87	
2,2-Dichloropropane	ug/l	50.00	45.96	92	
1,1-Dichloropropene	ug/l	50.00	48.27	96	
Diisopropyl ether	ug/l	50.00	49.00	98	
Ethylbenzene	ug/l	50.00	46.21	92	
Hexachloro-1,3-butadiene	ug/l	50.00	38.17	76	
Isopropylbenzene (Cumene)	ug/l	50.00	46.94	94	

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QUALITY CONTROL DATA

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

LABORATORY CONTROL SAMPLE: 922840731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
p-Isopropyltoluene	ug/l	50.00	47.37	95	
Methylene chloride	ug/l	50.00	44.88	90	
Methyl-tert-butyl ether	ug/l	50.00	45.05	90	
Naphthalene	ug/l	50.00	33.66	67	
n-Propylbenzene	ug/l	50.00	49.50	99	
Styrene	ug/l	50.00	44.74	90	
1,1,1,2-Tetrachloroethane	ug/l	50.00	46.81	94	
1,1,2,2-Tetrachloroethane	ug/l	50.00	42.83	86	
Tetrachloroethene	ug/l	50.00	36.69	73	
Toluene	ug/l	50.00	45.52	91	
1,2,3-Trichlorobenzene	ug/l	50.00	36.14	72	
1,2,4-Trichlorobenzene	ug/l	50.00	39.95	80	
1,1,1-Trichloroethane	ug/l	50.00	49.21	98	
1,1,2-Trichloroethane	ug/l	50.00	42.76	86	
Trichloroethene	ug/l	50.00	46.43	93	
Trichlorofluoromethane	ug/l	50.00	113.4	227	1
1,2,3-Trichloropropane	ug/l	50.00	51.13	102	
1,2,4-Trimethylbenzene	ug/l	50.00	47.29	95	
1,3,5-Trimethylbenzene	ug/l	50.00	47.82	96	
Vinyl chloride	ug/l	50.00	47.86	96	
m&p-Xylene	ug/l	100.00	92.71	93	
o-Xylene	ug/l	50.00	46.16	92	
Toluene-d8 (S)				98	
4-Bromofluorobenzene (S)				96	
Dibromofluoromethane (S)				103	
1,2-Dichloroethane-d4 (S)				96	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 922840749 922840756

Parameter	Units	922832860 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	RPD	Footnotes
Benzene	ug/l	0	50.00	44.53	43.73	89	88	2	
Chlorobenzene	ug/l	0	50.00	44.00	45.26	88	90	3	
1,1-Dichloroethene	ug/l	0	50.00	46.31	43.11	93	86	7	
Toluene	ug/l	0	50.00	43.34	44.21	87	88	2	
Trichloroethene	ug/l	0	50.00	43.62	43.96	87	88	1	

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QUALITY CONTROL DATA

Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 922840749 922840756

Parameter	Units	922832860 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	RPD	Footnotes
Toluene-d8 (S)						98	98		
4-Bromofluorobenzene (S)						97	98		
Dibromofluoromethane (S)						102	92		
1,2-Dichloroethane-d4 (S)						96	82		

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SC 99006

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Lab Project Number: 9241906
Client Project ID: FHR North Loading Rack

QUALITY CONTROL DATA PARAMETER FOOTNOTES

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

LCS(D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
DUP	Sample Duplicate
ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
RPD	Relative Percent Difference
(S)	Surrogate
[1]	Recovery falls outside of QC limits, however, this compound is not found in the associated samples.
[2]	The surrogate and/or spike recovery was outside acceptance limits.
[3]	Low surrogate recovery was confirmed as a matrix effect by a second analysis.
[4]	The reported result may be biased high due to carryover of the sample analyzed immediately prior on the instrument.

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

Required Client Information: Section A

Company: REISS REMEDIATION, INC
Address: 4111 EAST 37th ST. No.
WICHITA KS 67201-2256
Phone: 316-828-2146
Fax: 316-828-4034

Required Client Information: Section B

Report To: FRANK VAN RYN
Copy To: STEVE TYLER / CATCH
Invoice To: FRANK VAN RYN
P.O.
Project Name: FHR NORTH LOADING RACK
Project Number:

Page: 1 of 1

732933

Client Information (Check quote/contract):
Requested Due Date: 3-19-03
*TAT: STAN.

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

To Be Completed by Pace Analytical and Client **Section C**

Quote Reference:
Project Manager: SHERRI STABEL
Project #: 924 19006
Profile #: 856 4

Section D Required Client Information:

Valid Matrix Codes

MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID (One character per box. (A–Z, 0–9 / .–) Sample IDs MUST BE UNIQUE)	MATRIX CODE	DATE COLLECTED mm / dd / yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	EPA 8260	Remarks / Lab ID
1	KMW-1	WT	2/28/03	1245					✓					✓	912030096
2	KMW-3			1200										✓	912030104
3	KMW-4			1220										✓	912030112
4	KMW-5			1300										✓	912030120
5	KMW-6			1320										✓	912030138
6	KMW-7			1410										✓	912030146
7	KMW-8			1330										✓	912030153
8	KMW-10			1345										✓	912030161
9	KMW-11			1425 ~~1375~~										✓	912030179
10	KMW-12			1500										✓	912030187
11	KMW-13			1530										✓	912030195
12	KMW-14			1445										✓	912030203

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	[signature] / CATCH	3-3-03	1500	[signature]	3/4	1200

SAMPLE CONDITION

Temp in °C	1.8
Received on Ice	(Y)N
Sealed Cooler	(Y)N
Samples Intact	(Y)N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: STEVE TYLER
SIGNATURE of SAMPLER: [signature]
DATE Signed: (MM / DD / YY) 03/03/03

SEE REVERSE SIDE FOR INSTRUCTIONS

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March 05, 2003

Mr. Steve Tyler
Catlin Engineers & Scientist
220 Old Dairy Road
P.O. Box 10279
Wilmington, NC 28405

RE: Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Dear Mr. Tyler:

Enclosed are the analytical results for sample(s) received by the laboratory on February 27, 2003. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Sherri Stabel
Sherri.Stabel@pacelabs.com
Project Manager

Enclosures

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821749 | Project Sample Number: 9241768-001 | Date Collected: 02/24/03 10:45
Client Sample ID: 101 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	1300	ug/l	50.	50.0	02/28/03 10:33	STC			
1-Chloro-3-fluorobenzene (S)	99	%		1.0	02/28/03 10:33	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821756 | Project Sample Number: 9241768-002 | Date Collected: 02/24/03 10:30
Client Sample ID: 102 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	21.	ug/l	1.0	1.0	02/28/03	STC			
1-Chloro-3-fluorobenzene (S)	121	%		1.0	02/28/03	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821764 | Project Sample Number: 9241768-003 | Date Collected: 02/24/03 11:25
Client Sample ID: 108 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	150000	ug/l	5000	5000	02/28/03 06:29	STC			
1-Chloro-3-fluorobenzene (S)	105	%		1.0	02/28/03 06:29	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821772 | Project Sample Number: 9241768-004 | Date Collected: 02/25/03 12:45
Client Sample ID: 113 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	2.2	ug/l	1.0	1.0	03/04/03	PPM			
1-Chloro-3-fluorobenzene (S)	105	%		1.0	03/04/03	PPM	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821780 | Project Sample Number: 9241768-005 | Date Collected: 02/25/03 12:30
Client Sample ID: 117 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	55000	ug/l	500	500	03/01/03 22:45	PPM			
1-Chloro-3-fluorobenzene (S)	107	%		1.0	03/01/03 22:45	PPM	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821798 | Project Sample Number: 9241768-006 | Date Collected: 02/24/03 11:10
Client Sample ID: 119 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	9000	ug/l	100	100	02/28/03	STC			
1-Chloro-3-fluorobenzene (S)	111	%		1.0	02/28/03	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821806 | Project Sample Number: 9241768-007 | Date Collected: 02/24/03 11:35
Client Sample ID: 121 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	140000	ug/l	5000	5000	02/28/03 07:51	STC			
1-Chloro-3-fluorobenzene (S)	106	%		1.0	02/28/03 07:51	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821814 | Project Sample Number: 9241768-008 | Date Collected: 02/24/03 13:00
Client Sample ID: MW-1 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	ND	ug/l	1.0	1.0	03/04/03	STC			
1-Chloro-3-fluorobenzene (S)	92	%		1.0	03/04/03	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821822 | Project Sample Number: 9241768-009 | Date Collected: 02/24/03 13:10
Client Sample ID: MW-3 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	120000	ug/l	5000	5000	02/28/03 09:12	STC			
1-Chloro-3-fluorobenzene (S)	102	%		1.0	02/28/03 09:12	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821830 | Project Sample Number: 9241768-010 | Date Collected: 02/24/03 12:45
Client Sample ID: MW-5 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	1200	ug/l	20.	20.0	03/01/03 22:32	STC			
1-Chloro-3-fluorobenzene (S)	100	%		1.0	03/01/03 22:32	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821848 | Project Sample Number: 9241768-011 | Date Collected: 02/24/03 13:30
Client Sample ID: MW-7 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	400000	ug/l	5000	5000	03/01/03 23:12	STC			
1-Chloro-3-fluorobenzene (S)	101	%		1.0	03/01/03 23:12	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821855 | Project Sample Number: 9241768-012 | Date Collected: 02/24/03 13:00
Client Sample ID: MW-8 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	15000	ug/l	1000	1000	03/01/03 23:53	STC			
1-Chloro-3-fluorobenzene (S)	98	%		1.0	03/01/03 23:53	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821863 | Project Sample Number: 9241768-013 | Date Collected: 02/24/03 12:35
Client Sample ID: MW-9 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	ND	ug/l	1.0	1.0	03/03/03 18:44	STC			
1-Chloro-3-fluorobenzene (S)	102	%		1.0	03/03/03 18:44	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821871 | Project Sample Number: 9241768-014 | Date Collected: 02/24/03 13:40
Client Sample ID: MW-11 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	130000	ug/l	2000	2000	03/02/03 01:14	STC			
1-Chloro-3-fluorobenzene (S)	103	%		1.0	03/02/03 01:14	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821889 | Project Sample Number: 9241768-015 | Date Collected: 02/24/03 13:50
Client Sample ID: MW-12 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	86000	ug/l	10000	10000	03/02/03 01:54	STC			
1-Chloro-3-fluorobenzene (S)	109	%		1.0	03/02/03 01:54	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821897 | Project Sample Number: 9241768-016 | Date Collected: 02/24/03 13:25
Client Sample ID: MW-13 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	99.	ug/l	1.0	1.0	03/04/03 18:17	STC			
1-Chloro-3-fluorobenzene (S)	102	%		1.0	03/04/03 18:17	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821905 | Project Sample Number: 9241768-017 | Date Collected: 02/24/03 12:00
Client Sample ID: MW-14 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	240000	ug/l	100000	10000	03/02/03 03:15	STC		1	
1-Chloro-3-fluorobenzene (S)	102	%		1.0	03/02/03 03:15	STC	625-98-9		

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Fax: 704.875.9091

Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821913 | Project Sample Number: 9241768-018 | Date Collected: 02/24/03 12:15
Client Sample ID: MW-15 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	130000	ug/l	2000	2000	03/02/03 03:56	STC			
1-Chloro-3-fluorobenzene (S)	111	%		1.0	03/02/03 03:56	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821921 | Project Sample Number: 9241768-019 | Date Collected: 02/25/03 12:15
Client Sample ID: MW-16 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	17000	ug/l	200	200	03/03/03	PPM			
1-Chloro-3-fluorobenzene (S)	107	%		1.0	03/01/03	PPM	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821939 | Project Sample Number: 9241768-020 | Date Collected: 02/24/03 12:00
Client Sample ID: MW-17 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	ND	ug/l	1.0	1.0	03/04/03 18:58	STC			
1-Chloro-3-fluorobenzene (S)	103	%		1.0	03/04/03 18:58	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821947 | Project Sample Number: 9241768-021 | Date Collected: 02/25/03 12:00
Client Sample ID: MW-18 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	670	ug/l	10.	10.0	03/04/03	PPM			
1-Chloro-3-fluorobenzene (S)	107	%		1.0	03/04/03	PPM	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821954 | Project Sample Number: 9241768-022 | Date Collected: 02/25/03 11:45
Client Sample ID: MW-19 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	27000	ug/l	250	250	03/04/03	PPM			
1-Chloro-3-fluorobenzene (S)	107	%		1.0	03/04/03	PPM	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821962 | Project Sample Number: 9241768-023 | Date Collected: 02/25/03 10:15
Client Sample ID: MW-20 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	5000	ug/l	200	200	03/02/03 01:32	PPM			
1-Chloro-3-fluorobenzene (S)	107	%		1.0	03/02/03 01:32	PPM	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821970 | Project Sample Number: 9241768-024 | Date Collected: 02/25/03 10:35
Client Sample ID: MW-28 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	22.	ug/l	1.0	1.0	03/02/03 02:15	PPM			
1-Chloro-3-fluorobenzene (S)	105	%		1.0	03/02/03 02:15	PPM	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821988 | Project Sample Number: 9241768-025 | Date Collected: 02/25/03 11:15
Client Sample ID: MW-32 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	110000	ug/l	5000	5000	03/02/03 02:57	PPM			
1-Chloro-3-fluorobenzene (S)	107	%		1.0	03/02/03 02:57	PPM	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922821996 | Project Sample Number: 9241768-026 | Date Collected: 02/25/03 11:25
Client Sample ID: MW-33 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	22000	ug/l	500	500	03/02/03 03:40	PPM			
1-Chloro-3-fluorobenzene (S)	107	%		1.0	03/02/03 03:40	PPM	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922822002 | Project Sample Number: 9241768-027 | Date Collected: 02/25/03 11:40
Client Sample ID: ~~RRW-3~~ KRW-3 5/12/03 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	45000	ug/l	1000	1000	03/02/03 04:23	PPM			
1-Chloro-3-fluorobenzene (S)	106	%		1.0	03/02/03 04:23	PPM	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922822010 | Project Sample Number: 9241768-028 | Date Collected: 02/24/03 10:45
Client Sample ID: ~~RRW-4~~ KRW-4 5/12/03 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	11000	ug/l	100	100	03/02/03 05:17	STC			
1-Chloro-3-fluorobenzene (S)	100	%		1.0	03/02/03 05:17	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922822028 | Project Sample Number: 9241768-029 | Date Collected: 02/24/03 11:30
Client Sample ID: ~~BRW-5~~ KRW-5 5/12/03 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	66000	ug/l	1000	1000	03/02/03 05:58	STC			
1-Chloro-3-fluorobenzene (S)	102	%		1.0	03/02/03 05:58	STC	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

Lab Sample No: 922822036 | Project Sample Number: 9241768-030 | Date Collected: 02/25/03 11:30
Client Sample ID: ~~RRW-6~~ KRW-6 GM 5/12/03 | Matrix: Water | Date Received: 02/27/03 09:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	60000	ug/l	2000	2000	03/02/03 05:05	PPM			
1-Chloro-3-fluorobenzene (S)	107	%		1.0	03/02/03 05:05	PPM	625-98-9		

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
(S)	Surrogate
[1]	The sample was found to be non-homogenous.

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QUALITY CONTROL DATA

Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

QC Batch: 70745 — Analysis Method: EPA 602
QC Batch Method: EPA 602 — Analysis Description: Purgeable Aromatics
Associated Lab Samples: 922821749 922821756 922821764 922821798 922821806 922821814 922821822

METHOD BLANK: 922822549
Associated Lab Samples: 922821749 922821756 922821764 922821798 922821806 922821814 922821822

Parameter	Units	Blank Result	Reporting Limit	Footnotes
m&p-Xylene	ug/l	ND	1.0	
1-Chloro-3-fluorobenzene (S)	%	100		

LABORATORY CONTROL SAMPLE: 922822556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
m&p-Xylene	ug/l	40.00	36.26	91	
1-Chloro-3-fluorobenzene (S)				102	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 922822564 922822572

Parameter	Units	922820618 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	RPD	Footnotes
m&p-Xylene	ug/l	0	40.00	36.35	36.54	91	91	1	
1-Chloro-3-fluorobenzene (S)						105	106		

SAMPLE DUPLICATE: 922822580

Parameter	Units	922821822 Result	DUP Result	RPD	Footnotes
m&p-Xylene	ug/l	120000	110000	5	
1-Chloro-3-fluorobenzene (S)	%	102	100		

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QUALITY CONTROL DATA

Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

QC Batch: 70806 — Analysis Method: EPA 602
QC Batch Method: EPA 602 — Analysis Description: Purgeable Aromatics
Associated Lab Samples: 922821830 922821848 922821855 922821863 922821871 922821889 922821897 922821905 922821913 922821939 922822010 922822028

METHOD BLANK: 922824560
Associated Lab Samples: 922821830 922821848 922821855 922821863 922821871 922821889 922821897 922821905 922821913 922821939 922822010 922822028

Parameter	Units	Blank Result	Reporting Limit	Footnotes
m&p-Xylene	ug/l	ND	1.0	
1-Chloro-3-fluorobenzene (S)	%	98		

LABORATORY CONTROL SAMPLE: 922824578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
m&p-Xylene	ug/l	40.00	36.40	91	
1-Chloro-3-fluorobenzene (S)				102	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 922824586 922824594

Parameter	Units	922823927 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	RPD	Footnotes
m&p-Xylene	ug/l	0	40.00	35.24	35.03	88	88	1	
1-Chloro-3-fluorobenzene (S)						100	100		

SAMPLE DUPLICATE: 922824602

Parameter	Units	922819867 Result	DUP Result	RPD	Footnotes
m&p-Xylene	ug/l	ND	ND	NC	
1-Chloro-3-fluorobenzene (S)	%	101	101		

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QUALITY CONTROL DATA

Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

QC Batch: 70818 — Analysis Method: EPA 602
QC Batch Method: EPA 602 — Analysis Description: Purgeable Aromatics
Associated Lab Samples: 922821772, 922821780, 922821921, 922821947, 922821954, 922821962, 922821970, 922821988, 922821996, 922822002, 922822036

METHOD BLANK: 922825336
Associated Lab Samples: 922821772, 922821780, 922821921, 922821947, 922821954, 922821962, 922821970, 922821988, 922821996, 922822002, 922822036

Parameter	Units	Blank Result	Reporting Limit	Footnotes
m&p-Xylene	ug/l	ND	1.0	
1-Chloro-3-fluorobenzene (S)	%	106		

LABORATORY CONTROL SAMPLE: 922825344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
m&p-Xylene	ug/l	40.00	37.61	94	
1-Chloro-3-fluorobenzene (S)				106	

MATRIX SPIKE: 922825351

Parameter	Units	20139875 Result	Spike Conc.	MS Result	MS % Rec	Footnotes
m&p-Xylene	ug/l	0	40.00	37.64	94	
1-Chloro-3-fluorobenzene (S)					105	

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Lab Project Number: 9241768
Client Project ID: FHR North PX 195-033

QUALITY CONTROL DATA PARAMETER FOOTNOTES

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

LCS(D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
DUP	Sample Duplicate
ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
RPD	Relative Percent Difference
(S)	Surrogate

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Section A — Required Client Information:

Company: REISS REMEDIATION INC.
Address: 4111 EAST 37 STR. N
WICHITA KS 67220
Phone: 316-828-2146
Fax: 316-828-4034

Section B — Required Client Information:

Report To: FRANK VAN RYN
Copy To: STEVE TYLER
Invoice To: FRANK VAN RYN
P.O.
Project Name: FHR NORTH PX
Project Number: 195-033

Client Information (Check quote/contract):
Requested Due Date: 3-14-03
*TAT: STAN

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference: FHR
Project Manager: SHERRI STABEL
Project #: 924.1760
Profile #: 856 1

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
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

Requested Analysis: M/P XYLENES 8021 602

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED (mm / dd / yy)	TIME COLLECTED (hh:mm a/p)	# Containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	M/P XYLENES 8021 602	Remarks / Lab ID
1	101	WT	2/24/03	1045					✓					✓	92421719
2	102	↓	↓	1030					↓					✓	92421756
3	108	↓	↓	1125					↓					✓	92421769
4	113	↓	2/25	1245					↓					✓	92421772
5	117	↓	2/25	1230					↓					✓	92421780
6	119	↓	2/24	1110					↓					✓	92421798
7	121	↓	↓	1135					↓					✓	92421806
8	MW-1	↓	↓	1300					↓					✓	92421814
9	MW-3	↓	↓	1310					↓					✓	92421812
10	MW-5	↓	↓	1245					↓					✓	92421830
11	MW-7	↓	↓	1330					↓					✓	92421848
12	MW-8	↓	↓	1300					↓					✓	92421855

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	STATL / CATLIN	2/26/03	1500	[illegible]	2/27	930

SAMPLE CONDITION

Temp in °C	2.9
Received on Ice	(Y)/N
Sealed Cooler	(Y)/N
Samples Intact	(Y)/N ICH

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: STEVE TYLER Joshi Carscallen
SIGNATURE of SAMPLER: [signature] Joshi Carscallen
DATE Signed: (MM / DD / YY) 02/25/03

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687338

Page: 2 of 3

Section A — Required Client Information:

Company: REISS REMEDIATION INC
Address: 4111 EAST 37th STR NO.
WICHITA KS 67220
Phone: 316-828-2146
Fax: 316-828-2146

Section B — Required Client Information:

Report To: FRANK VAN RYN - FHR
Copy To: STEVE TYLER - CATLIN
Invoice To: FRANK VAN RYN - FHR
P.O.:
Project Name: FHR NORTH PX
Project Number:

Client Information (Check quote/contract):
Requested Due Date: 3-14-03
*TAT: STAN

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:
Project Manager: SHERRI STABEL
Project #:
Profile #:

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
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

Requested Analysis: M/P XYLENES 602

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED (mm / dd / yy)	TIME COLLECTED (hh:mm a/p)	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	M/P XYLENES 602	Remarks / Lab ID
1	MW-9	WT	2/24/03	1235					✓					✓	92421963
2	MW-11			1340										✓	92421971
3	MW-12			1350										✓	92421989
4	MW-13			1325										✓	92421997
5	MW-14			1200										✓	92421905
6	MW-15			1215										✓	92421913
7	MW-16		2/25	1215										✓	92421921
8	MW-17		2/24	1200										✓	92421939
9	MW-18		2/25	1200										✓	92421947
10	MW-19			1145										✓	92421954
11	MW-20			1015										✓	92421962
12	MW-25			1035										✓	92421970

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	[signature] / CATLIN	2/24/03	1500	[signature]	2/27	930

SAMPLE CONDITION

Temp in °C	2.9
Received on Ice	(Y)/N
Sealed Cooler	(Y)N
Samples Intact	~~(Y)~~/(N) KH

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: STEVE TYLER Jehli CARSCALLEN
SIGNATURE of SAMPLER: [signature] [signature] DATE Signed: (MM / DD / YY) 02/25/03

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Chain of Custody / Analytical Request Document

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Page: 3 of 3

Required Client Information: Section A

Company: REISS REMEDIATION INC
Address: 4111 EAST 37 STR. NO.
WICHITA KS 67220
Phone: 316-828-2146
Fax: 316 828-4034

Required Client Information: Section B

Report To: FRANK VAN RYN - REISS
Copy To: STEVE TYLER - CATLIN
Invoice To: FRANK
P.O.:
Project Name: FHR NORTH PX
Project Number:

Client Information (Check quote/contract):
Requested Due Date: 3-14-03
*TAT: STAN

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

To Be Completed by Pace Analytical and Client: Section C

Quote Reference:
Project Manager: SHERRI STABEL
Project #:
Profile #:

Section D — Required Client Information:

Valid Matrix Codes:

MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

Requested Analysis: MTBE, Xylenes, BTEX 602

ITEM #	SAMPLE ID (One character per box. (A–Z, 0–9 / .–) Sample IDs MUST BE UNIQUE)	MATRIX CODE	DATE COLLECTED mm / dd / yy	TIME COLLECTED hh: mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	MTBE, Xylenes, BTEX 602	Remarks / Lab ID
1	MW-32	WT	2/25/03	1115					✓					✓	92E21995
2	MW-33			1125					✓					✓	92E21996
3	KRW-3			1140					✓					✓	92E22002
4	KRW-4		2/24	1045					✓					✓	92E22010
5	KRW-5		2/24	1130					✓					✓	92E22029
6	KRW-6		2/25	1130					✓					✓	92E22036
7															
8															
9															
10															
11															
12															

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	STAN / CATLIN	2/26/03	1500	Kevin Kumer	2/27	930

SAMPLE CONDITION

Temp in °C	2.9
Received on Ice	(Y)/N
Sealed Cooler	(Y)/N
Samples Intact	(Y)/N KH

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: STEVE TYLER John Carscallen
SIGNATURE of SAMPLER: STAN / John Carscallen
DATE Signed: (MM / DD / YY) 02/25/03

195-033

FILE COPY

Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

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www.pacelabs.com

August 16, 2002

Mr. Steve Tyler
Catlin Engineers & Scientist
220 Old Dairy Road
P.O. Box 10279
Wilmington, NC 28405

RE: Lab Project Number: 9235262
Client Project ID: FHR No.

Dear Mr. Tyler:

Enclosed are the analytical results for sample(s) received by the laboratory on August 6, 2002. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Sherri Howard
Sherri.Howard@pacelabs.com
Project Manager

Enclosures

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www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Lab Project Number: 1060962
Client Project ID: 9235262 FHR

Lab Sample No: 922432141 Project Sample Number: 1060962-001 Date Collected: 08/05/02 12:30
Client Sample ID: SVE Matrix: Air Date Received: 08/07/02 11:30

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Air								
GC/MS VOCs, in Air	Method: TO-14 Source							
m&p-Xylene	10.	ppmv	2.7	08/15/02 09:26	MTG			
THC as Gas	9.3	ppmv	1.3	08/15/02 09:26	MTG			

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REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Lab Project Number: 1060962
Client Project ID: 9235262 FHR

PARAMETER FOOTNOTES

ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit

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1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

QUALITY CONTROL DATA

Lab Project Number: 1060962
Client Project ID: 9235262 FHR

QC Batch: 77606
QC Batch Method: TO-14 Source
Associated Lab Samples: 922432141

Analysis Method: TO-14 Source
Analysis Description: GC/MS VOCs, in Air

METHOD BLANK: 103775789
Associated Lab Samples: 922432141

Parameter	Units	Blank Result	Reporting Limit	Footnotes
m&p-Xylene	ppmv	ND	0.20	
THC as Gas	ppmv	ND	1.0	

LABORATORY CONTROL SAMPLE: 103775797

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
m&p-Xylene	ppmv	0.9300	0.7799	84	

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Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Lab Project Number: 1060962
Client Project ID: 9235262 FHR

QUALITY CONTROL DATA PARAMETER FOOTNOTES

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

LCS(D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
DUP	Sample Duplicate
ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
RPD	Relative Percent Difference

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Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

QUALITY CONTROL DATA

CROSS REFERENCE TABLE

Lab Project Number: 1060962
Client Project ID: 9235262 FHR

Lab Sample No Identifier	Client Sample Identifier	QC Batch Method	QC Batch Identifier	Analytical Method	Analytical Batch Identifier
922432141	SVE	TO-14 Source	77606		

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A DIGITAL ANALYTICAL LABORATORIES, INC. PACE
527 Northchase Parkway SE, Wilmington, NC 28405
Phone: (910) 350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 19435

Page 1 of 1

Client: FHR EAST
Address: 4111 37th St No.
Address: Wichita KS 67220
Quote #:

Project ID: FHR No
Contact: Frank Van Ryd
Phone: 316-823-2146
Fax:

Date: 8-5-02
Turnaround: ~~5 Day by 8/12/02~~ STD
Job Number: ~~Sherry Howard~~ per Steve SW#8-6
P.O. Number:

Report To: Frank Van Ryd (Re
Stone Tyler (CAN)
Invoice To: Frank

Sample ID	Date	Time	Matrix	Preservative															Comments Please specify any special analytical requirements
								M/P xylenes & TPH/Gas per TO-14 Source											
SVE	8/5/02	1230	AIR					✓				9222432141							

Relinquished By	Date	Time	Received By	Date	Time	Temperature	Shipping Information Requested
SAA	8/5/02	1600	Kevin Thing	8-6	920	NA	NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

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Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

April 04, 2003

Mr. Steve Tyler
Catlin Engineers & Scientist
220 Old Dairy Road
P.O. Box 10279
Wilmington, NC 28405

RE: Lab Project Number: 9242838
Client Project ID: FHR-North 195-033

Dear Mr. Tyler:

Enclosed are the analytical results for sample(s) received by the laboratory on April 1, 2003. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Sherri Stabel
Sherri.Stabel@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9242838
Client Project ID: FHR-North 195-033

Lab Sample No: 922884697 | Project Sample Number: 9242838-001 | Date Collected: 03/28/03 12:10
Client Sample ID: 303TW-1 | Matrix: Water | Date Received: 04/01/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	480	ug/l	5.0	5.0	04/04/03 01:50	PPM			
1-Chloro-3-fluorobenzene (S)	98	%		1.0	04/04/03 01:50	PPM	625-98-9		

Date: 04/04/03

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

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Laboratory Certification IDs
LA Wastewater 04034
VA Drinking Water 213
FL NELAP E87627

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9242838
Client Project ID: FHR-North 195-033

Lab Sample No: 922884721 | Project Sample Number: 9242838-004 | Date Collected: 03/28/03 12:35
Client Sample ID: 303TW-2 | Matrix: Water | Date Received: 04/01/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	1.0	ug/l	1.0	1.0	04/04/03 03:58	PPM			
1-Chloro-3-fluorobenzene (S)	95	%		1.0	04/04/03 03:58	PPM	625-98-9		

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

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VA Drinking Water 213
FL NELAP E87627

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9242838
Client Project ID: FHR-North 195-033

Lab Sample No: 922884705 | Project Sample Number: 9242838-002 | Date Collected: 03/28/03 12:20
Client Sample ID: 303TW-3 | Matrix: Water | Date Received: 04/01/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	2200	ug/l	20.	20.0	04/04/03 02:32	PPM			
1-Chloro-3-fluorobenzene (S)	99	%		1.0	04/04/03 02:32	PPM	625-98-9		

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

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Laboratory Certification IDs
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VA Drinking Water 213
FL NELAP E87627

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9242838
Client Project ID: FHR-North 195-033

Lab Sample No: 922884713 | Project Sample Number: 9242838-003 | Date Collected: 03/28/03 12:30
Client Sample ID: 303TW-4 | Matrix: Water | Date Received: 04/01/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Volatiles									
Purgeable Aromatics	Method: EPA 602								
m&p-Xylene	31000	ug/l	500	500	04/04/03 03:15	PPM			
1-Chloro-3-fluorobenzene (S)	99	%		1.0	04/04/03 03:15	PPM	625-98-9		

Date: 04/04/03

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

REPORT OF LABORATORY ANALYSIS
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Laboratory Certification IDs
LA Wastewater 04034
VA Drinking Water 213
FL NELAP E87627

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Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9242838
Client Project ID: FHR-North 195-033

PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
(S)	Surrogate

Laboratory Certification IDs

NC Wastewater	12
NC Drinking Water	37706
SC	99006

REPORT OF LABORATORY ANALYSIS

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Laboratory Certification IDs

LA Wastewater	04034
VA Drinking Water	213
FL NELAP	E87627

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Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

QUALITY CONTROL DATA

Lab Project Number: 9242838
Client Project ID: FHR-North 195-033

QC Batch: 72273 — Analysis Method: EPA 602
QC Batch Method: EPA 602 — Analysis Description: Purgeable Aromatics
Associated Lab Samples: 922884697 922884705 922884713 922884721

METHOD BLANK: 922887443
Associated Lab Samples: 922884697 922884705 922884713 922884721

Parameter	Units	Blank Result	Reporting Limit	Footnotes
m&p-Xylene	ug/l	ND	1.0	
1-Chloro-3-fluorobenzene (S)	%	98		

LABORATORY CONTROL SAMPLE: 922887450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
m&p-Xylene	ug/l	40.00	37.21	93	
1-Chloro-3-fluorobenzene (S)				98	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 922887468 922887476

Parameter	Units	922885736 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	RPD	Footnotes
m&p-Xylene	ug/l	0	40.00	34.42	35.29	86	88	3	
1-Chloro-3-fluorobenzene (S)						98	98		

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

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Laboratory Certification IDs
LA Wastewater 04034
VA Drinking Water 213
FL NELAP E87627

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Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9242838
Client Project ID: FHR-North 195-033

QUALITY CONTROL DATA PARAMETER FOOTNOTES

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

LCS(D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
DUP	Sample Duplicate
ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
RPD	Relative Percent Difference
(S)	Surrogate

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

REPORT OF LABORATORY ANALYSIS
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Laboratory Certification IDs
LA Wastewater 04034
VA Drinking Water 213
FL NELAP E87627

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732935

Page: 1 of 1

Required Client Information: Section A

Company: FLINT HILLS RESOURCES LP
Address: 4111 EAST 37 N ST No.
WICHITA KS 67201
Phone: (910) 452-5861
Fax: (910) 452-7563

Required Client Information: Section B

Report To: FRANK VAN RYN
Copy To: STEVE TYLER
Invoice To: FRANK VAN RYN
P.O.:
Project Name: FHR-NORTH
Project Number: 195-033

Client Information (Check quote/contract):
Requested Due Date: 4-14-03
*TAT: STAND

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

To Be Completed by Pace Analytical and Client: Section C

Quote Reference:
Project Manager: SHERRI STABEL
Project #: 9242038
Profile #: 856 1

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
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

Requested Analysis: M/P XYLENES, PART EPA 602

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED (mm / dd / yy)	TIME COLLECTED (hh:mm a/p)	# Containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	M/P XYLENES	PART EPA 602	Remarks / Lab ID
1	303TW-1	WT	3/28/03	1210					X					✓		92200469
2	303TW-3	WT	3/28/03	1220					X					✓		92200470
3	303TW-4	WT	3/28/03	1230					X					✓		92200471
4	303TW-2	WT	3/28/03	1235					X					✓		92200472
5																
6																
7																
8																
9																
10																
11																
12																

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Dimitri Talbert / DIMITRI TALBERT	3/31/03	0915	[signature] / CATUM	3/31/03	0915
	[signature] / CATUM	3/31/03	1600	[signature]	4/1	10:00

SAMPLE CONDITION

Temp in °C	4.0
Received on Ice	(Y)/N
Sealed Cooler	(Y)/N
Samples Intact	(Y)/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: DIMITRI TALBERT
SIGNATURE of SAMPLER: [signature]
DATE Signed: (MM / DD / YY) 03/31/03

SEE REVERSE SIDE FOR INSTRUCTIONS

Form 00001 Rev 04/0