REMEDIATION UPDATE REPORT
FOR
MARCH 1, 2004 TO AUGUST 5, 2004

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

DECEMBER 14, 2004

PREPARED FOR:

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CATLIN PROJECT NO. 201-125

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December 14, 2004

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

Dec 2004

Re: Remediation Update Report for March 2004 to August 2004
Flint Hills Resources, LP - North Terminal
Wilmington, North Carolina
CATLIN Project No. 201-125

Dear Dr. Stehman:

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

Please note that during the groundwater table gauging event on August 3, 2004, 0.8 feet of free-phase product was observed in AMW-4. Subsequently, CATLIN obtained a sample of the free-phase product for identification. The laboratory results from the product identification are provided within the attached report. A review of the laboratory results indicates that the product has characteristics of gasoline. A review of historic AMW-4 groundwater sample analyses indicates BTEX concentrations significantly lower than the solubility of BTEX constituents. The remaining Apex site monitoring wells (AMW-1, AMW-2, AMW-3, AMW-5 and AMW-6) had no free-phase product. Based on these results, it appears that this free-phase product may be from a new source. CATLIN recommends that the Apex property owner investigate the source of this free-phase product.

Additionally, we received your letter dated August 12, 2004 in regard to the previous Remediation Update Report for September 1, 2003 to February 29, 2004 for this site. The following is a brief response to a couple of the items noted in your letter:

- The air sparge system is routinely monitored for efficient operation conditions as discussed in the attached Remediation Update Report. Based on the operational data discussed within the attached Remediation Update Report, it is our opinion that the air sparge system is

- operating correctly. However, CATLIN will continue to monitor and/or adjust the operation to be most effective.

- Your letter stated that the groundwater remediation efforts at the Loading Rack Area will need to address groundwater impact on the Apex property as well. Please note that based on the presence of free-phase product at AMW-4, it appears that a portion of the groundwater contamination identified on the Apex property is not from FHR activities. Therefore, FHR should not be responsible for the remediation of the entire Apex property.

  FHR groundwater remediation at the Loading Rack Area is temporarily on-hold until the effectiveness of the soil treatment, along with the incorporation of the chemical oxidant on the down-gradient groundwater contamination, is evaluated.

- Please note that the Revised Remedial Actions currently being implemented are significantly more aggressive and expensive in comparison to some of the traditional approaches (i.e. pump and treat, air sparge, natural attenuation, etc.).

Upon your review of this report, please contact Ms. Elizabeth Rasor if you should have any questions concerning this project.

Sincerely,

Jeffery K. Becken, P.E.
Project Manager

Stephan A. Tyler
Project Geologist

Enclosure

cc: Ms. Elizabeth Rasor, Reiss Remediation, Inc. (w/ encl.)
Mr. Dan Smading, Flint Hills Resources, LP (w/ encl.)
Flint Hills Resources, LP – North Terminal Facility (w/ encl.)
Mr. H. Layton Bedsole, Jr. – North Carolina State Ports Authority (w/ encl.)
Mr. William Frederick – Groundwater & Environmental Service of North Carolina, Inc.

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1.0 INTRODUCTION

1.1 PURPOSE

CATLIN Engineers and Scientists (CATLIN) is submitting this Remediation Update Report on behalf of Reiss Remediation, Inc. (Reiss) 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 (March 1, 2004 to August 5, 2004) environmental findings, at two areas of concern within the FHR-North Terminal. 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. Subsequent to the CAPA submittal, Reiss and CATLIN personnel met with NCDENR on January 20, 2004 to discuss the Revised Remedial Actions for the FHR North site. However, CATLIN submitted a letter dated March 5, 2004 that presented Revised Remedial Actions for the FHR North site. NCDENR GWS personnel reviewed the Revised Remedial Action and transmitted a letter stating: "The proposed revisions are both prudent and appropriate and are an acceptable modification of the overall site remedial strategy." Therefore, current remediation and monitoring activities are in general accordance with the Revised Remedial Actions presented within the March 5, 2004 letter.

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 seven aboveground 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 seven ASTs and associated pipelines, which had been utilized for the storage and transfer of gasoline and fuel oil. Gasoline additives were stored in five 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. In addition, the truck loading rack area was dis-assembled in the fall of 2003 allowing easier access for remedial activities.

2.0 BACKGROUND INFORMATION

2.1 PARAXYLENE FACILITY

2.1.1 Brief Incident History

Since Phillips Petroleum constructed the facility in 1954/1955, it has been utilized to handle various gasolines, additives, #2 fuel oils and PX. Since 1954/1955, there have been several product releases at the subject site. Former and ongoing assessment, remediation and monitoring activities for product releases since 1980 have been well documented and are on file at the NCDENR Wilmington Regional Office (WiRO) GWS. This report focuses on the current PX remediation efforts through August 5, 2004.

2.1.2 Contaminants of Concern

The primary contaminant of concern (as agreed upon by NCDENR) at the PX Facility is dissolved PX, one of three xylenes isomers (ortho, meta, and para). Currently, analytical laboratories do not have the technology to accurately distinguish between metaxylene and Paraxylene compounds. Since the source is known to be PX, all soil and groundwater samples are analyzed for meta/para (M/P) xylenes and the resulting concentration is assumed to be PX.

As detailed in the CAPA, the goal for surficial groundwater remediation is to reduce dissolved M/P xylene concentrations to 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. PX Facility groundwater samples are analyzed, by an independent analytical laboratory, for M/P xylenes concentration in μg/L per EPA Method 602 to evaluate the dissolved concentrations.

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 former 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 and railcar loading rack areas 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, Ethylbenzene, 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 the above listed dissolved compounds to within current and interim 2L GWQS. Loading Rack Area groundwater samples are analyzed for volatile compounds in µg/L per EPA Method 8260B to evaluate the dissolved compound concentrations.

3.0 ADDITIONAL ASSESSMENT ACTIVITIES

3.1 PARAXYLENE FACILITY

During this reporting period no additional assessment activities were conducted at the PX Facility.

3.2 LOADING RACK AREA

During this reporting period no additional assessment activities were conducted at the Loading Rack Area.

4.0 SITE REMEDIATION ACTIVITIES

4.1 PARAXYLENE FACILITY

A summary of the PX Facility remediation activities completed during the time period of March 1, 2004 to August 5, 2004 are summarized as follows:

4.1.1 Soil

As part of the initial remedial activities, a Soil Vapor Extraction (SVE) system to remove remnant PX from subsurface soils west of AST 301 was installed on March 21, 1995 and was operated continuously until January 2003. After an equipment failure, a decision was made to discontinue operation of the soil vent unit because of the minimal M/P xylene concentrations of the SVE exhaust at that time and the planned remediation activities.

4.1.2 Surficial Groundwater

4.1.2.1 Air Sparge System

Air sparging is an in situ remediation method involving aeration of the impacted groundwater with ambient air. In this application, pressurized ambient air (+ 27 pounds per square inch) is sparged into the impacted surficial aquifer through a series of vertical injection wells. As ambient air migrates upward through the groundwater, dissolved volatile hydrocarbon compounds partition (volatilize) into the vapor phase. In addition, the air sparging increases the dissolved oxygen (DO) concentrations in the groundwater, which enhances biological degradation of petroleum hydrocarbons by indigenous microorganisms in the soil and groundwater. A discussion of the current DO data is presented in Section 6.1.2 of this report. 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 are allowed to naturally vent to the atmosphere.

The air sparge system for this site is a vertical well network of deep (± 38 feet deep) and shallow (± 18 to 23 feet deep) air sparge wells. Currently, three air sparge systems are operational at this facility. (Refer to Figure 3.) Two operate as continuous systems (Networks A and B) and the third operates as a pulse system (Network C).

- Network A – along the northwest property boundary between monitoring wells 119 and MW-20.
- Network B – in the vicinity of the area between monitoring wells 106 and 113.

Networks A and B began operation on February 6, 1998. Four additional shallow air sparge wells were added to Network A and have been fully operational since July 2003.

Network C is operating within the dissolved PX plume along the north property boundary in the vicinity of the area near monitoring wells MW-32 and MW-33. Network C began operation in January

2003 as a Pulse Air Sparge (PAS) system. The PAS system consists of injecting a pulse of ambient air, below the contaminated zone of the impacted aquifer, through a vertical air sparge well. As air is injected into the aquifer, a de-watered sphere grows around the sparge point. This spherical volume of air continues to grow displacing groundwater until the top of the sphere is about to break through the surface of the groundwater table. Prior to "breakthrough", the air injection is terminated and the surrounding aquifer is allowed to recharge the sparged zone before the next "pulse".

The air sparge wells were cleaned to ensure maximum efficiency and airflow between April 15, 2004 and June 16, 2004. Compressed air was used to blow out any debris from the sight gauges and regulators. A compressed air wand attachment was used to clean the screens of the air sparge wells in order to remove obstructions. The air sparge well screens are cleaned annually at a minimum.

During the time period referenced within this report the air compressor (and thus the air sparge system) was not operational from June 6, 2004 to August 9, 2004, due to equipment maintenance activities. Otherwise, the system was operational 99% (assuming 1% off time for general maintenance activities) of the time.

The influence of the air sparge system is predominantly determined by obtaining groundwater DO readings at monitoring wells up gradient and down gradient of the networks. A discussion of the current DO data is presented in Section 6.1.2 of this report.

A discussion of the current surficial groundwater PX concentration data in the vicinity of the air sparge systems 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), NPDES Permit No. NC0076732, for treatment of site surficial groundwater, well purge water, AST water bottoms and collected stormwater runoff. FHR site personnel conduct the FWTP operation, maintenance and reporting activities. Currently, impacted surficial groundwater from four recovery well locations (KRW-3, KRW-4, KRW-5 and KRW-6) is pumped into the FWTP. Refer to Figure 3 for recovery well locations. Effluent from 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 is 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.

Please note that recovery well KRW-4 was off during the time period referenced within this report from July 1, 2004 to August 9, 2004 due to a pump failure.

Recovery well RW-2 is a shallow well (16 feet BLS) and has not been active since October 2000. This recovery well was properly abandoned in 2003.

4.1.2.3 Chemical Oxidation Pilot Study

As previously stated, CATLIN submitted a letter dated March 5, 2004 that presented Revised Remedial Actions for the FHR North project site that was approved by the NCDENR-GWS. The Revised Remedial Actions included the application of a chemical oxidant at the PX Facility and the Loading Rack Area. During the time period referenced within this report, Reiss contracted Weston Solutions, Inc. (Weston) to provide assistance to Reiss and CATLIN with a chemical oxidation field pilot study to evaluate the use of three hydrogen peroxide based chemical oxidants.

The chemical oxidation pilot study fieldwork was conducted in the area just west of Tank 801. To determine the feasibility of the use of a chemical oxidant and the optimal chemical solution for application a variety of hydrogen peroxide concentrations and enhancements were utilized. Three horizontal trenches (Segments A through C) were excavated to accommodate the application of the chemical oxidants and nine monitoring wells (PTW-1 through PTW-9) were installed to monitor surficial groundwater conditions during the pilot study. The approximate locations of the new monitoring wells are illustrated on the attached Figure 3.

Weston prepared a Pilot Study Report dated November 2004 that summarized the pilot test activities and findings. CATLIN submitted a copy of this report on behalf of FHR to NCDENR-GWS on November 30, 2004. Subsequently, Dr. Charles Stehman with NCDENR-GWS prepared a response letter stating to please proceed with full-scale implementation. As of the preparation of this report, full-scale activities are currently being implemented. A summary of the full-scale activities will be provided in future Remediation Update Reports.

4.1.2.4 Proposed Groundwater Remediation System Expansion

The Revised Remedial Actions letter dated March 5, 2004 by CATLIN also proposed connecting recovery wells KRW-7 and KRW-8 to the FWTP. In order to not influence the chemical oxidation pilot study results, these recovery wells were not connected during the time period referenced within this report. However, these recovery wells began operation in mid October 2004. Total flow rate to the FWTP from all of the recovery wells will be maintained at a rate less than 55 gallons per minute (gpm) to ensure the 70-gpm NPDES and Air Quality permit requirements are not exceeded.

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 aboveground 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 the surficial groundwater table significantly changes by allowing the liberation of free-phase product trapped in the remnant smear zone.

Free-phase PX that has been observed in wells is manually recovered with either a sorbent or a bailer. All recovered free-phase PX is temporarily stored in a satellite drum (55 gallon) in the vicinity of the area near recovery well KRW-5. Recovered free-phase product is managed in a lawful and environmentally sound manner. Free-phase PX recovered during this monitoring period is further discussed within Section 6.1.3 of this report.

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 Revised Remedial Actions letter dated March 5, 2004 by CATLIN proposed soil remediation activities. Subsequently, Reiss obtained

proposals from two contractors to perform the proposed ex-situ remedial activities. Based on the cost to complete the activities within the desired 30 day time period to meet the requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) from Site Remediation per 40 CFR 63 subpart GGGGG (also know as "Remediation MACT"), it appears that an in-situ remedial approach may be warranted. The current groundwater remedial plan of action at the Loading Rack Area includes the use of hydrogen peroxide as a chemical oxidant. Therefore, the evaluation of the use of hydrogen peroxide as an in-situ soil remediation alternative to a thermal ex-situ soil remediation process is warranted. CATLIN intends to conduct a pilot study in the near future to evaluate the use of hydrogen peroxide ($\leq$ 35%) as an in-situ soil remediation process at the Loading Rack Area.

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. However, as part of the Revised Remedial Actions, surficial groundwater remediation is temporarily on-hold until the effectiveness of the soil treatment is evaluated.

4.2.3 Free-Phase Product

As was reported in the CAPA, free-phase product was initially detected in monitoring wells KWM-8, KMW-9, KMW-12 and KMW-13. Free-phase product that accumulates in these monitoring wells has been manually recovered, stored, and disposed of in the same manner discussed in Section 4.1.3.

A discussion of the free-phase product recovered during this monitoring period is provided within Section 6.2.3 of this report.

5.0 MONITORING PLAN

The following Sections discuss the monitoring plan that was generally followed during the time period of March 1, 2004 to August 5, 2004.

5.1 PARAXYLENE FACILITY

Weekly

- Check and maintain operation of all recovery wells.
- Check and maintain operation of the air compressor.
- Gauge all recovery wells for depth to surficial groundwater table and possible free-phase product.
- Manually recover free-phase product, if present.

Monthly

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

- Check and maintain operation of the air sparge wells.

Semi-Annual (February and August)

The following semi-annual 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 and MTBE analysis per EPA Method 602. Monitoring wells are selected to provide data concerning PX plume boundary and historical concentration high conditions.
- In order to monitor the effectiveness of the air sparge system, dissolved oxygen concentrations are obtained from surficial groundwater of selected monitoring wells.
- Submit a semi-annual Site Remediation Update Report.

5.2 LOADING RACK AREA

Monthly

- Gauging of selected monitoring wells for depth to surficial groundwater table and the potential presence of free-phase product.
- Manually recover free-phase product, if present.

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 Update Report.

6.0 SITE REMEDIATION PROGRESS

6.1 PARAXYLENE FACILITY

6.1.1 Soil

As previously discussed in Section 4.1.1, a SVE system to remove remnant PX from subsurface soils west of AST 301 was operated from March 21, 1995 through January 2003. PX vapor emitted from the SVE system was a combination of PX from remnant soil and groundwater contamination. The

site Remediation Report for the period of April 2002 to February 2003 indicated the approximate calculated volume of PX extracted between March 21, 1995 and August 5, 2002 to be 2,271.8 gallons.

6.1.2 Surficial Groundwater

6.1.2.1 Dissolved Oxygen Data

As previously stated, the goal of an air sparge system is to volatilize organic constituents and to maintain aerobic conditions to facilitate biodegradation of the compounds. Aerobic conditions can be assessed by monitoring the dissolved oxygen levels in surrounding monitoring wells. Aerobic conditions are generally those with dissolved oxygen levels greater than one (1) mg/L.

The latest (August 4, 2003) DO concentration data has been summarized in Table 2 and illustrated on Figure 7. This data was obtained through the use of an YSI multi-parameter water quality meter. The monitoring wells selected for the measurement of DO were based on the recommendations of the previous Remediation Update Report dated June 23, 2004 by CATLIN. During the time period referenced within this report and the August 4, 2004 sampling event, the air compressor was not operational from June 6, 2004 to August 9, 2004 due to equipment maintenance activities.

The DO concentrations at selected monitoring wells (106, 108, 113, and MW-16) located beyond the anticipated influence of the air sparge networks ranged from 1.10 to 1.48 mg/L. Please note that MW-12, which is located beyond the anticipated influence of the air sparge networks, was also analyzed for DO. However, MW-12 was within the influence of the chemical oxidation pilot study and thus the DO was likely remnants of the pilot study oxidation application. Dissolved oxygen concentrations of monitoring wells located within the anticipated influence of the air sparge networks have been summarized as follows:

Network	Monitoring Wells	DO Range
A	MW-17, MW-18, MW-19, MW-20	1.03 to 2.73
B	107, 121, MW-14	0.83 to 1.54
C	MW-32, MW-33	1.32 to 3.49

While the air sparge Network B injection rates have been relatively the same as those of Networks A and C, the increase in surficial groundwater DO has not historically been as significant in the wells around Network B as it has in the wells around Networks A and C. This is likely due to the location of the monitoring wells used for

monitoring influence of Network B, on the edge of the anticipated radius of influence. Since the PX Facility is going to be treated with chemical oxidant, CATLIN does not recommend any additional monitoring wells for monitoring System B at this time. DO will continue to be monitored as necessary in all areas on a semi-annual basis while injection rates will be monitored on a monthly basis.

6.1.2.2 Surficial Groundwater Table Data

On August 3, 2004, selected monitoring wells were gauged for depth to water and potential free-phase product. The monitoring wells selected for the measurement of surfical groundwater table elevations were based on the recommendations of the previous Remediation Update Report dated June 23, 2004 by CATLIN. 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. Note the depressions in the surficial groundwater table within the vicinity of the PX facility; the pumping influences at the active 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

During the weekly site visits, CATLIN personnel record depth to water table data, potential free-phase product measurements and flow meter readings at each active recovery well (KRW-3, KRW-4, KRW-5 and KRW-6). In addition, during the semi-annual site sampling events effluent samples are obtained from each active recovery well for dissolved M/P xylenes analysis per EPA Method 602. On August 4, 2004, CATLIN personnel obtained the latest effluent samples from active recovery wells KRW-3, KRW-4, KRW-5 and KRW-6. 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:

$$PXV = V \times \frac{3.7854\ L}{gal.} \times \frac{1\ g}{1{,}000\ mg} \times \frac{1\ lb.}{453.59\ g} \times \frac{gal.}{8.34\ lb.} \times \frac{1}{SG} \times \text{PX conc.}$$

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 (milligrams per Liter)

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, August 4, 2004. The remediation progress at each site recovery well has been summarized in Table 6.

6.1.2.4 Dissolved PX Concentration Data

CATLIN personnel obtained the latest representative groundwater samples from selected monitoring wells on August 4, 2004. Prior to obtaining a groundwater sample each monitoring well is first developed (a minimum of three volumes) utilizing either a disposable bailer or a Geopump (peristaltic). The selected monitoring wells were based on the recommendations of the previous Remediation Update Report dated June 23, 2004 by CATLIN. All groundwater samples from the August 4, 2004 sample event were submitted to Severn Trent Laboratory (STL) in Savannah, Georgia 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 have been summarized on Table 3. The interpolated current horizontal extent of dissolved M/P-xylenes within the site surficial groundwater has been illustrated on Figure 8. Please note that Figure 8 includes data interpreted by CATLIN for the State Ports Authority (SPA) Property from the CATLIN March 2003 temporary well data to illustrate the interpolated surficial groundwater M/P xylene concentrations north of tank 801.

As illustrated on Figure 8, the current laboratory results indicate two predominant areas of high PX concentrations within the site surficial groundwater. One area is the area in the general vicinity between recovery well KRW-5 and tank 301, and the other is the general vicinity west of tank 801.

A review of PX concentration data in Table 3 and PX concentration contours in Figure 8 indicate a progressive decline in the surficial groundwater PX concentrations at the monitoring wells along the boundary air sparge Network A.

PX concentrations along the air sparge Network B have demonstrated limited progress with fluctuating results. Air sparge well network B injection rates have been within design recommendations. As previously noted, the monitoring wells used for monitoring the influence of Network B is on the edge of the anticipated radius of

influence. Since the PX Facility is going to be treated with a chemical oxidant, CATLIN does not recommend any additional monitoring wells for monitoring System B at this time. It is also important to note that during the time period referenced within this report and the August 4, 2004 sampling event, the air compressor was not operational from June 6, 2004 to August 9, 2004 due to an equipment failure.

A review of the PX concentration data in Table 3 and PX concentration contours in Figure 8 indicates a progressive decline of dissolved PX concentrations.

Figure 8 also indicates a lower concentration area around the pilot study area.

6.1.3 Free-Phase PX Data

As previously stated in Section 4.1.3, free-phase PX observed in wells is manually recovered. During the time period covered by this report (March 2004 to August 2004), free-phase PX has been observed in recovery wells KRW-4, and KRW-5 at the PX Facility. The quantity of free-phase PX manually recovered during this monitoring period has been provided in Table 6.

6.2 LOADING RACK AREA

6.2.1 Soil

As of the time period referenced within this report, no soil remediation or monitoring activities were completed at the Loading Rack Area. However, soil remediation is anticipated at the Loading Rack Area upon completion of the proposed in-situ soil remediation pilot study at the PX Facility.

6.2.2 Surficial Groundwater

6.2.2.1 Surficial Groundwater Table Data

On August 3, 2004, selected site monitoring wells were gauged for depth to water and potential free-phase product. The selected monitoring wells were based on the recommendations of the previous Remediation Update Report dated June 23, 2004 by CATLIN. 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 observed during the August 3, 2004 site visit has been prevalent since the site monitoring wells were initially installed for the CAPA.

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 this time period.

6.2.2.3 Dissolved Volatile Concentration Data

As previously stated, CATLIN personnel obtained representative groundwater samples from selected monitoring wells on August 3, 2004. The selected wells were first developed (a minimum of three volumes) utilizing either a disposable bailer or a Geopump (peristaltic). The selected monitoring wells were based on the recommendations of the previous Remediation Update Report dated June 23, 2004 by CATLIN. All site groundwater samples were submitted to STL in Savannah, Georgia 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. In reviewing Table 5, the comparison of the last two sample events illustrates dissolved volatile concentrations within the site surficial groundwater have remained generally the same with isolated increases and decreases.

The source of the benzene contamination at AMW-6 has not been determined at this time. The APEX monitoring wells will continue to be monitored in the future for benzene concentration trends. Please note that a groundwater analytical sample was not obtained from the monitoring well identified as AMW-4 on the APEX property (Figures 9, 10 and 11) due to the presence of free-phase product. Please refer to Section 6.2.3 of this report for additional discussion on the presence of free-phase product at this monitoring well.

6.2.3 Free-Phase Product Data

During this monitoring period of September 2003 to February 2004, a low level of free-phase product was observed at monitoring well KMW-8 in May 2004. Approximately 0.25 gallons of free-phase product was manually recovered with a bailer and stored in a satellite drum (55 gallon) in the vicinity of recovery well KRW-5.

During the groundwater gauging event on August 3, 2004, 0.8 feet of free-phase product was observed in AMW-4, one of the monitoring wells on the Apex property. CATLIN subsequently obtained a sample of the product, the

laboratory results of which are provided in Appendix B. The product has characteristics of gasoline. Given that the FHR Facility no longer has gasoline and that the dissolved BTEX concentrations in groundwater from recent sampling events have been significantly lower than the solubility of these chemicals, it appears that this product, at AMW-4, may be from an off-property source. Given the location of the monitoring well in which this product appeared, the source may be on or adjacent to the Apex property. We have notified Apex of these findings and provided them with the sampling results.

7.0 FUTURE ACTIVITIES

Monitoring and operation of the existing remediation systems, as described within this report will continue. Initiation of the full-scale chemical oxidation pilot test will be implemented in the upcoming monitoring period.

The following monitoring wells will be sampled during the next semi-annual sampling event in February 2004:

PX Facility
MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-11, MW-12, MW-13, MW-14, MW-15, MW-17, MW-18, MW-19, MW-20, MW-28, MW-32, MW-33, 101, 102, 105, 106, 107, 108, 113, 117, 119, KRW-3, KRW-4, KRW-5, KRW-6, KRW-7 and KRW-8.

Groundwater at the following monitoring wells will be field gauged for DO:
MW-12, MW-14, MW-16, MW-17, MW-18, MW-19, MW-20, MW-32, MW-33, 106, 108, 113, 117, 120, and 121.

Loading Rack Area KMW-2
KMW-1, KMW-3, KMW-4, KMW-5, KMW-6, KMW-7, KMW-8, KMW-9, KMW-10, KMW-11, KMW-12, KMW-13, KMW-14, AMW-1, AMW-2, AMW-3, AMW-4, AMW-5, AMW-6 and the proposed monitoring wells.

Stephen A. Tyler
Project Scientist

Jeffery K. Becken, P.E.
Project Engineer

TABLES

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED MONITORING WELLS – AUGUST 3, 2004

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 PHASE PRODUCT THICKNESS (in feet)	SPECIFIC GRAVITY ADJUSTMENT	WATER TABLE ELEVATION (IN FEET)
TYPE II MONITORING WELLS					
MW-1	39.45	7.86	NMT	--	31.59
MW-2	29.11	3.99	NMT	--	25.12
MW-3	37.84	7.81	NMT	--	30.03
MW-4	33.84	9.32	NMT	--	24.52
MW-5	39.56	7.22	NMT	--	32.34
MW-6	38.92	NM	NMT	--	NM
MW-7	38.71	7.60	NMT	--	31.11
MW-8	39.85	7.58	NMT	--	32.27
MW-9	36.88	NM	NMT	--	NM
MW-10	35.45	NM	NMT	--	NM
MW-11	35.14	4.66	NMT	--	30.48
MW-12	35.23	7.65	NMT	--	27.58
MW-13	33.90	7.36	NMT	--	26.54
MW-14	29.39	5.65	NMT	--	23.74
MW-15	28.82	7.09	NMT	--	21.73
MW-16	28.21	5.97	NMT	--	22.24
MW-17	25.57	3.68	NMT	--	21.89
MW-18	26.92	9.67	NMT	--	17.25
MW-19	27.59	10.25	NMT	--	17.34
MW-20	29.29	10.93	NMT	--	18.36
MW-28	36.41	6.5	NMT	--	29.91
MW-30	35.20	NM	NM	--	NM
MW-32	33.69	8.55	NMT	--	25.14
MW-33	35.16	9.05	NMT	--	26.11
101	28.88	3.50	NMT	--	25.38
102	29.88	4.44	NMT	--	25.44
104	28.10	NM	NMT	--	NM
105	29.51	4.22	NM	--	25.29
106	30.62	5.67	NMT	--	24.95
107	31.33	5.14	NMT	--	26.19
108	31.50	7.23	NMT	--	24.27
113	33.90	9.83	NMT	--	24.07
114	34.74	NM	NM	--	NM
117	31.33	9.85	NMT	--	21.48
119	26.68	4.10	NMT	--	22.58
121	29.20	4.83	NMT	--	24.37

TABLE 1

SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED MONITORING WELLS – AUGUST 3, 2004

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 PHASE PRODUCT THICKNESS (in feet)	SPECIFIC GRAVITY ADJUSTMENT	WATER TABLE ELEVATION (IN FEET)
TYPE III MONITORING WELLS					
TMW-1	30.43	NM	NMT	--	NM
TMW-2	35.40	NM	NM	--	NM
RECOVERY WELLS					
RW-2	36.18	NM	NM	--	NM
KRW-3	29.07	12.53	NMT	--	16.54
KRW-4	27.82	10.88	NMT	0.86	24.47
KRW-5	32.58	13.40	NMT	0.86	20.30
KRW-6	30.90	17.55	NMT	--	13.35
SUN PIEZOMETERS					
S-1	26.80	NM	NM	--	NM
S-2	27.46	NM	NM	--	NM
S-3	27.47	NM	NM	--	NM

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

TABLE 2

SUMMARY OF DISSOLVED OXYGEN MEASUREMENTS FROM SELECTED MONITORING WELLS AUGUST 2004

PARAXYLENE FACILITY

FLINT HILLS RESOURCES, LP NORTH TERMINAL
WILMINGTON, NORTH CAROLINA

WELL I.D.	DATE	DISSOLVED OXYGEN (mg/L)
106	8/4/2004	1.48
107	8/4/2004	0.83
108	8/4/2004	1.10
113	8/4/2004	1.46
121	8/4/2004	1.15
MW-12	8/4/2004	2.47
MW-14	8/4/2004	1.54
MW-16	8/4/2004	1.13
MW-17	8/4/2004	1.03
MW-18	8/4/2004	1.56
MW-19	8/4/2004	1.09
MW-20	8/3/2004	2.73
MW-32	8/4/2004	1.39
MW-33	8/4/2004	3.49

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	12/8/1995	29,000
	2/13/1996	11,000
	6/24/1996	9,400
	1/28/1997	340
	12/4/1997	4,000
	6/13/1998	360
	1/19/1999	250
	7/14/1999	26
	2/29/2000	<1.0
	6/13/2000	470
	2/21/2001	<1.0
	7/31/2001	2.3
	4/1/2002	260
	7/31/2002	4,200
	2/24/2003	<1.0
	8/20/2003	<1.0
	2/20/2004	<1.0
	8/4/2004	<1.0
MW-2	2/20/2004	140,000
	8/4/2004	360,000
MW-3	12/8/1995	180,000
	6/24/1996	28,000
	1/28/1997	53,000
	12/4/1997	100,000
	6/13/1998	35,000
	1/19/1999	49,000
	7/14/1999	20,000
	2/29/2000	37,000
	6/13/2000	63,000
	2/21/2001	120,000
	7/31/2001	110,000
	4/1/2002	81,000
	7/31/2002	96,000
	2/24/2003	120,000
	8/19/2003	96,000
	2/20/2004	110,000
	8/4/2004	89,000

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	12/8/1995	1,600,000
	2/13/1996	140,000
	6/24/1996	140,000
	1/28/1997	190,000
	12/4/1997	220,000
	6/13/1998	180,000
	1/19/1999	190,000
	7/14/1999	300,000
	2/29/2000	100,000
	6/13/2000	45,000
	2/20/2004	66,000
	8/4/2004	80,000
MW-5	2/13/1996	9,800
	6/24/1996	2,500
	1/28/1997	1,400
	12/4/1997	790
	6/13/1998	7,800
	1/19/1999	2,400
	7/14/1999	4,900
	2/29/2000	2,100
	6/13/2000	2,800
	7/31/2001	12,000
	4/1/2002	2,000
	7/31/2002	<5.0
	2/24/2003	1,200
	8/20/2003	630
	2/20/2004	1,400
	8/4/2004	390
MW-7	10/15/1999	150,000
	2/29/2000	130,000
	2/21/2001	150,000
	7/31/2001	120,000
	4/2/2002	140,000
	2/24/2003	400,000
	8/20/2003	2,200,000
	2/20/2004	570,000 D
	8/4/2004	3,100,000
	8/6/2004	110,000
MW-8	10/5/1999	4,400
	2/29/2000	12,000
	2/21/2001	5,500
	7/31/2001	8,500
	4/2/2002	17,000
	2/24/2003	15,000
	8/20/2003	16,000
	2/20/2004	6,800
	8/4/2004	5,800

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-9	2/29/2000	<1
	2/24/2003	<1.0
	8/20/2003	<1.0
	2/20/2004	<1.0
MW-10	2/29/2000	96,000
	2/21/2001	89,000
	7/31/2001	110,000
MW-11	2/29/2000	110,000
	7/31/2001	100,000
	4/1/2002	63,000
	2/24/2003	130,000
	8/20/2003	110,000
	2/20/2004	53,000
	8/4/2004	53,000
MW-12	2/29/2000	56,000
	2/21/2001	170,000
	7/31/2001	140,000
	7/31/2002	140,000
	2/24/2003	86,000
	8/20/2003	17,000
	2/20/2004	92,000
	8/4/2004	35,000
MW-13	2/29/2000	85,000
	2/21/2001	43,000
	7/31/2001	41,000
	4/1/2002	76,000
	7/31/2002	30,000
	2/24/2003	99
	8/19/2003	7,900
	2/20/2004	6,000
	8/4/2004	13,000
MW-14	2/29/2000	270,000
	7/31/2001	110,000
	4/1/2002	160,000
	7/31/2002	180,000
	2/24/2003	240,000
	8/19/2003	140,000
	2/20/2004	180000 D
	8/4/2004	190,000

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-15	2/29/2000	49,000
	6/13/2000	57,000
	2/21/2001	80,000
	7/31/2001	23,000
	7/30/2002	97,000
	2/24/2003	130,000
	8/19/2003	76,000
	2/20/2004	75,000 D
	8/4/2004	110,000
MW-16	2/29/2000	79,000
	6/13/2000	62,000
	2/21/2001	47,000
	7/31/2001	21,000
	4/1/2002	8,700
	7/30/2002	4,300
	2/25/2003	17,000
	8/19/2003	30,000
	2/20/2004	27,000
MW-17	2/29/2000	24,000
	6/13/2000	2,400
	2/21/2001	3,100
	8/1/2001	290
	4/1/2002	170
	7/30/2002	2,600
	2/24/2003	<1.0
	8/19/2003	3.7
	2/20/2004	4,600
	8/4/2004	2,100
MW-18	2/29/2000	13,000
	6/13/2000	21
	2/21/2001	29,000
	7/31/2001	6,400
	4/1/2002	510
	7/30/2002	<10
	2/25/2003	670
	8/19/2003	110
	2/20/2004	<1.0

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	2/29/2000	1,400
	6/13/2000	430
	2/21/2001	1,000
	7/31/2001	260
	4/1/2002	11,000
	7/30/2002	5,700
	2/25/2003	27,000
	8/19/2003	9,700
	2/20/2004	5,800
MW-20	2/29/2000	7,900
	6/13/2000	110,000
	2/21/2001	47,000
	7/31/2001	70,000
	4/2/2002	7,900
	7/31/2002	15,000
	2/25/2003	5,000
	8/19/2003	2,600
	2/20/2004	14,000
	8/3/2004	3,200
MW-28	4/94	2,240
	2/13/1996	370
	6/24/1996	740
	1/28/1997	14
	12/4/1997	2,300
	6/13/1998	59
	7/14/1999	<1
	3/1/2000	<1
	6/13/2000	<1
	2/21/2001	4
	7/31/2001	<1.0
	2/25/2003	22
	8/20/2003	<1.0
	2/20/2004	530
	8/3/2004	30
MW-30	1/19/1999	<1
	7/14/1999	<1
	3/1/2000	<1
	6/13/2000	<1
	2/21/2001	<1

TABLE 3

SUMMARY OF EPA METHOD 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	4/1/2002	110,000
	7/31/2002	89,000
	2/25/2003	110,000
	8/19/2003	1,700
	2/20/2004	5,700
	8/4/2004	14,000
MW-33	4/1/2002	15,000
	7/31/2002	21,000
	2/25/2003	22,000
	8/19/2003	22,000
	2/20/2004	3,600
	8/4/2004	13,000
PTW-1	8/6/2004	2,800
PTW-2	8/6/2004	7,400
PTW-3	8/6/2004	660
PTW-4	8/6/2004	22,000
PTW-5	8/6/2004	46,000
PTW-6	8/6/2004	4,800
PTW-7	8/6/2004	1,200
PTW-8	8/6/2004	40,000
PTW-9	8/6/2004	45,000
101	2/24/2003	1,300
	8/19/2003	3,900
	2/20/2004	12,000
	8/4/2004	2,200
102	12/8/1995	800
	6/24/1996	200
	1/28/1997	1,100
	12/4/1997	26
	6/13/1998	270
	1/19/1999	49
	7/14/1999	760
	2/29/2000	1,300
	6/13/2000	230
	2/21/2001	100
	8/1/2001	9.1
	4/2/2002	<5.0
	7/30/2002	<10
	2/24/2003	21
	8/19/2003	5.3
	2/20/2004	150
	8/4/2004	35
104	7/30/2002	<50
	2/20/2004	860
105	7/30/2002	<50
	8/4/2004	26

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	12/8/1995	350,000
	6/24/1996	<10
	1/28/1997	120,000
	6/13/1998	No Data
	1/19/1999	140,000
	7/14/1999	29,000
	3/1/2000	130,000
	6/13/2000	87,000
	2/21/2001	97,000
	8/1/2001	35,000
	8/19/2003	180,000
	2/20/2004	87,000
	8/4/2004	46,000
107	6/13/2000	96,000
	7/31/2002	240,000
	8/19/2003	160,000
	2/20/2004	88,000
	8/4/2004	66,000
108	4/1/2002	130,000
	2/24/2003	150,000
	8/19/2003	97,000
	2/20/2004	120,000
	8/4/2004	120,000
113	1/19/1999	11
	7/14/1999	BQL
	2/29/2000	370
	6/13/2000	460
	2/21/2001	<1
	7/31/2001	71
	4/1/2002	3.5
	7/31/2002	<1.0
	2/25/2003	2.2
	8/19/2003	1.6
	2/20/2004	<1.0
	8/4/2004	<1.0
114	6/13/1998	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	12/8/1995	86,000
	6/24/1996	59,000
	1/28/1997	80,000
	12/4/1997	46,000
	6/13/1998	130,000
	1/19/1999	120,000
	7/14/1999	140,000
	2/29/2000	78,000
	6/13/2000	100,000
	2/21/2001	81,000
	7/31/2001	45,000
	4/1/2002	39,000
	7/30/2002	16,000
	2/25/2003	55,000
	8/19/2003	7,100
	2/20/2004	110,000 D
	8/4/2004	57,000
119	6/24/1996	<2
	1/28/1997	1,500
	12/4/1997	15
	6/13/1998	3,000
	1/19/1999	390
	7/14/1999	420
	2/29/2000	4,900
	6/13/2000	1,300
	2/21/2001	37
	7/31/2001	1,800
	4/1/2002	320
	7/30/2002	<100
	2/24/2003	9,000
	8/19/2003	<100
	2/20/2004	48
	8/4/2004	590
120	12/8/1995	1,600
	6/24/1996	600
	1/28/1997	4,300
	12/4/1997	1,500
	6/13/1998	1,500
	1/19/1999	1,000
	7/14/1999	400
	WELL WAS DAMAGED	
	6/13/2000	800
	2/21/2001	1,200
	8/1/2001	2,300
	4/1/2002	33,000

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)
121	12/8/1995	300,000
	6/24/1996	100,000
	1/28/1997	100,000
	12/4/1997	140,000
	6/13/1998	160,000
	1/19/1999	110,000
	7/14/1999	140,000
	3/1/2000	190,000
	2/24/2003	140,000
D-O	12/8/1995	160,000
	6/24/1996	62,000
	1/28/1997	3,400
	Well has been permanently abandoned	
TYPE III MONITORING WELLS		
TMW-1	12/8/1995	220
	2/29/2000	300
TMW-2	2/29/2000	4.2
RECOVERY WELLS		
RW-2	12/4/1997	8,100
	6/13/1998	14,000
	1/19/1999	8,200
	7/14/1999	9,200
	3/1/2000	26,000
	4/1/2002	17,000
	7/31/2002	13,000
KRW-3	12/4/1997	87,000
	6/13/1998	120,000
	1/19/1999	67,000
	7/14/1999	86,000
	2/29/2000	17,000
	6/13/2000	85,000
	2/21/2001	100,000
	7/31/2001	140,000
	4/1/2002	47,000
	7/31/2002	57,000
	2/25/2003	45,000
	8/19/2003	93,000
	2/20/2004	53,000 D
	8/4/2004	58,000

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-4	12/4/1997	27,000
	6/13/1998	60,000
	1/19/1999	18,000
	7/14/1999	86,000
	2/29/2000	61,000
	6/13/2000	29,000
	2/21/2001	15,000
	8/1/2001	13,000
	4/1/2002	11,000
	7/31/2002	16,000
	2/24/2003	11,000
	8/19/2003	15,000
	2/20/2004	18,000
	8/4/2004	13,000
KRW-5	12/4/1997	180,000
	6/13/1998	130,000
	1/19/1999	84,000
	7/14/1999	390,000
	2/29/2000	150,000
	6/13/2000	100,000
	2/21/2001	FP
	7/31/2001	79,000
	4/1/2002	170,000
	7/31/2002	60,000
	2/24/2003	66,000
	8/19/2003	210,000
	2/20/2004	77,000
	8/4/2004	180,000
KRW-6	2/21/2001	64,000
	7/31/2001	95,000
	4/1/2002	93,000
	7/31/2002	53,000
	2/25/2003	60,000
	8/19/2003	72,000
	2/20/2004	120,000
	8/4/2004	92,000
KRW-7	8/21/2003	21,000
	8/4/2004	63,000
KRW-8	8/21/2003	100,000
	8/4/2004	14,000
TEMPORARY MONITORING WELLS *		
HP-1	4/94	11,900
HP-2	4/94	11,500
303TW-1	3/28/03	480
303TW-2	3/28/2003	1
303TW-3	3/28/2003	2,200
303TW-4	3/28/2003	31,000

FP = Free Product

* Temporary wells have been permanently abandoned

D - The reported result is from a secondary dilution.

TABLE 4

SUMMARY OF GROUNDWATER ELEVATIONS AT SELECTED MONITORING WELLS – AUGUST 3, 2004

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 PHASE PRODUCT THICKNESS (in feet)	SPECIFIC GRAVITY ADJUSTMENT	WATER TABLE ELEVATION (in feet)
TYPE II MONITORING WELLS					
KMW-1	19.62	6.28	NMT	--	13.34
KMW-3	14.63	4.67	NMT	--	9.96
KMW-4	20.15	10.12	NMT	--	10.03
KMW-5	16.29	1.85	NMT	--	14.44
KMW-6	24.90	1.38	NMT	--	23.52
KMW-7	25.11	0.77	NMT	--	24.34
KMW-8	25.86	1.22	NMT	--	24.64
KMW-9	25.73	1.28	NMT	--	24.45
KMW-10	24.92	1.06	NMT	--	23.86
KMW-11	27.34	1.60	NMT	--	25.74
KMW-12	24.19	10.83	NMT	--	13.36
KMW-13	23.84	10.32	NMT	--	13.52
KMW-14	23.31	9.50	NMT	--	13.81
FHR TYPE II MONITORING WELLS WITHIN APEX TERMINAL					
AMW-1	23.42	10.55	NMT	--	12.87
AMW-2	23.35	10.32	NMT	--	13.03
AMW-3	21.72	9.97	NMT	--	11.75
AMW-4	15.16	6.90	0.8	0.86	8.95
AMW-5	10.38	4.52	NMT	--	5.86
AMW-6	11.97	6.76	NMT	--	5.21

Notes:

Specific gravity adjustment for para-xylene is 0.86.

NMT = No Measurable Thickness

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**	8/1/2001	-	-	-	-	-	-	-	-	-	-	-	**1,100**	-	-
T-2**	8/1/2001	-	-	-	-	-	-	-	-	-	-	-	4.9*	-	-
T-3**	8/24/2001	<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**	8/24/2001	<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**	8/24/2001	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	**34,000**	<500	ND
T-6**	8/24/2001	**8,300**	<500	<500	<500	<500	**48,000**	**830**	<500	**4,100**	**1,700**	<500	**11,000**	**860**	ND
T-8**	8/24/2001	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
	9/16/03	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	53	40	22	<5.0	ND
	2/19/04	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<5.0	<1.0	<1.0	26	27	2.6	<1.0	ND
	8/5/04	<0.36	7.7	0.81J	<0.34	0.27J	<0.31	1.9J	0.85J	<0.54	52	60	<0.40	<0.35	ND
KMW-2	4/94	-	-	-	-	-	-	-	-	-	-	-	**19,000***	-	-
	2/10/99	-	-	-	-	-	-	-	-	-	-	-	5*	-	-

All results in micrograms per Liter - µg/l
- = No data
ND = Not detected
BQL = Below Quantitation Limits
Bold figure indicates concentration level exceeds applicable 2L Groundwater Standard limit.
Refer to laboratory reports for other 8260B analytes detected.

* = Determined with EPA Method 602 analysis
** = Temporary wells have been permanently abandoned
J = Value is estimated concentration that is less than PQL, but greater than or equal to the MDL.
E = The reported result exceeded the calibration range of the instrument.

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]**
	9/16/03	<5.0	<5.0	<5.0	**120**	<5.0	<5.0	8.1	9.4	<5.0	74	32	250	<5.0	ND
	2/19/04	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
	8/5/04	<0.36	<0.31	<0.24	<0.34	<0.25	<0.31	<0.44	<0.32	<0.54	0.23J	<0.21	<0.40	<0.35	ND
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
	9/16/03	<5.0	<5.0	<5.0	<5.0	<5.0	12	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0	ND
	2/19/04	<1.0	<1.0	<1.0	<1.0	<1.0	17	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
	8/5/04	<0.36	<0.31	<0.24	<0.34	<0.25	1.1J	0.50J	<0.32	<0.54	0.38J	0.24J	<0.40	<0.35	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
	9/16/03	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	**13,000**	<120	ND
	2/19/04	<500	<500	<500	<500	<500	<5,000	<2,500	<500	<500	<500	<500	**15,000**	<500	ND
	8/5/04	<36	<31	<24	<34	<25	<31	<44	<32	<54	<19	<21	**25,000**	<35	ND

All results in micrograms per Liter - µg/l
- = No data
ND = Not detected
BQL = Below Quantitation Limits
Bold figure indicates concentration level exceeds applicable 2L Groundwater Standard limit.
Refer to laboratory reports for other 8260B analytes detected.

* = Determined with EPA Method 602 analysis
** = Temporary wells have been permanently abandoned
J = Value is estimated concentration that is less than PQL, but greater than or equal to the MDL.
E = The reported result exceeded the calibration range of the instrument.

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-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
	9/16/03	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	**14,000**	<120	ND
	2/19/04	<1,000	<1,000	<1,000	<1,000	<1,000	<10,000	<5,000	<1,000	<1,000	<1,000	<1,000	**31,000**	<1,000	ND
	8/5/2004	<36	<31	<24	<34	<25	<31	**73J**	<32	<54	36J	<21	**51,000**	**75**	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
	9/16/03	**300**	<5.0	<5.0	**180**	12	<5.0	**150**	22	14	170	62	**560**	8.2	ND
	2/19/04	**110**	<10	<10	**120**	12	<100	**190**	26	<10	**410**	110	**600**	12	ND
	8/5/2004	**140**	<1.6	<1.2	**140**	10	<1.6	**200**	19	5.8	150	34	330	28	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
	9/16/03	**1,900**	<250	<250	**670**	<250	**1,600**	**480**	<250	680	**1,200**	**390**	**5,900**	450	ND
	2/19/04	**2,600**	<100	<100	**990**	<100	<1,000	**680**	**110**	820	**1,400**	**380**	**8,800**	**670**	ND
	8/5/2004	**560**	<31	<24	**430**	40J	**200J**	**560**	60J	200	**1,200**	310	**5,500**	**580**	ND
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/WELL WAS REPLACED ON 7/2/03													
	9/16/03	**1,200**	<250	<250	**2,000**	<250	**540**	**660**	**340**	**1,200**	**2,700**	**830**	**10,000**	**1,200**	ND
	2/19/04	**560**	<200	<200	**830**	<200	<2,000	<1,000	<200	310	**1,400**	**330**	**6,900**	**640**	ND
	8/5/04	**600**	45J	<24	**930**	**89J**	100J	**550**	**170**	280	**1,500**	**350**	**5900**	**510**	ND

All results in micrograms per Liter - µg/l
- = No data
Bold figure indicates concentration level exceeds applicable 2L Groundwater Standard limit.
Refer to laboratory reports for other 8260B analytes detected.

ND = Not detected
BQL = Below Quantitation Limits

* = Determined with EPA Method 602 analysis
** = Temporary wells have been permanently abandoned
J = Value is estimated concentration that is less than PQL, but greater than or equal to the MDL.
E = The reported result exceeded the calibration range of the instrument.

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-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
	9/16/03	<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
	2/19/04	**440**	<10	<10	**190**	19	<100	**140**	30	28	190	38	260	<10	ND
	8/5/04	**36**	5.3	2.2	**29**	9.3	2.4J	**94**	20	3.2	77	9.6	17	0.69 J	6.29 J
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
	9/16/03	<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
	2/19/04	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
	8/5/04	<0.36	<0.31	<0.24	<0.34	<0.25	<0.31	<0.44	<0.32	<0.54	<0.19	<0.21	<0.4	<0.3	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
	9/16/03	**2,000**	<250	<250	**680**	<250	<250	**370**	<250	<250	**950**	290	**4,400**	<250	ND
	2/19/04	**2,400**	<500	<500	**1,600**	<500	<5,000	<2,500	<500	<500	**2,700**	**670**	**13,000**	<500	ND
	8/5/04	**1,800**	<77	<60	**1,500**	**170J**	160J	**1,300**	**340**	220J	**3,400**	**860**	**12,000**	**120 J**	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
	9/16/03	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	**20,000**	<1,000	ND
	2/19/04	<1,000	<1,000	<1,000	<1,000	<1,000	<10,000	<5,000	<1,000	<1,000	<1,000	<1,000	**71,000**	<1,000	ND
	8/5/04	<180	<160	<120	<170	<120	<160	<220	<160	<270	<95	<100	**68,000**	<180	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	**23,000**	<120	ND
	9/16/03	<500	<500	<500	**45,000**	<500	<500	<500	<500	<500	<500	<500	**38,000**	<500	ND
	2/19/04	<1,000	<1,000	<1,000	<1,000	<1,000	<10,000	<5,000	<1,000	<1,000	<1,000	<1,000	**62,000**	<1,000	ND
	8/5/04	<180	<160	<120	<170	<120	<160	**400J**	<160	<270	140J	<100	**50,000**	<180	ND

All results in micrograms per Liter - µg/l
- = No data
ND = Not detected
BQL = Below Quantitation Limits
Bold figure indicates concentration level exceeds applicable 2L Groundwater Standard limit.
Refer to laboratory reports for other 8260B analytes detected.

* = Determined with EPA Method 602 analysis
** = Temporary wells have been permanently abandoned
J = Value is estimated concentration that is less than PQL, but greater than or equal to the MDL.
E = The reported result exceeded the calibration range of the instrument.

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
AMW-1	12/22/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.6	2.7	<2.0	<1.0	2.2
	2/19/04	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<5.0	<1.0	<1.0	<1.0	4.3	<1.0	<1.0	35
	8/5/04	<0.36	<0.3	<0.24	<0.34	<0.25	<0.31	<0.44	<0.32	<0.54	<0.19	1.2	<0.40	<0.35	ND
AMW-2	12/22/03	**1,700**	<1.0	<1.0	**1,400**	**130**	**300**	**660**	**390**	**1,100**	**2,500**	**710**	**27,000**	**680**	5.2
	2/19/04	**2,200**	<200	<200	**1,700**	<200	<2,000	<1,000	**300**	**2,000**	**2,200**	**600**	**39,000**	**940**	ND
	8/5/04	**2,300**	<62	<48	**2,000**	**140J**	**440J**	**750J**	**260**	**1,900**	**2,100**	**560**	**40,000**	**970**	ND
AMW-3	12/22/03	**220**	<1.0	<1.0	**30**	25	10	**56**	39	12	89	23	**1,600**	**8.5**	7.2
	2/19/04	**170**	<50	<50	**50**	<50	<500	<250	<50	<50	100	<50	**2,800**	**<50**	ND
	8/5/04	**230**	10	4.8J	**70**	43	4.6J	**170**	69	13	94	29	**670**	**5.8**	ND
AMW-4	12/22/03	**200**	15	18	11	14	**240**	**26**	26	2.8	140	110	68	<1.0	36
	2/19/04	**420**	<10	13	21	28	**110**	<50	34	17	200	93	98	<10	ND
	8/5/04	**0.8' FREE- PHASE PRODUCT PRESENT IN AMW-4**													
AMW-5	12/22/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	ND
	2/19/04	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.3
	8/5/04	<0.36	<0.31	<0.24	<0.34	<0.25	<0.31	<0.44	<0.32	<0.54	<0.19	<0.21	0.90 J	<0.35	ND
AMW-6	12/22/03	**76**	<1.0	2.7	5.3	4.1	24	<1.0	1.1	1.1	3.4	<1.0	11	<1.0	ND
	2/19/04	**66**	2.6	4.2	3.5	5.5	24	5.7	1.8	2.2	17	<5.0	23	2.2	ND
	8/5/04	**210E**	3.2	5.5	1.9	6	59	1.1J	2.4	3.5	23	8.5	20	2.6	ND

All results in micrograms per Liter - µg/l
- = No data
ND = Not detected
BQL = Below Quantitation Limits
Bold figure indicates concentration level exceeds applicable 2L Groundwater Standard limit.
Refer to laboratory reports for other 8260B analytes detected.

* = Determined with EPA Method 602 analysis
** = Temporary wells have been permanently abandoned
J = Value is estimated concentration that is less than PQL, but greater than or equal to the MDL.
E = The reported result exceeded the calibration range of the instrument.

TABLE 6

SURFICIAL GROUNDWATER RECOVERY DATA
FOR PERIOD MARCH 5, 2004 to AUGUST 3, 2004

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

WELL I.D.	CURRENT PERIOD (3/5/2004 to 8/3/2004)		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 (Operated from 3/21/95 to 1/03)	0	0/0	4,249,488	46
KRW-3 (Operating since prior to March 19, 1995 event)	347,080	23/0	18,565,572	932
KRW-4 (Operating since November 3, 1997)	2,581,950	39/11.2	30,740,029	625
KRW-5 (Operating since November 3, 1997)	1,552,600	325/1.2	27,855,419	3,982.5
KRW-6 (Operating since January 17, 2001)	999,500	107/0	5,420,630	505.5

NOTE: RW-2 has been permanently turned off since October of 2000 due to low water table elevation.

Dissolved PX removed calculations are provided in Section 6.1.2.3 of the report text.

* Dissolved PX removed/PX manually removed

TABLE 7

HISTORICAL MTBE DATA - SURFICIAL GROUNDWATER

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

WELL I.D.	DATE	MTBE Concentration (µg/L)
TYPE II MONITORING WELLS		
MW-1	Jun-98 Feb-04 Aug-04	<20 <10 <10
MW-2	Feb-04 Aug-04	<40,000 <200
MW-3	Jun-98 Feb-04 Aug-04	<2,000 <40,000 <200
MW-4	Jun-98 Feb-04 Aug-04	<10,000 <10,000 <200
MW-5	Jun-98 Feb-04 Aug-04	<1,000 <500 <200
MW-7	Feb-04 Aug-04	<25,000 <200
MW-8	Feb-04 Aug-04	<1,000 <200
MW-9	Feb-04	<10
MW-11	Feb-04 Aug-04	<10,000 <200
MW-12	Feb-04 Aug-04	<10,000 <200
MW-13	Feb-04 Aug-04	<1,000 <200
MW-14	Feb-04 Aug-04	<10,000 <200
MW-15	Feb-04 Aug-04	<5,000 <200
MW-16	Jul-03 Aug-03 Feb-04	1,100 <500 <5,000

TABLE 7

HISTORICAL MTBE DATA - SURFICIAL GROUNDWATER

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

WELL I.D.	DATE	MTBE Concentration (µg/L)
MW-17	Jul-03	2,100
	Aug-03	5.9
	Feb-04	<1,200
	Aug-04	<200
MW-18	Feb-04	<10
MW-19	Feb-04	<1,000
MW-20	Feb-04	<5,000
	Aug-04	<200
MW-28	Jun-98	<2
	Feb-04	<100
	Aug-04	<50
MW-30	Jun-98	<1
MW-32	Feb-04	<1,000
	Aug-04	<200
MW-33	Feb-04	<1,000
	Aug-04	<200
101	Jul-03	<100
	Aug-03	<50
	Feb-04	8,500
	Aug-04	920
102	Jun-96	1,100
	Jun-98	420
	Jan-99	150
	Jul-03	310
	Aug-03	200
	Feb-04	290
	Aug-04	<100
104	Jul-02	5,100
	Feb-04	<500
105	Aug-02	390
	Aug-04	20

TABLE 7

HISTORICAL MTBE DATA - SURFICIAL GROUNDWATER

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

WELL I.D.	DATE	MTBE Concentration (µg/L)
106	Jun-96	420
	Aug-02	1,000
	Aug-03	<5,000
	Feb-04	<25000
	Aug-04	<200
107	Jul-02	<500
	Aug-02	<500
	Aug-03	<5,000
	Feb-04	<10000
	Aug-04	<200
108	Aug-03	<5,000
	Feb-04	<40000
	Aug-04	<200
113	Jan-99	<2
	Feb-04	<10
	Aug-04	<10
114	Jun-98	18
117	Jul-96	<5,000
	Jun-98	<20,000
	Feb-04	<10,000
	Aug-04	<200
119	Jun-96	14
	Jun-98	<100
	Apr-02	2,900
	Jul-02	6,400
	Aug-03	2,200
	Feb-04	990
	Aug-04	280
120	Jun-96	38
	Jun-98	160
	Jan-99	210
	Apr-02	1,300
121	Jun-96	<1,000
	Jun-98	<10,000

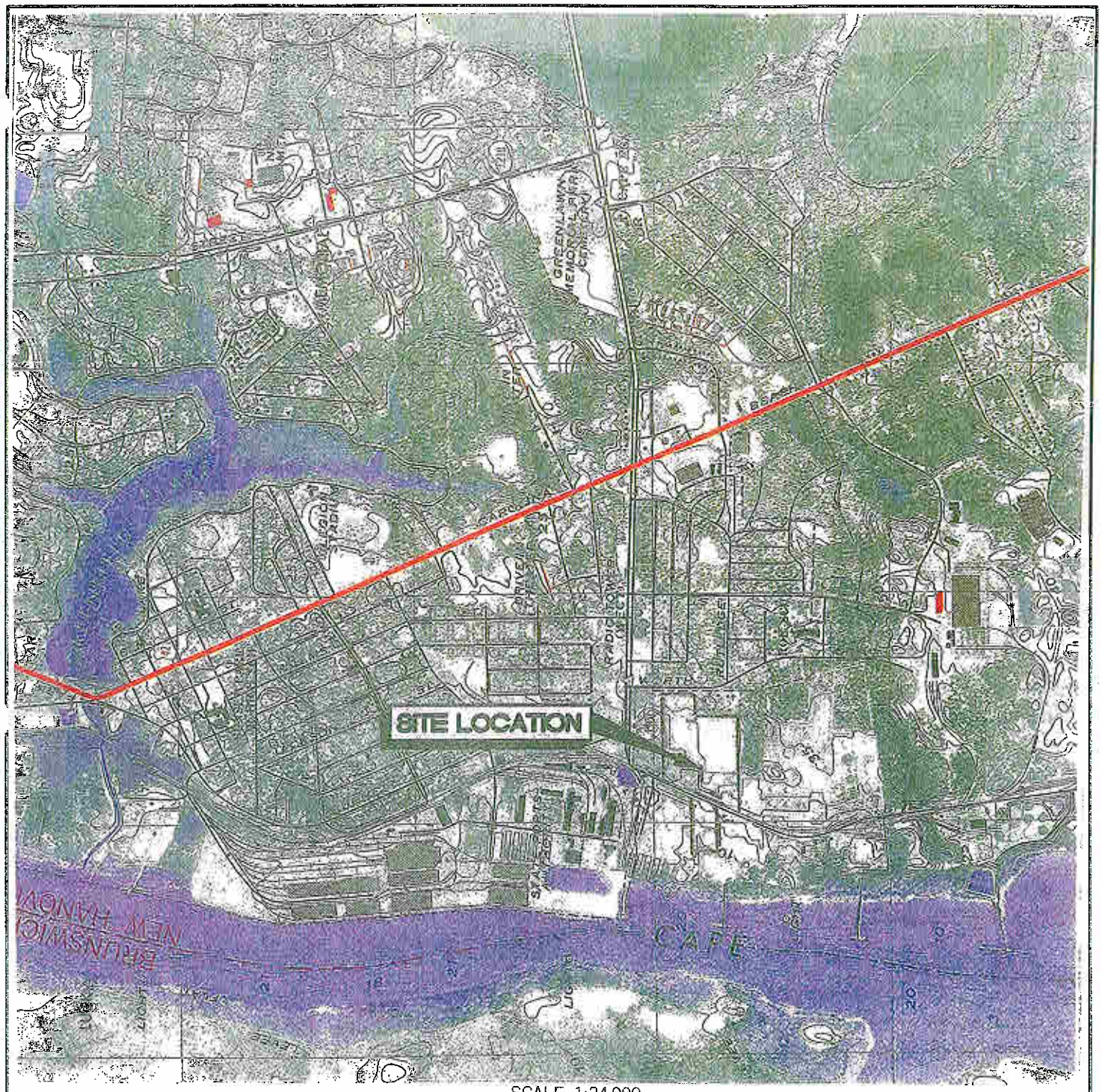
TABLE 7

HISTORICAL MTBE DATA - SURFICIAL GROUNDWATER

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

WELL I.D.	DATE	MTBE Concentration (µg/L)
TEMPORARY WELLS		
M-1	Aug-02	1,500
M-2	Aug-02	<50
RECOVERY WELLS		
RW-2	Jun-98 Apr-02 Jul-02	<1,000 <500 <500
KRW-3	Feb-04 Aug-04	<5,000 <200
KRW-4	Jun-98 Apr-02 Jul-02 Aug-03 Feb-04 Aug-04	<4,000 5,900 2,900 2,700 <5,000 670
KRW-5	Feb-04 Aug-04	<10,000 <200
KRW-6	Feb-04 Aug-04	<10,000 <200
KRW-7	Aug-04	<200
KRW-8	Aug-04	<200
GASOLINE/FUEL OIL AST AREA MONITORING WELLS		
2	Apr-02	<5

FIGURES



SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

GN 1° 39' 29 MILS

MN 5½° 98 MILS

CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE
THE MEAN RANGE OF TIDE IS APPROXIMATELY 3.6 FEET

M GRID AND 1979, MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

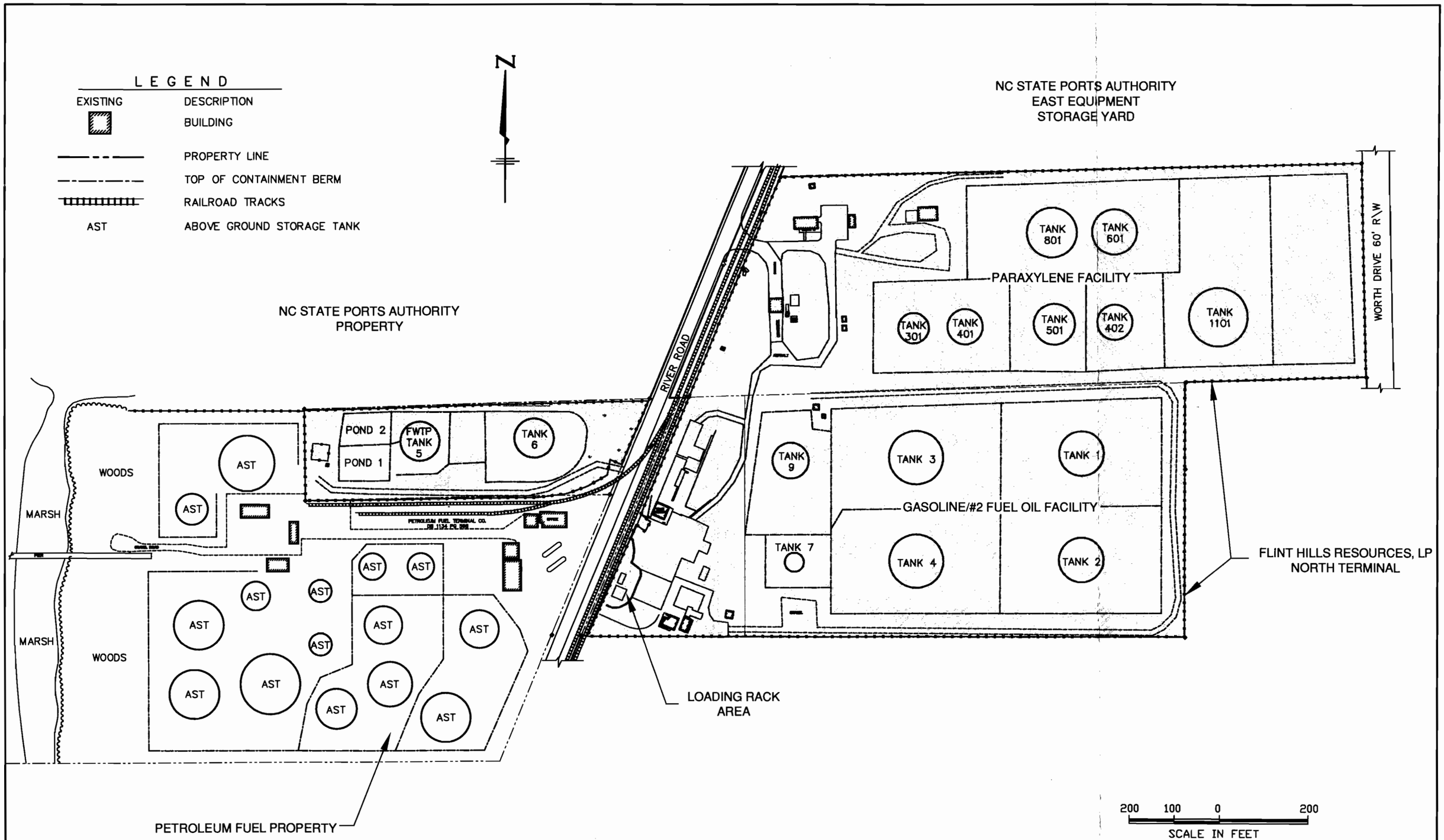
QUADRANGLE LOCATION

CAELIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

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

JOB NO:	DATE:	SCALE:	DRAWN BY:	CHECKED BY:
201-125	SEP 2004	AS SHOWN	HCS	JKB

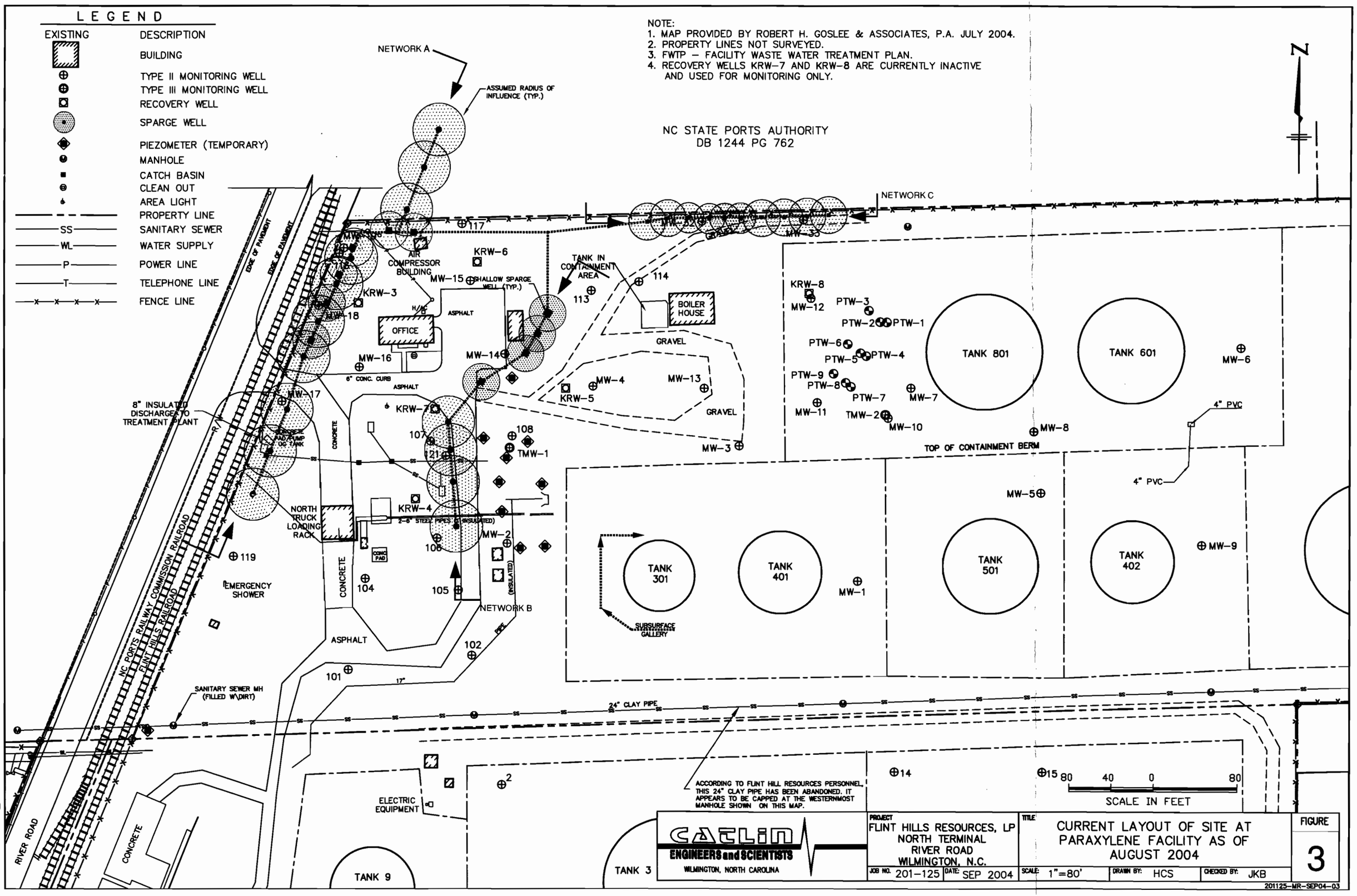
201125-MR-SEP04-01

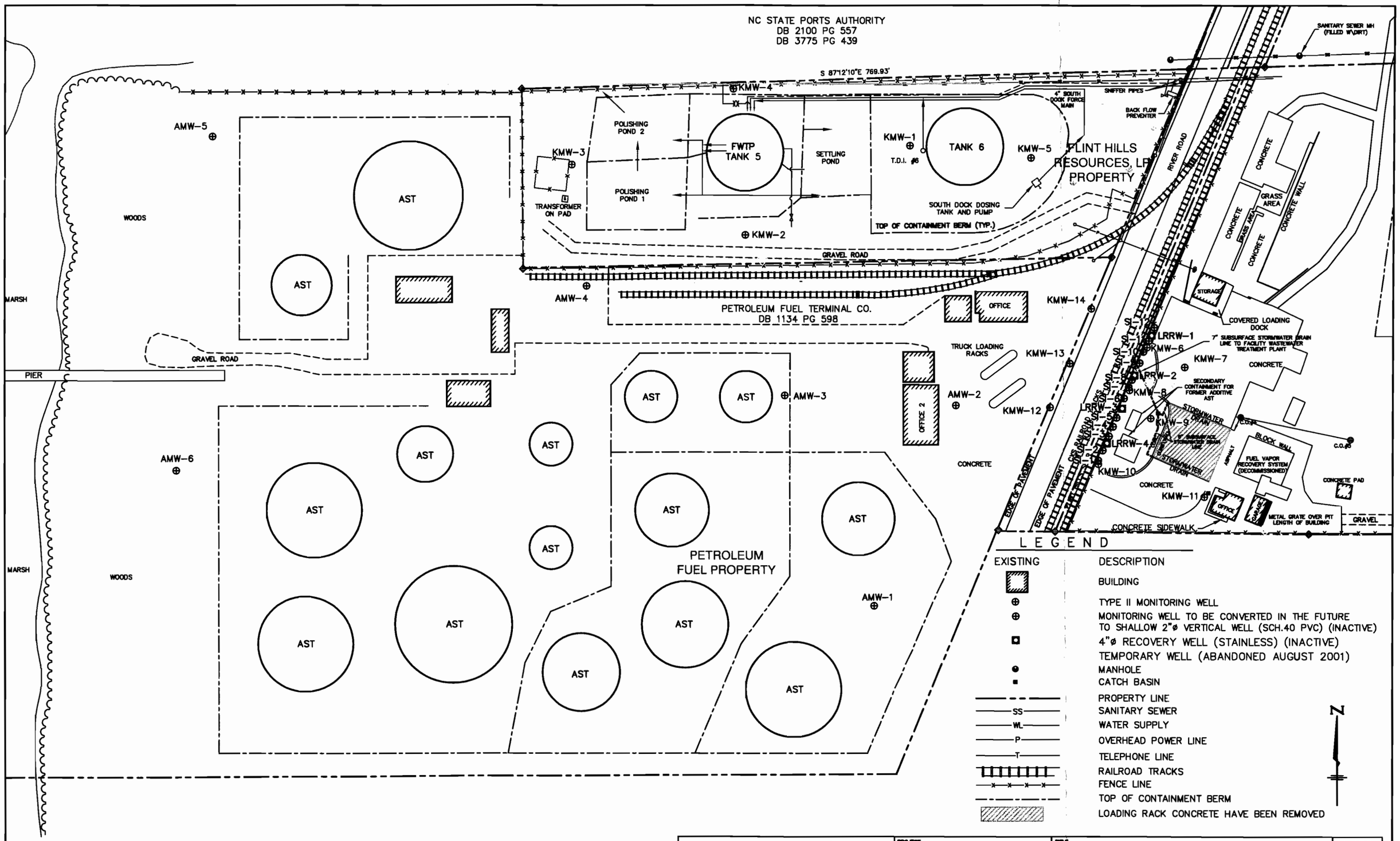


NOTE:
1. MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
2. PROPERTY LINES NOT SURVEYED.
3. PETROLEUM FUEL PROPERTY BASED ON AERIAL PHOTOGRAPHS.

CATLIN ENGINEERS and SCIENTISTS, WILMINGTON, NORTH CAROLINA	PROJECT: FLINT HILLS RESOURCES, LP NORTH TERMINAL RIVER ROAD WILMINGTON, N.C.	TITLE: SITE MAP			FIGURE 2
	JOB NO. 201-125	DATE: SEP 2004	SCALE: 1"=200'	DRAWN BY: HCS	CHECKED BY: JKB

201125-MR-SEP04-02


LEGEND
EXISTING
DESCRIPTION
BUILDING
TYPE II MONITORING WELL
TYPE III MONITORING WELL
RECOVERY WELL
SPARGE WELL
PIEZOMETER (TEMPORARY)
MANHOLE
CATCH BASIN
CLEAN OUT
AREA LIGHT
PROPERTY LINE
SS SANITARY SEWER
WL WATER SUPPLY
P POWER LINE
T TELEPHONE LINE
FENCE LINE
NOTE:
1. MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
2. PROPERTY LINES NOT SURVEYED.
3. FWTP – FACILITY WASTE WATER TREATMENT PLAN.
4. RECOVERY WELLS KRW-7 AND KRW-8 ARE CURRENTLY INACTIVE AND USED FOR MONITORING ONLY.
NC STATE PORTS AUTHORITY
DB 1244 PG 762
N
NETWORK A
ASSUMED RADIUS OF INFLUENCE (TYP.)
NETWORK C
NETWORK B
AIR COMPRESSOR BUILDING
KRW-6
MW-15
SHALLOW SPARGE WELL (TYP.)
TANK IN CONTAINMENT AREA
BOILER HOUSE
OFFICE
ASPHALT
GRAVEL
KRW-3
MW-18
MW-16
MW-14
6" CONC. CURB
KRW-5
MW-4
MW-13
MW-17
KRW-7
8" INSULATED DISCHARGE TO TREATMENT PLANT
CONCRETE
TMW-1
MW-3
KRW-8
MW-12
PTW-3
PTW-2
PTW-1
PTW-6
PTW-5
PTW-4
PTW-9
PTW-8
PTW-7
MW-7
MW-11
TMW-2
MW-10
MW-8
MW-6
TANK 801
TANK 601
TOP OF CONTAINMENT BERM
4" PVC
MW-5
TANK 301
TANK 401
MW-1
TANK 501
TANK 402
MW-9
SUBSURFACE GALLERY
NORTH TRUCK LOADING RACK
KRW-4
2-6" STEEL PIPES (INSULATED)
MW-2
CONC PAD
EMERGENCY SHOWER
NC PORTS RAILWAY COMMISSION RAILROAD
FLINT HILLS RAILROAD
EDGE OF PAVEMENT
SANITARY SEWER MH (FILLED W\DIRT)
24" CLAY PIPE
ACCORDING TO FLINT HILL RESOURCES PERSONNEL, THIS 24" CLAY PIPE HAS BEEN ABANDONED. IT APPEARS TO BE CAPPED AT THE WESTERNMOST MANHOLE SHOWN ON THIS MAP.
ELECTRIC EQUIPMENT
RIVER ROAD
TANK 9
TANK 3
80 40 0 80
SCALE IN FEET
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 AUGUST 2004
FIGURE
3
JOB NO. 201-125
DATE: SEP 2004
SCALE: 1"=80'
DRAWN BY: HCS
CHECKED BY: JKB
201125-MR-SEP04-03



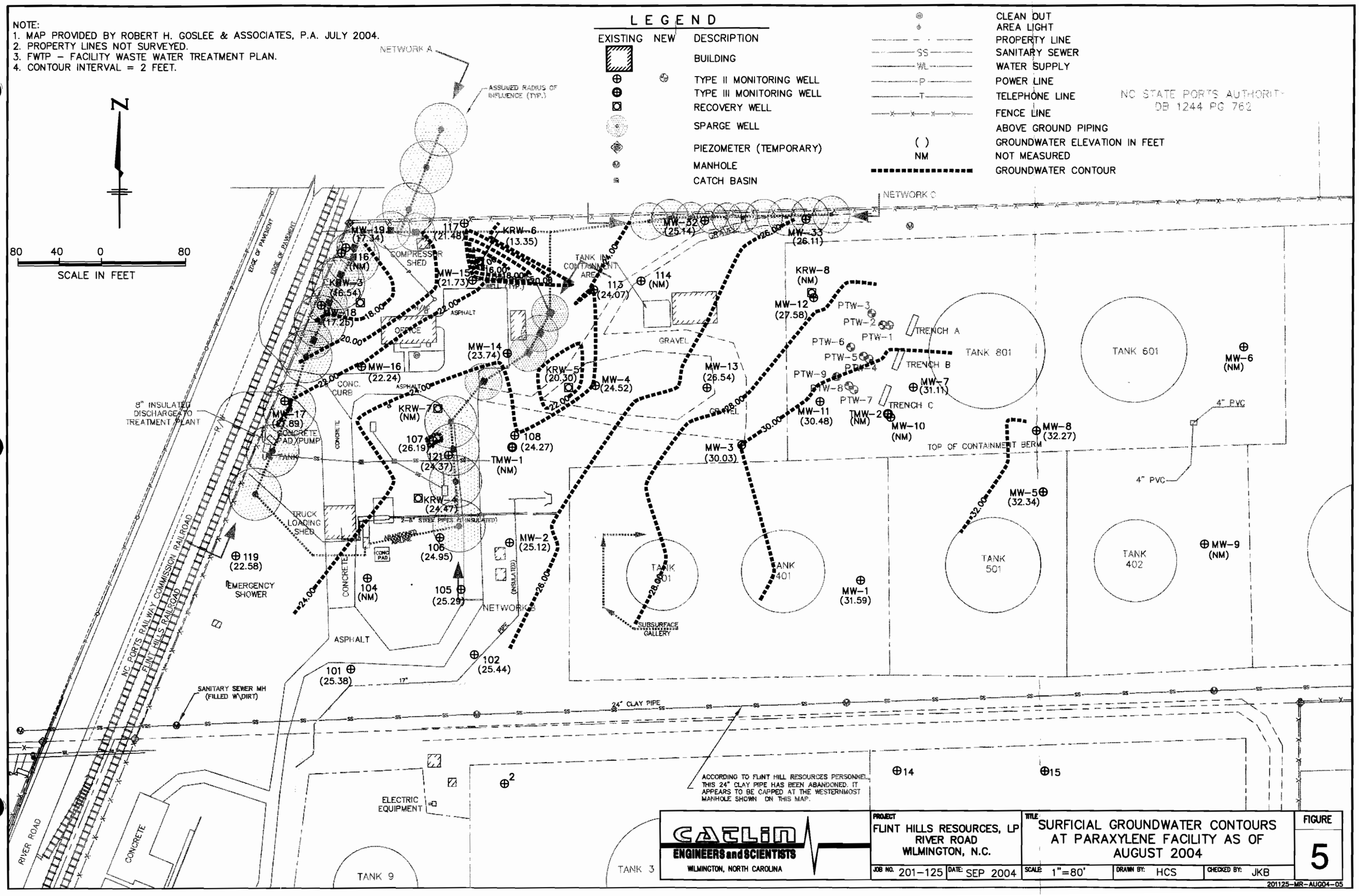
NOTE:
1. THE FHR PORTION OF THIS MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
2. PROPERTY LINES NOT SURVEYED.
3. PETROLEUM FUEL PROPERTY BASED ON AERIAL PHOTOGRAPHS.
4. AST – ABOVE GROUND STORAGE TANK.
5. FWTP – FACILITY WASTE WATER TREATMENT PLAN.

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 LOADING RACK AREA AS OF AUGUST 2004		FIGURE 4
JOB NO. 201-125	DATE: SEP 2004	SCALE: 1"=100'	DRAWN BY: HCS / CHECKED BY: JKB

201125-MR-SEP04-04

NOTE:
1. MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
2. PROPERTY LINES NOT SURVEYED.
3. FWTP – FACILITY WASTE WATER TREATMENT PLAN.
4. CONTOUR INTERVAL = 2 FEET.

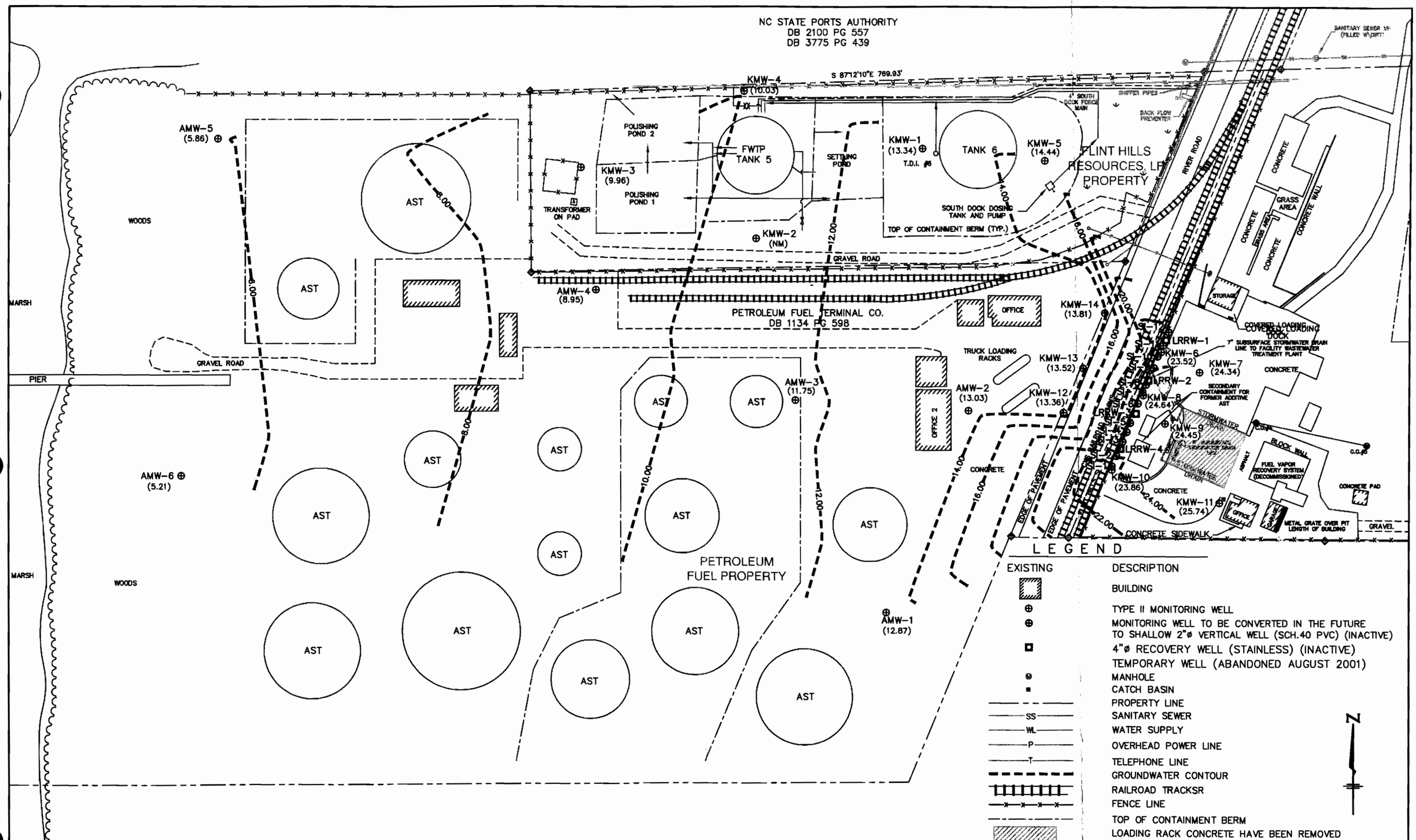


CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT	TITLE	FIGURE
FLINT HILLS RESOURCES, LP RIVER ROAD WILMINGTON, N.C.	SURFICIAL GROUNDWATER CONTOURS AT PARAXYLENE FACILITY AS OF AUGUST 2004	5

JOB NO.	DATE	SCALE	DRAWN BY	CHECKED BY
201-125	SEP 2004	1"=80'	HCS	JKB

201125-MR-AUG04-05



NOTE:
1. THE FHR PORTION OF THIS MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
2. PROPERTY LINES NOT SURVEYED.
3. PETROLEUM FUEL PROPERTY BASED ON AERIAL PHOTOGRAPHS.
4. AST – ABOVE GROUND STORAGE TANK.
5. FWTP – FACILITY WASTE WATER TREATMENT PLAN.
6. CONTOUR INTERVAL = 2.0 FEET

100 50 0 100
SCALE IN FEET

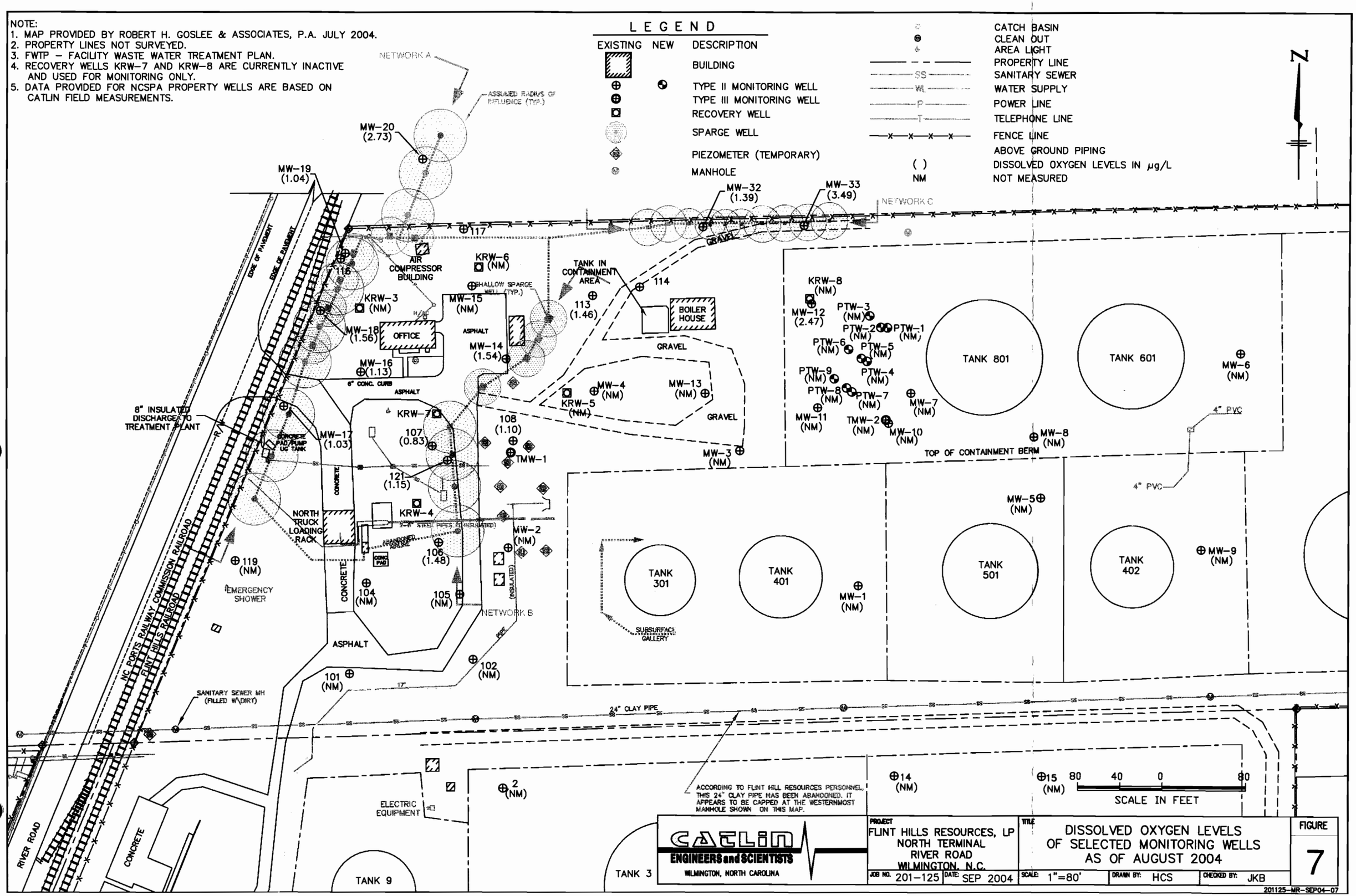
CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT	TITLE	FIGURE
FLINT HILLS RESOURCES, LP NORTH TERMINAL RIVER ROAD WILMINGTON, N.C.	SURFICIAL GROUNDWATER CONTOURS AT LOADING RACK AREA AS OF AUGUST 2004	6

JOB NO.	DATE	SCALE	DRAWN BY	CHECKED BY
201-125	SEP 2004	1"=100'	HCS	JKB

201125-MR-SEP04-06

NOTE:
1. MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
2. PROPERTY LINES NOT SURVEYED.
3. FWTP – FACILITY WASTE WATER TREATMENT PLAN.
4. RECOVERY WELLS KRW-7 AND KRW-8 ARE CURRENTLY INACTIVE AND USED FOR MONITORING ONLY.
5. DATA PROVIDED FOR NCSPA 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.

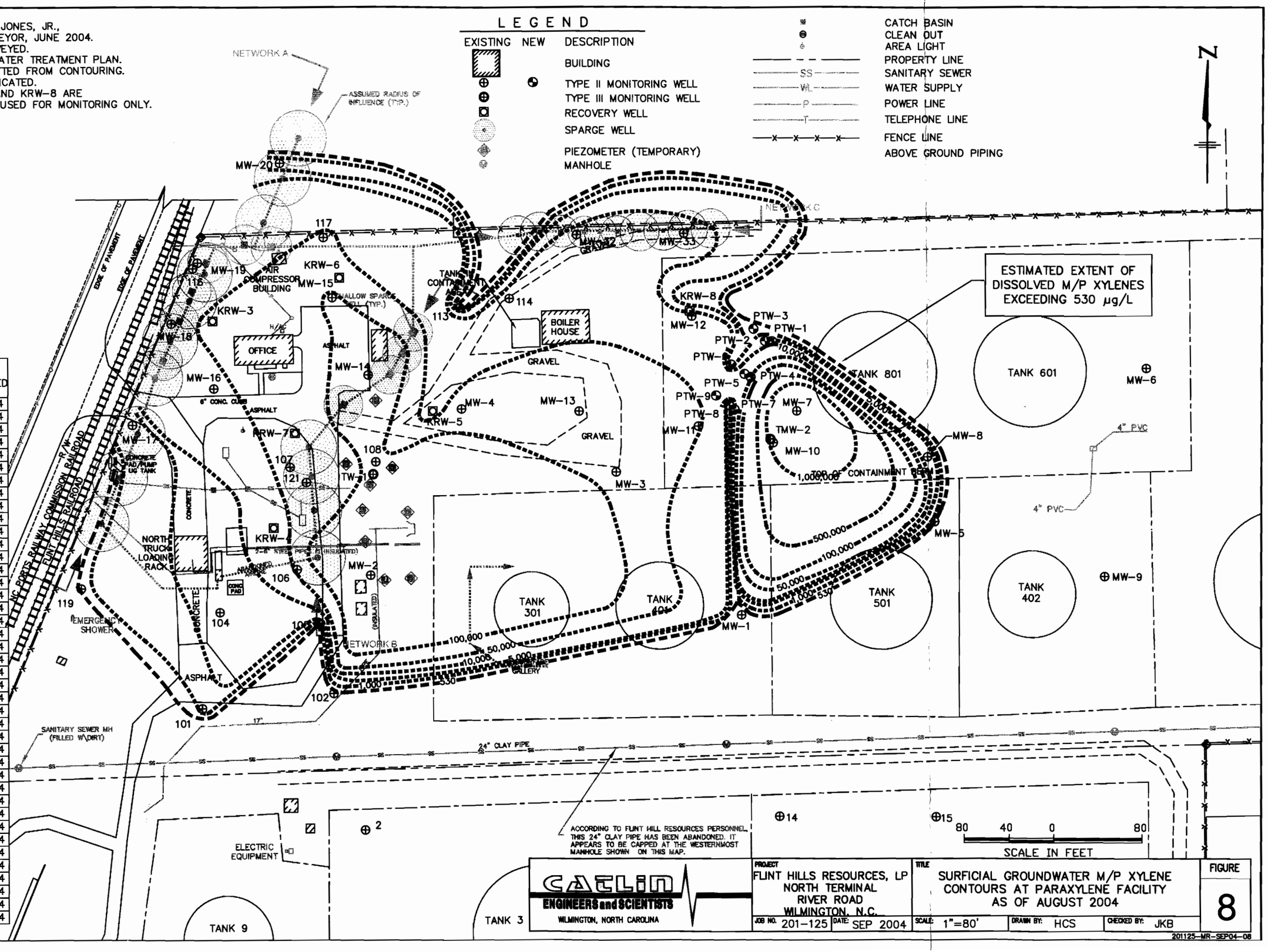
TITLE: DISSOLVED OXYGEN LEVELS OF SELECTED MONITORING WELLS AS OF AUGUST 2004

FIGURE 7

JOB NO. 201-125 | DATE: SEP 2004 | SCALE: 1"=80' | DRAWN BY: HCS | CHECKED BY: JKB

201125-MR-SEP04-07

NOTE:
1. MAP PROVIDED BY BOB M. JONES, JR., PROFESSIONAL LAND SURVEYOR, JUNE 2004.
2. PROPERTY LINES NOT SURVEYED.
3. FTWP – FACILITY WASTE WATER TREATMENT PLAN.
4. RECOVERY WELL DATA OMITTED FROM CONTOURING.
5. CONTOUR INTERVAL AS INDICATED.
6. RECOVERY WELLS KRW–7 AND KRW–8 ARE CURRENTLY INACTIVE AND USED FOR MONITORING ONLY.



WELL ID	M/P XYLENES (µg/L)	DATE SAMPLED
MW–1	<1.0	8/4/04
MW–2	360,000	8/4/04
MW–3	89,000	8/4/04
MW–4	80,000	8/4/04
MW–5	390	8/4/04
MW–7	3,100,000	8/4/04
MW–8	5,800	8/4/04
MW–11	53,000	8/4/04
MW–12	35,000	8/4/04
MW–13	13,000	8/4/04
MW–14	190,000	8/4/04
MW–15	110,000	8/4/04
MW–17	2,100	8/4/04
MW–20	3,200	8/3/04
MW–28	30	8/3/04
MW–32	14,000	8/4/04
MW–33	13,000	8/4/04
101	2,200	8/4/04
102	35	8/4/04
105	26	8/4/04
106	46,000	8/4/04
107	66,000	8/4/04
108	120,000	8/4/04
113	<1.0	8/4/04
117	57,000	8/4/04
119	590	8/4/04
KRW–3	58,000	8/4/04
KRW–4	13,000	8/4/04
KRW–5	180,000	8/4/04
KRW–6	92,000	8/4/04
KRW–7	63,000	8/4/04
KRW–8	14,000	8/4/04
PTW–1	2,800	8/6/04
PTW–2	7,400	8/6/04
PTW–3	660	8/6/04
PTW–4	22,000	8/6/04
PTW–5	46,000	8/6/04
PTW–6	4,800	8/6/04
PTW–7	1,200	8/6/04
PTW–8	40,000	8/6/04
PTW–9	45,000	8/6/04

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

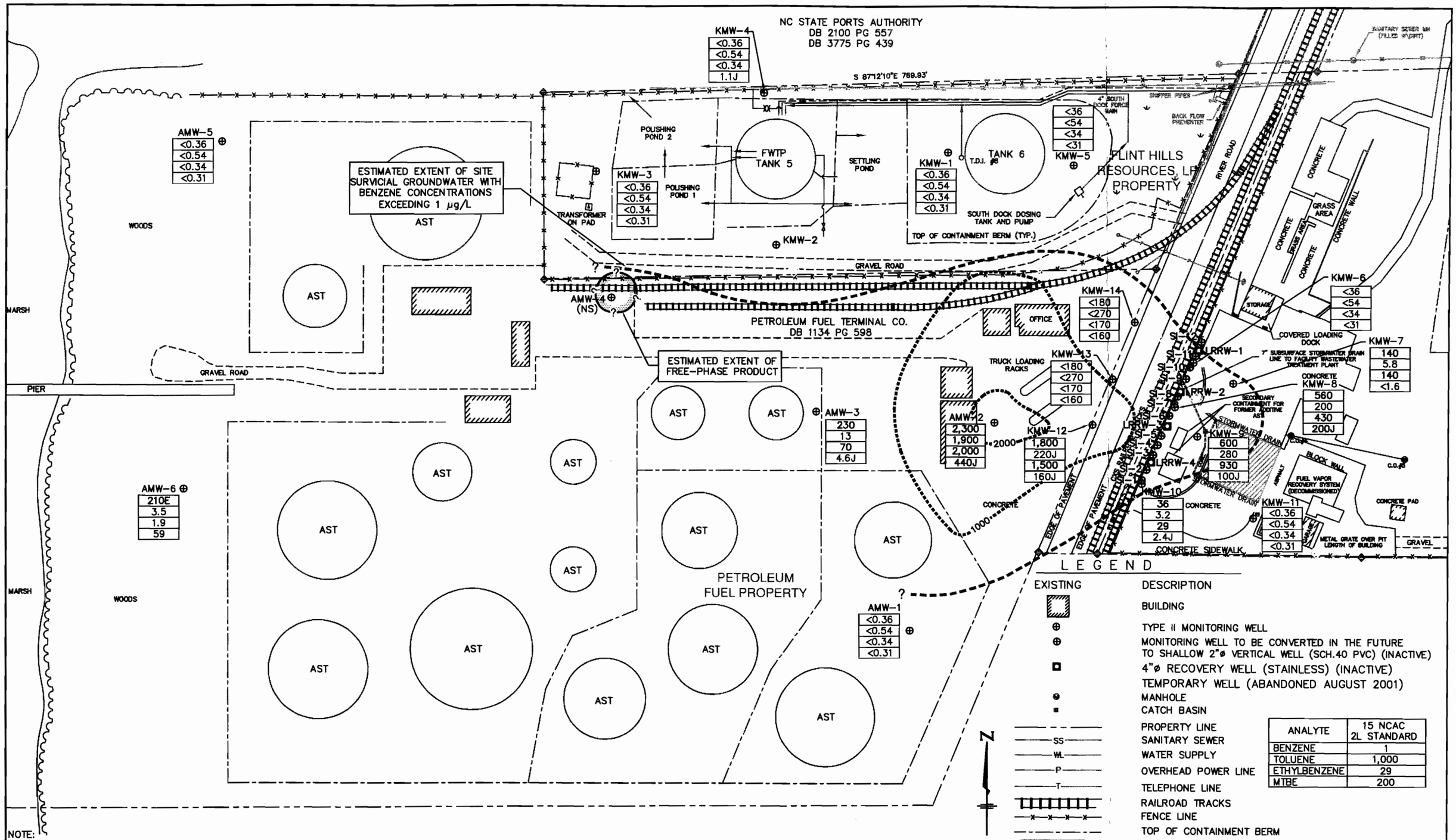
PROJECT: FLINT HILLS RESOURCES, LP
NORTH TERMINAL
RIVER ROAD
WILMINGTON, N.C.

TITLE: SURFICIAL GROUNDWATER M/P XYLENE CONTOURS AT PARAXYLENE FACILITY AS OF AUGUST 2004

FIGURE 8

JOB NO. 201–125 | DATE: SEP 2004 | SCALE: 1"=80' | DRAWN BY: HCS | CHECKED BY: JKB

201125–MR–SEP04–08



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

NOTE:
1. THE FHR PORTION OF THIS MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
2. PROPERTY LINES NOT SURVEYED.
3. PETROLEUM FUEL PROPERTY BASED ON AERIAL PHOTOGRAPHS.
4. AST – ABOVE GROUND STORAGE TANK.
5. FWTP – FACILITY WASTE WATER TREATMENT PLAN.
6. SHADED CONCENTRATIONS EXCEED CORRESPONDING STANDARD.
7. J = ESTIMATED CONCENTRATION.
8. E = RESULT EXCEEDED CALIBRATION RANGE OF THE INSTRUMENT.
9. ALL RESULTS µg/L.

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

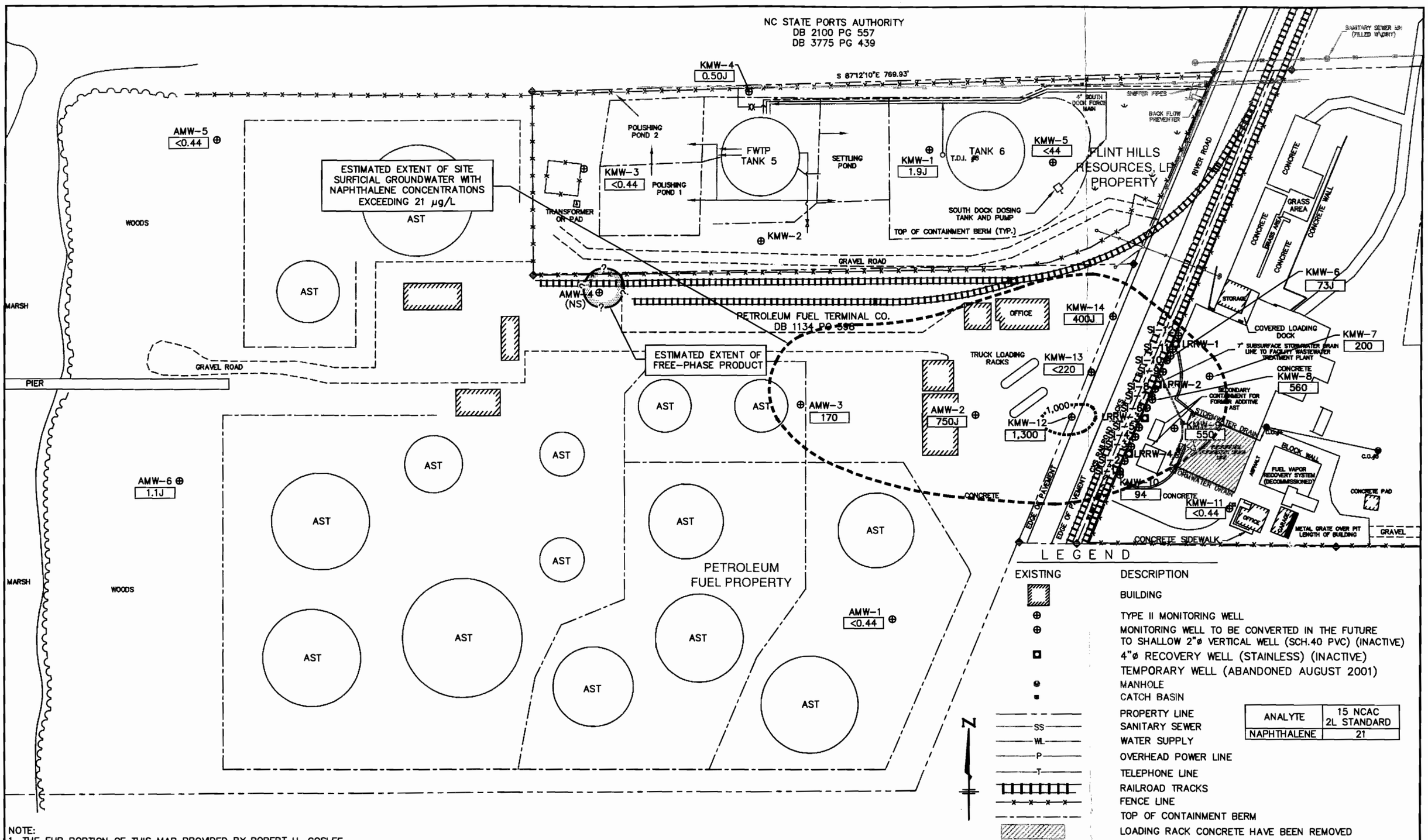
PROJECT: FLINT HILLS RESOURCES, LP
NORTH TERMINAL
RIVER ROAD
WILMINGTON, N.C.

TITLE: SURFICIAL GROUNDWATER BTE AND MTBE DATA AT LOADING RACK AREA AS OF AUGUST 2004

FIGURE 9

JOB NO. 201-125 | DATE: SEP 2004 | SCALE: 1"=100' | DRAWN BY: HCS | CHECKED BY: JKB

201125-MR-SEP04-09



ANALYTE	15 NCAC 2L STANDARD
NAPHTHALENE	21

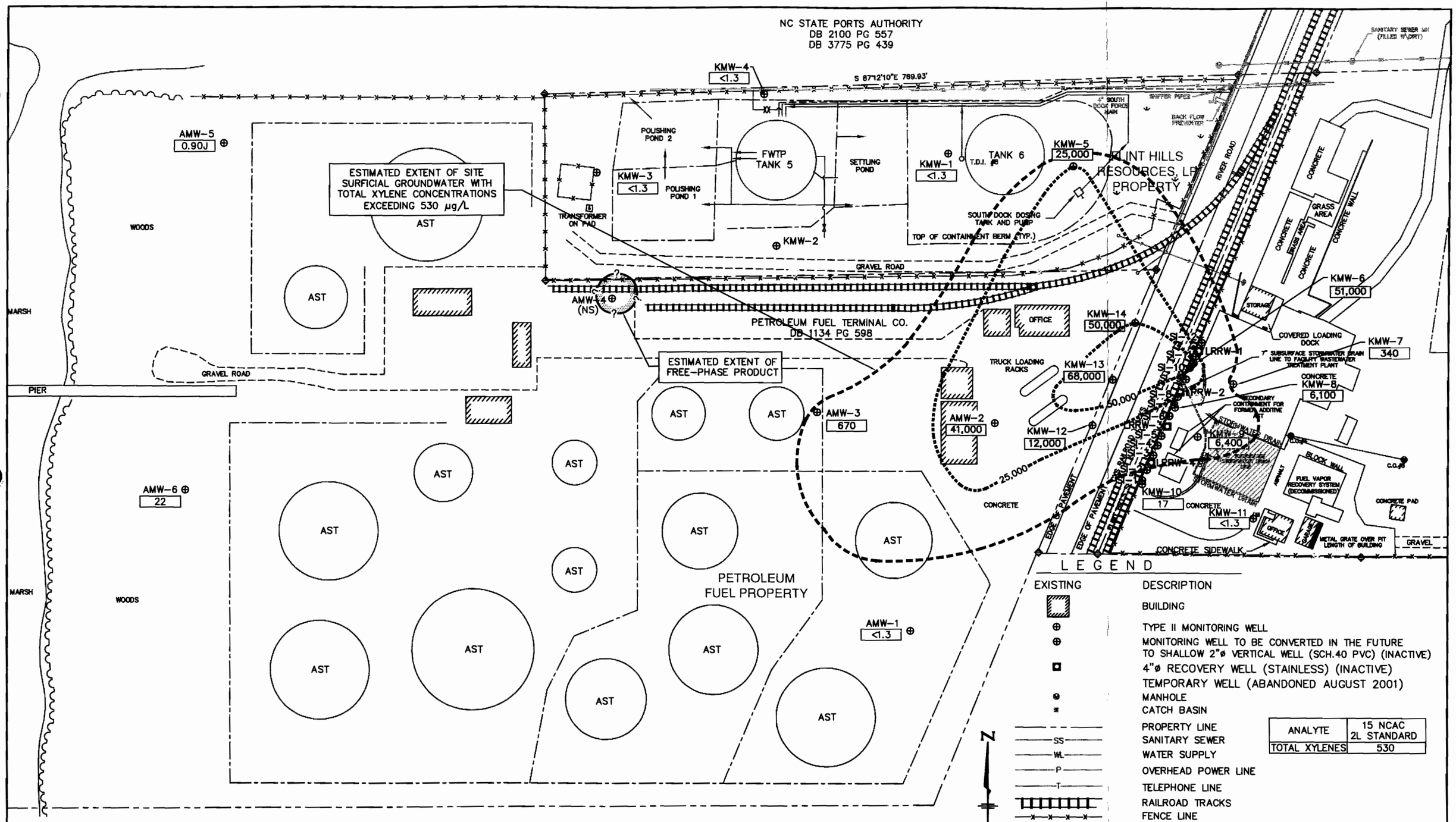
NOTE:
1. THE FHR PORTION OF THIS MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
2. PROPERTY LINES NOT SURVEYED.
3. PETROLEUM FUEL PROPERTY BASED ON AERIAL PHOTOGRAPHS.
4. AST – ABOVE GROUND STORAGE TANK.
5. FWTP – FACILITY WASTE WATER TREATMENT PLAN.
6. SHADED CONCENTRATIONS EXCEED 2L STANDARD OF 21 µg/L.
7. J = ESTIMATED CONCENTRATION.
8. ALL RESULTS IN µg/L.

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 AUGUST 2004	10

JOB NO. 201-125 | DATE: SEP 2004 | SCALE: 1"=100' | DRAWN BY: HCS | CHECKED BY: JKB

201125-MR-SEP04-10



ANALYTE	15 NCAC 2L STANDARD
TOTAL XYLENES	530

NOTE:
1. THE FHR PORTION OF THIS MAP PROVIDED BY ROBERT H. GOSLEE & ASSOCIATES, P.A. JULY 2004.
2. PROPERTY LINES NOT SURVEYED.
3. PETROLEUM FUEL PROPERTY BASED ON AERIAL PHOTOGRAPHS.
4. AST – ABOVE GROUND STORAGE TANK.
5. FWTP – FACILITY WASTE WATER TREATMENT PLAN.
6. SHADED CONCENTRATIONS EXCEED 2L STANDARD OF 530 µg/L.
7. J = ESTIMATED CONCENTRATION.
8. CONTOUR INTERVAL = 25,000 µg/L.
9. ALL RESULTS IN µg/L.

CATLIN ENGINEERS and SCIENTISTS
WILMINGTON, NORTH CAROLINA

PROJECT	TITLE	FIGURE
FLINT HILLS RESOURCES, LP NORTH TERMINAL RIVER ROAD WILMINGTON, N.C.	SURFICIAL GROUNDWATER TOTAL XYLENES DATA AT LOADING RACK AREA AS OF AUGUST 2004	11

JOB NO. 201-125 | DATE: SEP 2004 | SCALE: 1"=100' | DRAWN BY: HCS | CHECKED BY: JKB

201125-MR-SEP04-11

APPENDIX A

ANALYTICAL LABORATORY REPORTS AND CHAIN-OF-CUSTODY RECORDS

SEVERN TRENT STL

Report to: Mr. Jeff Becken
Catlin Engineers & Scientists
220 Old Dairy Road
Wilmington, NC 28405

STL Log #: S447134
Client Project #: 201-125
Client Project Description: FHR North Terminal
Report Date: 08-19-04

REVISED
8-25-04

Angie Weimerskirk, Project Manager

STL Savannah
5102 LaRoche Ave
Savannah, Ga 31404

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*1
Sample ID : MW-20
Matrix : LI
Percent Solids :

Sampled : 08-03-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0811A	08-12-04	08-12-04	EC	3200		ug/l	500	500	160
Methyl t-butyl ether (MTBE)	602	1B0811A	08-12-04	08-12-04	EC	200	<	ug/l	500	5000	140
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0811A*	*08-12-04*	*08-12-04*	*EC*	*97*		*%*	*500*		

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*2
Sample ID : MW-28
Matrix : LI
Percent Solids :

Sampled : 08-03-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-12-04	08-12-04	EC	30		ug/l	5.0	5.0	1.6
Methyl t-butyl ether (MTBE)	602	1B0812A	08-12-04	08-12-04	EC	50	<	ug/l	5.0	50	1.4
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-12-04*	*08-12-04*	*EC*	*93*		*%*	*5.0*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*3
Sample ID : 117
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0811A	08-12-04	08-12-04	EC	57000		ug/l	2500	2500	780
Methyl t-butyl ether (MTBE)	602	1B0811A	08-12-04	08-12-04	EC	200	<	ug/l	2500	25000	700
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0811A*	*08-12-04*	*08-12-04*	*EC*	*103*		*%*	*2500*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*4
Sample ID : MW-15
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0811A	08-12-04	08-12-04	EC	110000		ug/l	2500	2500	780
Methyl t-butyl ether (MTBE)	602	1B0811A	08-12-04	08-12-04	EC	200	<	ug/l	2500	25000	700
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0811A*	*08-12-04*	*08-12-04*	*EC*	*100*		*%*	*2500*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*5
Sample ID : KRW-6
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0813A	08-14-04	08-14-04	EC	92000		ug/l	2000	2000	620
Methyl t-butyl ether (MTBE)	602	1B0813A	08-14-04	08-14-04	EC	200	<	ug/l	2000	20000	560
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0813A*	*08-14-04*	*08-14-04*	*EC*	*103*		*%*	*2000*		

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*6
Sample ID : KRW-3
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-12-04	08-12-04	EC	58000		ug/l	1000	1000	310
Methyl t-butyl ether (MTBE)	602	1B0812A	08-12-04	08-12-04	EC	200	<	ug/l	1000	10000	280
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-12-04*	*08-12-04*	*EC*	*97*		*%*	*1000*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*7
Sample ID : KRW-7
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-12-04	08-12-04	EC	63000		ug/l	1000	1000	310
Methyl t-butyl ether (MTBE)	602	1B0812A	08-12-04	08-12-04	EC	200	<	ug/l	1000	10000	280
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-12-04*	*08-12-04*	*EC*	*100*		*%*	*1000*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*8
Sample ID : 119
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-12-04	08-12-04	EC	590		ug/l	20	20	6.2
Methyl t-butyl ether (MTBE)	602	1B0812A	08-12-04	08-12-04	EC	280		ug/l	20	200	5.6
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-12-04*	*08-12-04*	*EC*	*97*		*%*	*20*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*9
Sample ID : MW-17
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-12-04	08-12-04	EC	2100		ug/l	200	200	62
Methyl t-butyl ether (MTBE)	602	1B0812A	08-12-04	08-12-04	EC	200	<	ug/l	200	2000	56
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-12-04*	*08-12-04*	*EC*	*93*		*%*	*200*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*10
Sample ID : 101
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-12-04	08-12-04	EC	2200		ug/l	250	250	78
Methyl t-butyl ether (MTBE)	602	1B0812A	08-12-04	08-12-04	EC	920		ug/l	250	2500	70
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-12-04*	*08-12-04*	*EC*	*90*		*%*	*250*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*11
Sample ID : MW-2
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0813A	08-14-04	08-14-04	EC	360000		ug/l	5000	5000	1600
Methyl t-butyl ether (MTBE)	602	1B0813A	08-14-04	08-14-04	EC	200	<	ug/l	5000	50000	1400
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0813A*	*08-14-04*	*08-14-04*	*EC*	*97*		*%*	*5000*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*12
Sample ID : 102
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0813A	08-14-04	08-14-04	EC	35		ug/l	10	10	3.1
Methyl t-butyl ether (MTBE)	602	1B0813A	08-14-04	08-14-04	EC	100	<	ug/l	10	100	2.8
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0813A*	*08-14-04*	*08-14-04*	*EC*	*100*		*%*	*10*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*13
Sample ID : KRW-4
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-12-04	08-12-04	EC	13000		ug/l	500	500	160
Methyl t-butyl ether (MTBE)	602	1B0812A	08-12-04	08-12-04	EC	670		ug/l	500	5000	140
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-12-04*	*08-12-04*	*EC*	*97*		*%*	*500*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*14
Sample ID : KRW-5
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0813A	08-14-04	08-14-04	EC	180000		ug/l	4000	4000	1200
Methyl t-butyl ether (MTBE)	602	1B0813A	08-14-04	08-14-04	EC	200	<	ug/l	4000	40000	1100
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0813A*	*08-14-04*	*08-14-04*	*EC*	*100*		*%*	*4000*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*15
Sample ID : 105
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-17-04	08-17-04	EC	26		ug/l	1.0	1.0	0.31
Methyl t-butyl ether (MTBE)	602	1B0816A	08-17-04	08-17-04	EC	20		ug/l	1.0	10	0.28
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0816A*	*08-17-04*	*08-17-04*	*EC*	*100*		*%*	*1.0*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*16
Sample ID : MW-4
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-13-04	08-13-04	EC	80000		ug/l	1000	1000	310
Methyl t-butyl ether (MTBE)	602	1B0812A	08-13-04	08-13-04	EC	200	<	ug/l	1000	10000	280
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-13-04*	*08-13-04*	*EC*	*103*		*%*	*1000*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*17
Sample ID : 106
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-13-04	08-13-04	EC	46000		ug/l	2500	2500	780
Methyl t-butyl ether (MTBE)	602	1B0812A	08-13-04	08-13-04	EC	200	<	ug/l	2500	25000	700
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-13-04*	*08-13-04*	*EC*	*103*		*%*	*2500*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*18
Sample ID : MW-13
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0813A	08-14-04	08-14-04	EC	13000		ug/l	250	250	78
Methyl t-butyl ether (MTBE)	602	1B0813A	08-14-04	08-14-04	EC	200	<	ug/l	250	2500	70
Surrogate -											
a,a,a-Trifluorotoluene *	*602*	*1B0813A*	*08-14-04*	*08-14-04*	*EC*	*97*		*%*	*250*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*19
Sample ID : MW-3
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-13-04	08-13-04	EC	89000		ug/l	4000	4000	1200
Methyl t-butyl ether (MTBE)	602	1B0812A	08-13-04	08-13-04	EC	200	<	ug/l	4000	40000	1100
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-13-04*	*08-13-04*	*EC*	*97*		*%*	*4000*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*20
Sample ID : 107
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0813A	08-13-04	08-13-04	EC	66000		ug/l	1000	1000	310
Methyl t-butyl ether (MTBE)	602	1B0813A	08-13-04	08-13-04	EC	200	<	ug/l	1000	10000	280
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0813A*	*08-13-04*	*08-13-04*	*EC*	*103*		*%*	*1000*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*21
Sample ID : MW-11
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-13-04	08-13-04	EC	53000		ug/l	1000	1000	310
Methyl t-butyl ether (MTBE)	602	1B0812A	08-13-04	08-13-04	EC	200	<	ug/l	1000	10000	280
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-13-04*	*08-13-04*	*EC*	*100*		*%*	*1000*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*22
Sample ID : MW-14
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-13-04	08-13-04	EC	190000		ug/l	4000	4000	1200
Methyl t-butyl ether (MTBE)	602	1B0812A	08-13-04	08-13-04	EC	200	<	ug/l	4000	40000	1100
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-13-04*	*08-13-04*	*EC*	*103*		*%*	*4000*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*23
Sample ID : MW-1
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-13-04	08-13-04	EC	1.0	<	ug/l	1.0	1.0	0.31
Methyl t-butyl ether (MTBE)	602	1B0812A	08-13-04	08-13-04	EC	10	<	ug/l	1.0	10	0.28
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-13-04*	*08-13-04*	*EC*	*103*		*%*	*1.0*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*24
Sample ID : 108
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-13-04	08-13-04	EC	120000		ug/l	4000	4000	1200
Methyl t-butyl ether (MTBE)	602	1B0812A	08-13-04	08-13-04	EC	200	<	ug/l	4000	40000	1100
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-13-04*	*08-13-04*	*EC*	*97*		*%*	*4000*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*25
Sample ID : MW-5
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-13-04	08-13-04	EC	390		ug/l	50	50	16
Methyl t-butyl ether (MTBE)	602	1B0812A	08-13-04	08-13-04	EC	200	<	ug/l	50	500	14
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-13-04*	*08-13-04*	*EC*	*100*		*%*	*50*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*26
Sample ID : 113
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-13-04	08-13-04	EC	1.0	<	ug/l	1.0	1.0	0.31
Methyl t-butyl ether (MTBE)	602	1B0812A	08-13-04	08-13-04	EC	10	<	ug/l	1.0	10	0.28
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-13-04*	*08-13-04*	*EC*	*100*		*%*	*1.0*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*27
Sample ID : MW-8
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-13-04	08-13-04	EC	5800		ug/l	100	100	31
Methyl t-butyl ether (MTBE)	602	1B0812A	08-13-04	08-13-04	EC	200	<	ug/l	100	1000	28
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0812A*	*08-13-04*	*08-13-04*	*EC*	*97*		*%*	*100*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*28
Sample ID : MW-7
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0813A	08-13-04	08-13-04	EC	3100000		ug/l	50000	50000	16000
Methyl t-butyl ether (MTBE)	602	1B0813A	08-13-04	08-13-04	EC	200	<	ug/l	50000	50000	14000
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0813A*	*08-13-04*	*08-13-04*	*EC*	*97*		*%*	*50000*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*29
Sample ID : MW-32
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-17-04	08-17-04	EC	14000		ug/l	250	250	78
Methyl t-butyl ether (MTBE)	602	1B0816A	08-17-04	08-17-04	EC	200	<	ug/l	250	2500	70
Surrogate -											
a,a,a-Trifluorotoluene *	*602*	*1B0816A*	*08-17-04*	*08-17-04*	*EC*	*93*		*%*	*250*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*30
Sample ID : KRW-8
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-17-04	08-17-04	EC	14000		ug/l	500	500	160
Methyl t-butyl ether (MTBE)	602	1B0816A	08-17-04	08-17-04	EC	200	<	ug/l	500	5000	140
Surrogate -											
a,a,a-Trifluorotoluene *	*602*	*1B0816A*	*08-17-04*	*08-17-04*	*EC*	*93*		*%*	*500*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*31
Sample ID : MW-33
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-17-04	08-17-04	EC	13000		ug/l	200	200	62
Methyl t-butyl ether (MTBE)	602	1B0816A	08-17-04	08-17-04	EC	200	<	ug/l	200	2000	56
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0816A*	*08-17-04*	*08-17-04*	*EC*	*97*		*%*	*200*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*32
Sample ID : MW-12
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0813A	08-13-04	08-13-04	EC	35000		ug/l	1000	1000	310
Methyl t-butyl ether (MTBE)	602	1B0813A	08-13-04	08-13-04	EC	200	<	ug/l	1000	10000	280
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0813A*	*08-13-04*	*08-13-04*	*EC*	*103*		*%*	*1000*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*37
Sample ID : Trip Blank
Matrix : LI
Percent Solids :

Sampled : 08-04-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-17-04	08-17-04	EC	1.0	<	ug/l	1.0	1.0	0.31
Methyl t-butyl ether (MTBE)	602	1B0816A	08-17-04	08-17-04	EC	10	<	ug/l	1.0	10	0.28
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0816A*	*08-17-04*	*08-17-04*	*EC*	*100*		*%*	*1.0*		

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*33
Sample ID : Method Blank
Matrix : LI
Percent Solids :

Sampled :
Received:

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0811A	08-11-04	08-11-04	EC	1.0	<	ug/l	1.0	1.0	0.31
Methyl t-butyl ether (MTBE)	602	1B0811A	08-11-04	08-11-04	EC	10	<	ug/l	1.0	10	0.28
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0811A*	*08-11-04*	*08-11-04*	*EC*	*100*		*%*	*1.0*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*38
Sample ID : Method Blank
Matrix : LI
Percent Solids :

Sampled :
Received:

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0812A	08-12-04	08-12-04	EC	1.0	<	ug/l	1.0	1.0	0.31
Methyl t-butyl ether (MTBE)	602	1B0812A	08-12-04	08-12-04	EC	10	<	ug/l	1.0	10	0.28
Surrogate -											
a,a,a-Trifluorotoluene *	*602*	*1B0812A*	*08-12-04*	*08-12-04*	*EC*	*97*		*%*	*1.0*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*41
Sample ID : Method Blank
Matrix : LI
Percent Solids :

Sampled :
Received:

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0813A	08-13-04	08-13-04	EC	1.0	<	ug/l	1.0	1.0	0.31
Methyl t-butyl ether (MTBE)	602	1B0813A	08-13-04	08-13-04	EC	10	<	ug/l	1.0	10	0.28
Surrogate -											
a,a,a-Trifluorotoluene *	*602*	*1B0813A*	*08-13-04*	*08-13-04*	*EC*	*97*		*%*	*1.0*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*44
Sample ID : Method Blank
Matrix : LI
Percent Solids :

Sampled :
Received:

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-16-04	08-16-04	EC	1.0	<	ug/l	1.0	1.0	0.31
Methyl t-butyl ether (MTBE)	602	1B0816A	08-16-04	08-16-04	EC	10	<	ug/l	1.0	10	0.28
Surrogate -											
a,a,a-Trifluorotoluene *	*602*	*1B0816A*	*08-16-04*	*08-16-04*	*EC*	*100*		*%*	*1.0*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*34
Sample ID : Lab Control Standard Result
Matrix : LI Sampled :
Percent Solids : Received:

LCS RESULTS SUMMARY REPORT

Parameter	Method	Batch	Spike Result	Expected Value	Units	Spike % Recovery	Accuracy Limit
mp-Xylene	602	1B0811A	38	40	ug/l	95	54-125
Methyl t-butyl ether (MTBE)	602	1B0811A	20	20	ug/l	100	40-140
Surrogate -							
a,a,a-Trifluorotoluene *	602	1B0811A	30	30	ug/l	100	69-124

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*39
Sample ID : Lab Control Standard Result
Matrix : LI Sampled :
Percent Solids : Received:

LCS RESULTS SUMMARY REPORT

Parameter	Method	Batch	Spike Result	Expected Value	Units	Spike % Recovery	Accuracy Limit
mp-Xylene	602	1B0812A	42	40	ug/l	105	54-125
Methyl t-butyl ether (MTBE)	602	1B0812A	22	20	ug/l	110	40-140
Surrogate -							
a,a,a-Trifluorotoluene *	602	1B0812A	32	30	ug/l	107	69-124

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*42
Sample ID : Lab Control Standard Result
Matrix : LI Sampled :
Percent Solids : Received:

LCS RESULTS SUMMARY REPORT

Parameter	Method	Batch	Spike Result	Expected Value	Units	Spike % Recovery	Accuracy Limit
mp-Xylene	602	1B0813A	40	40	ug/l	100	54-125
Methyl t-butyl ether (MTBE)	602	1B0813A	19	20	ug/l	95	40-140
Surrogate -							
a,a,a-Trifluorotoluene *	602	1B0813A	32	30	ug/l	107	69-124

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447134*45
Sample ID : Lab Control Standard Result
Matrix : LI Sampled :
Percent Solids : Received:

LCS RESULTS SUMMARY REPORT

Parameter	Method	Batch	Spike Result	Expected Value	Units	Spike % Recovery	Accuracy Limit
mp-Xylene	602	1B0816A	44	40	ug/l	110	54-125
Methyl t-butyl ether (MTBE)	602	1B0816A	23	20	ug/l	115	40-140
Surrogate -							
a,a,a-Trifluorotoluene *	602	1B0816A	32	30	ug/l	107	69-124

SEVERN TRENT STL

Report to: Mr. Jeff Becken
Catlin Engineers & Scientists
220 Old Dairy Road
Wilmington, NC 28405

STL Log #: S447240
Client Project #: 201-125
Client Project Description: FHR North Terminal
Report Date: 08-31-04

Angie Weimerskirk, Project Manager

STL Savannah
5102 LaRoche Ave
Savannah, Ga 31404

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*1
Sample ID : PTW-1
Matrix : LI
Percent Solids :

Sampled : 08-06-2004
Received: 08-10-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0818A	08-19-04	08-19-04	EC	2800		ug/l	400	400	120
Methyl t-butyl ether (MTBE)	602	1B0818A	08-19-04	08-19-04	EC	240	J	ug/l	400	4000	110
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0818A*	*08-19-04*	*08-19-04*	*EC*	*93*		*%*	*400*		
Sodium	6010	0811K	08-11-04	08-11-04	BR	1.2		mg/l	1	0.50	0.18

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*2
Sample ID : PTW-2
Matrix : LI
Percent Solids :

Sampled : 08-06-2004
Received: 08-10-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0818A	08-19-04	08-19-04	EC	7400		ug/l	1000	1000	310
Methyl t-butyl ether (MTBE)	602	1B0818A	08-19-04	08-19-04	EC	280	<	ug/l	1000	10000	280
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0818A*	*08-19-04*	*08-19-04*	*EC*	*90*		*%*	*1000*		
Sodium	6010	0811K	08-11-04	08-11-04	BR	2.1		mg/l	1	0.50	0.18

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*3
Sample ID : PTW-3
Matrix : LI
Percent Solids :

Sampled : 08-06-2004
Received: 08-10-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0818A	08-19-04	08-19-04	EC	660		ug/l	20	20	6.2
Methyl t-butyl ether (MTBE)	602	1B0818A	08-19-04	08-19-04	EC	8.8	J	ug/l	20	200	5.6
Surrogate -											
a,a,a-Trifluorotoluene *	*602*	*1B0818A*	*08-19-04*	*08-19-04*	*EC*	*93*		*%*	*20*		
Sodium	6010	0811K	08-11-04	08-11-04	BR	1.4		mg/l	1	0.50	0.18

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*4
Sample ID : PTW-4
Matrix : LI
Percent Solids :

Sampled : 08-06-2004
Received: 08-10-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-17-04	08-17-04	EC	22000		ug/l	500	500	160
Methyl t-butyl ether (MTBE)	602	1B0816A	08-17-04	08-17-04	EC	140	<	ug/l	500	5000	140
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0816A*	*08-17-04*	*08-17-04*	*EC*	*93*		*%*	*500*		
Sodium	6010	0811K	08-11-04	08-11-04	BR	3.3		mg/l	1	0.50	0.18

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*5
Sample ID : PTW-5
Matrix : LI
Percent Solids :

Sampled : 08-06-2004
Received: 08-10-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-17-04	08-17-04	EC	46000		ug/l	5000	5000	1600
Methyl t-butyl ether (MTBE)	602	1B0816A	08-17-04	08-17-04	EC	1400	<	ug/l	5000	50000	1400
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0816A*	*08-17-04*	*08-17-04*	*EC*	*100*		*%*	*5000*		
Sodium	6010	0811K	08-11-04	08-11-04	BR	4.6		mg/l	1	0.50	0.18

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*6
Sample ID : PTW-6
Matrix : LI
Percent Solids :

Sampled : 08-06-2004
Received: 08-10-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0818A	08-19-04	08-19-04	EC	4800		ug/l	400	400	120
Methyl t-butyl ether (MTBE)	602	1B0818A	08-19-04	08-19-04	EC	110	<	ug/l	400	4000	110
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0818A*	*08-19-04*	*08-19-04*	*EC*	*93*		*%*	*400*		
Sodium	6010	0811K	08-11-04	08-11-04	BR	14		mg/l	1	0.50	0.18

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*7
Sample ID : PTW-7
Matrix : LI
Percent Solids :

Sampled : 08-06-2004
Received: 08-10-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0820A	08-20-04	08-20-04	EC	1200		ug/l	50	50	16
Methyl t-butyl ether (MTBE)	602	1B0820A	08-20-04	08-20-04	EC	120	J	ug/l	50	500	14
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0820A*	*08-20-04*	*08-20-04*	*EC*	*97*		*%*	*50*		
Sodium	6010	0811K	08-11-04	08-11-04	BR	2.0		mg/l	1	0.50	0.18

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*8
Sample ID : PTW-8
Matrix : LI
Percent Solids :

Sampled : 08-06-2004
Received: 08-10-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-17-04	08-17-04	EC	40000		ug/l	2000	2000	620
Methyl t-butyl ether (MTBE)	602	1B0816A	08-17-04	08-17-04	EC	560	<	ug/l	2000	20000	560
Surrogate -											
a,a,a-Trifluorotoluene *	*602*	*1B0816A*	*08-17-04*	*08-17-04*	*EC*	*97*		*%*	*2000*		
Sodium	6010	0811K	08-11-04	08-11-04	BR	3.2		mg/l	1	0.50	0.18

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*9
Sample ID : PTW-9
Matrix : LI
Percent Solids :

Sampled : 08-06-2004
Received: 08-10-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-17-04	08-17-04	EC	45000		ug/l	2000	2000	620
Methyl t-butyl ether (MTBE)	602	1B0816A	08-17-04	08-17-04	EC	560	<	ug/l	2000	20000	560
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0816A*	*08-17-04*	*08-17-04*	*EC*	*100*		*%*	*2000*		
Sodium	6010	0811K	08-11-04	08-11-04	BR	2.7		mg/l	1	0.50	0.18

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*10
Sample ID : MW-7
Matrix : LI
Percent Solids :

Sampled : 08-06-2004
Received: 08-10-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-17-04	08-17-04	EC	110000		ug/l	5000	5000	1600
Methyl t-butyl ether (MTBE)	602	1B0816A	08-17-04	08-17-04	EC	1400	<	ug/l	5000	50000	1400
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0816A*	*08-17-04*	*08-17-04*	*EC*	*97*		*%*	*5000*		
Sodium	6010	0811K	08-11-04	08-11-04	BR	1.2		mg/l	1	0.50	0.18

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*11
Sample ID : Trip Blank
Matrix : LI
Percent Solids :

Sampled : 08-06-2004
Received: 08-10-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-17-04	08-17-04	EC	1.0	<	ug/l	1.0	1.0	0.31
Methyl t-butyl ether (MTBE)	602	1B0816A	08-17-04	08-17-04	EC	10	<	ug/l	1.0	10	0.28
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0816A*	*08-17-04*	*08-17-04*	*EC*	*97*		*%*	*1.0*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*12
Sample ID : Method Blank
Matrix : LI
Percent Solids :

Sampled :
Received:

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0816A	08-16-04	08-16-04	EC	1.0	<	ug/l	1.0	1.0	0.31
Methyl t-butyl ether (MTBE)	602	1B0816A	08-16-04	08-16-04	EC	10	<	ug/l	1.0	10	0.28
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0816A*	*08-16-04*	*08-16-04*	*EC*	*100*		*%*	*1.0*		
Sodium	6010	0811K	08-11-04	08-11-04	BR	0.50	<	mg/l	1	0.50	0.18

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*16
Sample ID : Method Blank
Matrix : LI
Percent Solids :

Sampled :
Received:

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0818A	08-18-04	08-18-04	EC	1.0	<	ug/l	1.0	1.0	0.31
Methyl t-butyl ether (MTBE)	602	1B0818A	08-18-04	08-18-04	EC	10	<	ug/l	1.0	10	0.28
Surrogate -											
*a,a,a-Trifluorotoluene **	*602*	*1B0818A*	*08-18-04*	*08-18-04*	*EC*	*93*		*%*	*1.0*		

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*19
Sample ID : Method Blank
Matrix : LI
Percent Solids :

Sampled :
Received:

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
mp-Xylene	602	1B0820A	08-20-04	08-20-04	EC	1.0	<	ug/l	1.0	1.0	0.31
Methyl t-butyl ether (MTBE)	602	1B0820A	08-20-04	08-20-04	EC	10	<	ug/l	1.0	10	0.28
Surrogate -											
a,a,a-Trifluorotoluene *	*602*	*1B0820A*	*08-20-04*	*08-20-04*	*EC*	*90*		*%*	*1.0*		

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*13
Sample ID : Lab Control Standard Result
Matrix : LI
Percent Solids :

Sampled :
Received:

LCS RESULTS SUMMARY REPORT

Parameter	Method	Batch	Spike Result	Expected Value	Units	Spike % Recovery	Accuracy Limit
mp-Xylene	602	1B0816A	44	40	ug/l	110	54-125
Methyl t-butyl ether (MTBE)	602	1B0816A	23	20	ug/l	115	40-140
Surrogate -							
a,a,a-Trifluorotoluene *	602	1B0816A	32	30	ug/l	107	69-124
Sodium	6010	0811K	4.89	5.0	mg/l	98	75-125

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*17
Sample ID : Lab Control Standard Result
Matrix : LI
Percent Solids :

Sampled :
Received:

LCS RESULTS SUMMARY REPORT

Parameter	Method	Batch	Spike Result	Expected Value	Units	Spike % Recovery	Accuracy Limit
mp-Xylene	602	1B0818A	38	40	ug/l	95	54-125
Methyl t-butyl ether (MTBE)	602	1B0818A	19	20	ug/l	95	40-140
Surrogate -							
a,a,a-Trifluorotoluene *	602	1B0818A	29	30	ug/l	97	69-124

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal
Laboratory ID : S447240*20
Sample ID : Lab Control Standard Result
Matrix : LI Sampled :
Percent Solids : Received:

LCS RESULTS SUMMARY REPORT

Parameter	Method	Batch	Spike Result	Expected Value	Units	Spike % Recovery	Accuracy Limit
mp-Xylene	602	1B0820A	39	40	ug/l	98	54-125
Methyl t-butyl ether (MTBE)	602	1B0820A	19	20	ug/l	95	40-140
Surrogate -							
a,a,a-Trifluorotoluene *	602	1B0820A	30	30	ug/l	100	69-124

STL SAVANNAH

Data Qualifiers

Inorganic Data

B	The reported result is an estimated concentration that is less than the PQL, but greater than or equal to the MDL.
E	The reported value is an estimated because of the presence of matrix interference.
N	The matrix spike recovery is not within control limits. See case narrative.
S	The result was determined by Method of Standard Addition (MSA).
U	The compound was analyzed for, but was not detected at or above the MDL/PQL.
<	The compound was analyzed for, but was not detected at or above the PQL.
W	The post-digestion spike for furnace AA analysis was out of control limits, while sample absorbance was less than 50% of spike absorbance.
*	Duplicate analysis is not within control limits.

Organic Data

B	The analyte was found in the associated method blank.
D	The reported result is from a secondary dilution
*F33	Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.
E	The reported result exceeded the calibration range of the instrument.
J	The reported result is an estimated concentration that is less than the PQL, but greater than or equal to the MDL.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two GC columns or HPLC detectors.
U	The compound was analyzed for, but was not detected at or above the MDL/PQL.
<	The compound was analyzed for but was not detected at or above the PQL.
*F53	Because surrogate recoveries were outside established limits the sample was re-extracted and/or reanalyzed. Comparable results were obtained.
*F54	Because surrogate recoveries were outside established limits, the sample was re-extracted and/or reanalyzed. Both sets of data are provided.
*F36	Surrogate recovery was outside of established limits due to a coeluting matrix interference present in the sample.
X1	Internal standards recovered outside of advisory limits.
X	Surrogate recovery was outside of advisory limits.
Y	Spike recovery was outside of advisory limits.

Universal

*F61	The recoveries of the matrix spikes are outside advisory limits due to the abundance of the target analyte in the sample.
*F65	Elevated detection limits were reported due to sample matrix interference which required sample or extract dilution.
*F73	Matrix spike recoveries were outside advisory limits due to matrix interference present in the sample.
*F82	Insufficient sample volume was available to perform batch specific matrix spikes.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

STL

COOLER RECEIPT AND INSPECTION FORM

Log Number: 5447240

Number of Coolers Received: 1

Received By: H Thigpen

Date: 8/10/04

Project Manager: _____

Client: Catlin

Courier: ____ Fed EX X UPS ____ Client ____ Other

Cooler Temperature(s) Upon Receipt: 2.1

	YES	NO*
Is cooler temperature ≤6°C, with no frozen samples? NOTE: If >6°C and/or samples are frozen AND multiple coolers are received, list all samples associated with out-of-temp cooler(s).	✓	
Circle One: Did the samples arrive on wet ice, blue ice, no ice, or other? If other, then list:		
Are custody seals intact, if used? If no seals are used, then write NA in space provided:		
Did samples arrive in good condition with no breakage?	✓	
Circle One: Type of packing used is: vermiculite, bubble wrap, or other. If other, then list:		
Is there a COC?	✓	
Circle One: Is the COC an STL Savannah COC or a client COC?		
Is the COC filled out completely?	✓	
Is the COC filled out in ink and signed?	✓	
Are all sample containers labeled?	✓	
Are all sample labels legible?	✓	
Are all samples listed on COC included in cooler?	✓	
Are all samples included in cooler listed on COC?		✓
Do sample IDs on containers match sample IDs on COC?	✓	
Do containers contain sufficient volumes?	✓	

** All boxes checked 'NO' require PM notification and completion of next 2 sections.*

CUSTODY STAFF:

Describe all anomalous receipt situations in detail (attach additional sheets if necessary): The trip blank was not included on COC.

PM STAFF:

Client Contacted: ✓ YES ___ NO

Contact: Dimitri Talbert

Date: 8-10-04

Resolution: samples should be analyzed for m/p xylene + MTBE only

PM Signature: Angie Weinerchuk

FCU046:07.22.04:1

Serial Number 37139

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

SEVERN TRENT **STL**

STL Savannah
5102 LaRoche Avenue
Savannah, GA 31404

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

Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE: FMC North	PROJECT NO.: 201-125	PROJECT LOCATION (STATE): NC
STL (LAB) PROJECT MANAGER: Angie Wimerskirk	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Jeff K. Becker	CLIENT PHONE: 910-452-5861	CLIENT FAX: 910-452-7583
CLIENT NAME: Catlin Eng. & Sci	CLIENT E-MAIL: jeff.becker@catlinusa.com	
CLIENT ADDRESS: 220 Old Dairy Rd Wilmington, NC 28405		
COMPANY CONTRACTING THIS WORK (if applicable): Keiss		

PAGE 1 OF 1

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

REQUIRED ANALYSIS: 602+MPyrenes; Sodium

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT,...)	602+MPyrenes (HCL)	Sodium (Nitric Acid)	REMARKS
8-6-04	1035	PTW-1		X				4	1	
	1055	PTW-2		X				4	1	* Pilot test
	1115	PTW-3		X				4	1	day 80
	1130	PTW-4		X				4	1	sampling
	1140	PTW-5		X				4	1	
	1150	PTW-6		X				4	1	
	1205	PTW-7		X				4	1	
	1220	PTW-8		X				4	1	
	1235	PTW-9		X				4	1	
	1245	MW-7		X				4	1	

TEMP. 2.1

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
			[signature]	8-9-04	1400			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	STL SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	8/10/04	9:30	YES ○ NO ○		S447240	

STL8240-680 (12/02)

SEVERN TRENT STL

Report to: Mr. Jeff Becken
Catlin Engineers & Scientists
220 Old Dairy Road
Wilmington, NC 28405

STL Log #: S447161A
Client Project #: 201-125
Client Project Description: FHR North Terminal Loading Rack
Report Date: 09-08-04

REVISED
9/9/04

Angie Weimerskirk

Angie Weimerskirk, Project Manager

STL Savannah
5102 LaRoche Ave
Savannah, Ga 31404

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*1
Sample ID : KMW-7
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	2.0	<	ug/l	5	5.0	2.0
Bromomethane (Methyl bromide)	8260	1P0816C1	08-16-04	08-16-04	PC	3.1	<	ug/l	5	5.0	3.1
Vinyl chloride	8260	1P0816C1	08-16-04	08-16-04	PC	2.8	<	ug/l	5	5.0	2.8
Chloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	3.9	<	ug/l	5	5.0	3.9
Methylene chloride (Dichloromethane)	8260	1P0816C1	08-16-04	08-16-04	PC	3.2	<	ug/l	5	25	3.2
Acetone	8260	1P0816C1	08-16-04	08-16-04	PC	25	<	ug/l	5	120	25
Carbon disulfide	8260	1P0816C1	08-16-04	08-16-04	PC	3.3	<	ug/l	5	5.0	3.3
1,1-Dichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	1.8	<	ug/l	5	5.0	1.8
1,1-Dichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	1.8	<	ug/l	5	5.0	1.8
Cis/Trans-1,2-Dichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	5.5	<	ug/l	5	10	5.5
Chloroform	8260	1P0816C1	08-16-04	08-16-04	PC	1.8	<	ug/l	5	5.0	1.8
1,2-Dichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	1.3	<	ug/l	5	5.0	1.3
2-Butanone (MEK)	8260	1P0816C1	08-16-04	08-16-04	PC	6.5	<	ug/l	5	50	6.9
1,1,1-Trichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	1.6	<	ug/l	5	5.0	1.6
Carbon tetrachloride	8260	1P0816C1	08-16-04	08-16-04	PC	1.6	<	ug/l	5	5.0	1.6
Bromodichloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.70	<	ug/l	5	5.0	0.70
1,1,2,2-Tetrachloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.90	<	ug/l	5	5.0	0.90
1,2-Dichloropropane	8260	1P0816C1	08-16-04	08-16-04	PC	1.6	<	ug/l	5	5.0	1.6
trans-1,3-Dichloropropene	8260	1P0816C1	08-16-04	08-16-04	PC	1.3	<	ug/l	5	5.0	1.3
Trichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	1.8	<	ug/l	5	5.0	1.8
Dibromochloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	2.5	<	ug/l	5	5.0	2.5
1,1,2-Trichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	1.1	<	ug/l	5	5.0	1.1
Benzene	**8260**	**1P0816C1**	**08-16-04**	**08-16-04**	**PC**	**140**		**ug/l**	**5**	**5.0**	**1.8**
cis-1,3-Dichloropropene	8260	1P0816C1	08-16-04	08-16-04	PC	1.2	<	ug/l	5	5.0	1.2
Bromoform	8260	1P0816C1	08-16-04	08-16-04	PC	1.6	<	ug/l	5	5.0	1.6
2-Hexanone	8260	1P0816C1	08-16-04	08-16-04	PC	4.6	<	ug/l	5	50	4.6
4-Methyl-2-pentanone (MIBK)	8260	1P0816C1	08-16-04	08-16-04	PC	3.2	<	ug/l	5	50	3.2
Tetrachloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	1.8	<	ug/l	5	5.0	1.8
Toluene	**8260**	**1P0816C1**	**08-16-04**	**08-16-04**	**PC**	**5.8**		**ug/l**	**5**	**5.0**	**2.7**
Chlorobenzene	8260	1P0816C1	08-16-04	08-16-04	PC	1.7	<	ug/l	5	5.0	1.7
Ethylbenzene	**8260**	**1P0816C1**	**08-16-04**	**08-16-04**	**PC**	**140**		**ug/l**	**5**	**5.0**	**1.7**
Styrene	8260	1P0816C1	08-16-04	08-16-04	PC	1.2	<	ug/l	5	5.0	1.2
Xylenes, Total	**8260**	**1P0816C1**	**08-16-04**	**08-16-04**	**PC**	**340**		**ug/l**	**5**	**10**	**6.5**
Methyl t-butyl ether (MTBE)	8260	1P0816C1	08-16-04	08-16-04	PC	1.6	<	ug/l	5	50	1.6
Naphthalene	**8260**	**1P0816C1**	**08-16-04**	**08-16-04**	**PC**	**200**		**ug/l**	**5**	**25**	**2.2**
1,3,5-Trimethylbenzene	**8260**	**1P0816C1**	**08-16-04**	**08-16-04**	**PC**	**34**		**ug/l**	**5**	**5.0**	**1.0**
n-Butylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	1.6	<	ug/l	5	5.0	1.6

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*1
Sample ID : KMW-7
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	1.2	<	ug/l	5	5.0	1.2
Isopropylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	10		ug/l	5	5.0	1.2
n-Propylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	19		ug/l	5	5.0	1.6
1,2,4-Trimethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	150		ug/l	5	5.0	0.95
*Surrogate - Toluene-d8 **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*106*		*%*	*5*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*106*		*%*	*5*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*106*		*%*	*5*		
o-Xylene	8260	1P0816C1	08-16-04	08-16-04	PC	28			5	5.0	1.8
mp-Xylene	8260	1P0816C1	08-16-04	08-16-04	PC	330			5	5.0	2.0

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*2
Sample ID : KMW-11
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.39	<	ug/l	1	1.0	0.39
Bromomethane (Methyl bromide)	8260	1P0812C1	08-12-04	08-12-04	PC	0.62	<	ug/l	1	1.0	0.62
Vinyl chloride	8260	1P0812C1	08-12-04	08-12-04	PC	0.56	<	ug/l	1	1.0	0.56
Chloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.78	<	ug/l	1	1.0	0.78
Methylene chloride (Dichloromethane)	8260	1P0812C1	08-12-04	08-12-04	PC	0.64	<	ug/l	1	5.0	0.64
Acetone	8260	1P0812C1	08-12-04	08-12-04	PC	5.0	<	ug/l	1	25	5.0
Carbon disulfide	8260	1P0812C1	08-12-04	08-12-04	PC	0.66	<	ug/l	1	1.0	0.66
1,1-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
1,1-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
Cis/Trans-1,2-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	1.1	<	ug/l	1	2.0	1.1
Chloroform	8260	1P0812C1	08-12-04	08-12-04	PC	0.37	<	ug/l	1	1.0	0.37
1,2-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.26	<	ug/l	1	1.0	0.26
2-Butanone (MEK)	8260	1P0812C1	08-12-04	08-12-04	PC	1.3	<	ug/l	1	10	1.4
1,1,1-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.32	<	ug/l	1	1.0	0.32
Carbon tetrachloride	8260	1P0812C1	08-12-04	08-12-04	PC	0.31	<	ug/l	1	1.0	0.31
Bromodichloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.14	<	ug/l	1	1.0	0.14
1,1,2,2-Tetrachloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.18	<	ug/l	1	1.0	0.18
1,2-Dichloropropane	8260	1P0812C1	08-12-04	08-12-04	PC	0.33	<	ug/l	1	1.0	0.33
trans-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	0.26	<	ug/l	1	1.0	0.26
Trichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.37	<	ug/l	1	1.0	0.37
Dibromochloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.50	<	ug/l	1	1.0	0.50
1,1,2-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.22	<	ug/l	1	1.0	0.22
Benzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
cis-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	0.23	<	ug/l	1	1.0	0.23
Bromoform	8260	1P0812C1	08-12-04	08-12-04	PC	0.33	<	ug/l	1	1.0	0.33
2-Hexanone	8260	1P0812C1	08-12-04	08-12-04	PC	0.93	<	ug/l	1	10	0.93
4-Methyl-2-pentanone (MIBK)	8260	1P0812C1	08-12-04	08-12-04	PC	0.65	<	ug/l	1	10	0.65
Tetrachloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.35	<	ug/l	1	1.0	0.35
Toluene	8260	1P0812C1	08-12-04	08-12-04	PC	0.54	<	ug/l	1	1.0	0.54
Chlorobenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.34	<	ug/l	1	1.0	0.34
Ethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.34	<	ug/l	1	1.0	0.34
Styrene	8260	1P0812C1	08-12-04	08-12-04	PC	0.25	<	ug/l	1	1.0	0.25
Xylenes, Total	8260	1P0812C1	08-12-04	08-12-04	PC	1.3	<	ug/l	1	2.0	1.3
Methyl t-butyl ether (MTBE)	8260	1P0812C1	08-12-04	08-12-04	PC	0.31	<	ug/l	1	10	0.31
Naphthalene	8260	1P0812C1	08-12-04	08-12-04	PC	0.44	<	ug/l	1	5.0	0.44
1,3,5-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.21	<	ug/l	1	1.0	0.21
n-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.31	<	ug/l	1	1.0	0.31

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*2
Sample ID : KMW-11
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.24	<	ug/l	1	1.0	0.24
Isopropylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.25	<	ug/l	1	1.0	0.25
n-Propylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.32	<	ug/l	1	1.0	0.32
1,2,4-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.19	<	ug/l	1	1.0	0.19
*Surrogate - Toluene-d8 **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*104*		*%*	*1*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*106*		*%*	*1*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*104*		*%*	*1*		
o-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	0.35	<		1	1.0	0.35
mp-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	0.40	<		1	1.0	0.40

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*3
Sample ID : KMW-9
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	39	<	ug/l	100	100	39
Bromomethane (Methyl bromide)	8260	1P0812C1	08-12-04	08-12-04	PC	62	<	ug/l	100	100	62
Vinyl chloride	8260	1P0812C1	08-12-04	08-12-04	PC	56	<	ug/l	100	100	56
Chloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	78	<	ug/l	100	100	78
Methylene chloride (Dichloromethane)	8260	1P0812C1	08-12-04	08-12-04	PC	64	<	ug/l	100	500	64
Acetone	8260	1P0812C1	08-12-04	08-12-04	PC	500	<	ug/l	100	2500	500
Carbon disulfide	8260	1P0812C1	08-12-04	08-12-04	PC	66	<	ug/l	100	100	66
1,1-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	36	<	ug/l	100	100	36
1,1-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	36	<	ug/l	100	100	36
Cis/Trans-1,2-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	110	<	ug/l	100	200	110
Chloroform	8260	1P0812C1	08-12-04	08-12-04	PC	37	<	ug/l	100	100	37
1,2-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	26	<	ug/l	100	100	26
2-Butanone (MEK)	8260	1P0812C1	08-12-04	08-12-04	PC	130	<	ug/l	100	1000	140
1,1,1-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	32	<	ug/l	100	100	32
Carbon tetrachloride	8260	1P0812C1	08-12-04	08-12-04	PC	31	<	ug/l	100	100	31
Bromodichloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	14	<	ug/l	100	100	14
1,1,2,2-Tetrachloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	18	<	ug/l	100	100	18
1,2-Dichloropropane	8260	1P0812C1	08-12-04	08-12-04	PC	33	<	ug/l	100	100	33
trans-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	26	<	ug/l	100	100	26
Trichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	37	<	ug/l	100	100	37
Dibromochloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	50	<	ug/l	100	100	50
1,1,2-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	22	<	ug/l	100	100	22
Benzene	8260	1P0812C1	08-12-04	08-12-04	PC	600		ug/l	100	100	36
cis-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	23	<	ug/l	100	100	23
Bromoform	8260	1P0812C1	08-12-04	08-12-04	PC	33	<	ug/l	100	100	33
2-Hexanone	8260	1P0812C1	08-12-04	08-12-04	PC	93	<	ug/l	100	1000	93
4-Methyl-2-pentanone (MIBK)	8260	1P0812C1	08-12-04	08-12-04	PC	65	<	ug/l	100	1000	65
Tetrachloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	35	<	ug/l	100	100	35
Toluene	8260	1P0812C1	08-12-04	08-12-04	PC	280		ug/l	100	100	54
Chlorobenzene	8260	1P0812C1	08-12-04	08-12-04	PC	34	<	ug/l	100	100	34
Ethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	930		ug/l	100	100	34
Styrene	8260	1P0812C1	08-12-04	08-12-04	PC	25	<	ug/l	100	100	25
Xylenes. Total	8260	1P0812C1	08-12-04	08-12-04	PC	6400		ug/l	100	200	130
Methyl t-butyl ether (MTBE)	8260	1P0812C1	08-12-04	08-12-04	PC	100	J	ug/l	100	1000	31
Naphthalene	8260	1P0812C1	08-12-04	08-12-04	PC	550		ug/l	100	500	44
1,3,5-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	350		ug/l	100	100	21
n-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	45	J	ug/l	100	100	31

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*3
Sample ID : KMW-9
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	24	<	ug/l	100	100	24
Isopropylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	89	J	ug/l	100	100	25
n-Propylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	170		ug/l	100	100	32
1.2.4-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	1500		ug/l	100	100	19
*Surrogate - Toluene-d8 **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*100*		*%*	*100*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*106*		*%*	*100*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*102*		*%*	*100*		
o-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	510			100	100	35
mp-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	5900			100	100	40

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*4
Sample ID : KMW-6
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	39	<	ug/l	100	100	39
Bromomethane (Methyl bromide)	8260	1P0816C1	08-16-04	08-16-04	PC	62	<	ug/l	100	100	62
Vinyl chloride	8260	1P0816C1	08-16-04	08-16-04	PC	56	<	ug/l	100	100	56
Chloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	78	<	ug/l	100	100	78
Methylene chloride (Dichloromethane)	8260	1P0816C1	08-16-04	08-16-04	PC	64	<	ug/l	100	500	64
Acetone	8260	1P0816C1	08-16-04	08-16-04	PC	500	<	ug/l	100	2500	500
Carbon disulfide	8260	1P0816C1	08-16-04	08-16-04	PC	66	<	ug/l	100	100	66
1,1-Dichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	36	<	ug/l	100	100	36
1,1-Dichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	36	<	ug/l	100	100	36
Cis/Trans-1,2-Dichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	110	<	ug/l	100	200	110
Chloroform	8260	1P0816C1	08-16-04	08-16-04	PC	37	<	ug/l	100	100	37
1,2-Dichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	26	<	ug/l	100	100	26
2-Butanone (MEK)	8260	1P0816C1	08-16-04	08-16-04	PC	130	<	ug/l	100	1000	140
1,1,1-Trichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	32	<	ug/l	100	100	32
Carbon tetrachloride	8260	1P0816C1	08-16-04	08-16-04	PC	31	<	ug/l	100	100	31
Bromodichloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	14	<	ug/l	100	100	14
1,1,2,2-Tetrachloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	18	<	ug/l	100	100	18
1,2-Dichloropropane	8260	1P0816C1	08-16-04	08-16-04	PC	33	<	ug/l	100	100	33
trans-1,3-Dichloropropene	8260	1P0816C1	08-16-04	08-16-04	PC	26	<	ug/l	100	100	26
Trichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	37	<	ug/l	100	100	37
Dibromochloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	50	<	ug/l	100	100	50
1,1,2-Trichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	22	<	ug/l	100	100	22
Benzene	8260	1P0816C1	08-16-04	08-16-04	PC	36	<	ug/l	100	100	36
cis-1,3-Dichloropropene	8260	1P0816C1	08-16-04	08-16-04	PC	23	<	ug/l	100	100	23
Bromoform	8260	1P0816C1	08-16-04	08-16-04	PC	33	<	ug/l	100	100	33
2-Hexanone	8260	1P0816C1	08-16-04	08-16-04	PC	93	<	ug/l	100	1000	93
4-Methyl-2-pentanone (MIBK)	8260	1P0816C1	08-16-04	08-16-04	PC	65	<	ug/l	100	1000	65
Tetrachloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	35	<	ug/l	100	100	35
Toluene	8260	1P0816C1	08-16-04	08-16-04	PC	54	<	ug/l	100	100	54
Chlorobenzene	8260	1P0816C1	08-16-04	08-16-04	PC	34	<	ug/l	100	100	34
Ethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	34	<	ug/l	100	100	34
Styrene	8260	1P0816C1	08-16-04	08-16-04	PC	25	<	ug/l	100	100	25
Xylenes, Total	8260	1P0816C1	08-16-04	08-16-04	PC	51000		ug/l	100	200	130
Methyl t-butyl ether (MTBE)	8260	1P0816C1	08-16-04	08-16-04	PC	31	<	ug/l	100	1000	31
Naphthalene	8260	1P0816C1	08-16-04	08-16-04	PC	73	J	ug/l	100	500	44
1,3,5-Trimethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	21	<	ug/l	100	100	21
n-Butylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	31	<	ug/l	100	100	31

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*4
Sample ID : KMW-6
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	24	<	ug/l	100	100	24
Isopropylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	25	<	ug/l	100	100	25
n-Propylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	32	<	ug/l	100	100	32
1,2,4-Trimethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	36	J	ug/l	100	100	19
*Surrogate - Toluene-d8 **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*110*		*%*	*100*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*108*		*%*	*100*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*106*		*%*	*100*		
o-Xylene	8260	1P0816C1	08-16-04	08-16-04	PC	75	J		100	100	35
mp-Xylene	8260	1P0816C1	08-16-04	08-16-04	PC	51000			100	100	40

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*5
Sample ID : KMW-8
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	39	<	ug/l	100	100	39
Bromomethane (Methyl bromide)	8260	1P0812C1	08-12-04	08-12-04	PC	62	<	ug/l	100	100	62
Vinyl chloride	8260	1P0812C1	08-12-04	08-12-04	PC	56	<	ug/l	100	100	56
Chloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	78	<	ug/l	100	100	78
Methylene chloride (Dichloromethane)	8260	1P0812C1	08-12-04	08-12-04	PC	64	<	ug/l	100	500	64
Acetone	8260	1P0812C1	08-12-04	08-12-04	PC	500	<	ug/l	100	2500	500
Carbon disulfide	8260	1P0812C1	08-12-04	08-12-04	PC	66	<	ug/l	100	100	66
1,1-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	36	<	ug/l	100	100	36
1,1-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	36	<	ug/l	100	100	36
Cis/Trans-1,2-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	110	<	ug/l	100	200	110
Chloroform	8260	1P0812C1	08-12-04	08-12-04	PC	37	<	ug/l	100	100	37
1,2-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	26	<	ug/l	100	100	26
2-Butanone (MEK)	8260	1P0812C1	08-12-04	08-12-04	PC	130	<	ug/l	100	1000	140
1,1,1-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	32	<	ug/l	100	100	32
Carbon tetrachloride	8260	1P0812C1	08-12-04	08-12-04	PC	31	<	ug/l	100	100	31
Bromodichloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	14	<	ug/l	100	100	14
1,1,2,2-Tetrachloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	18	<	ug/l	100	100	18
1,2-Dichloropropane	8260	1P0812C1	08-12-04	08-12-04	PC	33	<	ug/l	100	100	33
trans-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	26	<	ug/l	100	100	26
Trichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	37	<	ug/l	100	100	37
Dibromochloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	50	<	ug/l	100	100	50
1,1,2-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	22	<	ug/l	100	100	22
Benzene	8260	1P0812C1	08-12-04	08-12-04	PC	560		ug/l	100	100	36
cis-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	23	<	ug/l	100	100	23
Bromoform	8260	1P0812C1	08-12-04	08-12-04	PC	33	<	ug/l	100	100	33
2-Hexanone	8260	1P0812C1	08-12-04	08-12-04	PC	93	<	ug/l	100	1000	93
4-Methyl-2-pentanone (MIBK)	8260	1P0812C1	08-12-04	08-12-04	PC	65	<	ug/l	100	1000	65
Tetrachloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	35	<	ug/l	100	100	35
Toluene	8260	1P0812C1	08-12-04	08-12-04	PC	200		ug/l	100	100	54
Chlorobenzene	8260	1P0812C1	08-12-04	08-12-04	PC	34	<	ug/l	100	100	34
Ethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	430		ug/l	100	100	34
Styrene	8260	1P0812C1	08-12-04	08-12-04	PC	25	<	ug/l	100	100	25
Xylenes, Total	8260	1P0812C1	08-12-04	08-12-04	PC	6100		ug/l	100	200	130
Methyl t-butyl ether (MTBE)	8260	1P0812C1	08-12-04	08-12-04	PC	200	J	ug/l	100	1000	31
Naphthalene	8260	1P0812C1	08-12-04	08-12-04	PC	560		ug/l	100	500	44
1,3,5-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	310		ug/l	100	100	21
n-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	31	<	ug/l	100	100	31

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*5
Sample ID : KMW-8
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	24	<	ug/l	100	100	24
Isopropylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	40	J	ug/l	100	100	25
n-Propylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	60	J	ug/l	100	100	32
1.2.4-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	1200		ug/l	100	100	19
*Surrogate - Toluene-d8 **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*110*		*%*	*100*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*100*		*%*	*100*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*104*		*%*	*100*		
o-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	580			100	100	35
mp-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	5500			100	100	40

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*6
Sample ID : KMW-10
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.39	<	ug/l	1	1.0	0.39
Bromomethane (Methyl bromide)	8260	1P0812C1	08-12-04	08-12-04	PC	0.62	<	ug/l	1	1.0	0.62
Vinyl chloride	8260	1P0812C1	08-12-04	08-12-04	PC	0.56	<	ug/l	1	1.0	0.56
Chloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.78	<	ug/l	1	1.0	0.78
Methylene chloride (Dichloromethane)	8260	1P0812C1	08-12-04	08-12-04	PC	0.64	<	ug/l	1	5.0	0.64
Acetone	8260	1P0812C1	08-12-04	08-12-04	PC	6.0	J	ug/l	1	25	5.0
Carbon disulfide	8260	1P0812C1	08-12-04	08-12-04	PC	0.66	<	ug/l	1	1.0	0.66
1,1-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
1,1-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
Cis/Trans-1,2-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	1.1	<	ug/l	1	2.0	1.1
Chloroform	8260	1P0812C1	08-12-04	08-12-04	PC	0.37	<	ug/l	1	1.0	0.37
1,2-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.26	<	ug/l	1	1.0	0.26
2-Butanone (MEK)	8260	1P0812C1	08-12-04	08-12-04	PC	1.3	<	ug/l	1	10	1.4
1,1,1-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.32	<	ug/l	1	1.0	0.32
Carbon tetrachloride	8260	1P0812C1	08-12-04	08-12-04	PC	0.31	<	ug/l	1	1.0	0.31
Bromodichloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.14	<	ug/l	1	1.0	0.14
1,1,2,2-Tetrachloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.18	<	ug/l	1	1.0	0.18
1,2-Dichloropropane	8260	1P0812C1	08-12-04	08-12-04	PC	0.33	<	ug/l	1	1.0	0.33
trans-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	0.26	<	ug/l	1	1.0	0.26
Trichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.37	<	ug/l	1	1.0	0.37
Dibromochloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.50	<	ug/l	1	1.0	0.50
1,1.2-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.29	J	ug/l	1	1.0	0.22
Benzene	8260	1P0812C1	08-12-04	08-12-04	PC	36		ug/l	1	1.0	0.36
cis-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	0.23	<	ug/l	1	1.0	0.23
Bromoform	8260	1P0812C1	08-12-04	08-12-04	PC	0.33	<	ug/l	1	1.0	0.33
2-Hexanone	8260	1P0812C1	08-12-04	08-12-04	PC	0.93	<	ug/l	1	10	0.93
4-Methyl-2-pentanone (MIBK)	8260	1P0812C1	08-12-04	08-12-04	PC	0.65	<	ug/l	1	10	0.65
Tetrachloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.35	<	ug/l	1	1.0	0.35
Toluene	8260	1P0812C1	08-12-04	08-12-04	PC	3.2		ug/l	1	1.0	0.54
Chlorobenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.34	<	ug/l	1	1.0	0.34
Ethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	29		ug/l	1	1.0	0.34
Styrene	8260	1P0812C1	08-12-04	08-12-04	PC	0.25	<	ug/l	1	1.0	0.25
Xylenes, Total	8260	1P0812C1	08-12-04	08-12-04	PC	17		ug/l	1	2.0	1.3
Methyl t-butyl ether (MTBE)	8260	1P0812C1	08-12-04	08-12-04	PC	2.4	J	ug/l	1	10	0.31
Naphthalene	8260	1P0812C1	08-12-04	08-12-04	PC	94		ug/l	1	5.0	0.44
1,3,5-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	9.6		ug/l	1	1.0	0.21
n-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	5.3		ug/l	1	1.0	0.31

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*6
Sample ID : KMW-10
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	2.2		ug/l	1	1.0	0.24
Isopropylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	9.3		ug/l	1	1.0	0.25
n-Propylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	20		ug/l	1	1.0	0.32
1,2,4-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	77		ug/l	1	1.0	0.19
*Surrogate - Toluene-d8 **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*102*		*%*	*1*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*106*		*%*	*1*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*106*		*%*	*1*		
o-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	0.69	J		1	1.0	0.35
mp-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	17			1	1.0	0.40

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*7
Sample ID : KMW-1
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.39	<	ug/l	1	1.0	0.39
Bromomethane (Methyl bromide)	8260	1P0812C1	08-12-04	08-12-04	PC	0.62	<	ug/l	1	1.0	0.62
Vinyl chloride	8260	1P0812C1	08-12-04	08-12-04	PC	0.56	<	ug/l	1	1.0	0.56
Chloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.78	<	ug/l	1	1.0	0.78
Methylene chloride (Dichloromethane)	8260	1P0812C1	08-12-04	08-12-04	PC	0.64	<	ug/l	1	5.0	0.64
Acetone	8260	1P0812C1	08-12-04	08-12-04	PC	5.0	<	ug/l	1	25	5.0
Carbon disulfide	8260	1P0812C1	08-12-04	08-12-04	PC	0.66	<	ug/l	1	1.0	0.66
1,1-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
1,1-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
Cis/Trans-1,2-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	1.1	<	ug/l	1	2.0	1.1
Chloroform	8260	1P0812C1	08-12-04	08-12-04	PC	0.37	<	ug/l	1	1.0	0.37
1,2-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.26	<	ug/l	1	1.0	0.26
2-Butanone (MEK)	8260	1P0812C1	08-12-04	08-12-04	PC	1.3	<	ug/l	1	10	1.4
1,1,1-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.32	<	ug/l	1	1.0	0.32
Carbon tetrachloride	8260	1P0812C1	08-12-04	08-12-04	PC	0.31	<	ug/l	1	1.0	0.31
Bromodichloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.14	<	ug/l	1	1.0	0.14
1,1,2,2-Tetrachloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.18	<	ug/l	1	1.0	0.18
1,2-Dichloropropane	8260	1P0812C1	08-12-04	08-12-04	PC	0.33	<	ug/l	1	1.0	0.33
trans-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	0.26	<	ug/l	1	1.0	0.26
Trichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.37	<	ug/l	1	1.0	0.37
Dibromochloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.50	<	ug/l	1	1.0	0.50
1,1,2-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.22	<	ug/l	1	1.0	0.22
Benzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
cis-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	0.23	<	ug/l	1	1.0	0.23
Bromoform	8260	1P0812C1	08-12-04	08-12-04	PC	0.33	<	ug/l	1	1.0	0.33
2-Hexanone	8260	1P0812C1	08-12-04	08-12-04	PC	0.93	<	ug/l	1	10	0.93
4-Methyl-2-pentanone (MIBK)	8260	1P0812C1	08-12-04	08-12-04	PC	0.65	<	ug/l	1	10	0.65
Tetrachloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.35	<	ug/l	1	1.0	0.35
Toluene	8260	1P0812C1	08-12-04	08-12-04	PC	0.54	<	ug/l	1	1.0	0.54
Chlorobenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.34	<	ug/l	1	1.0	0.34
Ethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.34	<	ug/l	1	1.0	0.34
Styrene	8260	1P0812C1	08-12-04	08-12-04	PC	0.25	<	ug/l	1	1.0	0.25
Xylenes, Total	8260	1P0812C1	08-12-04	08-12-04	PC	1.3	<	ug/l	1	2.0	1.3
Methyl t-butyl ether (MTBE)	8260	1P0812C1	08-12-04	08-12-04	PC	0.31	<	ug/l	1	10	0.31
Naphthalene	8260	1P0812C1	08-12-04	08-12-04	PC	1.9	J	ug/l	1	5.0	0.44
1,3,5-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	60		ug/l	1	1.0	0.21
n-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	7.7		ug/l	1	1.0	0.31

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*7
Sample ID : KMW-1
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.81	J	ug/l	1	1.0	0.24
Isopropylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.27	J	ug/l	1	1.0	0.25
n-Propylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.85	J	ug/l	1	1.0	0.32
1,2,4-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	52		ug/l	1	1.0	0.19
*Surrogate - Toluene-d8 **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*102*		*%*	*1*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*110*		*%*	*1*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*106*		*%*	*1*		
o-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	0.35	<		1	1.0	0.35
mp-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	0.40	<		1	1.0	0.40

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*8
Sample ID : KMW-5
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	39	<	ug/l	100	100	39
Bromomethane (Methyl bromide)	8260	1P0812C1	08-12-04	08-12-04	PC	62	<	ug/l	100	100	62
Vinyl chloride	8260	1P0812C1	08-12-04	08-12-04	PC	56	<	ug/l	100	100	56
Chloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	78	<	ug/l	100	100	78
Methylene chloride (Dichloromethane)	8260	1P0812C1	08-12-04	08-12-04	PC	64	<	ug/l	100	500	64
Acetone	8260	1P0812C1	08-12-04	08-12-04	PC	500	<	ug/l	100	2500	500
Carbon disulfide	8260	1P0812C1	08-12-04	08-12-04	PC	66	<	ug/l	100	100	66
1,1-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	36	<	ug/l	100	100	36
1,1-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	36	<	ug/l	100	100	36
Cis/Trans-1,2-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	110	<	ug/l	100	200	110
Chloroform	8260	1P0812C1	08-12-04	08-12-04	PC	37	<	ug/l	100	100	37
1,2-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	26	<	ug/l	100	100	26
2-Butanone (MEK)	8260	1P0812C1	08-12-04	08-12-04	PC	130	<	ug/l	100	1000	140
1,1,1-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	32	<	ug/l	100	100	32
Carbon tetrachloride	8260	1P0812C1	08-12-04	08-12-04	PC	31	<	ug/l	100	100	31
Bromodichloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	14	<	ug/l	100	100	14
1,1,2,2-Tetrachloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	18	<	ug/l	100	100	18
1,2-Dichloropropane	8260	1P0812C1	08-12-04	08-12-04	PC	33	<	ug/l	100	100	33
trans-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	26	<	ug/l	100	100	26
Trichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	37	<	ug/l	100	100	37
Dibromochloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	50	<	ug/l	100	100	50
1,1,2-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	22	<	ug/l	100	100	22
Benzene	8260	1P0812C1	08-12-04	08-12-04	PC	36	<	ug/l	100	100	36
cis-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	23	<	ug/l	100	100	23
Bromoform	8260	1P0812C1	08-12-04	08-12-04	PC	33	<	ug/l	100	100	33
2-Hexanone	8260	1P0812C1	08-12-04	08-12-04	PC	93	<	ug/l	100	1000	93
4-Methyl-2-pentanone (MIBK)	8260	1P0812C1	08-12-04	08-12-04	PC	65	<	ug/l	100	1000	65
Tetrachloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	35	<	ug/l	100	100	35
Toluene	8260	1P0812C1	08-12-04	08-12-04	PC	54	<	ug/l	100	100	54
Chlorobenzene	8260	1P0812C1	08-12-04	08-12-04	PC	34	<	ug/l	100	100	34
Ethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	34	<	ug/l	100	100	34
Styrene	8260	1P0812C1	08-12-04	08-12-04	PC	25	<	ug/l	100	100	25
Xylenes, Total	8260	1P0812C1	08-12-04	08-12-04	PC	25000		ug/l	100	200	130
Methyl t-butyl ether (MTBE)	8260	1P0812C1	08-12-04	08-12-04	PC	31	<	ug/l	100	1000	31
Naphthalene	8260	1P0812C1	08-12-04	08-12-04	PC	44	<	ug/l	100	500	44
1,3,5-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	21	<	ug/l	100	100	21
n-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	31	<	ug/l	100	100	31

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*8
Sample ID : KMW-5
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	24	<	ug/l	100	100	24
Isopropylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	25	<	ug/l	100	100	25
n-Propylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	32	<	ug/l	100	100	32
1,2,4-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	19	<	ug/l	100	100	19
*Surrogate - Toluene-d8 **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*104*		*%*	*100*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*106*		*%*	*100*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*102*		*%*	*100*		
o-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	35	<		100	100	35
mp-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	25000			100	100	40

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*9
Sample ID : KMW-4
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.39	<	ug/l	1	1.0	0.39
Bromomethane (Methyl bromide)	8260	1P0812C1	08-12-04	08-12-04	PC	0.62	<	ug/l	1	1.0	0.62
Vinyl chloride	8260	1P0812C1	08-12-04	08-12-04	PC	0.56	<	ug/l	1	1.0	0.56
Chloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.78	<	ug/l	1	1.0	0.78
Methylene chloride (Dichloromethane)	8260	1P0812C1	08-12-04	08-12-04	PC	0.64	<	ug/l	1	5.0	0.64
Acetone	8260	1P0812C1	08-12-04	08-12-04	PC	5.0	<	ug/l	1	25	5.0
Carbon disulfide	8260	1P0812C1	08-12-04	08-12-04	PC	0.66	<	ug/l	1	1.0	0.66
1,1-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
1,1-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
Cis/Trans-1,2-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	1.1	<	ug/l	1	2.0	1.1
Chloroform	8260	1P0812C1	08-12-04	08-12-04	PC	0.37	<	ug/l	1	1.0	0.37
1,2-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.26	<	ug/l	1	1.0	0.26
2-Butanone (MEK)	8260	1P0812C1	08-12-04	08-12-04	PC	1.3	<	ug/l	1	10	1.4
1,1,1-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.32	<	ug/l	1	1.0	0.32
Carbon tetrachloride	8260	1P0812C1	08-12-04	08-12-04	PC	0.31	<	ug/l	1	1.0	0.31
Bromodichloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.14	<	ug/l	1	1.0	0.14
1,1,2,2-Tetrachloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.18	<	ug/l	1	1.0	0.18
1,2-Dichloropropane	8260	1P0812C1	08-12-04	08-12-04	PC	0.33	<	ug/l	1	1.0	0.33
trans-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	0.26	<	ug/l	1	1.0	0.26
Trichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.37	<	ug/l	1	1.0	0.37
Dibromochloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.50	<	ug/l	1	1.0	0.50
1,1,2-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.22	<	ug/l	1	1.0	0.22
Benzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
cis-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	0.23	<	ug/l	1	1.0	0.23
Bromoform	8260	1P0812C1	08-12-04	08-12-04	PC	0.33	<	ug/l	1	1.0	0.33
2-Hexanone	8260	1P0812C1	08-12-04	08-12-04	PC	0.93	<	ug/l	1	10	0.93
4-Methyl-2-pentanone (MIBK)	8260	1P0812C1	08-12-04	08-12-04	PC	0.65	<	ug/l	1	10	0.65
Tetrachloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.35	<	ug/l	1	1.0	0.35
Toluene	8260	1P0812C1	08-12-04	08-12-04	PC	0.54	<	ug/l	1	1.0	0.54
Chlorobenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.34	<	ug/l	1	1.0	0.34
Ethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.34	<	ug/l	1	1.0	0.34
Styrene	8260	1P0812C1	08-12-04	08-12-04	PC	0.25	<	ug/l	1	1.0	0.25
Xylenes, Total	8260	1P0812C1	08-12-04	08-12-04	PC	1.3	<	ug/l	1	2.0	1.3
Methyl t-butyl ether (MTBE)	8260	1P0812C1	08-12-04	08-12-04	PC	1.1	J	ug/l	1	10	0.31
Naphthalene	8260	1P0812C1	08-12-04	08-12-04	PC	0.50	J	ug/l	1	5.0	0.44
1,3,5-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.24	J	ug/l	1	1.0	0.21
n-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.31	<	ug/l	1	1.0	0.31

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*9
Sample ID : KMW-4
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.24	<	ug/l	1	1.0	0.24
Isopropylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.25	<	ug/l	1	1.0	0.25
n-Propylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.32	<	ug/l	1	1.0	0.32
1,2,4-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.38	J	ug/l	1	1.0	0.19
*Surrogate - Toluene-d8 **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*104*		*%*	*1*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*106*		*%*	*1*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*104*		*%*	*1*		
o-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	0.35	<		1	1.0	0.35
mp-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	0.40	<		1	1.0	0.40

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*10
Sample ID : KMW-3
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.39	<	ug/l	1	1.0	0.39
Bromomethane (Methyl bromide)	8260	1P0812C1	08-12-04	08-12-04	PC	0.62	<	ug/l	1	1.0	0.62
Vinyl chloride	8260	1P0812C1	08-12-04	08-12-04	PC	0.56	<	ug/l	1	1.0	0.56
Chloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.78	<	ug/l	1	1.0	0.78
Methylene chloride (Dichloromethane)	8260	1P0812C1	08-12-04	08-12-04	PC	0.64	<	ug/l	1	5.0	0.64
Acetone	8260	1P0812C1	08-12-04	08-12-04	PC	5.0	<	ug/l	1	25	5.0
Carbon disulfide	8260	1P0812C1	08-12-04	08-12-04	PC	0.66	<	ug/l	1	1.0	0.66
1,1-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
1,1-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
Cis/Trans-1,2-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	1.1	<	ug/l	1	2.0	1.1
Chloroform	8260	1P0812C1	08-12-04	08-12-04	PC	0.37	<	ug/l	1	1.0	0.37
1,2-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.26	<	ug/l	1	1.0	0.26
2-Butanone (MEK)	8260	1P0812C1	08-12-04	08-12-04	PC	1.3	<	ug/l	1	10	1.4
1,1,1-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.32	<	ug/l	1	1.0	0.32
Carbon tetrachloride	8260	1P0812C1	08-12-04	08-12-04	PC	0.31	<	ug/l	1	1.0	0.31
Bromodichloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.14	<	ug/l	1	1.0	0.14
1,1,2,2-Tetrachloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.18	<	ug/l	1	1.0	0.18
1,2-Dichloropropane	8260	1P0812C1	08-12-04	08-12-04	PC	0.33	<	ug/l	1	1.0	0.33
trans-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	0.26	<	ug/l	1	1.0	0.26
Trichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.37	<	ug/l	1	1.0	0.37
Dibromochloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.50	<	ug/l	1	1.0	0.50
1,1,2-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	0.22	<	ug/l	1	1.0	0.22
Benzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.36	<	ug/l	1	1.0	0.36
cis-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	0.23	<	ug/l	1	1.0	0.23
Bromoform	8260	1P0812C1	08-12-04	08-12-04	PC	0.33	<	ug/l	1	1.0	0.33
2-Hexanone	8260	1P0812C1	08-12-04	08-12-04	PC	0.93	<	ug/l	1	10	0.93
4-Methyl-2-pentanone (MIBK)	8260	1P0812C1	08-12-04	08-12-04	PC	0.65	<	ug/l	1	10	0.65
Tetrachloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	0.35	<	ug/l	1	1.0	0.35
Toluene	8260	1P0812C1	08-12-04	08-12-04	PC	0.54	<	ug/l	1	1.0	0.54
Chlorobenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.34	<	ug/l	1	1.0	0.34
Ethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.34	<	ug/l	1	1.0	0.34
Styrene	8260	1P0812C1	08-12-04	08-12-04	PC	0.25	<	ug/l	1	1.0	0.25
Xylenes, Total	8260	1P0812C1	08-12-04	08-12-04	PC	1.3	<	ug/l	1	2.0	1.3
Methyl t-butyl ether (MTBE)	8260	1P0812C1	08-12-04	08-12-04	PC	0.31	<	ug/l	1	10	0.31
Naphthalene	8260	1P0812C1	08-12-04	08-12-04	PC	0.44	<	ug/l	1	5.0	0.44
1,3,5-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.21	<	ug/l	1	1.0	0.21
n-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.31	<	ug/l	1	1.0	0.31

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*10
Sample ID : KMW-3
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.24	<	ug/l	1	1.0	0.24
Isopropylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.25	<	ug/l	1	1.0	0.25
n-Propylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.32	<	ug/l	1	1.0	0.32
1,2,4-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	0.23	J	ug/l	1	1.0	0.19
*Surrogate - Toluene-d8 **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*106*		*%*	*1*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*104*		*%*	*1*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*104*		*%*	*1*		
o-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	0.35	<		1	1.0	0.35
mp-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	0.40	<		1	1.0	0.40

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*11
Sample ID : KMW-13
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	200	<	ug/l	500	500	200
Bromomethane (Methyl bromide)	8260	1P0812C1	08-12-04	08-12-04	PC	310	<	ug/l	500	500	310
Vinyl chloride	8260	1P0812C1	08-12-04	08-12-04	PC	280	<	ug/l	500	500	280
Chloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	390	<	ug/l	500	500	390
Methylene chloride (Dichloromethane)	8260	1P0812C1	08-12-04	08-12-04	PC	320	<	ug/l	500	2500	320
Acetone	8260	1P0812C1	08-12-04	08-12-04	PC	2500	<	ug/l	500	12000	2500
Carbon disulfide	8260	1P0812C1	08-12-04	08-12-04	PC	330	<	ug/l	500	500	330
1,1-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	180	<	ug/l	500	500	180
1,1-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	180	<	ug/l	500	500	180
Cis/Trans-1,2-Dichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	550	<	ug/l	500	1000	550
Chloroform	8260	1P0812C1	08-12-04	08-12-04	PC	180	<	ug/l	500	500	180
1,2-Dichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	130	<	ug/l	500	500	130
2-Butanone (MEK)	8260	1P0812C1	08-12-04	08-12-04	PC	650	<	ug/l	500	5000	690
1,1,1-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	160	<	ug/l	500	500	160
Carbon tetrachloride	8260	1P0812C1	08-12-04	08-12-04	PC	160	<	ug/l	500	500	160
Bromodichloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	70	<	ug/l	500	500	70
1,1,2,2-Tetrachloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	90	<	ug/l	500	500	90
1,2-Dichloropropane	8260	1P0812C1	08-12-04	08-12-04	PC	160	<	ug/l	500	500	160
trans-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	130	<	ug/l	500	500	130
Trichloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	180	<	ug/l	500	500	180
Dibromochloromethane	8260	1P0812C1	08-12-04	08-12-04	PC	250	<	ug/l	500	500	250
1,1,2-Trichloroethane	8260	1P0812C1	08-12-04	08-12-04	PC	110	<	ug/l	500	500	110
Benzene	8260	1P0812C1	08-12-04	08-12-04	PC	180	<	ug/l	500	500	180
cis-1,3-Dichloropropene	8260	1P0812C1	08-12-04	08-12-04	PC	120	<	ug/l	500	500	120
Bromoform	8260	1P0812C1	08-12-04	08-12-04	PC	160	<	ug/l	500	500	160
2-Hexanone	8260	1P0812C1	08-12-04	08-12-04	PC	460	<	ug/l	500	5000	460
4-Methyl-2-pentanone (MIBK)	8260	1P0812C1	08-12-04	08-12-04	PC	320	<	ug/l	500	5000	320
Tetrachloroethene	8260	1P0812C1	08-12-04	08-12-04	PC	180	<	ug/l	500	500	180
Toluene	8260	1P0812C1	08-12-04	08-12-04	PC	270	<	ug/l	500	500	270
Chlorobenzene	8260	1P0812C1	08-12-04	08-12-04	PC	170	<	ug/l	500	500	170
Ethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	170	<	ug/l	500	500	170
Styrene	8260	1P0812C1	08-12-04	08-12-04	PC	120	<	ug/l	500	500	120
Xylenes, Total	8260	1P0812C1	08-12-04	08-12-04	PC	68000		ug/l	500	1000	650
Methyl t-butyl ether (MTBE)	8260	1P0812C1	08-12-04	08-12-04	PC	160	<	ug/l	500	5000	160
Naphthalene	8260	1P0812C1	08-12-04	08-12-04	PC	220	<	ug/l	500	2500	220
1,3,5-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	100	<	ug/l	500	500	100
n-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	160	<	ug/l	500	500	160

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*11
Sample ID : KMW-13
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	120	<	ug/l	500	500	120
Isopropylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	120	<	ug/l	500	500	120
n-Propylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	160	<	ug/l	500	500	160
1,2,4-Trimethylbenzene	8260	1P0812C1	08-12-04	08-12-04	PC	95	<	ug/l	500	500	95
*Surrogate - Toluene-d8 **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*108*		*%*	*500*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*106*		*%*	*500*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0812C1*	*08-12-04*	*08-12-04*	*PC*	*104*		*%*	*500*		
o-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	180	<		500	500	180
mp-Xylene	8260	1P0812C1	08-12-04	08-12-04	PC	68000			500	500	200

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*12
Sample ID : KMW-14
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	200	<	ug/l	500	500	200
Bromomethane (Methyl bromide)	8260	1P0817C1	08-17-04	08-17-04	PC	310	<	ug/l	500	500	310
Vinyl chloride	8260	1P0817C1	08-17-04	08-17-04	PC	280	<	ug/l	500	500	280
Chloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	390	<	ug/l	500	500	390
Methylene chloride (Dichloromethane)	8260	1P0817C1	08-17-04	08-17-04	PC	320	<	ug/l	500	2500	320
Acetone	8260	1P0817C1	08-17-04	08-17-04	PC	2500	<	ug/l	500	12000	2500
Carbon disulfide	8260	1P0817C1	08-17-04	08-17-04	PC	330	<	ug/l	500	500	330
1,1-Dichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	180	<	ug/l	500	500	180
1,1-Dichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	180	<	ug/l	500	500	180
Cis/Trans-1,2-Dichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	550	<	ug/l	500	1000	550
Chloroform	8260	1P0817C1	08-17-04	08-17-04	PC	180	<	ug/l	500	500	180
1,2-Dichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	130	<	ug/l	500	500	130
2-Butanone (MEK)	8260	1P0817C1	08-17-04	08-17-04	PC	650	<	ug/l	500	5000	690
1,1,1-Trichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	160	<	ug/l	500	500	160
Carbon tetrachloride	8260	1P0817C1	08-17-04	08-17-04	PC	160	<	ug/l	500	500	160
Bromodichloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	70	<	ug/l	500	500	70
1,1,2,2-Tetrachloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	90	<	ug/l	500	500	90
1,2-Dichloropropane	8260	1P0817C1	08-17-04	08-17-04	PC	160	<	ug/l	500	500	160
trans-1,3-Dichloropropene	8260	1P0817C1	08-17-04	08-17-04	PC	130	<	ug/l	500	500	130
Trichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	180	<	ug/l	500	500	180
Dibromochloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	250	<	ug/l	500	500	250
1,1,2-Trichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	110	<	ug/l	500	500	110
Benzene	8260	1P0817C1	08-17-04	08-17-04	PC	180	<	ug/l	500	500	180
cis-1,3-Dichloropropene	8260	1P0817C1	08-17-04	08-17-04	PC	120	<	ug/l	500	500	120
Bromoform	8260	1P0817C1	08-17-04	08-17-04	PC	160	<	ug/l	500	500	160
2-Hexanone	8260	1P0817C1	08-17-04	08-17-04	PC	460	<	ug/l	500	5000	460
4-Methyl-2-pentanone (MIBK)	8260	1P0817C1	08-17-04	08-17-04	PC	320	<	ug/l	500	5000	320
Tetrachloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	180	<	ug/l	500	500	180
Toluene	8260	1P0817C1	08-17-04	08-17-04	PC	270	<	ug/l	500	500	270
Chlorobenzene	8260	1P0817C1	08-17-04	08-17-04	PC	170	<	ug/l	500	500	170
Ethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	170	<	ug/l	500	500	170
Styrene	8260	1P0817C1	08-17-04	08-17-04	PC	120	<	ug/l	500	500	120
Xylenes, Total	**8260**	**1P0817C1**	**08-17-04**	**08-17-04**	**PC**	**50000**		**ug/l**	**500**	**1000**	**650**
Methyl t-butyl ether (MTBE)	8260	1P0817C1	08-17-04	08-17-04	PC	160	<	ug/l	500	5000	160
Naphthalene	**8260**	**1P0817C1**	**08-17-04**	**08-17-04**	**PC**	**400**	**J**	**ug/l**	**500**	**2500**	**220**
1,3,5-Trimethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	100	<	ug/l	500	500	100
n-Butylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	160	<	ug/l	500	500	160

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*12
Sample ID : KMW-14
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	120	<	ug/l	500	500	120
Isopropylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	120	<	ug/l	500	500	120
n-Propylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	160	<	ug/l	500	500	160
1,2,4-Trimethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	140	J	ug/l	500	500	95
*Surrogate - Toluene-d8 **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*104*		*%*	*500*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*108*		*%*	*500*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*102*		*%*	*500*		
o-Xylene	8260	1P0817C1	08-17-04	08-17-04	PC	180	<		500	500	180
mp-Xylene	8260	1P0817C1	08-17-04	08-17-04	PC	50000			500	500	200

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*13
Sample ID : KWM-12
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	98	<	ug/l	250	250	98
Bromomethane (Methyl bromide)	8260	1P0817C1	08-17-04	08-17-04	PC	160	<	ug/l	250	250	160
Vinyl chloride	8260	1P0817C1	08-17-04	08-17-04	PC	140	<	ug/l	250	250	140
Chloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	200	<	ug/l	250	250	200
Methylene chloride (Dichloromethane)	8260	1P0817C1	08-17-04	08-17-04	PC	160	<	ug/l	250	1200	160
Acetone	8260	1P0817C1	08-17-04	08-17-04	PC	1200	<	ug/l	250	6200	1200
Carbon disulfide	8260	1P0817C1	08-17-04	08-17-04	PC	160	<	ug/l	250	250	160
1,1-Dichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	90	<	ug/l	250	250	90
1,1-Dichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	90	<	ug/l	250	250	90
Cis/Trans-1,2-Dichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	280	<	ug/l	250	500	280
Chloroform	8260	1P0817C1	08-17-04	08-17-04	PC	92	<	ug/l	250	250	92
1,2-Dichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	65	<	ug/l	250	250	65
2-Butanone (MEK)	8260	1P0817C1	08-17-04	08-17-04	PC	320	<	ug/l	250	2500	340
1,1,1-Trichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	80	<	ug/l	250	250	80
Carbon tetrachloride	8260	1P0817C1	08-17-04	08-17-04	PC	77	<	ug/l	250	250	78
Bromodichloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	35	<	ug/l	250	250	35
1,1,2,2-Tetrachloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	45	<	ug/l	250	250	45
1,2-Dichloropropane	8260	1P0817C1	08-17-04	08-17-04	PC	82	<	ug/l	250	250	82
trans-1,3-Dichloropropene	8260	1P0817C1	08-17-04	08-17-04	PC	65	<	ug/l	250	250	65
Trichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	92	<	ug/l	250	250	92
Dibromochloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	120	<	ug/l	250	250	120
1,1,2-Trichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	55	<	ug/l	250	250	55
Benzene	8260	1P0817C1	08-17-04	08-17-04	PC	1800		ug/l	250	250	90
cis-1,3-Dichloropropene	8260	1P0817C1	08-17-04	08-17-04	PC	57	<	ug/l	250	250	58
Bromoform	8260	1P0817C1	08-17-04	08-17-04	PC	82	<	ug/l	250	250	82
2-Hexanone	8260	1P0817C1	08-17-04	08-17-04	PC	230	<	ug/l	250	2500	230
4-Methyl-2-pentanone (MIBK)	8260	1P0817C1	08-17-04	08-17-04	PC	160	<	ug/l	250	2500	160
Tetrachloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	88	<	ug/l	250	250	88
Toluene	8260	1P0817C1	08-17-04	08-17-04	PC	220	J	ug/l	250	250	140
Chlorobenzene	8260	1P0817C1	08-17-04	08-17-04	PC	85	<	ug/l	250	250	85
Ethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	1500		ug/l	250	250	85
Styrene	8260	1P0817C1	08-17-04	08-17-04	PC	62	<	ug/l	250	250	62
Xylenes, Total	8260	1P0817C1	08-17-04	08-17-04	PC	12000		ug/l	250	500	320
Methyl t-butyl ether (MTBE)	8260	1P0817C1	08-17-04	08-17-04	PC	160	J	ug/l	250	2500	78
Naphthalene	8260	1P0817C1	08-17-04	08-17-04	PC	1300		ug/l	250	1200	110
1,3,5-Trimethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	860		ug/l	250	250	52
n-Butylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	77	<	ug/l	250	250	78

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*13
Sample ID : KWM-12
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	60	<	ug/l	250	250	60
Isopropylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	170	J	ug/l	250	250	62
n-Propylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	340		ug/l	250	250	80
1,2,4-Trimethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	3400		ug/l	250	250	48
*Surrogate - Toluene-d8 **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*108*		*%*	*250*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*106*		*%*	*250*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*104*		*%*	*250*		
o-Xylene	8260	1P0817C1	08-17-04	08-17-04	PC	120	J		250	250	88
mp-Xylene	8260	1P0817C1	08-17-04	08-17-04	PC	12000			250	250	100

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*14
Sample ID : AMW-2
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	78	<	ug/l	200	200	78
Bromomethane (Methyl bromide)	8260	1P0816C1	08-16-04	08-16-04	PC	120	<	ug/l	200	200	120
Vinyl chloride	8260	1P0816C1	08-16-04	08-16-04	PC	110	<	ug/l	200	200	110
Chloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	160	<	ug/l	200	200	160
Methylene chloride (Dichloromethane)	8260	1P0816C1	08-16-04	08-16-04	PC	130	<	ug/l	200	1000	130
Acetone	8260	1P0816C1	08-16-04	08-16-04	PC	1000	<	ug/l	200	5000	1000
Carbon disulfide	8260	1P0816C1	08-16-04	08-16-04	PC	130	<	ug/l	200	200	130
1,1-Dichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	72	<	ug/l	200	200	72
1,1-Dichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	72	<	ug/l	200	200	72
Cis/Trans-1,2-Dichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	220	<	ug/l	200	400	220
Chloroform	8260	1P0816C1	08-16-04	08-16-04	PC	74	<	ug/l	200	200	74
1,2-Dichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	52	<	ug/l	200	200	52
2-Butanone (MEK)	8260	1P0816C1	08-16-04	08-16-04	PC	260	<	ug/l	200	2000	280
1,1,1-Trichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	64	<	ug/l	200	200	64
Carbon tetrachloride	8260	1P0816C1	08-16-04	08-16-04	PC	62	<	ug/l	200	200	62
Bromodichloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	28	<	ug/l	200	200	28
1,1,2,2-Tetrachloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	36	<	ug/l	200	200	36
1,2-Dichloropropane	8260	1P0816C1	08-16-04	08-16-04	PC	66	<	ug/l	200	200	66
trans-1,3-Dichloropropene	8260	1P0816C1	08-16-04	08-16-04	PC	52	<	ug/l	200	200	52
Trichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	74	<	ug/l	200	200	74
Dibromochloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	100	<	ug/l	200	200	100
1,1,2-Trichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	44	<	ug/l	200	200	44
Benzene	8260	1P0816C1	08-16-04	08-16-04	PC	2300		ug/l	200	200	72
cis-1,3-Dichloropropene	8260	1P0816C1	08-16-04	08-16-04	PC	46	<	ug/l	200	200	46
Bromoform	8260	1P0816C1	08-16-04	08-16-04	PC	66	<	ug/l	200	200	66
2-Hexanone	8260	1P0816C1	08-16-04	08-16-04	PC	190	<	ug/l	200	2000	190
4-Methyl-2-pentanone (MIBK)	8260	1P0816C1	08-16-04	08-16-04	PC	130	<	ug/l	200	2000	130
Tetrachloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	70	<	ug/l	200	200	70
Toluene	8260	1P0816C1	08-16-04	08-16-04	PC	1900		ug/l	200	200	110
Chlorobenzene	8260	1P0816C1	08-16-04	08-16-04	PC	68	<	ug/l	200	200	68
Ethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	2000		ug/l	200	200	68
Styrene	8260	1P0816C1	08-16-04	08-16-04	PC	50	<	ug/l	200	200	50
Xylenes, Total	8260	1P0816C1	08-16-04	08-16-04	PC	41000		ug/l	200	400	260
Methyl t-butyl ether (MTBE)	8260	1P0816C1	08-16-04	08-16-04	PC	440	J	ug/l	200	2000	62
Naphthalene	8260	1P0816C1	08-16-04	08-16-04	PC	750	J	ug/l	200	1000	88
1,3,5-Trimethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	560		ug/l	200	200	42
n-Butylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	62	<	ug/l	200	200	62

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*14
Sample ID : AMW-2
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	48	<	ug/l	200	200	48
Isopropylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	140	J	ug/l	200	200	50
n-Propylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	260		ug/l	200	200	64
1,2,4-Trimethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	2100		ug/l	200	200	38
*Surrogate - Toluene-d8 **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*104*		*%*	*200*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*112*		*%*	*200*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*104*		*%*	*200*		
o-Xylene	8260	1P0816C1	08-16-04	08-16-04	PC	970			200	200	70
mp-Xylene	8260	1P0816C1	08-16-04	08-16-04	PC	40000			200	200	80

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*15
Sample ID : AMW-1
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.39	<	ug/l	1	1.0	0.39
Bromomethane (Methyl bromide)	8260	1P0817C1	08-17-04	08-17-04	PC	0.62	<	ug/l	1	1.0	0.62
Vinyl chloride	8260	1P0817C1	08-17-04	08-17-04	PC	0.56	<	ug/l	1	1.0	0.56
Chloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.78	<	ug/l	1	1.0	0.78
Methylene chloride (Dichloromethane)	8260	1P0817C1	08-17-04	08-17-04	PC	0.64	<	ug/l	1	5.0	0.64
Acetone	8260	1P0817C1	08-17-04	08-17-04	PC	5.0	<	ug/l	1	25	5.0
Carbon disulfide	8260	1P0817C1	08-17-04	08-17-04	PC	0.66	<	ug/l	1	1.0	0.66
1,1-Dichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	0.36	<	ug/l	1	1.0	0.36
1,1-Dichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.36	<	ug/l	1	1.0	0.36
Cis/Trans-1,2-Dichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	1.1	<	ug/l	1	2.0	1.1
Chloroform	8260	1P0817C1	08-17-04	08-17-04	PC	0.37	<	ug/l	1	1.0	0.37
1,2-Dichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.26	<	ug/l	1	1.0	0.26
2-Butanone (MEK)	8260	1P0817C1	08-17-04	08-17-04	PC	1.3	<	ug/l	1	10	1.4
1,1,1-Trichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.32	<	ug/l	1	1.0	0.32
Carbon tetrachloride	8260	1P0817C1	08-17-04	08-17-04	PC	0.31	<	ug/l	1	1.0	0.31
Bromodichloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.14	<	ug/l	1	1.0	0.14
1,1,2,2-Tetrachloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.18	<	ug/l	1	1.0	0.18
1,2-Dichloropropane	8260	1P0817C1	08-17-04	08-17-04	PC	0.33	<	ug/l	1	1.0	0.33
trans-1,3-Dichloropropene	8260	1P0817C1	08-17-04	08-17-04	PC	0.26	<	ug/l	1	1.0	0.26
Trichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	0.37	<	ug/l	1	1.0	0.37
Dibromochloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.50	<	ug/l	1	1.0	0.50
1,1,2-Trichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.22	<	ug/l	1	1.0	0.22
Benzene	8260	1P0817C1	08-17-04	08-17-04	PC	0.36	<	ug/l	1	1.0	0.36
cis-1,3-Dichloropropene	8260	1P0817C1	08-17-04	08-17-04	PC	0.23	<	ug/l	1	1.0	0.23
Bromoform	8260	1P0817C1	08-17-04	08-17-04	PC	0.33	<	ug/l	1	1.0	0.33
2-Hexanone	8260	1P0817C1	08-17-04	08-17-04	PC	0.93	<	ug/l	1	10	0.93
4-Methyl-2-pentanone (MIBK)	8260	1P0817C1	08-17-04	08-17-04	PC	0.65	<	ug/l	1	10	0.65
Tetrachloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	0.35	<	ug/l	1	1.0	0.35
Toluene	8260	1P0817C1	08-17-04	08-17-04	PC	0.54	<	ug/l	1	1.0	0.54
Chlorobenzene	8260	1P0817C1	08-17-04	08-17-04	PC	0.34	<	ug/l	1	1.0	0.34
Ethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	0.34	<	ug/l	1	1.0	0.34
Styrene	8260	1P0817C1	08-17-04	08-17-04	PC	0.25	<	ug/l	1	1.0	0.25
Xylenes, Total	8260	1P0817C1	08-17-04	08-17-04	PC	1.3	<	ug/l	1	2.0	1.3
Methyl t-butyl ether (MTBE)	8260	1P0817C1	08-17-04	08-17-04	PC	0.31	<	ug/l	1	10	0.31
Naphthalene	8260	1P0817C1	08-17-04	08-17-04	PC	0.44	<	ug/l	1	5.0	0.44
1,3,5-Trimethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	1.2		ug/l	1	1.0	0.21
n-Butylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	0.31	<	ug/l	1	1.0	0.31

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*15
Sample ID : AMW-1
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	0.24	<	ug/l	1	1.0	0.24
Isopropylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	0.25	<	ug/l	1	1.0	0.25
n-Propylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	0.32	<	ug/l	1	1.0	0.32
1,2,4-Trimethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	0.19	<	ug/l	1	1.0	0.19
*Surrogate - Toluene-d8 **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*108*		*%*	*1*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*108*		*%*	*1*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*108*		*%*	*1*		
o-Xylene	8260	1P0817C1	08-17-04	08-17-04	PC	0.35	<		1	1.0	0.35
mp-Xylene	8260	1P0817C1	08-17-04	08-17-04	PC	0.40	<		1	1.0	0.40

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*16
Sample ID : AMW-3
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	2.0	<	ug/l	5	5.0	2.0
Bromomethane (Methyl bromide)	8260	1P0817C1	08-17-04	08-17-04	PC	3.1	<	ug/l	5	5.0	3.1
Vinyl chloride	8260	1P0817C1	08-17-04	08-17-04	PC	2.8	<	ug/l	5	5.0	2.8
Chloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	3.9	<	ug/l	5	5.0	3.9
Methylene chloride (Dichloromethane)	8260	1P0817C1	08-17-04	08-17-04	PC	3.2	<	ug/l	5	25	3.2
Acetone	8260	1P0817C1	08-17-04	08-17-04	PC	25	<	ug/l	5	120	25
Carbon disulfide	8260	1P0817C1	08-17-04	08-17-04	PC	3.3	<	ug/l	5	5.0	3.3
1,1-Dichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	1.8	<	ug/l	5	5.0	1.8
1,1-Dichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	1.8	<	ug/l	5	5.0	1.8
Cis/Trans-1,2-Dichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	5.5	<	ug/l	5	10	5.5
Chloroform	8260	1P0817C1	08-17-04	08-17-04	PC	1.8	<	ug/l	5	5.0	1.8
1,2-Dichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	1.3	<	ug/l	5	5.0	1.3
2-Butanone (MEK)	8260	1P0817C1	08-17-04	08-17-04	PC	6.5	<	ug/l	5	50	6.9
1,1,1-Trichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	1.6	<	ug/l	5	5.0	1.6
Carbon tetrachloride	8260	1P0817C1	08-17-04	08-17-04	PC	1.6	<	ug/l	5	5.0	1.6
Bromodichloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.70	<	ug/l	5	5.0	0.70
1,1,2,2-Tetrachloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.90	<	ug/l	5	5.0	0.90
1,2-Dichloropropane	8260	1P0817C1	08-17-04	08-17-04	PC	1.6	<	ug/l	5	5.0	1.6
trans-1,3-Dichloropropene	8260	1P0817C1	08-17-04	08-17-04	PC	1.3	<	ug/l	5	5.0	1.3
Trichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	1.8	<	ug/l	5	5.0	1.8
Dibromochloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	2.5	<	ug/l	5	5.0	2.5
1,1,2-Trichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	1.1	<	ug/l	5	5.0	1.1
Benzene	8260	1P0817C1	08-17-04	08-17-04	PC	230		ug/l	5	5.0	1.8
cis-1,3-Dichloropropene	8260	1P0817C1	08-17-04	08-17-04	PC	1.2	<	ug/l	5	5.0	1.2
Bromoform	8260	1P0817C1	08-17-04	08-17-04	PC	1.6	<	ug/l	5	5.0	1.6
2-Hexanone	8260	1P0817C1	08-17-04	08-17-04	PC	4.6	<	ug/l	5	50	4.6
4-Methyl-2-pentanone (MIBK)	8260	1P0817C1	08-17-04	08-17-04	PC	3.2	<	ug/l	5	50	3.2
Tetrachloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	1.8	<	ug/l	5	5.0	1.8
Toluene	8260	1P0817C1	08-17-04	08-17-04	PC	13		ug/l	5	5.0	2.7
Chlorobenzene	8260	1P0817C1	08-17-04	08-17-04	PC	1.7	<	ug/l	5	5.0	1.7
Ethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	70		ug/l	5	5.0	1.7
Styrene	8260	1P0817C1	08-17-04	08-17-04	PC	1.2	<	ug/l	5	5.0	1.2
Xylenes, Total	8260	1P0817C1	08-17-04	08-17-04	PC	670		ug/l	5	10	6.5
Methyl t-butyl ether (MTBE)	8260	1P0817C1	08-17-04	08-17-04	PC	4.6	J	ug/l	5	50	1.6
Naphthalene	8260	1P0817C1	08-17-04	08-17-04	PC	170		ug/l	5	25	2.2
1,3,5-Trimethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	29		ug/l	5	5.0	1.0
n-Butylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	10		ug/l	5	5.0	1.6

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*16
Sample ID : AMW-3
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	4.8	J	ug/l	5	5.0	1.2
Isopropylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	43		ug/l	5	5.0	1.2
n-Propylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	69		ug/l	5	5.0	1.6
1,2,4-Trimethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	94		ug/l	5	5.0	0.95
*Surrogate - Toluene-d8 **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*106*		*%*	*5*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*106*		*%*	*5*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*104*		*%*	*5*		
o-Xylene	8260	1P0817C1	08-17-04	08-17-04	PC	5.8			5	5.0	1.8
mp-Xylene	8260	1P0817C1	08-17-04	08-17-04	PC	670			5	5.0	2.0

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*17
Sample ID : AMW-5
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.39	<	ug/l	1	1.0	0.39
Bromomethane (Methyl bromide)	8260	1P0816C1	08-16-04	08-16-04	PC	0.62	<	ug/l	1	1.0	0.62
Vinyl chloride	8260	1P0816C1	08-16-04	08-16-04	PC	0.56	<	ug/l	1	1.0	0.56
Chloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.78	<	ug/l	1	1.0	0.78
Methylene chloride (Dichloromethane)	8260	1P0816C1	08-16-04	08-16-04	PC	0.64	<	ug/l	1	5.0	0.64
Acetone	8260	1P0816C1	08-16-04	08-16-04	PC	5.0	<	ug/l	1	25	5.0
Carbon disulfide	8260	1P0816C1	08-16-04	08-16-04	PC	0.66	<	ug/l	1	1.0	0.66
1,1-Dichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	0.36	<	ug/l	1	1.0	0.36
1,1-Dichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.36	<	ug/l	1	1.0	0.36
Cis/Trans-1,2-Dichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	1.1	<	ug/l	1	2.0	1.1
Chloroform	8260	1P0816C1	08-16-04	08-16-04	PC	0.37	<	ug/l	1	1.0	0.37
1,2-Dichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.26	<	ug/l	1	1.0	0.26
2-Butanone (MEK)	8260	1P0816C1	08-16-04	08-16-04	PC	1.3	<	ug/l	1	10	1.4
1,1,1-Trichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.32	<	ug/l	1	1.0	0.32
Carbon tetrachloride	8260	1P0816C1	08-16-04	08-16-04	PC	0.31	<	ug/l	1	1.0	0.31
Bromodichloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.14	<	ug/l	1	1.0	0.14
1,1,2,2-Tetrachloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.18	<	ug/l	1	1.0	0.18
1,2-Dichloropropane	8260	1P0816C1	08-16-04	08-16-04	PC	0.33	<	ug/l	1	1.0	0.33
trans-1,3-Dichloropropene	8260	1P0816C1	08-16-04	08-16-04	PC	0.26	<	ug/l	1	1.0	0.26
Trichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	0.37	<	ug/l	1	1.0	0.37
Dibromochloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.50	<	ug/l	1	1.0	0.50
1,1,2-Trichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.22	<	ug/l	1	1.0	0.22
Benzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.36	<	ug/l	1	1.0	0.36
cis-1,3-Dichloropropene	8260	1P0816C1	08-16-04	08-16-04	PC	0.23	<	ug/l	1	1.0	0.23
Bromoform	8260	1P0816C1	08-16-04	08-16-04	PC	0.33	<	ug/l	1	1.0	0.33
2-Hexanone	8260	1P0816C1	08-16-04	08-16-04	PC	0.93	<	ug/l	1	10	0.93
4-Methyl-2-pentanone (MIBK)	8260	1P0816C1	08-16-04	08-16-04	PC	0.65	<	ug/l	1	10	0.65
Tetrachloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	0.35	<	ug/l	1	1.0	0.35
Toluene	8260	1P0816C1	08-16-04	08-16-04	PC	0.54	<	ug/l	1	1.0	0.54
Chlorobenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.34	<	ug/l	1	1.0	0.34
Ethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.34	<	ug/l	1	1.0	0.34
Styrene	8260	1P0816C1	08-16-04	08-16-04	PC	0.25	<	ug/l	1	1.0	0.25
Xylenes, Total	8260	1P0816C1	08-16-04	08-16-04	PC	0.90	J	ug/l	1	2.0	1.3
Methyl t-butyl ether (MTBE)	8260	1P0816C1	08-16-04	08-16-04	PC	0.31	<	ug/l	1	10	0.31
Naphthalene	8260	1P0816C1	08-16-04	08-16-04	PC	0.44	<	ug/l	1	5.0	0.44
1,3,5-Trimethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.21	<	ug/l	1	1.0	0.21
n-Butylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.31	<	ug/l	1	1.0	0.31

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*17
Sample ID : AMW-5
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.24	<	ug/l	1	1.0	0.24
Isopropylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.25	<	ug/l	1	1.0	0.25
n-Propylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.32	<	ug/l	1	1.0	0.32
1,2,4-Trimethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.19	<	ug/l	1	1.0	0.19
*Surrogate - Toluene-d8 **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*106*		*%*	*1*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*98*		*%*	*1*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*104*		*%*	*1*		
o-Xylene	8260	1P0816C1	08-16-04	08-16-04	PC	0.35	<		1	1.0	0.35
mp-Xylene	8260	1P0816C1	08-16-04	08-16-04	PC	0.90	J		1	1.0	0.40

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*18
Sample ID : AMW-6
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.39	<	ug/l	1	1.0	0.39
Bromomethane (Methyl bromide)	8260	1P0817C1	08-17-04	08-17-04	PC	0.62	<	ug/l	1	1.0	0.62
Vinyl chloride	8260	1P0817C1	08-17-04	08-17-04	PC	0.56	<	ug/l	1	1.0	0.56
Chloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.78	<	ug/l	1	1.0	0.78
Methylene chloride (Dichloromethane)	8260	1P0817C1	08-17-04	08-17-04	PC	0.64	<	ug/l	1	5.0	0.64
Acetone	8260	1P0817C1	08-17-04	08-17-04	PC	5.0	<	ug/l	1	25	5.0
Carbon disulfide	8260	1P0817C1	08-17-04	08-17-04	PC	0.66	<	ug/l	1	1.0	0.66
1,1-Dichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	0.36	<	ug/l	1	1.0	0.36
1,1-Dichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.36	<	ug/l	1	1.0	0.36
Cis/Trans-1,2-Dichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	1.1	<	ug/l	1	2.0	1.1
Chloroform	8260	1P0817C1	08-17-04	08-17-04	PC	0.37	<	ug/l	1	1.0	0.37
1,2-Dichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.26	<	ug/l	1	1.0	0.26
2-Butanone (MEK)	8260	1P0817C1	08-17-04	08-17-04	PC	1.3	<	ug/l	1	10	1.4
1,1,1-Trichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.32	<	ug/l	1	1.0	0.32
Carbon tetrachloride	8260	1P0817C1	08-17-04	08-17-04	PC	0.31	<	ug/l	1	1.0	0.31
Bromodichloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.14	<	ug/l	1	1.0	0.14
1,1,2,2-Tetrachloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.18	<	ug/l	1	1.0	0.18
1,2-Dichloropropane	8260	1P0817C1	08-17-04	08-17-04	PC	0.33	<	ug/l	1	1.0	0.33
trans-1,3-Dichloropropene	8260	1P0817C1	08-17-04	08-17-04	PC	0.26	<	ug/l	1	1.0	0.26
Trichloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	0.37	<	ug/l	1	1.0	0.37
Dibromochloromethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.50	<	ug/l	1	1.0	0.50
1,1,2-Trichloroethane	8260	1P0817C1	08-17-04	08-17-04	PC	0.22	<	ug/l	1	1.0	0.22
Benzene	8260	1P0817C1	08-17-04	08-17-04	PC	210	E	ug/l	1	1.0	0.36
cis-1,3-Dichloropropene	8260	1P0817C1	08-17-04	08-17-04	PC	0.23	<	ug/l	1	1.0	0.23
Bromoform	8260	1P0817C1	08-17-04	08-17-04	PC	0.33	<	ug/l	1	1.0	0.33
2-Hexanone	8260	1P0817C1	08-17-04	08-17-04	PC	0.93	<	ug/l	1	10	0.93
4-Methyl-2-pentanone (MIBK)	8260	1P0817C1	08-17-04	08-17-04	PC	0.65	<	ug/l	1	10	0.65
Tetrachloroethene	8260	1P0817C1	08-17-04	08-17-04	PC	0.35	<	ug/l	1	1.0	0.35
Toluene	8260	1P0817C1	08-17-04	08-17-04	PC	3.5		ug/l	1	1.0	0.54
Chlorobenzene	8260	1P0817C1	08-17-04	08-17-04	PC	0.34	<	ug/l	1	1.0	0.34
Ethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	1.9		ug/l	1	1.0	0.34
Styrene	8260	1P0817C1	08-17-04	08-17-04	PC	0.25	<	ug/l	1	1.0	0.25
Xylenes, Total	8260	1P0817C1	08-17-04	08-17-04	PC	22		ug/l	1	2.0	1.3
Methyl t-butyl ether (MTBE)	8260	1P0817C1	08-17-04	08-17-04	PC	59		ug/l	1	10	0.31
Naphthalene	8260	1P0817C1	08-17-04	08-17-04	PC	1.1	J	ug/l	1	5.0	0.44
1,3,5-Trimethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	8.5		ug/l	1	1.0	0.21
n-Butylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	3.2		ug/l	1	1.0	0.31

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*18
Sample ID : AMW-6
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	5.5		ug/l	1	1.0	0.24
Isopropylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	6.0		ug/l	1	1.0	0.25
n-Propylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	2.4		ug/l	1	1.0	0.32
1,2,4-Trimethylbenzene	8260	1P0817C1	08-17-04	08-17-04	PC	23		ug/l	1	1.0	0.19
*Surrogate - Toluene-d8 **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*108*		*%*	*1*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*112*		*%*	*1*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0817C1*	*08-17-04*	*08-17-04*	*PC*	*104*		*%*	*1*		
o-Xylene	8260	1P0817C1	08-17-04	08-17-04	PC	2.6			1	1.0	0.35
mp-Xylene	8260	1P0817C1	08-17-04	08-17-04	PC	20			1	1.0	0.40

SEVERN TRENT STL

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*23
Sample ID : Trip Blank
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
Chloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.39	<	ug/l	1	1.0	0.39
Bromomethane (Methyl bromide)	8260	1P0816C1	08-16-04	08-16-04	PC	0.62	<	ug/l	1	1.0	0.62
Vinyl chloride	8260	1P0816C1	08-16-04	08-16-04	PC	0.56	<	ug/l	1	1.0	0.56
Chloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.78	<	ug/l	1	1.0	0.78
Methylene chloride (Dichloromethane)	8260	1P0816C1	08-16-04	08-16-04	PC	0.64	<	ug/l	1	5.0	0.64
Acetone	8260	1P0816C1	08-16-04	08-16-04	PC	5.0	<	ug/l	1	25	5.0
Carbon disulfide	8260	1P0816C1	08-16-04	08-16-04	PC	0.66	<	ug/l	1	1.0	0.66
1,1-Dichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	0.36	<	ug/l	1	1.0	0.36
1,1-Dichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.36	<	ug/l	1	1.0	0.36
Cis/Trans-1,2-Dichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	1.1	<	ug/l	1	2.0	1.1
Chloroform	8260	1P0816C1	08-16-04	08-16-04	PC	0.37	<	ug/l	1	1.0	0.37
1,2-Dichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.26	<	ug/l	1	1.0	0.26
2-Butanone (MEK)	8260	1P0816C1	08-16-04	08-16-04	PC	1.3	<	ug/l	1	10	1.4
1,1,1-Trichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.32	<	ug/l	1	1.0	0.32
Carbon tetrachloride	8260	1P0816C1	08-16-04	08-16-04	PC	0.31	<	ug/l	1	1.0	0.31
Bromodichloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.14	<	ug/l	1	1.0	0.14
1,1,2,2-Tetrachloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.18	<	ug/l	1	1.0	0.18
1,2-Dichloropropane	8260	1P0816C1	08-16-04	08-16-04	PC	0.33	<	ug/l	1	1.0	0.33
trans-1,3-Dichloropropene	8260	1P0816C1	08-16-04	08-16-04	PC	0.26	<	ug/l	1	1.0	0.26
Trichloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	0.37	<	ug/l	1	1.0	0.37
Dibromochloromethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.50	<	ug/l	1	1.0	0.50
1,1,2-Trichloroethane	8260	1P0816C1	08-16-04	08-16-04	PC	0.22	<	ug/l	1	1.0	0.22
Benzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.36	<	ug/l	1	1.0	0.36
cis-1,3-Dichloropropene	8260	1P0816C1	08-16-04	08-16-04	PC	0.23	<	ug/l	1	1.0	0.23
Bromoform	8260	1P0816C1	08-16-04	08-16-04	PC	0.33	<	ug/l	1	1.0	0.33
2-Hexanone	8260	1P0816C1	08-16-04	08-16-04	PC	0.93	<	ug/l	1	10	0.93
4-Methyl-2-pentanone (MIBK)	8260	1P0816C1	08-16-04	08-16-04	PC	0.65	<	ug/l	1	10	0.65
Tetrachloroethene	8260	1P0816C1	08-16-04	08-16-04	PC	0.35	<	ug/l	1	1.0	0.35
Toluene	8260	1P0816C1	08-16-04	08-16-04	PC	0.54	<	ug/l	1	1.0	0.54
Chlorobenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.34	<	ug/l	1	1.0	0.34
Ethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.34	<	ug/l	1	1.0	0.34
Styrene	8260	1P0816C1	08-16-04	08-16-04	PC	0.25	<	ug/l	1	1.0	0.25
Xylenes, Total	8260	1P0816C1	08-16-04	08-16-04	PC	0.66	J	ug/l	1	2.0	1.3
Methyl t-butyl ether (MTBE)	8260	1P0816C1	08-16-04	08-16-04	PC	0.31	<	ug/l	1	10	0.31
Naphthalene	8260	1P0816C1	08-16-04	08-16-04	PC	0.44	<	ug/l	1	5.0	0.44
1,3,5-Trimethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.21	<	ug/l	1	1.0	0.21
n-Butylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.31	<	ug/l	1	1.0	0.31

STL Savannah

Client : Catlin Engineers & Scientists
Work Order ID : FHR North Terminal Loading Rack
Laboratory ID : S447161A*23
Sample ID : Trip Blank
Matrix : LI
Percent Solids :

Sampled : 08-05-2004
Received: 08-06-2004

RESULTS SUMMARY REPORT

Parameter	Method	Batch	Prep Date	Analysis Date	Analyst	Result	Qual	Units	DF	RL	MDL
sec-Butylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.24	<	ug/l	1	1.0	0.24
Isopropylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.25	<	ug/l	1	1.0	0.25
n-Propylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.32	<	ug/l	1	1.0	0.32
1,2,4-Trimethylbenzene	8260	1P0816C1	08-16-04	08-16-04	PC	0.19	<	ug/l	1	1.0	0.19
*Surrogate - Toluene-d8 **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*114*		*%*	*1*		
*Surrogate - 4-Bromofluorobenzene **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*116*		*%*	*1*		
*Surrogate - Dibromofluoromethane **	*8260*	*1P0816C1*	*08-16-04*	*08-16-04*	*PC*	*106*		*%*	*1*		
o-Xylene	8260	1P0816C1	08-16-04	08-16-04	PC	0.35	<		1	1.0	0.35
mp-Xylene	8260	1P0816C1	08-16-04	08-16-04	PC	0.66	J		1	1.0	0.40

APPENDIX B

PRODUCT IDENTIFICATION LABORATORY REPORT AND CHAIN-OF-CUSTODY RECORD

FILE COPY

Certificate of Analysis

CORPORATE OFFICE
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Analysis Number: 04080157-001A

Sample ID:	AMW-4	**Date of Sample:**	08/11/04
Project #:		**Time Sampled:**	10:55
Project Name:	FHR Loading Rack	**Date Sample Analyzed:**	08/16/04
Client	Catlin & Associates	**Contact(s):**	Jeff Becken
Address	PO Box 10279		
Suite / Department	0		
City	Wilmington	**State**	NC **Zip** 28404-0279
Phone	(910) 452-5861 **Ext**		
Fax	(910) 452-7563		
Color:	Pale Straw	**Odor:**	Gasoline
***Specific Gravity @ 60° F.**	0.7822	***API @ 60° F.**	49.39
Carbon Range	C_2, C_4 - C_{12}	**Major Range**	C_5, C_7 - C_9

Paraffin	8.503	wt%	**N-Hexane**	1.791	wt%
Isoparaffins	21.285	wt%	**Benzene**	0.921	wt%
Naphthenics	7.706	wt%	**Ethyl Benzene**	3.582	wt%
Aromatics	48.192	wt%	**Toluene**	12.991	wt%
Olefins	14.080	wt%	**Meta-Xylene**	7.388	wt%
Unknowns	ND	wt%	**Para-Xylene**	3.256	wt%
2,2,4-Tri Methylpentane	0.172	wt%	**Ortho-Xylene**	4.552	wt%
			Xylenes	15.196	wt%
Calculated Research Octane	94.57		**EDB**	N/A	ppm
Lead/Manganese	N/A	ppm	**EDC**	N/A	ppm
***Oxygnates**	0.233	wt%	**Ethanol/Meoh**	N/A	wt%
C_{17}	ND	wt%	**C_{18}**	ND	wt%
Pristane	ND	wt%	**Phytane**	ND	wt%
Naphthalene	ND	wt%	**2-Methyl Naphthalene**	ND	wt%
1-Methyl Naphthalene	ND	wt%			

X **Gasoline Range:** C_4-C_{13} Indicators: 2,2,4-TMP; MTBE; Olefins, Lead
Diesel Range: C_7-C_{22} Indicators: No Olefins, Pristane, Phytane
Crude/Condensate Range: C_2 - C_{25+}: Indicators: No Olefins, Light & Heavies
Heavy Oil: C_{20+} waxy, strong n-parrafins

Comments: *Ethanol 0.233wt%

Bob Rannals
Hydrocarbon Lab Manager

P.I.A.N.O. ANALYSIS
SOUTHERN PETROLEUM LABORATORIES, INC.

Sample: 080157-001A AMW-4
File: CAP8P2
Calibration File: AMW4_LIQ

Analyzed on: 08-16-2004
Normalized to 100.00%
Processed 184 Peaks

Composite Report

Hydrocarbon Totals by Group Type

Type	Wt %	Vol %	Mol %
Total Paraffins:	8.503	9.941	9.692
Total Iso-paraffins:	21.285	24.335	21.932
Total Naphthenes:	7.706	7.791	8.813
Total Aromatics:	48.192	42.307	43.499
Total Olefins:	14.080	15.401	15.583
Total Oxygenates:	0.233	0.225	0.482
Total C26 PLUS	0.000	0.000	0.000
Total Unknowns:	0.000	0.000	0.000
Total:	100.000	100.000	100.000

Totals by Carbon Number

Group	Wt %	Vol %	Mol %	Ave. Mw.	Ave. Sp Gr.
Methane	0.000	0.000	0.000	0.000	0.000
Ethane	0.233	0.225	0.482	46.070	0.789
Propane	0.000	0.000	0.000	0.000	0.000
Butanes:	1.748	2.252	2.923	57.036	0.592
Pentanes:	15.003	17.407	20.119	71.118	0.657
Hexanes:	9.815	10.787	11.050	84.710	0.694
Heptanes:	29.573	29.464	29.398	95.932	0.766
Octanes:	23.877	21.920	21.149	107.669	0.831
Nonanes:	14.914	13.323	11.758	120.961	0.854
Decanes:	1.740	1.589	1.221	135.914	0.835
C11's:	2.732	2.668	1.695	153.700	0.781
C12's:	0.364	0.365	0.204	169.736	0.761
C13's:	0.000	0.000	0.000	0.000	0.000
C14's:	0.000	0.000	0.000	0.000	0.000
C15's:	0.000	0.000	0.000	0.000	0.000
C16's:	0.000	0.000	0.000	0.000	0.000
C17's:	0.000	0.000	0.000	0.000	0.000
C18's:	0.000	0.000	0.000	0.000	0.000
C19's:	0.000	0.000	0.000	0.000	0.000
C20's:	0.000	0.000	0.000	0.000	0.000
C21's:	0.000	0.000	0.000	0.000	0.000
C22's:	0.000	0.000	0.000	0.000	0.000
C23's:	0.000	0.000	0.000	0.000	0.000
C24's:	0.000	0.000	0.000	0.000	0.000
C25's:	0.000	0.000	0.000	0.000	0.000
C26's:	0.000	0.000	0.000	0.000	0.000
C26 PLUS	0.000	0.000	0.000		

P.I.A.N.O. ANALYSIS
SOUTHERN PETROLEUM LABORATORIES, INC.

Sample: 080157-001A AMW-4
File: CAP8P2
Calibration File: AMW4_LIQ

Analyzed on: 08-16-2004
Normalized to 100.00%
Processed 184 Peaks

Types by Carbon Number

Paraffins:	C1	0.000	0.000	0.000
	C2	0.000	0.000	0.000
	C3	0.000	0.000	0.000
	C4	0.776	1.023	1.273
	C5	2.878	3.507	3.805
	C6	1.791	2.072	1.982
	C7	1.669	1.862	1.589
	C8	0.784	0.851	0.654
	C9	0.196	0.209	0.146
	C10	0.087	0.091	0.058
	C11	0.098	0.101	0.060
	C12	0.223	0.226	0.125
	C13	0.000	0.000	0.000
	C14	0.000	0.000	0.000
	C15	0.000	0.000	0.000
	C16	0.000	0.000	0.000
	C17	0.000	0.000	0.000
	C18	0.000	0.000	0.000
	C19	0.000	0.000	0.000
	C20	0.000	0.000	0.000
	C21	0.000	0.000	0.000
	C22	0.000	0.000	0.000
	C23	0.000	0.000	0.000
	C24	0.000	0.000	0.000
	C25	0.000	0.000	0.000
	C26	0.000	0.000	0.000
Iso-paraffins:	C4	0.382	0.523	0.627
	C5	5.425	6.694	7.170
	C6	4.389	5.097	4.857
	C7	5.003	5.572	4.761
	C8	2.924	3.171	2.441
	C9	0.994	1.051	0.739
	C10	0.295	0.308	0.198
	C11	1.757	1.801	1.073
	C12	0.116	0.118	0.065
	C13	0.000	0.000	0.000
	C14	0.000	0.000	0.000
	C15	0.000	0.000	0.000
	C16	0.000	0.000	0.000
	C17	0.000	0.000	0.000
	C18	0.000	0.000	0.000
	C19	0.000	0.000	0.000
	C20	0.000	0.000	0.000
	C21	0.000	0.000	0.000
	C22	0.000	0.000	0.000
	C23	0.000	0.000	0.000
	C24	0.000	0.000	0.000
	C25	0.000	0.000	0.000
	C26	0.000	0.000	0.000
Aromatics:	C6	0.921	0.799	1.125
	C7	12.991	11.430	13.446
	C8	18.777	16.502	16.867
	C9	13.313	11.664	10.563
	C10	1.358	1.191	0.965
	C11	0.806	0.698	0.519
	C12	0.024	0.021	0.014
	C13	0.000	0.000	0.000
	C14	0.000	0.000	0.000
	C15	0.000	0.000	0.000
	C16	0.000	0.000	0.000
	C17	0.000	0.000	0.000

	C20	0.000	0.000	0.000
	C21	0.000	0.000	0.000
	C22	0.000	0.000	0.000
	C23	0.000	0.000	0.000
	C24	0.000	0.000	0.000
	C25	0.000	0.000	0.000
	C26	0.000	0.000	0.000
Naphthenes:	C5	3.393	3.473	4.614
	C6	1.484	1.499	1.682
	C7	1.384	1.396	1.344
	C8	0.963	0.956	0.819
	C9	0.410	0.399	0.310
	C10	0.000	0.000	0.000
	C11	0.071	0.068	0.044
	C12	0.000	0.000	0.000
	C13	0.000	0.000	0.000
	C14	0.000	0.000	0.000
	C15	0.000	0.000	0.000
	C16	0.000	0.000	0.000
	C17	0.000	0.000	0.000
	C18	0.000	0.000	0.000
	C19	0.000	0.000	0.000
	C20	0.000	0.000	0.000
	C21	0.000	0.000	0.000
	C22	0.000	0.000	0.000
	C23	0.000	0.000	0.000
	C24	0.000	0.000	0.000
	C25	0.000	0.000	0.000
	C26	0.000	0.000	0.000
Olefins:	C4	0.590	0.706	1.023
	C5	3.307	3.734	4.529
	C6	1.229	1.319	1.404
	C7	8.525	9.203	8.258
	C8	0.429	0.440	0.368
	C9	0.000	0.000	0.000

P.I.A.N.O. ANALYSIS
SOUTHERN PETROLEUM LABORATORIES, INC.

Sample: 080157-001A AMW-4
File: CAP8P2
Calibration File: AMW4_LIQ

Analyzed on: 08-16-2004
Normalized to 100.00%
Processed 184 Peaks

Components Listed in Chromatographic Order

pk#	Min.	Index	Component	Area	Wt%	Vol%	Mol%	Shift
1	9.27	364.0	i-Butane	29927	0.382	0.523	0.627	0.02
2	9.57	390.3	Butene-1	21133	0.275	0.353	0.468	1.23
3	9.70	400.0	n-Butane	60767	0.776	1.023	1.273	0.00
4	9.87	411.2	2,2-Dimethylpropane	20214	0.256	0.330	0.338	0.01
5	10.10	425.0	Ethanol	15649	0.233	0.225	0.482	0.95
6	10.78	457.1	1,2-Butadiene	6290	0.086	0.100	0.151	0.26
7	11.27	474.9	i-Pentane	402858	5.169	6.364	6.833	0.57
8	11.73	489.4	Butyne-2	17597	0.229	0.253	0.404	0.04
9	11.95	495.5	Pentene-1	33957	0.442	0.526	0.601	0.04
10	12.12	500.0	n-Pentane	220828	2.878	3.507	3.805	0.00
11	12.42	507.9	t-Pentene-2	53798	0.700	0.824	0.952	0.16
12	12.75	516.0	3,3-Dimethylbutene-1	23928	0.311	0.366	0.424	0.04
13	12.95	520.5	c-Pentene-2	78525	1.022	1.189	1.390	0.47
14	13.67	535.4	1c,3-Pentadiene	5068	0.066	0.073	0.092	0.04
15	13.75	537.0	2,2-Dimethylbutane	20392	0.254	0.298	0.281	0.64
16	14.73	554.3	Cyclopentene	59123	0.765	0.755	1.070	0.11
17	14.95	557.7	4-Methylpentene-1	3359	0.042	0.049	0.048	0.24
18	15.05	559.3	3-Methylpentene-1	4381	0.055	0.064	0.063	0.39
19	15.47	565.5	Cyclopentane	262425	3.393	3.473	4.614	0.32
20	15.80	570.3	2-Methylpentane	203274	2.537	2.963	2.807	0.05
21	16.87	584.1	3-Methylpentane	126212	1.599	1.836	1.770	0.18
22	17.27	588.8	Hexene-1	14444	0.179	0.203	0.203	0.57
23	18.28	600.0	n-Hexane	143913	1.791	2.072	1.982	0.00
24	18.50	602.7	t-Hexene-3	11763	0.146	0.163	0.165	0.52
25	18.75	605.8	c-Hexene-3	12770	0.158	0.176	0.179	0.20
26	18.95	608.2	t-Hexene-2	17398	0.216	0.241	0.244	0.31
27	19.15	610.6	2-Methylpentene-2	7331	0.091	0.100	0.103	0.57
28	19.25	611.7	3-Methylcyclopentene	11613	0.144	0.144	0.167	0.44
29	19.45	614.0	3-Methyl-c-pentene-2	3504	0.043	0.047	0.049	0.34
30	19.65	616.3	c-Hexene-2	6303	0.078	0.086	0.089	0.10
31	20.03	620.5	3,3-Dimethylpentene-1	480792	5.961	6.478	5.789	0.02
32	20.63	626.8	2,2-Dimethylpentane	7423	0.091	0.103	0.087	0.05
33	20.87	629.2	Methylcyclopentane	89585	1.136	1.158	1.287	0.03
34	21.28	633.4	2,4-Dimethylpentane	23615	0.288	0.326	0.274	0.38
35	21.88	639.1	2,3,3-Trimethylbutene-1	2269	0.028	0.031	0.027	0.18
36	23.12	650.2	2,4-Dimethylpentene-1	2390	0.030	0.032	0.029	0.56
37	23.40	652.6	1-Methylcyclopentene	17129	0.212	0.208	0.247	0.57
38	23.50	653.4	Benzene	82554	0.921	0.799	1.125	0.50
39	24.15	658.7	3,3-Dimethylpentane	19079	0.236	0.260	0.225	0.18
40	24.40	660.7	5-Methylhexene-1	1082	0.013	0.015	0.013	0.51

pk#	Min.	Index	Component	Area	Wt%	Vol%	Mol%	Shift
41	24.60	662.3	Cyclohexane	28943	0.348	0.341	0.394	0.12
42	24.85	664.2	2-Methyl-t-hexene-3	1917	0.024	0.026	0.023	0.51
43	25.28	667.5	4-Methylhexene-1	1268	0.016	0.017	0.015	0.00
44	25.57	669.6	4-Methyl-t/c-hexene-2	5024	0.062	0.067	0.060	0.20
45	25.72	670.7	2-Methylhexane	132118	1.641	1.845	1.562	0.30
46	25.95	672.4	2,3-Dimethylpentane	49873	0.599	0.658	0.570	0.29
47	26.32	675.0	1,1-Dimethylcyclopentane	5768	0.069	0.070	0.067	0.00
48	26.62	677.1	Cyclohexene	3448	0.043	0.040	0.050	0.30
49	26.85	678.7	3-Methylhexane	154437	1.928	2.141	1.835	0.19
50	27.35	682.1	5-Methyl-c-hexene-2	2779	0.034	0.037	0.033	0.19
51	27.72	684.5	3,4-Dimethyl-c-pentene-2	25022	0.310	0.330	0.301	0.21
52	28.08	686.9	1t,3-Dimethylcyclopentane	21863	0.275	0.280	0.267	0.39
53	28.25	688.0	3-Ethylpentane	17236	0.219	0.239	0.208	0.35
54	28.45	689.2	1t,2-Dimethylcyclopentane	26027	0.312	0.317	0.303	0.08
55	28.67	690.6	2,2,4-Trimethylpentane	13856	0.172	0.189	0.143	0.02
56	29.53	695.9	025	2816	0.035	0.039	0.034	0.07
57	30.05	698.9	t-Heptene-3	9541	0.118	0.128	0.115	0.33
58	30.23	700.0	n-Heptane	134634	1.669	1.862	1.589	0.00
59	30.57	702.5	c-Heptene-3	13955	0.173	0.188	0.168	0.13
60	30.70	703.5	2-Methyl-2-hexene	8903	0.110	0.118	0.107	0.13
61	31.18	707.1	3-Ethylpentene-2	7898	0.098	0.103	0.095	0.31
62	31.70	710.9	028	15472	0.192	0.204	0.186	0.04
63	32.22	714.5	2,3-Dimethylpentene-2	7602	0.094	0.098	0.092	0.42
64	32.78	718.5	3-Ethylcyclopentene	1403	0.017	0.017	0.017	0.25
65	33.00	719.9	1c,2-Dimethylcyclopentane	12129	0.150	0.157	0.146	0.03
66	33.12	720.7	Methylcyclohexane	48324	0.578	0.573	0.562	0.02
67	33.52	723.4	2,2-Dimethylhexane	14112	0.173	0.190	0.145	0.51
68	34.13	727.5	1,1,3-Trimethylcyclopentane	472	0.006	0.006	0.005	0.54
69	34.37	729.0	032	2050	0.025	0.026	0.025	0.03
70	34.90	732.4	035	12884	0.160	0.166	0.155	0.17
71	35.07	733.4	036	17455	0.216	0.225	0.210	0.22
72	35.37	735.3	2,5-Dimethylhexane	29561	0.345	0.379	0.288	0.11
73	36.27	740.8	1c,2t,4-Trimethylcyclopentane	9752	0.116	0.116	0.098	0.18
74	36.48	742.1	038	8333	0.103	0.108	0.100	0.07
75	37.28	746.8	1t,2c,3-Trimethylcyclopentane	3939	0.048	0.047	0.040	0.03
76	37.47	747.8	039	6236	0.077	0.081	0.075	0.03
77	38.05	751.2	2,3,4-Trimethylpentane	15450	0.192	0.203	0.160	0.05
78	38.28	752.5	040	9728	0.121	0.126	0.117	0.04
79	38.57	754.0	Toluene	1164318	12.991	11.430	13.446	0.94
80	39.85	761.0	2,3-Dimethylhexane	15244	0.197	0.211	0.164	0.31
81	40.23	763.0	1,1,2-Trimethylcyclopentane	1946	0.024	0.024	0.021	0.04
82	40.55	764.7	046	5900	0.073	0.076	0.071	0.01
83	40.97	766.8	2-Methylheptane	60585	0.754	0.824	0.630	0.05
84	41.25	768.3	3,4-Dimethylhexane	22716	0.282	0.299	0.235	0.00
85	41.48	769.5	4-Methylheptane	702	0.009	0.009	0.007	0.02
86	42.13	772.7	1c,2c,3-Trimethylcyclopentane	5359	0.066	0.067	0.056	0.04
87	42.40	774.0	3-Methylheptane	64595	0.801	0.866	0.669	0.15
88	42.62	775.1	1t,3-Dimethylcyclohexane	20630	0.256	0.256	0.217	0.22
89	43.12	777.5	1t,4-Dimethylcyclohexane	4031	0.050	0.050	0.042	0.14
90	43.75	780.6	1,3-Octadiene	1064	0.013	0.013	0.011	0.23

Pk#	Min.	Index	Component	Area	Wt%	Vol%	Mol%	Shift
91	44.23	782.8	048	1552	0.019	0.020	0.019	0.04
92	44.63	784.7	2,2,5-Trimethylhexane	1307	0.016	0.017	0.012	0.50
93	44.97	786.2	3c-Ethylmethylcyclopentane	5687	0.071	0.070	0.060	0.03
94	45.42	788.3	1,4-Octadiene	4562	0.057	0.056	0.049	0.42
95	45.68	789.5	2,3,5-Trimethylhexane	4986	0.062	0.065	0.046	0.08
96	46.22	791.9	2t-Ethylmethylcyclopentane	1429	0.018	0.018	0.015	0.04
97	46.77	794.3	1t,2-Dimethylcyclohexane	6493	0.080	0.079	0.068	0.02
98	47.62	797.9	t-Octene-3	4134	0.051	0.054	0.044	0.16
99	48.10	800.0	n-Octane	64362	0.784	0.851	0.654	0.00
100	48.38	801.6	049	9140	0.113	0.120	0.096	0.32
101	49.48	807.7	053	2993	0.037	0.039	0.032	0.05
102	50.00	810.5	i-Propylcyclopentane	2129	0.026	0.026	0.022	0.05
103	52.08	821.4	2,2,4-Trimethylhexane	1129	0.014	0.014	0.010	0.63
104	52.58	823.9	N2	1167	0.014	0.014	0.012	0.58
105	53.00	826.0	2,2-Dimethylheptane	2363	0.029	0.031	0.022	0.02
106	54.10	831.5	2,2,3-Trimethylhexane	5273	0.065	0.067	0.049	0.46
107	55.48	838.1	n-Propylcyclopentane	8471	0.105	0.103	0.089	0.43
108	55.78	839.5	2,4-Dimethylheptane	4809	0.060	0.064	0.044	0.05
109	56.28	841.9	N4	966	0.012	0.012	0.010	0.60
110	56.80	844.3	Ethylcyclohexane	3395	0.042	0.041	0.036	0.30
111	57.38	847.0	3,3-Dimethylheptane	10795	0.134	0.141	0.100	0.02
112	57.75	848.7	2,6-Dimethylheptane	3617	0.045	0.048	0.033	0.45
113	58.32	851.2	N5	878	0.011	0.011	0.009	0.10
114	58.70	852.9	N6	500	0.006	0.006	0.005	0.01
115	59.68	857.2	Ethylbenzene	306050	3.582	3.151	3.217	0.14
116	60.32	860.0	N7	997	0.012	0.012	0.011	0.41
117	61.63	865.6	m-Xylene	627268	7.388	6.521	6.636	0.01
118	61.87	866.6	p-Xylene	276439	3.256	2.885	2.925	0.03
119	62.82	870.5	N9	984	0.012	0.012	0.009	0.01
120	63.07	871.5	N10	2243	0.028	0.027	0.021	0.03
121	63.70	874.1	2,5-Dimethylhexadiene-2,4	12712	0.158	0.156	0.136	0.01
122	63.90	874.9	4-Methyloctane	17124	0.212	0.225	0.158	0.02
123	64.22	876.2	2-Methyloctane	1986	0.025	0.026	0.018	0.49
124	64.97	879.2	3-Ethylheptane	4575	0.057	0.060	0.042	0.08
125	65.23	880.2	3-Methyloctane	19399	0.241	0.255	0.179	0.17
126	65.60	881.7	1c,2c,4c-Trimethylcyclohexane	25521	0.316	0.307	0.239	0.43
127	66.17	883.9	o-Xylene	382456	4.552	3.945	4.089	0.47
128	67.38	888.5	N13	1757	0.022	0.021	0.016	0.37
129	67.62	889.4	I8	2812	0.035	0.036	0.026	0.68
130	68.03	891.0	1-Nonene	1701	0.021	0.022	0.016	0.01
131	69.90	897.9	c-Nonene-3	714	0.009	0.009	0.007	0.32
132	70.48	900.0	n-Nonane	16252	0.196	0.209	0.146	0.00
133	71.02	904.0	1,1-Methylethylcyclohexane	1756	0.022	0.023	0.016	0.38
134	72.28	913.3	c-Nonene-2	16511	0.205	0.212	0.155	0.49
135	73.17	919.7	I10	497	0.006	0.006	0.004	0.60
136	73.38	921.3	i-Propylcyclohexane	814	0.010	0.010	0.008	0.04
137	73.70	923.5	I11	803	0.010	0.010	0.007	0.32
138	74.60	929.9	2,6-Dimethyloctane	800	0.010	0.010	0.007	0.40
139	74.92	932.1	2,5-Dimethyloctane	2108	0.026	0.027	0.018	0.18
140	75.68	937.5	I12	3600	0.045	0.047	0.030	0.04

pk#	Min.	Index	Component	Area	Wt%	Vol%	Mol%	Shift
141	76.23	941.3	I13	2646	0.033	0.034	0.022	0.05
142	77.00	946.5	n-Propylbenzene	62250	0.681	0.602	0.540	0.51
143	78.13	954.1	1-Methyl-3-ethylbenzene	290467	3.313	2.923	2.629	0.38
144	78.45	956.2	1-Methyl-4-ethylbenzene	142395	1.545	1.368	1.226	0.03
145	79.28	961.7	1,3,5-Trimethylbenzene	137975	1.504	1.326	1.193	0.44
146	80.07	966.9	5-Methylnonane	2139	0.027	0.028	0.018	0.14
147	80.32	968.5	4-Methylnonane	3286	0.041	0.042	0.027	0.02
148	80.65	970.6	1-Methyl-2-ethylbenzene	95318	1.035	0.897	0.821	0.03
149	81.58	976.6	3-Methylnonane	4765	0.059	0.061	0.040	0.29
150	82.42	981.9	I19	291	0.004	0.004	0.002	0.29
151	82.73	983.9	1,2,4-Trimethylbenzene	416681	4.536	3.951	3.599	0.48
152	84.93	997.5	I25	2901	0.036	0.037	0.024	0.03
153	85.35	1000.0	n-Decane	7181	0.087	0.091	0.058	0.00
154	86.32	1009.1	1,2,3-Trimethylbenzene	64201	0.700	0.597	0.556	0.24
155	87.00	1015.4	1-Methyl-4-i-propylbenzene	1443	0.016	0.014	0.011	0.31
156	87.48	1019.8	I28	10478	0.130	0.134	0.079	0.04
157	87.73	1022.1	I29	49029	0.608	0.627	0.371	0.63
158	88.52	1029.3	1-Methyl-2-i-propylbenzene	973	0.011	0.009	0.007	0.04
159	88.90	1032.7	3-Ethylnonane	2228	0.028	0.028	0.017	0.03
160	89.68	1039.8	I31	1269	0.016	0.016	0.010	0.14
161	89.87	1041.4	I32	9944	0.123	0.118	0.076	0.49
162	90.13	1043.8	1,3-Diethylbenzene	29232	0.319	0.282	0.227	0.77
163	90.62	1048.0	1,4-Diethylbenzene	9734	0.106	0.094	0.075	0.44
164	90.87	1050.3	n-Butylbenzene	36842	0.402	0.356	0.286	0.15
165	91.95	1059.7	N34	5728	0.071	0.068	0.044	0.12
166	92.70	1066.2	I37	26005	0.322	0.332	0.197	0.09
167	93.03	1069.1	1,3,Dimethyl-4-ethylbenzene	20075	0.217	0.188	0.154	0.17
168	93.25	1070.9	s-C5Bz / 1,3-DM-4-EtBz	21520	0.240	0.213	0.154	0.13
169	93.90	1076.5	I40	39445	0.489	0.504	0.298	0.53
170	94.73	1083.5	I42	3289	0.041	0.042	0.025	0.01
171	96.13	1095.2	1,2-Dimethyl-3-ethylbenzene	4595	0.051	0.044	0.036	0.18
172	96.72	1100.0	n-Undecane	8214	0.098	0.101	0.060	0.00
173	97.35	1107.0	1,2,4,5-Tetramethylbenzene	22122	0.237	0.203	0.168	0.31
174	97.68	1110.7	(2-Methylbutyl)benzene	31377	0.320	0.274	0.206	0.45
175	99.60	1131.4	I43	5468	0.065	0.066	0.036	0.24
176	99.82	1133.8	A3	3232	0.035	0.030	0.023	0.06
177	100.50	1141.1	A4	10002	0.109	0.094	0.070	0.05
178	100.90	1145.3	1-Methyl-3-n-butylbenzene	7477	0.082	0.070	0.052	0.11
179	101.85	1155.3	n-Pentylbenzene	1880	0.021	0.018	0.013	0.49
180	103.12	1168.5	1-t-Butyl-3,5-dimethylbenzene	1116	0.012	0.010	0.007	0.03
181	103.75	1175.0	I44	3205	0.038	0.039	0.021	0.19
182	104.27	1180.3	I47	1087	0.013	0.013	0.007	0.02
183	105.23	1190.1	1,3-Di-n-propylbenzene	1134	0.012	0.011	0.007	0.20
184	106.22	1200.0	n-Dodecane	18732	0.223	0.226	0.125	0.00

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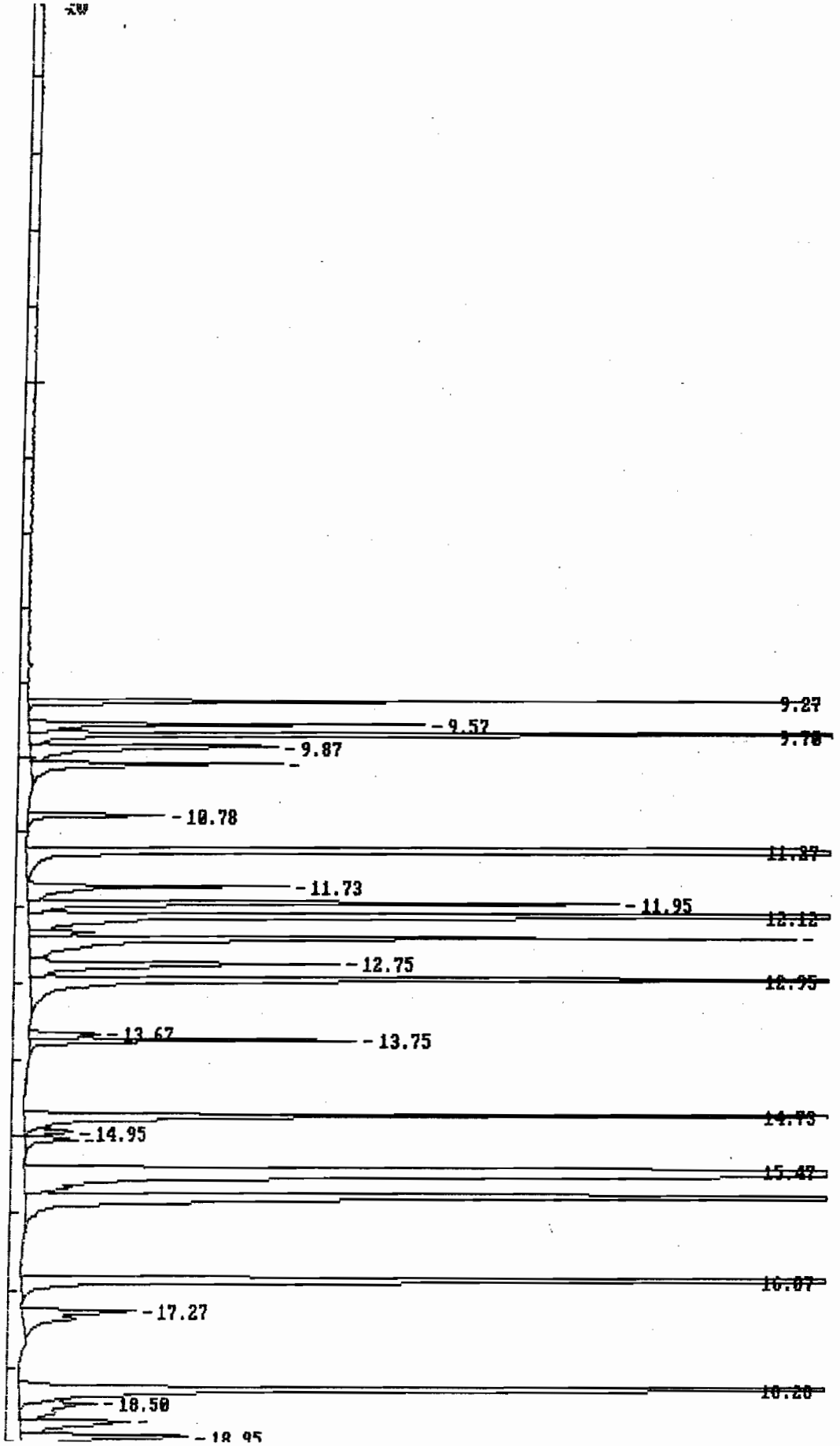

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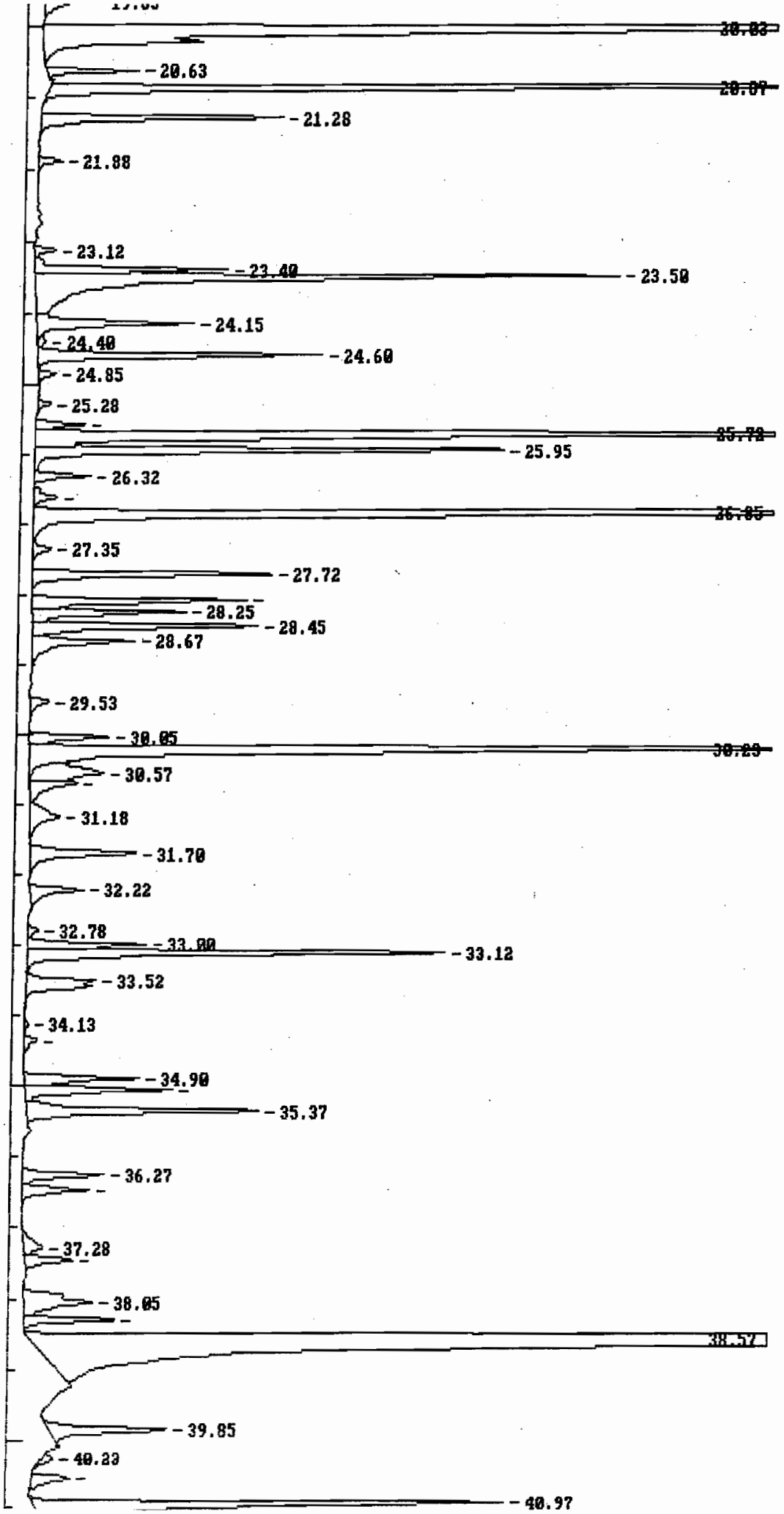
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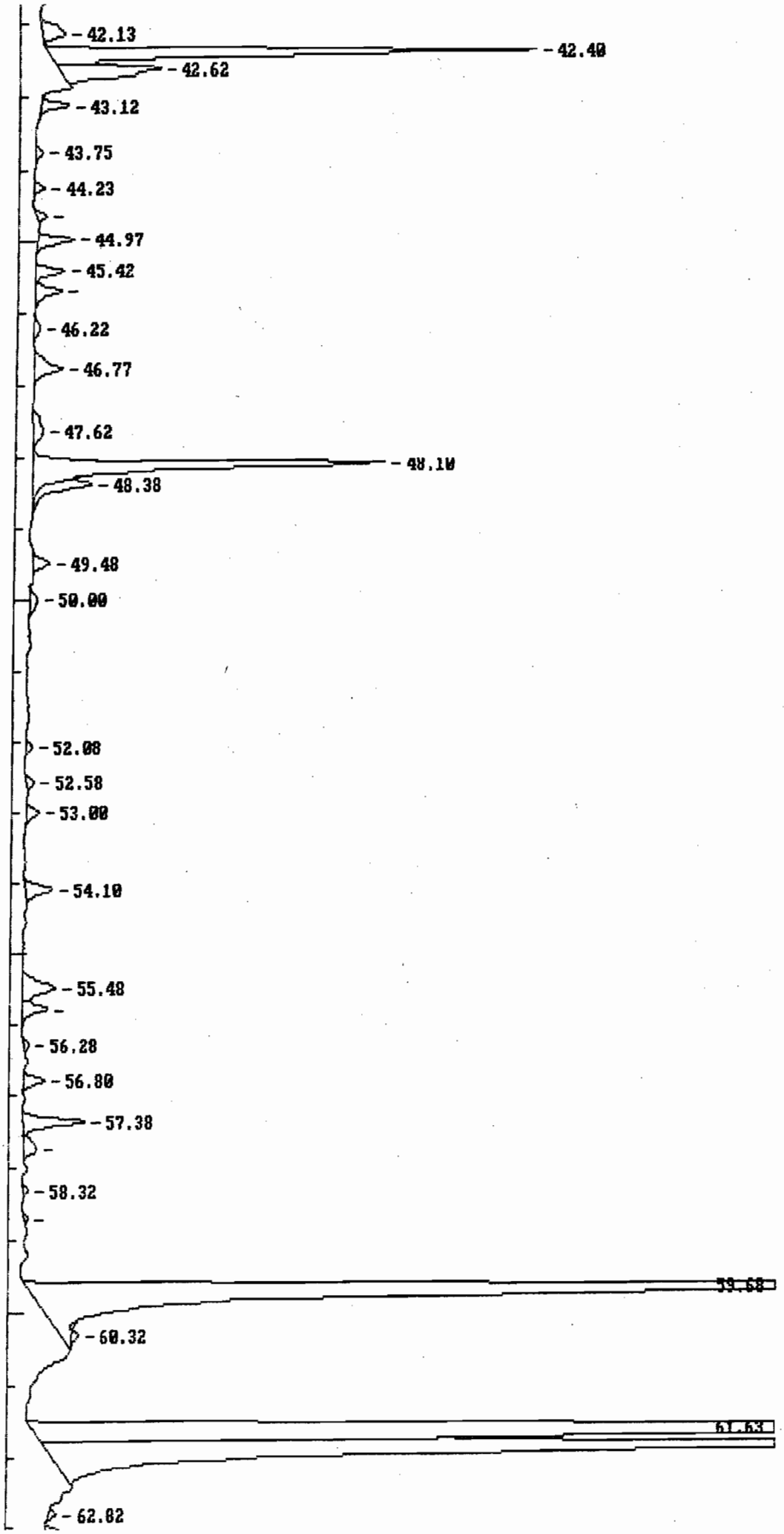
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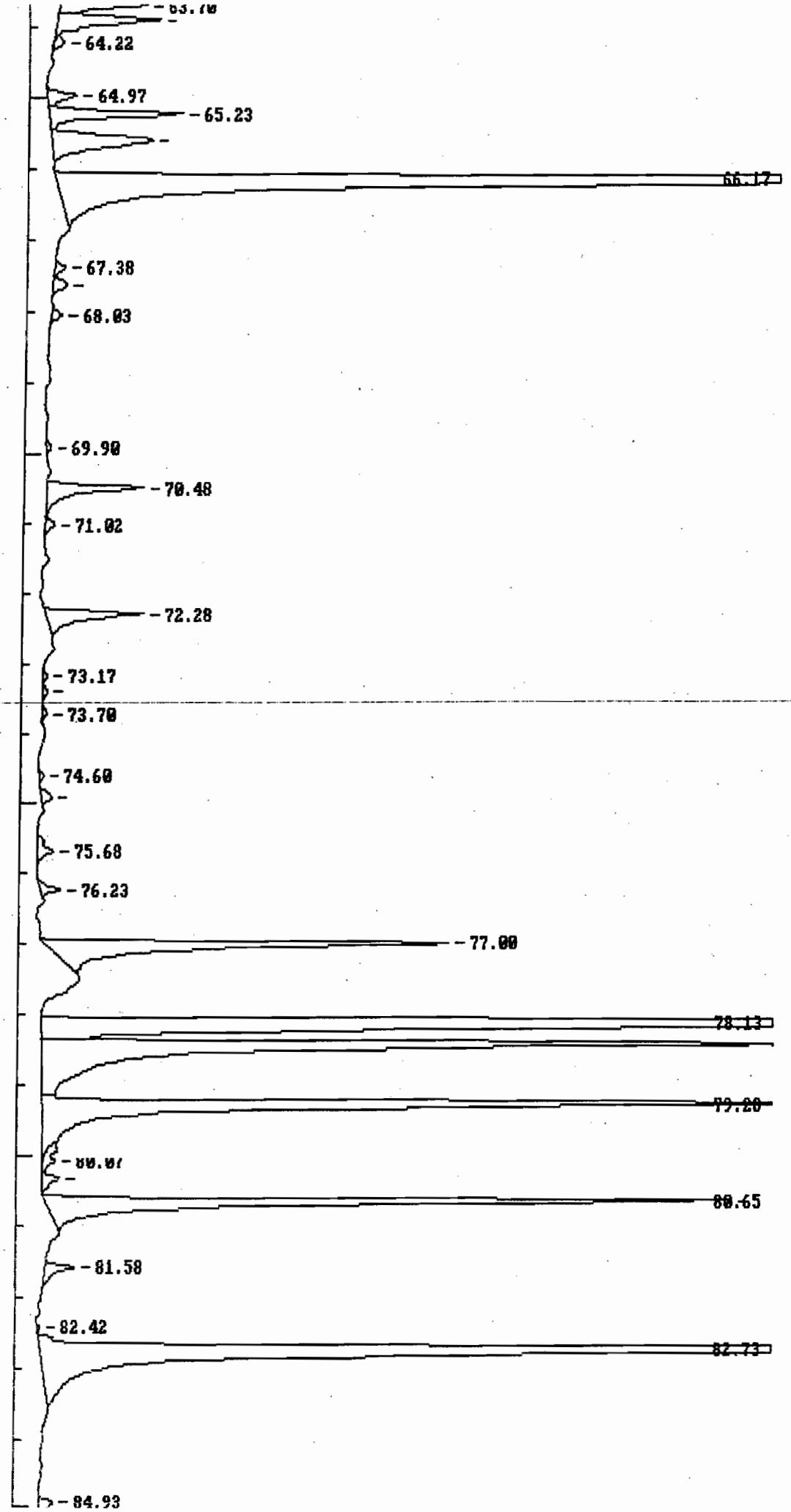
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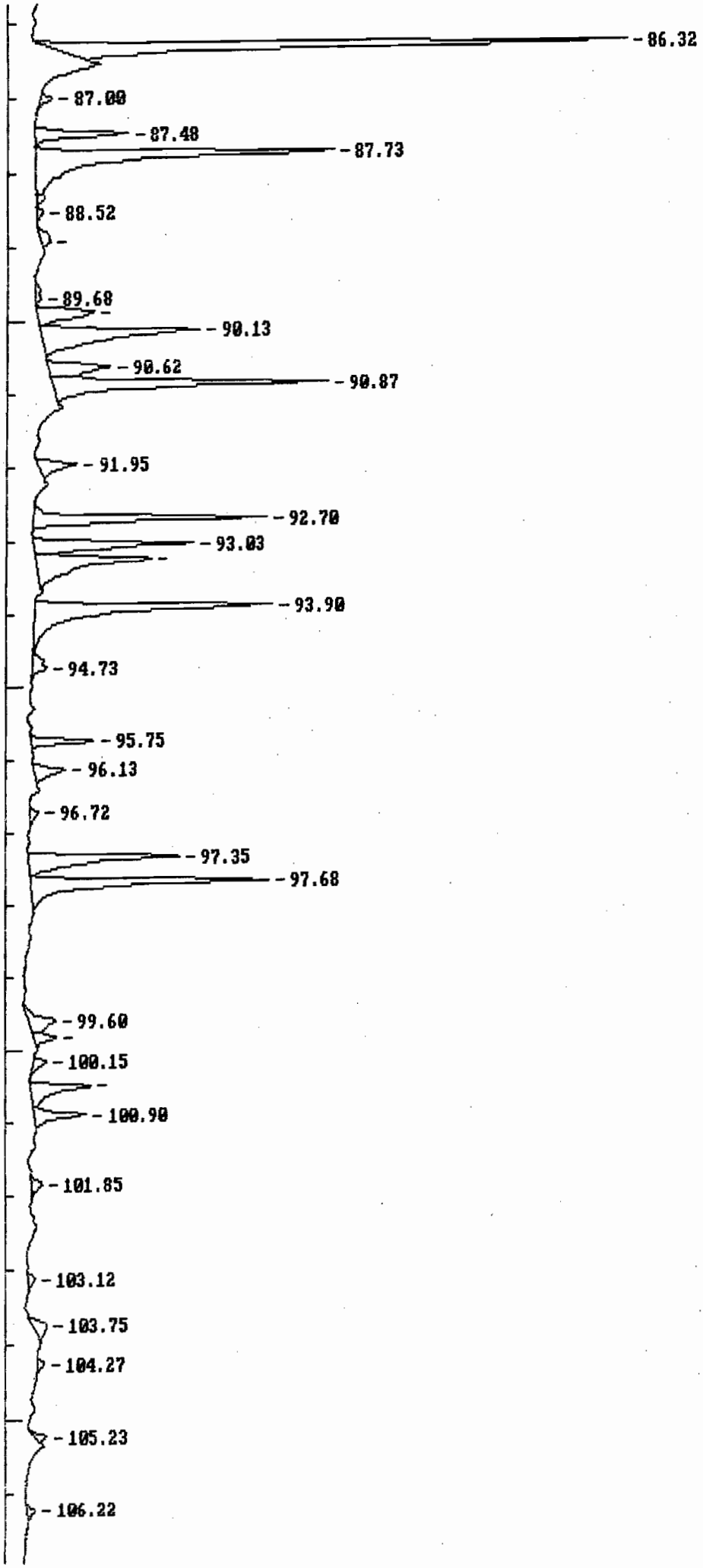
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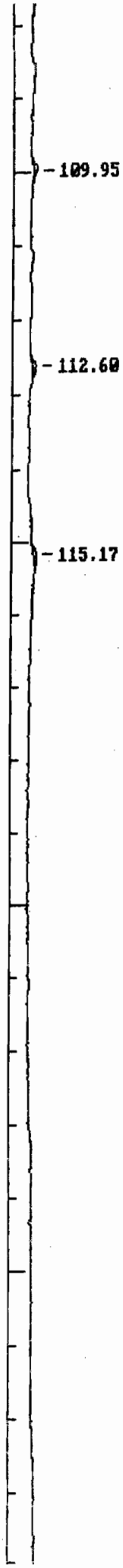

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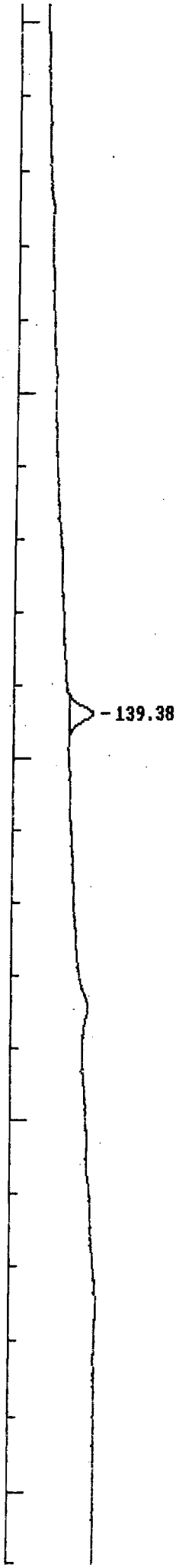

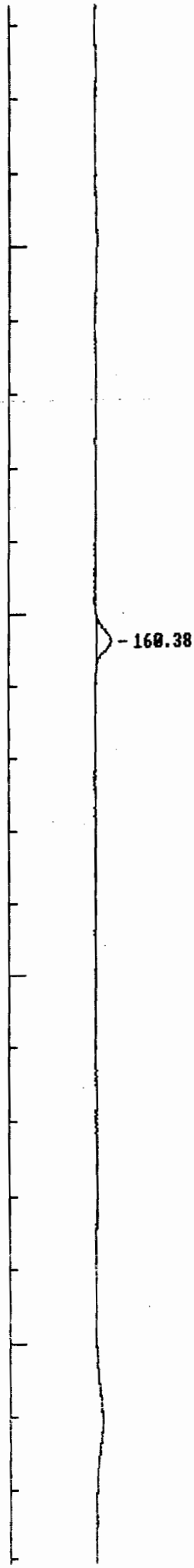
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PARADIGM ANALYTICAL LABORATORIES, INC. SPL
[illegible] Northchase Parkway SE, Wilmington, NC 28405
Phone (910) 350-1903 FAX (910) 350-1557

Chain-of Custody Record & Analytical Request

COC# 30080

Page 1 of 1

ent: REISS REMEDIATION
dress:
dress:
ote #:

Project ID: FHR LOADING RACK
Contact: JEFF BECKEN @ CATLIN
Phone: 910-452-5861
Fax: 910-452-7563

Date: 11AUG04
Turnaround: 5 DAY TURNAROUND
Job Number:
P.O. Number: 240811-3

Report To: JEFF BECKEN @ CATLIN ENGINEERS & SCIENTISTS
Invoice To: CATLIN

Sample ID	Date	Time	Matrix	Preservative: NONE				Analysis: PRODUCT ID: PIANO TEST									Comments (Please specify any special reporting requirements): ATTN: HYDROCARBONS: BOB RYANNALS
MW-4	11AUG04	1055		X				X									REPORT TO: JEFF BECKEN
																	CATLIN ENGINEERS & SCIENTISTS
																	220 OLD DAIRY ROAD
																	WILMINGTON, NC 28405
																	5 DAY TURNAROUND

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
[signature]	11AUG04	1500	[signature]	8/12	09:30		NC ____ SC ____ Other ____

SEE REVERSE FOR TERMS AND CONDITIONS

ORIGINAL

APPENDIX C

WELL CONSTRUCTION RECORDS FOR NEW MONITORING WELLS

WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR (INDIVIDUAL) NAME (print): Bobbie Fowler — CERTIFICATION #: 2869

WELL CONTRACTOR COMPANY NAME: CATLIN Engineers & Scientists — PHONE #: (910) 452-5861

STATE WELL CONSTRUCTION PERMIT # (if applicable): 2869 — ASSOCIATED WQ PERMIT # (if applicable): N/A

PTW-01

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☒ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____

2. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Wilmington County: New Hanover
   3334 River Rd.
   (Road Name and Numbers, Community, Subdivision, Lot No., Zip Code)

Topographic/Land Setting
☐ Ridge ☐ Slope ☐ Valley ☒ Flat
(check appropriate box)

Northing/Easting of well location
1435033.133/3043740.553
NCSP NAD 83 (ft)

Latitude/longitude source: ☒ GPS ☐ Topo. map
(check box)

3. OWNER: FLINT HILLS RESOURCES, LP
   Address: 3334 River Road
   (Street or Route No.)
   Wilmington (City or Town) NC (State) 28412 (Zip Code)
   (910) 799-0180
   Area code - Phone number

DEPTH From	To	DRILLING LOG Formation Description
		SEE ATTACHED

4. DATE DRILLED: 5/5/2004
5. TOTAL DEPTH: 18
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing 5.0 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 1.4 FT. Above Land Surface*
   * Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): Surficial Aquifer
12. DISINFECTION: Type N/A Amount N/A
13. CASING:

Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
-1.4	3 ft.	2 in.	Sch. 40	PVC
	ft.	in.		
	ft.	in.		

14. GROUT:

Depth From	To	Material	Method
0	1 ft.	Concrete	Surface Pour
1	2 ft.	Bent. Pellets	Surface Pour

15. SCREEN:

Depth From	To	Diameter	Slot Size	Material
3	18 ft.	2 in.	Slot .010 in.	PVC
	ft.	in.	in.	

16. SAND/GRAVEL PACK:

Depth From	To	Size	Material
2	18 ft.	#2 Medium	Torpedo Sand
	ft.		

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include road numbers and common road names.

SEE ATTACHED

17. REMARKS: _____

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

SIGNATURE OF PERSON CONSTRUCTING THE WELL — DATE 5-13-04

Submit original to Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

Modified from: GW-1 REV.07/2001

WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Bobbie Fowler CERTIFICATION # 2869

WELL CONTRACTOR COMPANY NAME CATLIN Engineers & Scientists PHONE # (910) 452-5861

STATE WELL CONSTRUCTION PERMIT # (if applicable) 2869 ASSOCIATED WQ PERMIT # (if applicable) N/A

PTW-02

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☒ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____

2. WELL LOCATION: (Show sketch of the location below)
Nearest Town: Wilmington County: New Hanover
3334 River Rd.
(Road Name and Numbers, Community, Subdivision, Lot No., Zip Code)

Topographic/Land Setting
☐ Ridge ☐ Slope ☐ Valley ☒ Flat
(check appropriate box)
Northing/Easting of well location
1435032.714/3043734.411
NCSP NAD 83 (ft)
Latitude/longitude source: ☒ GPS ☐ Topo. map
(check box)

3. OWNER: FLINT HILLS RESOURCES, LP
Address: 3334 River Road
(Street or Route No.)
Wilmington (City or Town) NC (State) 28412 (Zip Code)
(910) 799-0180
Area code - Phone number

DEPTH From	To	DRILLING LOG Formation Description
		SEE ATTACHED

4. DATE DRILLED: 5/5/2004
5. TOTAL DEPTH: 18
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing 5.0 FT.
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 1.4 FT. Above Land Surface*
* Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): Surficial Aquifer
12. DISINFECTION: Type N/A Amount N/A
13. CASING:

Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
-1.4	3 ft.	2 in.	Sch. 40	PVC
	ft.	in.		
	ft.	in.		

14. GROUT:

Depth From	To	Material	Method
0	1 ft.	Concrete	Surface Pour
1	2 ft.	Bent. Pellets	Surface Pour

15. SCREEN:

Depth From	To	Diameter	Slot Size	Material
3	18 ft.	2 in.	Slot .010 in.	PVC
	ft.	in.	in.	

16. SAND/GRAVEL PACK:

Depth From	To	Size	Material
2	18 ft.	#2 Medium	Torpedo Sand
	ft.		

SEE ATTACHED

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include road numbers and common road names.

17. REMARKS:

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

Bobbie Fowler 5-13-04
SIGNATURE OF PERSON CONSTRUCTING THE WELL DATE

Submit original to Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

Modified from: GW-1 REV.07/2001

WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Bobbie Fowler CERTIFICATION # 2869

WELL CONTRACTOR COMPANY NAME CATLIN Engineers & Scientists PHONE # (910) 452-5861

STATE WELL CONSTRUCTION PERMIT # (if applicable) 2869 ASSOCIATED WQ PERMIT # (if applicable) N/A

PTW-03

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☒ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____

2. WELL LOCATION: (Show sketch of the location below)
Nearest Town: Wilmington County: New Hanover
3334 River Rd.
(Road Name and Numbers, Community, Subdivision, Lot No., Zip Code)

Topographic/Land Setting
☐ Ridge ☐ Slope ☐ Valley ☒ Flat
(check appropriate box)
Northing/Easting of well location
1435042.618/3043722.529
NCSP NAD 83 (ft)
Latitude/longitude source: ☒ GPS ☐ Topo. map
(check box)

3. OWNER: FLINT HILLS RESOURCES, LP
Address: 3334 River Road
(Street or Route No.)
Wilmington (City or Town) NC (State) 28412 (Zip Code)
(910) 799-0180
Area code - Phone number

DEPTH From To — DRILLING LOG Formation Description

4. DATE DRILLED: 5/5/2004
5. TOTAL DEPTH: 18
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing 5.0 FT.
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 1.41 FT. Above Land Surface*
* Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118

SEE ATTACHED

9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): Surficial Aquifer
12. DISINFECTION: Type N/A Amount N/A
13. CASING:

Depth	Diameter	Wall Thickness or Weight/Ft.	Material
From -1.41 To 3 ft.	2 in.	Sch. 40	PVC
From ___ To ___ ft.	___ in.		
From ___ To ___ ft.	___ in.		

14. GROUT:

Depth	Material	Method
From 0 To 1 ft.	Concrete	Surface Pour
From 1 To 2 ft.	Bent. Pellets	Surface Pour

15. SCREEN:

Depth	Diameter	Slot Size	Material
From 3 To 18 ft.	2 in.	Slot .010 in.	PVC
From ___ To ___ ft.	___ in.	___ in.	

16. SAND/GRAVEL PACK:

Depth	Size	Material
From 2 To 18 ft.	#2 Medium	Torpedo Sand
From ___ To ___ ft.		

SEE ATTACHED

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include road numbers and common road names.

17. REMARKS: _____

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

SIGNATURE OF PERSON CONSTRUCTING THE WELL — DATE 5-13-04

Submit original to Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

Modified from: GW-1 REV.07/2001

WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR (INDIVIDUAL) NAME (print): Bobbie Fowler — CERTIFICATION #: 2869

WELL CONTRACTOR COMPANY NAME: CATLIN Engineers & Scientists — PHONE #: (910) 452-5861

STATE WELL CONSTRUCTION PERMIT # (if applicable): 2869 — ASSOCIATED WQ PERMIT # (if applicable): N/A

PTW-04

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☒ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____

2. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Wilmington County: New Hanover
   3334 River Rd.
   (Road Name and Numbers, Community, Subdivision, Lot No., Zip Code)

Topographic/Land Setting
☐ Ridge ☐ Slope ☐ Valley ☒ Flat
(check appropriate box)

Northing/Easting of well location
1434998.511/3043724.683
NCSP NAD 83 (ft)

Latitude/longitude source: ☒ GPS ☐ Topo. map
(check box)

3. OWNER: FLINT HILLS RESOURCES, LP
   Address: 3334 River Road
   (Street or Route No.)
   Wilmington (City or Town) NC (State) 28412 (Zip Code)
   (910) 799-0180
   Area code - Phone number

DEPTH From	To	DRILLING LOG Formation Description

4. DATE DRILLED: 5/5/2004
5. TOTAL DEPTH: 18
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing 5.0 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 1.35 FT. Above Land Surface*
   * Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118

SEE ATTACHED

9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): Surficial Aquifer
12. DISINFECTION: Type N/A Amount N/A
13. CASING:

Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
-1.35	3 ft.	2 in.	Sch. 40	PVC
	ft.	in.		
	ft.	in.		

14. GROUT:

Depth From	To	Material	Method
0	1 ft.	Concrete	Surface Pour
1	2 ft.	Bent. Pellets	Surface Pour

15. SCREEN:

Depth From	To	Diameter	Slot Size	Material
3	18 ft.	2 in.	Slot .010 in.	PVC
	ft.	in.	in.	

16. SAND/GRAVEL PACK:

Depth From	To	Size	Material
2	18 ft.	#2 Medium	Torpedo Sand
	ft.		

SEE ATTACHED

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include road numbers and common road names.

17. REMARKS:

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

SIGNATURE OF PERSON CONSTRUCTING THE WELL — DATE 5-13-04

Submit original to Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

Modified from: GW-1 REV.07/2001

WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Bobbie Fowler CERTIFICATION # 2869

WELL CONTRACTOR COMPANY NAME CATLIN Engineers & Scientists PHONE # (910) 452-5861

STATE WELL CONSTRUCTION PERMIT # (if applicable) 2869 ASSOCIATED WQ PERMIT # (if applicable) N/A

PTW-05

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☒ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____

2. WELL LOCATION: (Show sketch of the location below)
Nearest Town: Wilmington County: New Hanover
3334 River Rd.
(Road Name and Numbers, Community, Subdivision, Lot No., Zip Code)

Topographic/Land Setting
☐ Ridge ☐ Slope ☐ Valley ☒ Flat
(check appropriate box)
Northing/Easting of well location
1435000.103/3043718.333
NCSP NAD 83 (ft)
Latitude/longitude source: ☒ GPS ☐ Topo. map
(check box)

3. OWNER: FLINT HILLS RESOURCES, LP
Address: 3334 River Road
(Street or Route No.)
Wilmington (City or Town) NC (State) 28412 (Zip Code)
(910) 799-0180
Area code - Phone number

DEPTH From	To	DRILLING LOG Formation Description

4. DATE DRILLED: 5/6/2004
5. TOTAL DEPTH: 18
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing 5.0 FT.
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 1.45 FT. Above Land Surface*
* Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118

SEE ATTACHED

9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): Surficial Aquifer
12. DISINFECTION: Type N/A Amount N/A
13. CASING:

Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
-1.45	3 ft.	2 in.	Sch. 40	PVC
	ft.	in.		
	ft.	in.		

14. GROUT:

Depth From	To	Material	Method
0	1 ft.	Concrete	Surface Pour
1	2 ft.	Bent. Pellets	Surface Pour

15. SCREEN:

Depth From	To	Diameter	Slot Size	Material
3	18 ft.	2 in.	Slot .010 in.	PVC
	ft.	in.	in.	

16. SAND/GRAVEL PACK:

Depth From	To	Size	Material
2	18 ft.	#2 Medium	Torpedo Sand
	ft.		

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include road numbers and common road names.

SEE ATTACHED

17. REMARKS:

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

Bobbie Fowler 5-13-04

SIGNATURE OF PERSON CONSTRUCTING THE WELL DATE

Submit original to Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

Modified from: GW-1 REV.07/2001

WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Bobbie Fowler **CERTIFICATION #** 2869
WELL CONTRACTOR COMPANY NAME CATLIN Engineers & Scientists **PHONE #** (910) 452-5861
STATE WELL CONSTRUCTION PERMIT # (if applicable) 2869 **ASSOCIATED WQ PERMIT #** (if applicable) N/A

PTW-06

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☒ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____
2. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Wilmington County: New Hanover
   3334 River Rd.
   (Road Name and Numbers, Community, Subdivision, Lot No., Zip Code)
3. OWNER: FLINT HILLS RESOURCES, LP
   Address: 3334 River Road (Street or Route No.)
   Wilmington (City or Town) NC (State) 28412 (Zip Code)
   (910) 799-0180 (Area code - Phone number)
4. DATE DRILLED: 5/6/2004
5. TOTAL DEPTH: 18
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing 5.0 FT. (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 1.49 FT. Above Land Surface*
   * Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): Surficial Aquifer
12. DISINFECTION: Type N/A Amount N/A
13. CASING:

Depth From	To	ft.	Diameter	in.	Wall Thickness or Weight/Ft.	Material
-1.49	3		2		Sch. 40	PVC

14. GROUT:

Depth From	To	ft.	Material	Method
0	1		Concrete	Surface Pour
1	2		Bent. Pellets	Surface Pour

15. SCREEN:

Depth From	To	ft.	Diameter	in.	Slot Size	in.	Material
3	18		2		Slot .010		PVC

16. SAND/GRAVEL PACK:

Depth From	To	ft.	Size	Material
2	18		#2 Medium	Torpedo Sand

17. REMARKS:

Topographic/Land Setting
☐ Ridge ☐ Slope ☐ Valley ☒ Flat
(check appropriate box)

Northing/Easting of well location
1435007.643/3043705.106
NCSP NAD 83 (ft)

Latitude/longitude source: ☒ GPS ☐ Topo. map
(check box)

DEPTH From To — DRILLING LOG Formation Description

SEE ATTACHED

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include road numbers and common road names.

SEE ATTACHED

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

SIGNATURE OF PERSON CONSTRUCTING THE WELL — DATE 5-13-04

Submit original to Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

Modified from: GW-1 REV.07/2001

WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Bobbie Fowler CERTIFICATION # 2869

WELL CONTRACTOR COMPANY NAME CATLIN Engineers & Scientists PHONE # (910) 452-5861

STATE WELL CONSTRUCTION PERMIT # (if applicable) 2869 ASSOCIATED WQ PERMIT # (if applicable) N/A

PTW-07

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☒ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____
2. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Wilmington County: New Hanover
   3334 River Rd.
   (Road Name and Numbers, Community, Subdivision, Lot No., Zip Code)
3. OWNER: FLINT HILLS RESOURCES, LP
   Address: 3334 River Road (Street or Route No.)
   Wilmington (City or Town) NC (State) 28412 (Zip Code)
   (910) 799-0180 (Area code - Phone number)
4. DATE DRILLED: 5/6/2004
5. TOTAL DEPTH: 18
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing 5.0 FT. (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 1.15 FT. Above Land Surface*
   * Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): Surficial Aquifer
12. DISINFECTION: Type N/A Amount N/A
13. CASING:

Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
-1.15	3 ft.	2 in.	Sch. 40	PVC
	ft.	in.		
	ft.	in.		

14. GROUT:

Depth From	To	Material	Method
0	1 ft.	Concrete	Surface Pour
1	2 ft.	Bent. Pellets	Surface Pour

15. SCREEN:

Depth From	To	Diameter	Slot Size	Material
3	18 ft.	2 in.	Slot .010 in.	PVC
	ft.	in.	in.	

16. SAND/GRAVEL PACK:

Depth From	To	Size	Material
2	18 ft.	#2 Medium	Torpedo Sand
	ft.		

17. REMARKS:

Topographic/Land Setting
☐ Ridge ☐ Slope ☐ Valley ☒ Flat (check appropriate box)

Northing/Easting of well location
1434966.912/3043713.012
NCSP NAD 83 (ft)

Latitude/longitude source: ☒ GPS ☐ Topo. map (check box)

DEPTH (From To) DRILLING LOG Formation Description

SEE ATTACHED

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include road numbers and common road names.

SEE ATTACHED

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

SIGNATURE OF PERSON CONSTRUCTING THE WELL — DATE 5-13-04

Submit original to Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

Modified from: GW-1 REV.07/2001

WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR (INDIVIDUAL) NAME (print): Bobbie Fowler — CERTIFICATION #: 2869

WELL CONTRACTOR COMPANY NAME: CATLIN Engineers & Scientists — PHONE #: (910) 452-5861

STATE WELL CONSTRUCTION PERMIT # (if applicable): 2869 — ASSOCIATED WQ PERMIT # (if applicable): N/A

PTW-08

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☒ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____

2. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Wilmington County: New Hanover
   3334 River Rd.
   (Road Name and Numbers, Community, Subdivision, Lot No., Zip Code)

Topographic/Land Setting
☐ Ridge ☐ Slope ☐ Valley ☒ Flat
(check appropriate box)

Northing/Easting of well location
1434970.29/3043707.641
NCSP NAD 83 (ft)

Latitude/longitude source: ☒ GPS ☐ Topo. map
(check box)

3. OWNER: FLINT HILLS RESOURCES, LP
   Address: 3334 River Road
   (Street or Route No.)
   Wilmington (City or Town) — NC (State) — 28412 (Zip Code)
   (910) 799-0180
   Area code - Phone number

DEPTH From	To	DRILLING LOG Formation Description
		SEE ATTACHED

4. DATE DRILLED: 5/6/2004
5. TOTAL DEPTH: 18
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing 5.0 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 1.4 FT. Above Land Surface*
   * Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): Surficial Aquifer
12. DISINFECTION: Type N/A Amount N/A
13. CASING:

Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
-1.4	3 ft.	2 in.	Sch. 40	PVC
	ft.	in.		
	ft.	in.		

14. GROUT:

Depth From	To	Material	Method
0	1 ft.	Concrete	Surface Pour
1	2 ft.	Bent. Pellets	Surface Pour

15. SCREEN:

Depth From	To	Diameter	Slot Size	Material
3	18 ft.	2 in.	Slot .010 in.	PVC
	ft.	in.	in.	

16. SAND/GRAVEL PACK:

Depth From	To	Size	Material
2	18 ft.	#2 Medium	Torpedo Sand
	ft.		

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include road numbers and common road names.

SEE ATTACHED

17. REMARKS: _____

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

SIGNATURE OF PERSON CONSTRUCTING THE WELL — DATE 5-13-04

Submit original to Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

Modified from: GW-1 REV.07/2001

WELL CONSTRUCTION RECORD

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

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Bobbie Fowler **CERTIFICATION #** 2869

WELL CONTRACTOR COMPANY NAME CATLIN Engineers & Scientists **PHONE #** (910) 452-5861

STATE WELL CONSTRUCTION PERMIT # (if applicable) 2869 **ASSOCIATED WQ PERMIT #** (if applicable) N/A

PTW-09

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☒ Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use _____
2. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Wilmington County: New Hanover
   3334 River Rd.
   (Road Name and Numbers, Community, Subdivision, Lot No., Zip Code)
3. OWNER: FLINT HILLS RESOURCES, LP
   Address: 3334 River Road (Street or Route No.)
   Wilmington (City or Town) NC (State) 28412 (Zip Code)
   (910) 799-0180 (Area code - Phone number)
4. DATE DRILLED: 5/6/2004
5. TOTAL DEPTH: 18
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing 5.0 FT. (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 1.57 FT. Above Land Surface*
   * Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): Surficial Aquifer
12. DISINFECTION: Type N/A Amount N/A
13. CASING:

Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
-1.57	3 ft.	2 in.	Sch. 40	PVC
	ft.	in.		
	ft.	in.		

14. GROUT:

Depth From	To	Material	Method
0	1 ft.	Concrete	Surface Pour
1	2 ft.	Bent. Pellets	Surface Pour

15. SCREEN:

Depth From	To	Diameter	Slot Size	Material
3	18 ft.	2 in.	Slot .010 in.	PVC
	ft.	in.	in.	

16. SAND/GRAVEL PACK:

Depth From	To	Size	Material
2	18 ft.	#2 Medium	Torpedo Sand
	ft.		

17. REMARKS: _____

Topographic/Land Setting
☐ Ridge ☐ Slope ☐ Valley ☒ Flat (check appropriate box)

Northing/Easting of well location
1434977.752/3043695.113
NCSP NAD 83 (ft)

Latitude/longitude source: ☒ GPS ☐ Topo. map (check box)

DEPTH From	To	DRILLING LOG Formation Description

SEE ATTACHED

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include road numbers and common road names.

SEE ATTACHED

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

SIGNATURE OF PERSON CONSTRUCTING THE WELL — DATE 5-13-04

Submit original to Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 733-3221, within 30 days.

Modified from: GW-1 REV.07/2001

APPENDIX D

BORING LOGS
FOR NEW MONITORING WELLS

WELL LOG

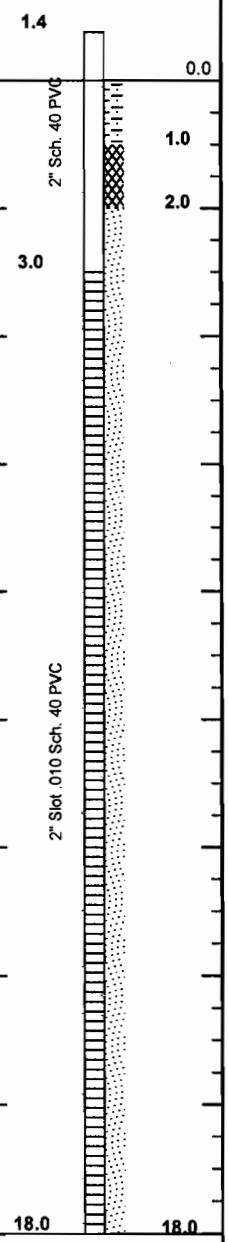
CATLIN ENGINEERS and SCIENTISTS
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 201-125	STATE: NC	COUNTY: New Hanover	LOCATION: Wilmington
PROJECT NAME: FHR North Terminal		LOGGED BY: Charles Ray	WELL ID: PTW-01
		DRILLER: Bobbie Fowler	
NORTHING: 1,435,033.1	EASTING: 3,043,740.6	CREW: Bill Miller	
SYSTEM: NCSP NAD 83 (ft)	BORING LOCATION: See Map		T.O.C. ELEV.: 36.67
DRILL MACHINE: CME 45B ATV	METHOD: HSA	0 HOUR DTW: 5.0	BORING DEPTH: 18.0
START DATE: 05/05/04	FINISH DATE: 05/05/04	24 HOUR DTW:	WELL DEPTH: 18.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION (DEPTH – ELEVATION)
									0.0 – 35.3: LAND SURFACE
0.0	1	2	6	6	0				
2.0	6	6	5	5	0				
4.0	2	3	9	9	1.5		SP		Tan, well sorted, v.f. to f. SAND. Moist to sat.
6.0	2	4	4	5	186				
8.0	2	3	2	3	738		SP		8.0 – 27.3: Tan, well sorted, v.f. to med. SAND. Sat.
							PT		9.5 – 25.8: Dark brown, SILTY, v.f. to med., SANDY PEAT with wood fragments. Moist.
10.0	2	3	4	4	480		PT		10.0 – 25.3: Dark brown, well sorted, v.f. to med. SAND with peat layers throughout.
12.0	4	9	7	12	110				12.0 – 23.3
14.0	2	6	11	15	214		SP		Tan, well sorted, v.f. to med. SAND. Sat.
16.0	5	10	14	15	395				18.0 – 17.3
									Boring Terminated at Elevation 17.3 ft

WELL DETAIL



Portland Cement | Bentonite Pellets | #2 Medium Sand

CATLIN BORING LOG 201-125.GPJ CATLIN.GDT 09/09/04

WELL LOG

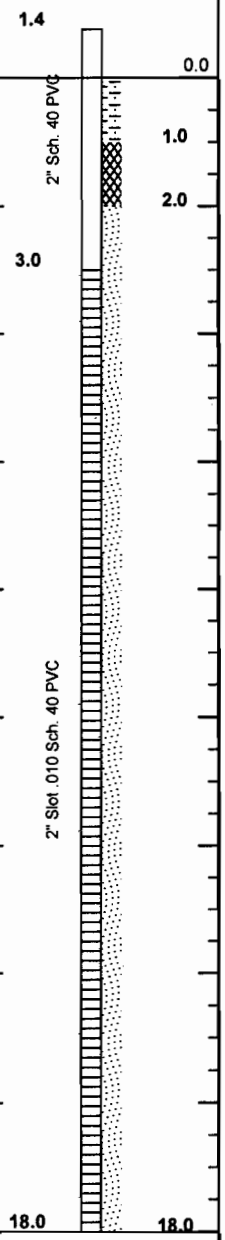
CATLIN ENGINEERS and SCIENTISTS
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 201-125	STATE: NC	COUNTY: New Hanover	LOCATION: Wilmington
PROJECT NAME: FHR North Terminal		LOGGED BY: Charles Ray	WELL ID: PTW-02
		DRILLER: Bobbie Fowler	
NORTHING: 1,435,032.7	EASTING: 3,043,734.4	CREW: Bill Miller	
SYSTEM: NCSP NAD 83 (ft)	BORING LOCATION: See Map		T.O.C. ELEV.: 36.68
DRILL MACHINE: CME 45B ATV	METHOD: HSA	0 HOUR DTW: 5.0	BORING DEPTH: 18.0
START DATE: 05/05/04	FINISH DATE: 05/05/04	24 HOUR DTW:	WELL DEPTH: 18.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION (DEPTH – ELEVATION)
									0.0 – 35.3: LAND SURFACE
0.0	1	2	3	4	0		SP		0.0 – 5.0 (35.3 – 30.3): Tan, well sorted, v.f. to f. SAND. Moist.
2.0	4	5	4	6	0				
4.0	7	7	9	9	5.8				
							SP		5.0 – 6.0 (30.3 – 29.3): Dark brown, well sorted, v.f. to f. SAND. Wet.
6.0	2	2	3	3	150		SP		6.0 – 9.0 (29.3 – 26.3): Tan/brown, well sorted, v.f. to med. SAND. Sat.
8.0	2	2	5	6	750		PT		9.0 – 10.0 (26.3 – 25.3): Dark brown, SILTY/CLAYEY PEAT with wood fragments. Moist.
10.0	2	2	5	9	600		SP		10.0 – 12.0 (25.3 – 23.3): Dark brown, well sorted, v.f. to med. SAND. Sat.
12.0	5	9	11	14	250		SP		12.0 – 18.0 (23.3 – 17.3): Tan, well sorted, v.f. to med. SAND. Sat.
14.0	2	3	9	14	260				
16.0	5	7	10	12	250				
									Boring Terminated at Elevation 17.3 ft

WELL DETAIL



Portland Cement | Bentonite Pellets | #2 Medium Sand

CATLIN BORING LOG 201-125.GPJ CATLIN.GDT 09/09/04

WELL LOG

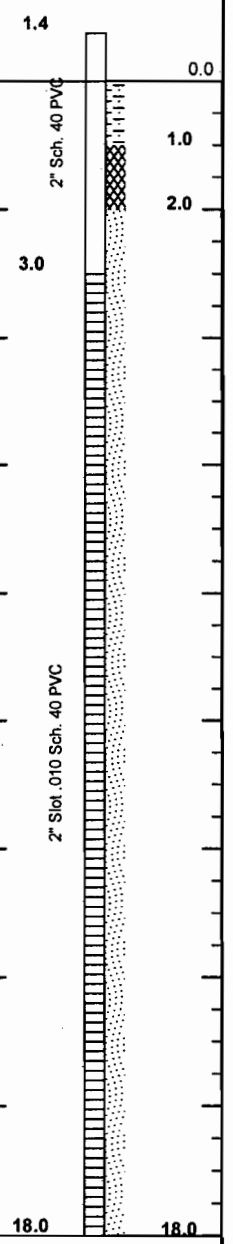
CATLIN ENGINEERS and SCIENTISTS
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 201-125	STATE: NC	COUNTY: New Hanover	LOCATION: Wilmington
PROJECT NAME: FHR North Terminal		LOGGED BY: Charles Ray	WELL ID: PTW-03
		DRILLER: Bobbie Fowler	
NORTHING: 1,435,042.6	EASTING: 3,043,722.5	CREW: Bill Miller	
SYSTEM: NCSP NAD 83 (ft)	BORING LOCATION: See Map		T.O.C. ELEV.: 36.68
DRILL MACHINE: CME 45B ATV	METHOD: HSA	0 HOUR DTW: 5.0	BORING DEPTH: 18.0
START DATE: 05/05/04	FINISH DATE: 05/05/04	24 HOUR DTW:	WELL DEPTH: 18.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION (DEPTH – ELEVATION)
									0.0 – LAND SURFACE – 35.3
0.0	2	2	4	5	6.3		SP		Tan, well sorted, v.f. to f. SAND. Moist. to Sat.
2.0	5	6	8	9	1.9				
4.0	7	9	8	6	0.9				
6.0	2	2	4	6	0				8.0 – 27.3
8.0	4	5	3	2	51		SP		Brown, mod. sorted, v.f. to med. SAND. Sat. 10.0 – 25.3
10.0	2	2	1	1	30		SP		Dark brown, S.A.A. 12.0 – 23.3
12.0	2	2	3	6	80		SP		Tan, S.A.A.
14.0	2	2	5	6	480				
16.0	2	3	5	7	100				18.0 – 17.3
									Boring Terminated at Elevation 17.3 ft

WELL DETAIL



Portland Cement | Bentonite Pellets | #2 Medium Sand

CATLIN BORING LOG 201-125.GPJ CATLIN.GDT 09/09/04

WELL LOG

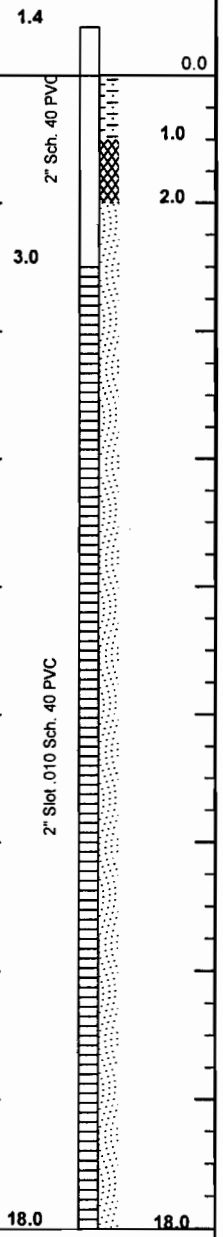
CATLIN ENGINEERS and SCIENTISTS
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 201-125	STATE: NC	COUNTY: New Hanover	LOCATION: Wilmington
PROJECT NAME: FHR North Terminal		LOGGED BY: Charles Ray	WELL ID: PTW-04
		DRILLER: Bobbie Fowler	
NORTHING: 1,434,998.5	EASTING: 3,043,724.7	CREW: Bill Miller	
SYSTEM: NCSP NAD 83 (ft)	BORING LOCATION: See Map		T.O.C. ELEV.: 36.41
DRILL MACHINE: CME 45B ATV	METHOD: HSA	0 HOUR DTW: 5.0	BORING DEPTH: 18.0
START DATE: 05/05/04	FINISH DATE: 05/05/04	24 HOUR DTW:	WELL DEPTH: 18.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION	DEPTH	ELEVATION
									LAND SURFACE	0.0	35.1
0.0	1	2	3	4	0						
2.0	1	1	2	2	0		SP		Tan, well sorted, v.f. to f. SAND. Moist to wet.		
4.0	4	4	3	3	0					6.0	29.1
6.0	1	1	2	2	625						
8.0	1	2	3	3	2000		SP		Dark brown, well sorted, v.f. to med. SAND. Sat.	10.0	25.1
10.0	1	3	3	3	>3943						
12.0	2	2	4	6	1068						
14.0	3	6	9	9	700		SP		Tan, S.A.A.		
16.0	4	5	10	12	345					18.0	17.1
									Boring Terminated at Elevation 17.1 ft		

WELL DETAIL



Portland Cement | Bentonite Pellets | #2 Medium Sand

CATLIN BORING LOG 201-125.GPJ CATLIN.GDT 09/09/04

WELL LOG

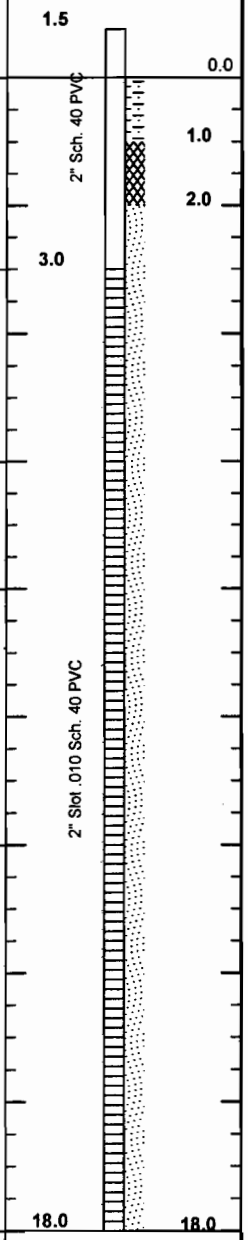
CATLIN ENGINEERS and SCIENTISTS
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 201-125	STATE: NC	COUNTY: New Hanover	LOCATION: Wilmington
PROJECT NAME: FHR North Terminal		LOGGED BY: Charles Ray	WELL ID: PTW-05
		DRILLER: Bobbie Fowler	
NORTHING: 1,435,000.1	EASTING: 3,043,718.3	CREW: Bill Miller	
SYSTEM: NCSP NAD 83 (ft)	BORING LOCATION: See Map		T.O.C. ELEV.: 36.57
DRILL MACHINE: CME 45B ATV	METHOD: HSA	0 HOUR DTW: 5.0	BORING DEPTH: 18.0
START DATE: 05/06/04	FINISH DATE: 05/06/04	24 HOUR DTW:	WELL DEPTH: 18.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION (DEPTH – ELEVATION)
									0.0 – LAND SURFACE – 35.1
0.0	1	2	3	4	0		SP		Tan, well sorted, v.f. to f. SAND. Moist. (0.0 – 3.0, 35.1 – 32.1)
2.0	5	6	8	10	0				
4.0	5	4	2	2	0		SP		Dark brown, S.A.A. (3.0 – 6.0, 32.1 – 29.1)
6.0	1	2	2	2	200		SP		Tan, well sorted, v.f. to med. SAND. Sat. (6.0 – 8.0, 29.1 – 27.1)
8.0	1	1	1	3	1600		SP		Dark brown, S.A.A. (8.0 – 12.0, 27.1 – 23.1)
10.0	2	5	3	3	3200				
12.0	3	8	9	9	2100		SP		Tan, S.A.A. (12.0 – 18.0, 23.1 – 17.1)
14.0	3	4	5	8	140				
16.0	1	5	6	6	277				
									Boring Terminated at Elevation 17.1 ft

WELL DETAIL



Portland Cement | Bentonite Pellets | #2 Medium Sand

CATLIN BORING LOG 201-125.GPJ CATLIN.GDT 09/09/04

WELL LOG

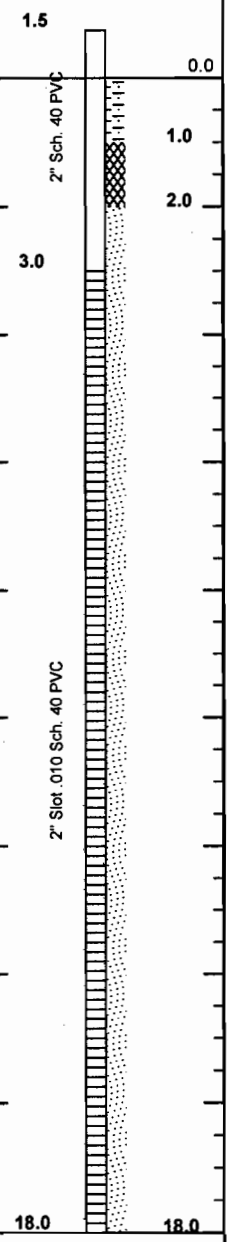
CATLIN ENGINEERS and SCIENTISTS
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 201-125	STATE: NC	COUNTY: New Hanover	LOCATION: Wilmington
PROJECT NAME: FHR North Terminal		LOGGED BY: Charles Ray	WELL ID: PTW-06
		DRILLER: Bobbie Fowler	
NORTHING: 1,435,007.6	EASTING: 3,043,705.1	CREW: Bill Miller	
SYSTEM: NCSP NAD 83 (ft)	BORING LOCATION: See Map		T.O.C. ELEV.: 36.42
DRILL MACHINE: CME 45B ATV	METHOD: HSA	0 HOUR DTW: 5.0	BORING DEPTH: 18.0
START DATE: 05/06/04	FINISH DATE: 05/06/04	24 HOUR DTW:	WELL DEPTH: 18.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION	DEPTH	ELEVATION
									LAND SURFACE	0.0	34.9
0.0	1	2	4	4	0		SP		Tan, well sorted, v.f. to f. SAND. Moist.	2.0	32.9
2.0	4	5	6	6	0		SP		Tan, well sorted, v.f. to med. SAND.	3.5	31.4
4.0	3	2	3	3	0		SP		Dark brown, S.A.A. Wet to Sat.	12.0	22.9
6.0	2	1	2	2	171						
8.0	2	2	2	2	>3943						
10.0	1	1	0	1	>3943						
12.0	2	3	4	6	925		SP		Tan/brown, S.A.A. Sat.	14.0	20.9
14.0	2	3	4	6	600		SP		Tan, S.A.A. Sat.	16.0	18.9
16.0	3	3	5	4	236		SP		Tan, mod. sorted, v.f. to med. SAND with some coarse grains. Sat.	18.0	16.9
									Boring Terminated at Elevation 16.9 ft		

WELL DETAIL



Portland Cement | Bentonite Pellets | #2 Medium Sand

CATLIN BORING LOG 201-125.GPJ CATLIN.GDT 09/09/04

WELL LOG

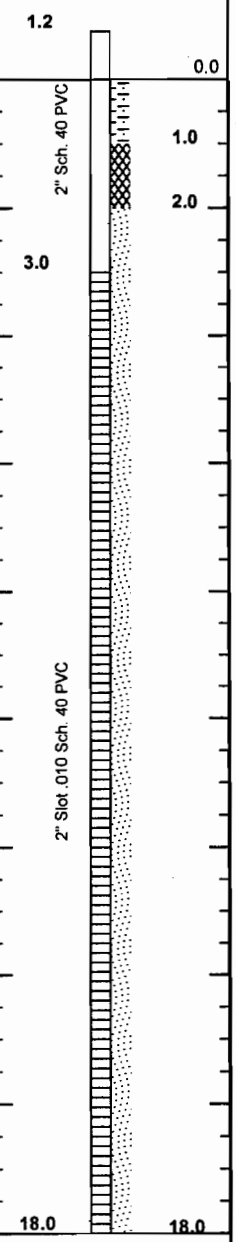
CATLIN ENGINEERS and SCIENTISTS
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 201-125	STATE: NC	COUNTY: New Hanover	LOCATION: Wilmington
PROJECT NAME: FHR North Terminal		LOGGED BY: Charles Ray	WELL ID: PTW-07
		DRILLER: Bobbie Fowler	
NORTHING: 1,434,966.9	EASTING: 3,043,713.0	CREW: Bill Miller	
SYSTEM: NCSP NAD 83 (ft)	BORING LOCATION: See Map		T.O.C. ELEV.: 36.73
DRILL MACHINE: CME 45B ATV	METHOD: HSA	0 HOUR DTW: 5.0	BORING DEPTH: 18.0
START DATE: 05/06/04	FINISH DATE: 05/06/04	24 HOUR DTW:	WELL DEPTH: 18.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION (DEPTH – ELEVATION)
									0.0 – 35.6 LAND SURFACE
0.0	2	3	4	5	0		SP		Tan/brown, well sorted, v.f. to f. SAND. Moist. (0.0 – 5.0 / 35.6 – 30.6)
2.0	5	5	6	7	0				
4.0	2	3	2	2	73				
							SP		Black, S.A.A. Wet. (5.0 – 6.0 / 30.6 – 29.6)
6.0	3	5	10	10	>3943		SP		Tan, well sorted, v.f. to med. SAND. Sat. (6.0 – 10.0 / 29.6 – 25.6)
8.0	2	6	7	6	>3943				
10.0	2	3	0	1	530		SP		Brown, well sorted, v.f. to f. SAND. Sat. (10.0 – 12.0 / 25.6 – 23.6)
12.0	3	4	7	8	660		SP		Tan, well sorted, v.f. to med. SAND. Sat. (12.0 – 18.0 / 23.6 – 17.6)
14.0	4	5	8	9	870				
16.0	4	6	10	12	230				
									Boring Terminated at Elevation 17.6 ft

WELL DETAIL



Portland Cement | Bentonite Pellets | #2 Medium Sand

WELL LOG

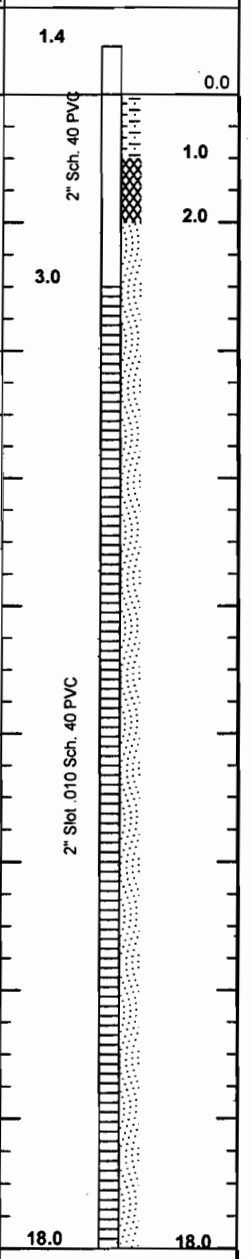
CATLIN ENGINEERS and SCIENTISTS
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 201-125	STATE: NC	COUNTY: New Hanover	LOCATION: Wilmington
PROJECT NAME: FHR North Terminal		LOGGED BY: Charles Ray	WELL ID: PTW-08
		DRILLER: Bobbie Fowler	
NORTHING: 1,434,970.3	EASTING: 3,043,707.6	CREW: Bill Miller	
SYSTEM: NCSP NAD 83 (ft)	BORING LOCATION: See Map		T.O.C. ELEV.: 36.72
DRILL MACHINE: CME 45B ATV	METHOD: HSA	0 HOUR DTW: 5.0	BORING DEPTH: 18.0
START DATE: 05/06/04	FINISH DATE: 05/06/04	24 HOUR DTW:	WELL DEPTH: 18.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION (DEPTH – ELEVATION)
									0.0 – LAND SURFACE – 35.3
0.0	1	2	4	5	0		SP		Tan, well sorted, v.f. to f. SAND. Moist.
2.0	4	7	9	9	0				4.0 – 31.3
4.0	5	6	7	10	35		SP		Tan, well sorted, v.f. to med. SAND. Wet. 5.0 – 30.3
6.0	2	7	13	12	800		SP		Brown, S.A.A. Wet to Sat.
8.0	4	7	5	4	>3943				10.0 – 25.3
10.0	3	1	1	1	1030		SP		Dark Brown, S.A.A. Sat.
12.0	3	5	6	10	300		SP		Brown,S.A.A. Sat.
14.0	5	5	10	13	240				16.0 – 19.3
16.0	9	7	8	7	210		SP		Tan, S.A.A. Sat. 18.0 – 17.3
									Boring Terminated at Elevation 17.3 ft

WELL DETAIL



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CATLIN BORING LOG 201-125.GPJ CATLIN.GDT 09/09/04

WELL LOG

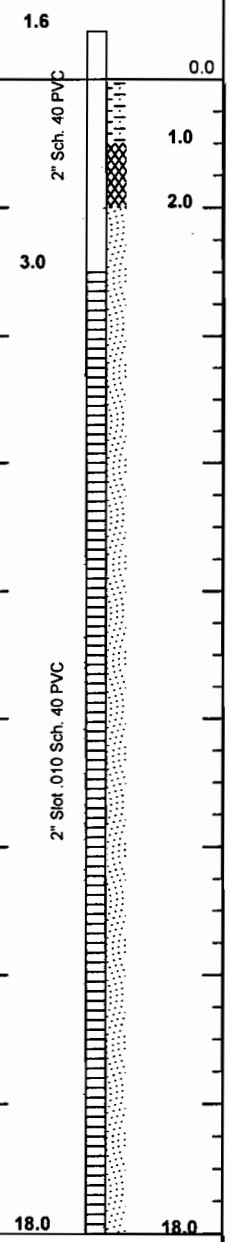
CATLIN ENGINEERS and SCIENTISTS
Wilmington, North Carolina

SHEET 1 OF 1

PROJECT NO.: 201-125	STATE: NC	COUNTY: New Hanover	LOCATION: Wilmington
PROJECT NAME: FHR North Terminal		LOGGED BY: Charles Ray	WELL ID: PTW-09
		DRILLER: Bobbie Fowler	
NORTHING: 1,434,977.8	EASTING: 3,043,695.1	CREW: Bill Miller	
SYSTEM: NCSP NAD 83 (ft)	BORING LOCATION: See Map		T.O.C. ELEV.: 36.90
DRILL MACHINE: CME 45B ATV	METHOD: HSA	0 HOUR DTW: 5.0	BORING DEPTH: 18.0
START DATE: 05/06/04	FINISH DATE: 05/06/04	24 HOUR DTW:	WELL DEPTH: 18.0

DEPTH	BLOW COUNT 6in	6in	6in	6in	OVA (ppm)	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION	DEPTH	ELEVATION
									LAND SURFACE	0.0	35.3
0.0	2	2	3	4	0		SP		Tan, well sorted, v.f. to f. SAND. Moist.	4.0	31.3
2.0	5	7	7	9	0						
4.0	6	6	6	9	62		SP		Tan, well sorted, v.f. to med. SAND. Wet.	6.0	29.3
6.0	3	8	9	9	>3943		SP		Brown, S.A.A. Sat.	10.0	25.3
8.0	4	4	3	1	>3943						
10.0	1	1	0	3	1200		SP		Black, S.A.A.	12.0	23.3
12.0	woh	woh	3	4	600		SP		Dark brown, S.A.A.	14.0	21.3
14.0	13	3	5	5	755		SP		Brown, S.A.A.	16.0	19.3
16.0	3	3	3	3	250		SP		Tan, S.A.A.	18.0	17.3
									Boring Terminated at Elevation 17.3 ft		

WELL DETAIL



Portland Cement | Bentonite Pellets | #2 Medium Sand

CATLIN BORING LOG 201-125.GPJ CATLIN.GDT 09/09/04