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UST Section Report
CTI Cape Fear Terminal
Wilmington, New Hanover County, NC

IHSB Site Name:

Southern Metals Recycling

NCN000407584

BUNNELL-LAMMONS ENGINEERING, INC.

GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

REPORT OF GROUNDWATER SAMPLING EVENT NOVEMBER 2015

Incident No. 6107

CAPE FEAR TERMINAL
1002 SOUTH FRONT STREET
WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

Prepared For

CTI of North Carolina, Inc.
Post Office Box 576
Savannah, Georgia 31402

Prepared By

Bunnell-Lammons Engineering, Inc.
6004 Ponders Court
Greenville, South Carolina 29615

April 27, 2016

BLE Project Number J15-9119-03

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BUNNELL-LAMMONS ENGINEERING, INC.
GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

April 27, 2016

Mr. James R. Baker, P.E.
CTI of North Carolina, Inc.
PO Box 576
Savannah, Georgia 31402

Subject: **Report of Groundwater Sampling Event – November 2015**
CTI of North Carolina – Cape Fear Terminal
1002 South Front Street
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No. 6107
BLE Job No. J15-9119-03

Dear Mr. Baker:

Bunnell-Lammons Engineering, Inc. (BLE) is pleased to submit the attached *Report of Groundwater Sampling Event – November 2015* for the CTI of North Carolina (CTI-NC) Cape Fear Terminal site located in Wilmington, New Hanover County, North Carolina. This report describes the project background and presents the scope of the groundwater sampling activities, summarizes the assessment findings, and presents BLE's conclusions and recommendations.

BLE appreciates the opportunity to provide our professional services on this project. If you have any questions regarding this report, or if we can be of additional service, please feel free to contact us at (864) 288-1265.

Sincerely,

BUNNELL-LAMMONS ENGINEERING, INC.

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TABLE OF CONTENTS

1.0 INTRODUCTION 1
2.0 SITE INFORMATION 2
2.1 Site Information 2
2.2 Site Contacts 2
3.0 SITE HISTORY 3
3.1 Previous Ownership 3
3.2 Historical Releases and Response 3
3.2.1 Northern Portion of the Site 4
3.2.2 Southern Portion of the Site 5
4.0 GROUNDWATER SAMPLING 6
4.1 Groundwater Occurrence 6
4.2 Free-Phase Petroleum 7
4.3 Groundwater Sampling Results 7
5.0 QUALITY CONTROL INFORMATION 7
6.0 GROUNDWATER REMEDIATION SYSTEMS 8
6.1 Air Sparging 8
6.2 Groundwater Pump and Treat 9
6.3 Free-Phase Petroleum Recovery 9
6.4 Natural Attenuation 10
7.0 CONCLUSIONS AND RECOMMENDATIONS 10

TABLES
Table 1 – Well Construction and Elevation Data
Table 2 – Groundwater Laboratory Analytical Results – November 2015
Table 3A – Historical Sampling Results – Northern Portion of the Site
Table 3B – Historical Sampling Results – Southern Portion of the Site
Table 4 – Groundwater Pump and Treat System – Flow Measurements

FIGURES
Figure 1 – Site Location Map
Figure 2 – Aerial Photograph of the Subject Site
Figure 3 – Site Map
Figure 4 – Groundwater Potentiometric Map
Figure 5 – Groundwater CoC Map
Figure 6 – Remediation System Locations

APPENDICES
Appendix A – Monitoring Well Purging and Sampling Procedures and Sampling Logs
Appendix B – Laboratory Analytical Reports

1.0 INTRODUCTION

The CTI of North Carolina (CTI-NC) Cape Fear Terminal is located at 1002 South Front Street in Wilmington, New Hanover County, North Carolina (**Figure 1**). An aerial photograph of the site is included as **Figure 2** and a site map is provided as **Figure 3**. Presently, the site is an operating terminal including facilities used for storage and distribution of petroleum and non-petroleum products.

Historically the site was owned, operated and regulated as two separate sites. The northern portion of the site was reportedly developed in the 1920's and was formerly owned by the Pure Oil Company, the Union Oil Company, UNOCAL Chemicals Division, and JLM Terminals Inc. The southern portion of site the site was originally developed in 1938 and was formerly owned by Gulf Oil, ATC Petroleum and Sprague Energy Corp. CTI-NC acquired both the northern and southern portions of the site in 2001. In 2002, North Carolina Department of Environmental Quality (NCDEQ) agreed to allow the groundwater sampling reports from the northern and southern portions of the site to be combined into a single document.

Three separate groundwater remediation approaches are currently being implemented at the site.

1. A pump and treat system consisting of three recovery pumps located in wells C-MW-4, C-RW-3 and JURW-3R or J-UC-2, a recovery trench to the southwest of Tank 205 and a second recovery trench to the north of Tank 127. Water recovered by the pump and treat system is discharged to an oil/water separator located on the southern portion of the site.
2. Passive free-phase petroleum product recovery efforts utilizing absorbent socks or pneumatic pumps on an as-needed basis to recover measurable quantities of product. There have been six different wells at the site where passive recovery efforts have been used periodically.
3. Select groundwater monitoring wells are being remediated through natural attenuation processes.

In addition, an air sparge system consisting of five sparge wells in the area of Tanks 211, 213 and 226; and six sparge wells along Meares Street was temporarily shutdown on December 2, 2014 with the approval of NCDEQ. The goal of the temporary shutdown is to determine if the air sparge system has reached its technical limitations and if natural attenuation can be an effective remediation technique in these areas.

Groundwater monitoring activities began at the site in 1996 and have been conducted on a semi-annual basis since 2003. On October 15, 2014, the NCDEQ issued a letter requesting continued semi-annual monitoring and operation of the remediation systems as the site. Bunnell-Lammons Engineering Inc. (BLE) was retained by CTI-NC for environmental services related to groundwater conditions at the CTI-NC Cape Fear Terminal. This report documents the November 2015 groundwater assessment activities at the subject site.

2.0 SITE INFORMATION

2.1 Site Information

Date of Report	April 27, 2016
NCDEQ Incident No.	6107
Site Name	CTI-NC Cape Fear Terminal
Site Address	1002 South Front Street Wilmington, North Carolina 28401
Geographic Coordinates	Latitude: N34°13'18" Longitude: W77°56'59"

2.2 Site Contacts

Property Owner	CTI of North Carolina, Inc. P.O. Box 576 Savannah, Georgia 31402 (912) 443-6553
Property Occupant	CTI of North Carolina, Inc. P.O. Box 576 Savannah, Georgia 31402 (912) 443-6553
Consultant/Contractor	Bunnell-Lammons Engineering, Inc. 6004 Ponders Court Greenville, South Carolina 29615 (864) 288-1265
Analytical Laboratory	Pace Analytical Services, Inc. 9800 Kincey Ave., Suite 100 Huntersville, NC 28078 (704) 875-9092

3.0 SITE HISTORY

3.1 Previous Ownership

Historically the site was owned, operated and regulated as two separate sites. The two sites were divided by Meares Street with one site located to the north of Meares Street and the other to the south.

The site to the north of Meares Street was developed as a petroleum storage facility between 1915 and 1953. According to historic Sanborn Fire insurance maps, in 1953 the northern site was occupied by the Cape Fear Terminal, a wholesale oil and gasoline storage yard. At that time, the northern site had nine gasoline aboveground storage tanks (ASTs), two No. 2 fuel oil ASTs, one kerosene AST, and two oil ASTs. Additionally, an automotive repair facility was located on the eastern portion of the site. According to a NCDEQ records review, the Pure Oil Company took over operations of the site from the Cape Fear Terminal in 1958. In 1965, the Union Oil Company purchased Pure Oil Company and operated the facility for 10 years. In 1975, the UNOCAL Chemicals Division acquired the facility. UNOCAL Chemical Division sold the facility in November 1993 to JLM Terminals Inc. In 2001, CTI-NC purchased the facility from JLM Terminals.

The site to the south of Meares Street was reportedly developed as a petroleum storage facility in 1938. By 1953, MacMillan & Cameron, Inc. owned the property and was using it as a wholesale gasoline storage yard. In 1955, Gulf Oil purchased the facility and maintained operations there for 25 years. In 1980, ATC Petroleum acquired the site from Gulf Oil. ATC Petroleum changed their name to Sprague Energy Corporation in 1989. Sprague Energy operated the facility until 2001 when they sold the site to CTI-NC.

3.2 Historical Releases and Response

The subject site, the CTI-NC Cape Fear Terminal, was regulated as two separate facilities until 2001 when CTI-NC purchased the property north of Meares Street from JLM Terminals and the property south of Meares Street from Sprague Energy. At that time, wells on the northern portion of the site were given the prefix "J" and wells on the southern portion of the site were given the prefix "C" in order to differentiate between similarly labeled wells across the site.

3.2.1 Northern Portion of Site

Historically, several releases have occurred on the northern portion of the subject site. The first release was reportedly discovered in May 1989 when approximately 8,200-gallons of mineral spirits were released as a result of an underground piping failure between Tanks 211 and 213. In May 1991, approximately 7-feet of free-phase petroleum was identified east of Tank 204 near recovery well RW-11. A piping manifold leak located to the east of recovery well RW-5 was reported in May 1992. In November 1995, an unknown quantity of gasoline and diesel fuel was released from underground piping in the rail car loading area. A release of an unknown quantity of gasoline was reported near Tank 202 in October 2010.

In August 1992, a *Final Remedial Action Plan* (RAP) was submitted to the NCDEQ by Maude Environmental, Inc. on behalf of Unocal Oil Company of California to address known releases at that time. A RAP Addendum was approved by the NCDEQ in October 1992 and in 1993 a groundwater remediation system consisting of a recovery trench with a skimmer (installed for free-phase petroleum recovery), six pump and treat wells and six vapor extraction wells were installed. The pump and treat system was discontinued in 1999 when an air sparging system was incorporated with the existing vacuum extraction system. The air sparging system began operating on the northern portion of the site on August 10, 1999 and operated continuously until December 2, 2014, with the exception of a period from late 2005 until December 2006.

CTI-NC initiated free product recovery efforts on the northern portion of the subject site beginning in October 2008. CTI-NC installed a free product recovery pump to service monitoring wells J-URW-3R, J-URW-2, and J-UC-2, as needed. The recovery pump is transferred between these wells when measurable product was detected. The liquid from these wells is pumped across Meares Street into the oil/water separator tank associated with the pump and treat remediation system on the southern portion of the site.

In the fall of 2010, CTI-NC installed a shallow well (TW-1) with a recovery pump to the east of Tank 202 to address free-phase petroleum identified in the area. The recovered free product was discharged via a temporary pipeline to the oil/water separator associated with the groundwater remediation system on the southern portion of the site. The pump in TW-1 was used intermittently from November 2010 until February 2011. The pump was removed in the spring of 2011 due the lack of groundwater being

consistently present in the well. Since that time, absorbent socks and a peristaltic pump have been utilized to remove free-phase petroleum from the temporary well when necessary.

3.2.2 Southern Portion of Site

According to previous reports, the first release identified in the southern portion of the site occurred in 1986 when free-phase petroleum was identified in the area of Tank 127. In response, an approximately 700-foot long, L-shaped recovery trench was constructed. From March 1987 to August 1992, a reported 5,343 gallons of free-phase petroleum was recovered from the trench. The recovery trench was decommissioned in 1992.

In March 1994, a Corrective Action Plan (CAP) was prepared by Richard Catlin & Associates to address soil and groundwater contamination at the site. The CAP recommended a two phase remediation approach. The first phase was a pump and treat system incorporating the existing recovery trench located near Tank 127 and installing a new recovery well (C-RW-2) located between Tank 114 and Tank 116 to address impacted groundwater. The treatment system was installed to the west of Tank 127 and initially consisted of an oil/water separator, air stripper and carbon filter. The second phase was the installation of a soil vapor extraction (SVE) system to address the impacted soils in the area of Tank 114 and Tank 115. The CAP was approved by the NCDEQ on May 19, 1994. The SVE system was installed in September 1995 and operated until NCDEQ approved its deactivation in March 1998. The pump and treat system has been in operation from 1995 until the present, with the exception of several months in 2006 when it was temporarily shut down for repairs.

In December 2006, 0.43-feet of free-phase product was identified in monitoring well C-MW-5, near Tank 114. Until that time, monitoring well C-MW-5 had not had measurable free-phase product thicknesses or dissolved-phase concentrations of targeted petroleum compounds exceeding the NCDEQ regulatory groundwater quality standard (NCGWQS)[1]. The installation of temporary monitoring wells in the vicinity of C-MW-5 did not identify additional free product. Ultimately, a sample of the free product was analyzed and identified as weathered kerosene. According to CTI-NC records, CTI-NC has not stored kerosene at the terminal and kerosene was not stored by the previous owners dating back to the 1970s.

[1] North Carolina Groundwater Quality Standards as established in North Carolina Administration Code Title 15A, Department of Environment and Natural Resources, Division of Water Quality, Subchapter 2L Section .0100, .0200, .0300, *Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina*, amended January 1, 2010.

Therefore, it is believed the kerosene product pre-dates CTI-NC ownership and was most likely due to a historical release sometime prior to 1970. Beginning in 2007, a peristaltic pump was utilized to remove the free product from monitoring well C-MW-5 whenever measurable amounts were detected. Free product has not been detected in monitoring well C-MW-5 since August 2011.

Due to the continued presence of free-phase petroleum and elevated dissolved phase contaminant concentrations in the area of Tank 127, a four-inch recovery well (C-RW-3) was installed in October 2007. On March 5, 2008, a pneumatic pump was installed in recovery well C-RW-3 to remove free-phase petroleum and impacted groundwater. The pneumatic pump in recovery well C-RW-3 remains in operation.

During the spring of 2009, a pneumatic pump was installed in monitoring well C-MW-4 to increase the volume of contaminated groundwater moving into the existing remediation system. The pump was activated in July 2009 and is currently in operation. This pump was not running from February to December 2010 due to installation of a new tank in this area.

4.0 GROUNDWATER SAMPLING

Fifteen groundwater monitoring wells (J-MW-3, J-MW-9, J-MW-10, J-MW-16, J-MW-19, J-RW-1 through J-RW-3, J-UC-1R, J-UC-6, C-RW-3, C-MW-4, C-MW-11, C-MW-16, and C-MW-18) associated with the subject site are sampled on a semi-annual basis as required by NCDEQ. Groundwater level measurements are collected from the sampled wells as well as 39 additional groundwater monitoring wells associated with the site on a semi-annual basis.

On November 11-12, 2015, BLE personnel mobilized to the site and performed the semi-annual groundwater sampling event.

4.1 Groundwater Occurrence

Site-wide stabilized groundwater level measurements obtained on November 11, 2015 ranged from 3.10 feet above mean sea level (J-UC-1R) to 20.26 feet above mean sea level (C-MW-4). A tabulation of the groundwater level data is provided on **Table 1**. A water table elevation contour map showing the

occurrence and direction of groundwater flow is presented as **Figure 4**. Groundwater flow is to the west, toward the Cape Fear River.

4.2 Free-Phase Petroleum

During the November 2015 sampling event, measurable free-phase petroleum was detected in three wells, J-URW-3R (0.39 ft), J-RW-8 (0.17 ft), and TW-1 (0.87 ft). Each of these wells has historically contained measureable amounts of free-phase petroleum and continues to be utilized for free-product recovery.

4.3 Groundwater Sampling Results

The November 2015 groundwater sampling event detected three petroleum compounds at concentrations exceeding their respective NCGWQS, as follows:

- **Benzene:** J-MW-3, J-RW-1, J-RW-3, C-RW-3, and C-MW-16
- **Xylenes:** J-RW-3 and C-RW-3
- **Isopropylbenzene:** J-MW-16 and C-RW-3
- **Naphthalene:** J-MW-16, J-RW-1, J-RW-2, J-RW-3, C-RW-3, C-RW-4 and C-MW-11

The analytical results also identified petroleum compounds (toluene, ethylbenzene and MTBE) in concentrations exceeding the laboratory minimum detection limits but below their respective NCGWQS in several wells. The results of the current laboratory analyses are summarized in **Table 2** and are shown on **Figure 5**. A summary of historical laboratory results is provided in **Table 3A** and **Table 3B**. The complete laboratory report is provided in **Appendix B**.

5.0 QUALITY CONTROL INFORMATION

Sample containers were marked in the field with identifying numbers, properly preserved, placed into sample coolers, secured, and maintained until received at the laboratory. The samples and chain-of-custody records were delivered to Pace Analytical Services in Huntersville, NC for analysis.

As noted in the laboratory reports in **Appendix B**, the samples were received by the laboratory in good condition, in accordance with the laboratory's quality specifications, and at a temperature of

approximately 1.1° Centigrade. As a quality control (QC) check, the laboratory analyzed random matrix spikes and matrix spike duplicates to detect possible matrix effects.

6.0 GROUNDWATER REMEDATION SYSTEMS

Three separate groundwater remediation approaches are currently being implemented at the site, pump and treat, free-product recovery and natural attenuation (**Figure 6**). A fourth groundwater remediation approach, air sparging, was recently deactivated. These remediation approaches address petroleum contamination in either the free-phase or dissolved-phase.

6.1 Air Sparging

On December 2, 2014, air sparging systems at the site were temporarily shutdown with the approval of NCDEQ. The goal of the temporary shutdown is to determine if natural attenuation can be an effective remediation technique to replace air sparging in areas where the system was utilized. NCDEQ approved the temporary shutdown of the system for two semi-annual groundwater sampling events. The November 2015 sampling event represents the second of the two sampling events.

Air sparging at the site was utilizing 11 air sparge wells located in two separate areas. Five air sparge wells are located in the area of Tanks 211, 213 and 226; and six air sparge wells are located on the northern side of Meares Street.

Five groundwater monitoring wells (J-MW-3, J-MW-9, J-RW-1, J-RW-2, and J-UC-6) monitor the systems effectiveness. Analytical data from these five monitoring wells collected during the two groundwater sampling events in 2015 will be used to determine if monitored natural attenuation can replace the former air sparging system. During the two 2015 semi-annual groundwater sampling events, petroleum concentrations in the groundwater monitoring wells associated with the air sparging system have generally decreased. These results would indicate that air sparging in this area has likely reached its technical limitations.

6.2 Groundwater Pump and Treat

The on-site groundwater pump and treat system consists of three recovery pumps located in wells C-MW-4 (south of Tank 115), C-RW-3 (north of Tank 127) and JURW-3R or J-UC-2 (southwest of Tank 215); a recovery trench to the southwest of Tank 205; and a second recovery trench to the north of Tank 127. Groundwater recovered by the system is treated through an oil/water separator located on the southern portion of the site and subsequently discharged into the Cape Fear River under an NPDES permit allowance.

During the semi-annual sampling event, three analytical samples were obtained from the oil/water separator; one from the influent, one from the mid-fluent, and one from the effluent. During this sampling event, one compound, methyl-tert-butyl ether (MTBE), was identified in the mid-fluent and effluent samples at concentrations above laboratory minimum detection limits but below regulatory standards. From January 6, 2015 until August 11, 2015, a total 583,742-gallons of water flowed through the oil/water separator. An historical summary of the groundwater pump and treat system flow measurements is included as **Table 4**.

Groundwater monitoring wells near the pump and treat locations have shown consistent decrease in petroleum contaminant concentrations. Specifically, monitoring well C-MW-18, located to the north of Tank 127, showed no petroleum compound concentrations detected above the NCGWQS for the last three sampling events. However, recovery well C-RW-3, which was voluntarily sampled, detected benzene, xylenes, isopropylbenzene and naphthalene at concentrations above their respective NCGWQS.

6.3 Free-Phase Petroleum Recovery

Free-phase petroleum recovery efforts utilizing absorbent socks or pneumatic pumps are performed on an as-needed basis to recover measurable quantities of product at the site. Historically, free-phase petroleum has been recovered from six wells on-site (J-UC-2, J-URW-3R, J-RW-11, TW-1, J-RW-8, and C-MW-7).

In November 2015, free-phase petroleum was detected in three wells J-URW-3R (0.39 ft), J-RW-8 (0.17 ft), and TW-1 (0.87 ft).

6.4 Natural Attenuation

Select areas are being remediated through natural attenuation processes. Currently, natural attenuation is observed at five monitoring wells (J-MW-10, J-MW-19, J-RW-3, J-UC-1R, and C-MW-11).

In the November 2015 sampling event, petroleum constituents were detected above their respective NCGWQS in well J-RW-3. Constituents above the NCGWQS included, benzene, ethylbenze, xylenes, isopropylbenzene, and naphthalene. The remaining wells did not detect contaminant concentrations or the detections were below the established NCGWQS.

7.0 CONCLUSIONS AND RECOMMENDATIONS

BLE has completed a semi-annual groundwater sampling event on behalf of CTI-NC at the Cape Fear Terminal. Continued semi-annual groundwater monitoring and operation of the remediation systems at the site are in conformance with the NCDEQ approved activities.

Groundwater remediation efforts have been implemented in some form in both the northern and southern portions of the site since the early 1990's. Remediation efforts have been beneficial, with free-phase petroleum product substantially reduced and dissolved-phase petroleum concentrations steadily decreasing.

The air sparging system was temporarily shut down on December 2, 2014 and remained inactive through the two 2015 semi-annual sampling events to determine if the system has reached its technical limitations. During the two 2015 semi-annual groundwater sampling events, petroleum concentrations have generally decreased in the five groundwater monitoring wells associated with the air sparging system. Based on these results, BLE believes monitored natural attenuation is a viable remediation method in the area of the former air sparging system and BLE recommends permanent closure of the air sparging system.

The elevated dissolved phase concentrations in recovery well C-RW-3 along with continued low dissolved phase concentrations in nearby monitoring wells would indicated that the pump and treat system is effectively pulling dissolved phase contamination toward the extraction points. Therefore, BLE

recommends continued operation of the pump and treat system on the wells and recovery trenches. Specifically, pump and treat operations should continue on wells C-MW-4, C-RW-3, C-MW-16, C-MW-18, J-MW-16 and J-URW-3R or J-UC-2 to the extent that groundwater is available for recovery. Additionally, the recovery trench to the southwest of Tank 205 and the recovery trench to the north of Tank 127 should continue to employ pump and treat at this time.

Free-phase petroleum was identified in three wells at the site during the November 2015 sampling event. The free-product recovery methods employed at the site (pumping, bailing or absorbent socks) have historically been employed, as-needed, and have proven effective. BLE recommends continuing free-phase petroleum recovery and progress monitoring.

Based on the results of the November 2015 groundwater sampling event, BLE recommends continued semi-annual monitoring of select wells to determine groundwater contaminant trends and natural attenuation effectiveness.

TABLES

TABLE 1

Well Construction and Elevation Data
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well ID	Depth of Well (ft.)	Screened Interval (ft.)	TOC* Elev. (ft.)	Depth to Product (ft.)	Depth to Water (ft.)	GW Elev. (ft.)	Well Location
Northern Portion of the Site							
J-MW-1	NM - Destroyed						
J-MW-2	13.5	3.5 - 13.5	18.13	No Product	5.26	12.87	S of Tank 211
J-MW-3	18.0	3.0 - 18.0	19.86	No Product	9.91	9.95	E of Tank 213
J-MW-4	NM-Abandoned						
J-MW-5	12.5	2.5 - 12.5	9.46	No Product	0.50	8.96	NW of Tank 213
J-MW-6	13.2	3.2 - 13.2	18.39	No Product	6.76	11.63	N of Tank 226
J-MW-7	NM-Abandoned						
J-MW-8	19.5	9.5 - 13.5	26.44	No Product	9.82	16.62	W of Main Office
J-MW-9	13.0	3.0 - 13.0	8.99	No Product	3.84	5.15	SE of Tank 204
J-MW-10	35.0	25.0 - 35.0	6.57	No Product	3.38	3.19	WSW of Tank 204
J-MW-11	35.0	25.0 - 35.0	7.37	No Product	5.72	1.65	SW of Tank 215
J-MW-12	15.5	5.5 - 15.5	14.26	No Product	5.16	9.10	S of Tank 203
J-MW-13	8.5	3.5 - 8.5	7.28	No Product	2.17	5.11	SW of Tank 204
J-MW-14	NM -Well Destroyed						
J-MW-16	33.0	13.0 - 33.0	8.81	No Product	3.23	5.58	SW of Tank 205
J-MW-17	33.0	13.0 - 33.0	7.37	No Product	2.60	4.77	N of Tank 204
J-MW-18	NM- Well Destroyed						
J-MW-19	10.5	1.3 - 10.3	NM	No Product	3.22	NM	W of Tank 204
J-RW-1	13.0	3.0 - 13.0	10.00	No Product	0.34	9.66	SE of Tank 213
J-RW-2	14.0	4.0 - 14.0	19.24	No Product	5.32	13.92	SW of Tank 226
J-RW-3	22.0	12.0 - 22.0	23.31	No Product	7.59	15.72	W of Truck Loading Rack
J-RW-4	22.0	12.0 - 22.0	27.09	No Product	9.25	17.84	W of Truck Loading Rack
J-RW-5	13.5	3.5 - 13.5	6.95	No Product	1.45	5.50	N of Tank 204
J-RW-6	9.0	2.0 - 9.0	9.95	No Product	1.87	8.08	E of Tank 204
J-RW-7	8.9	1.9 - 8.9	8.16	No Product	2.16	6.00	S of Tank 204
J-RW-8	9.5	1.5 - 9.5	9.96	2.57	2.74	7.22	N of Tank 204
J-RW-9	NM - Abandoned						
J-RW-10	8.9	0.9 - 8.9	8.86	No Product	1.80	7.06	SE of Tank 214
J-RW-11	NA	NA	8.50	No Product	1.31	7.19	SW of Tank 205
TW-1	4.1	NA	NM	1.72	2.59	NM	E of Tank 202
J-UC-1R	12.0	2.9 - 11.9	9.7	No Product	4.29	3.10	W of Tank 204
J-UC-2	11.9	2.9 - 11.9	9.0	Sheen	2.94	6.05	SW of Tank 205
J-UC-3R	13.0	3.9 - 12.9	19.0	No Product	6.61	12.41	W of Tank 208
J-UC-5	17.9	8.9 - 17.9	27.76	No Product	10.84	16.92	N of Main Office
J-UC-6	11.9	2.9 - 11.9	19.90	No Product	6.96	12.94	SE of Tank 226
J-UC-8	11.3	2.3 - 11.3	5.51	No Product	1.55	3.96	WSW of Tank 204
J-UC-10	15.0	6.0 - 15.0	24.05	No Product	6.45	17.60	E of Main Office
J-UC-11	NM - Abandoned						
J-UC-12	17.0	8.0 - 17.0	27.29	No Product	8.96	18.33	S of Main Office
J-UC-13D	NM - Abandoned						
J-PW-1	NM - Abandoned						
J-PW-2	NM - Abandoned						
J-URW-2	10.5	NA	9.40	No Product	3.04	6.36	SW of Tank 205
J-URW-3R	13.0	NA	9.40	3.99	4.38	5.02	SW of Tank 205
J-OW-1	NM - Abandoned						
J-OW-2	NM - Abandoned						
J-OW-3	NM - Abandoned						

Prepared By : IAI
Checked By: DPO

TABLE 1

Well Construction and Elevation Data
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well ID	Depth of Well (ft.)	Screened Interval (ft.)	TOC* Elev. (ft.)	Depth to Product (ft.)	Depth to Water (ft.)	GW Elev. (ft.)	Well Location
Southern Portion of the Site							
C-MW-1	10.9	NA	7.27	No Product	2.59	4.68	N of Treatment System
C-TMW-2	30.0	NA	7.57	No Product	2.56	5.01	W of Treament System
C-MW-3R	12.0	NA	NM	No Product	6.76	NM	E of tank 128
C-MW-4	14.5	NA	26.12	No Product	5.86	20.26	NE of Tank 118
C-MW-5	15.0	NA	23.66	No Product	6.94	16.72	N of Tank 114
C-MW-6	11.7	NA	6.77	No Product	2.97	3.80	S of oil/water sprtr
C-MW-7	12.2	NA	10.16	No Product	3.34	6.82	N or Tank 127
C-MW-8	NM -Well Destroyed						
C-MW-9R	12.0	NA	NM	No Product	0.60	NM	W of Tank 127
C-TMW-10	41.5	NA	12.77	No Product	5.58	7.19	SE of Tank 117
C-MW-11	14.0	NA	12.03	No Product	2.69	9.34	SE of Tank 117
C-MW-12	11.5	NA	23.98	No Product	5.05	18.93	NE of Tank 115 (offsite)
C-MW-13	14.5	NA	9.53	No Product	4.79	4.74	NW of Tank 127
C-MW-14	14.0	NA	7.26	No Product	2.30	4.96	W of Tank 128
C-MW-15	9.0	NA	5.26	Not Located			NW of Tank 127
C-MW-16	11.0	NA	6.32	No Product	1.66	4.66	N of Tank 127
C-MW-17	8.5	NA	7.05	No Product	2.63	4.42	W of tank 127
C-MW-18	10.0	NA	5.78	No Product	0.62	5.16	N or Tank 127
C-MW-19	NM - Well Destroyed						
C-MW-20	NM - Well Destroyed						
C-MW-21	14	NA	NM	No Product	1.16	NM	W of Tank 116
C-MW-22	14	NA	NM	No Product	0.80	NM	E ot Tank 117
C-RW-1	NM - Well Destroyed						
C-RW-2	15.0	NA	17.54	No Product	2.96	14.58	S of tank 114
C-RW-3	15.0	NA	11.55	No Product	7.88	3.67	N or Tank 127

Notes:
* Top of Casing elevations determined by prior consultant, except J-MW-5.
Wells gauged on 11-11-15
NM - Not Measured
NA - Not available

Prepared By : IAI
Checked By : DPO

TABLE 2

Groundwater Laboratory Analytical Results - November 2015
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Isopropylbenzene	Naphthalene
NCGWQS (ug/L)	**1**	**600**	**600**	**500**	**20**	**70**	**6**
J-MW-3	**2.7**	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
J-MW-9	<1.0	**1.4**	**7.7**	**12.3**	<1.0	**60.4**	<2.0
J-MW-10	**1.0**	<1.0	<1.0	<1.0	<1.0	**16.0**	<2.0
J-MW-16	<1.0	<1.0	**4.9**	**13.7**	<1.0	**103**	**16.0**
J-MW-19	<1.0	<1.0	<1.0	<1.0	<1.0	**1.2**	<2.0
J-RW-1	**8.3**	**3.5**	**14.9**	**6.5**	**7.4**	**61.3**	**20.5**
J-RW-2	<1.0	<1.0	**5.5**	**37.9**	**1.5**	**13.7**	**26.3**
J-RW-3	**6.0**	<5.0	**323**	**1067.3**	<5.0	**25**	**197**
J-UC-1R	<1.0	<1.0	**1.5**	<1.0	<1.0	**12.2**	<2.0
J-UC-6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
C-RW-3	**122.0**	**27.1**	**591**	**942.8**	<10.0	**386**	**616**
C-MW-4	<1.0	<1.0	**4.2**	**8.4**	<1.0	**1.9**	**8.6**
C-MW-11	<1.0	<1.0	**1.1**	**2.4**	<1.0	**7.6**	**13.7**
C-MW-16	**1.2**	<1.0	<1.0	**3.1**	**3.9**	**51.7**	<2.0
C-MW-18	<1.0	<1.0	<1.0	<1.0	<1.0	**29.4**	<2.0

Notes:

NCGWQS - North Carolina Groundwater Quality Standard as established in North Carolina Administrative Code Title 15A, Subchapter 2L, Section .0100, .0200, and .0300, Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina dated April 1, 2013.
Parameters reported in micrograms per liter (ug/L)
Bold values represent concentrations above the laboratory method detection limits
Shaded values represent concentrations above NCGWQS
NA = Not Analyzed
Samples collected on 11/11-12/2015.

Prepared By : IAI
Checked By: DPO

TABLE 3A

Historical Sampling Results - Northern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	IPE	Naphthalene	Methanol	Comments and Recommendations
NCGWQS (ug/L)		1	600	600	500	20	70	6	4000	
J-RW-1	12/20/1996	46.0	45.0	280	1,111	NS	NS	NA	BDL	
	6/19/1997	7.0	BDL	BDL	76.0	NS	NS	NA	BDL	
	12/10/1997	16.0	12.0	240	930	NS	NS	NA	BDL	
	6/18/1998	30.0	38.0	399	1,140	NS	NS	NA	BDL	
	12/16/1998	40.0	25.0	170	580	NS	NS	NA	BDL	
	6/25/1999	68.0	60.0	150	176.6	BDL	NS	NA	BDL	
	12/16/1999	BDL	BDL	1.5	3.2	BDL	NS	NA	BDL	
	6/13/2000	BDL	BDL	BDL	BDL	35.0	BDL	NA	BDL	
	12/14/2000	BDL	BDL	BDL	BDL	17.0	BDL	NA	BDL	
	6/13/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	
	12/5/2001	89.0	27.0	290	760	BDL	BDL	NA	BDL	
	6/26/2002	140.0	40.0	350	1,500	32.0	39.0	NA	NS	
	12/18/2002	21.0	2.1	49.0	73.0	17.0	<5	NA	NS	
	6/16/2003	<1	<1	3.6	3.9	11.0	<5.0	NA	NS	
	12/23/2003	11.0	1.8	53.0	210	22.0	<5.0	NA	NS	
	7/9/2004	140	25.0	190.0	230	23.0	7.4	NA	NS	
	12/8/2004	2.09J	<4	28.9	192.7	<8	<4	NA	NS	
	6/21/2005	2.4	<5	6.6	34.0	6.9	<1	NA	NS	
	12/20/2005	17.7	<10.0	148.0	512	<20.0	<10.0	NA	NS	
	6/21/2006	9.9	6.7	110.0	320	<1.0	<1.0	NA	NS	
	12/8/2006	77.0	<5.0	29.0	12.0	20.0	<1.0	NA	NA	
	6/26/2007	23.7	11.7	49.0	38.3	6.3	<2.00	NA	NA	
	12/12/2007	96.4	5.7	17.3	10.9	<8.00	<4.00	NA	NA	
	6/12/2008	66.5	11.3	62.4	44.3	<8.00	<4.00	6.6	NA	
	12/9/2008	<1.00	1.5	2.7	<3.00	5.0	<1.00	2.9	NA	
	6/11/2009	4.5	<1.0	7.4	14.1	18.4	3.3	48.4	NA	
	12/17/2009	<1.0	<1.0	1.0	<3.0	6.7	<1.0	<2.0	NA	
	6/23/2010	62.0	7.6	39.0	6.7	8.8	63.7	3.9	NA	
	1/5/2011	37.5	6.8	44.8	11.8	7.3	74.0	<2.0	NA	
	7/19/2011	25.4	6.5	12.4	12.3	7.3	60.1	<2.0	NA	
	1/20/2012	41.9	8.4	36.5	9.8	6.0	87.9	<2.0	NA	
	6/15/2012	2.9	1.1	2.8	<3.0	22.2	67.6	2.6	NA	
	3/8/2013	13.7	2.6	4.8	3.3	17.4	76.9	20.0	NA	J-RW-1: Recommendation
	10/23/2013	<1.0	<1.0	4.4	<3.0	5.1	96.4	<1.0	NA	Transition to MNA
	5/14/2014	<2.0	<2.0	11.1	8.1	10.2	97.1	<4.0	NA	
	11/10/2014	2.7	<1.0	10.2	<1.0	6.6	107.0	<2.0	NA	
	5/18/2015	12.1	3.9	15.2	11.1	3.4	72.3	17.6	NA	
	11/12/2015	8.3	3.5	14.9	6.5	7.4	61.3	20.5	NA	
J-RW-2	12/20/1996	30.0	120	420	2,020	NS	NS	NA	BDL	
	6/19/1997	22.0	150	410	1,810	NS	NS	NA	BDL	
	12/10/1997	33.0	100	520	2,200	NS	NS	NA	BDL	
	6/19/1998	29.0	36.0	590	2,400	NS	NS	NA	BDL	
	12/16/1998	38.0	100	790	3,700	NS	NS	NA	BDL	
	6/25/1999	BDL	96.0	800	3,460	BDL	NS	NA	BDL	
	12/16/1999	22.0	42.0	820	3,100	BDL	NS	NA	BDL	
	6/13/2000	18.0	17.0	840	2,800	BDL	BDL	NA	BDL	
	12/14/2000	18.0	28.0	700	2,100	BDL	52.0	NA	BDL	
	6/13/2001	BDL	67.0	770	3,100	BDL	BDL	NA	BDL	
	12/5/2001	BDL	12.0	930	2,700	BDL	63.0	NA	BDL	
	6/26/2002	BDL	<10	840	2,300	BDL	52.0	NA	NS	
	12/18/2002	16.0	11.0	870	2,400	<50	<50	NA	NS	
	6/18/2003	13.0	13.0	790	1,600	<50	<50	NA	NS	
	12/23/2003	14.0	<10	990	1,700	<50	<50	NA	NS	
	7/9/2004	7.3 J	<10	850	1,900	<50	<50	NA	NS	
	12/8/2004	2.21 J	<20	510	1,046	<40	<20	NA	NS	
	6/21/2005	2.0	<50	440	920	<10	<10	NA	NS	
	12/20/2005	6.3	5.6	445	732	5.9	<1.00	NA	NS	
	6/21/2006	11.0	<25	320	600	<5.0	<5.0	NA	NS	
	12/8/2006	6.8	<25	380	830	6.1	<5.0	NA	NA	
	6/26/2007	<20.0	<20.0	353	447	<40.0	<20.0	NA	NS	
	12/12/2007	<20.0	<20.0	327	453	<40.0	<20.0	NA	NA	
	6/12/2008	<32.0	<32.0	384	511	<64.0	<32.0	315	NA	
	12/9/2008	<80.0	<80.0	250	313	<80.0	<80.0	324	NA	
	6/11/2009	11.3	4.7	216	225	<1.0	14.8	191	NA	
	12/17/2009	6.2	<5.0	212	235	6.5	<5.0	273	NA	
	6/23/2010	6.0	<2.0	307	450	4.6	142	368	NA	
	1/5/2011	2.8	<2.5	176	214.1	2.7	60.5	239	NA	
	7/19/2011	2.8	<2.5	162	89.2	<2.5	92.7	148	NA	
	1/20/2012	2.8	<2.0	117	102.0	<2.0	61.0	91.4	NA	
	6/16/2012	3.2	<1.0	251	273.7	1.6	116	289	NA	J-RW-2: Recommendation
	3/8/2013	<1.0	<1.0	183	174.3	<1.0	95.8	118	NA	Transition to MNA
	10/23/2013	1.4	<1.0	185	160.3	3.7	118	140	NA	
	5/14/2014	<5.0	<5.0	135	145.0	<5.0	97	100	NA	
	11/10/2014	<1.0	<1.0	118	123.0	<1.0	61.0	81.1	NA	
	5/18/2015	<1.0	<1.0	89.5	65.8	<1.0	69.2	53.4	NA	
	11/12/2015	<1.0	<1.0	5.5	37.9	1.5	13.7	28.3	NA	

Prepared By: IAI
Checked By: DFO

TABLE 3A

Historical Sampling Results - Northern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	IPE	Naphthalene	Methanol	Comments and Recommendations
NCGWQS (ug/L)		1	600	600	500	20	70	6	4000	
J-RW-3	12/20/1996	210	160	BDL	1,249	NS	NS	NA	BDL	
	6/19/1997	320	39.0	200	1,037	NS	NS	NA	BDL	
	12/10/1997	180	20.0	100	420	NS	NS	NA	BDL	
	6/19/1998	650	180	1,500	8,100	NS	NS	NA	BDL	
	12/16/1998	210	59.0	750	4,500	NS	NS	NA	BDL	
	6/25/1999	440	53.0	1,000	2,671	BDL	NS	NA	BDL	
	12/16/1999	140	49.0	660	2,600	BDL	31.0	NA	BDL	
	6/9/2000	330	77.0	2,100	7,700	BDL	BDL	NA	BDL	
	12/14/2000	BDL	BDL	1.0	3.2	BDL	BDL	NA	BDL	
	6/13/2001	190	BDL	730	2,300	BDL	BDL	NA	BDL	
	12/5/2001	270	67.0	1,200	3,000	BDL	BDL	NA	BDL	
	6/26/2002	540	98.0	1,300	3,000	<50	<50	NA	NS	
	12/18/2002	450	80.0	1,300	3,800	54.0	<50	NA	NS	
	6/18/2003	440	95.0	2,000	6,200	<50	<50	NA	NS	
	12/23/2003	580	72.0	1,300	3,300	<50	<50	NA	NS	
	7/9/2004	280	44.0	1,000	2,600	<50	<50	NA	NS	
	12/8/2004	172	21.6	622	1,071.8	<40	<20	NA	NS	
	6/21/2005	330	<1,200	740	2,100	<250	<250	NA	NS	
	12/20/2005	107	33.7	440	1,511	<50.0	<25.0	NA	NS	
	6/21/2006	83.0	<120	390	1,530	<25.0	<25.0	NA	NS	
	12/6/2006	97.0	<250	340	990	<50	<50	NA	NA	
	6/28/2007	76.6	<25.0	430	1,070	<50.0	<25.0	NA	NS	
	12/12/2007	81.5	<32.0	607	1,060	<64.0	<32.0	NA	NA	
	6/12/2008	213	69.7	885	2,392	BDL	BDL	517	NA	
	12/9/2008	211	<50.0	773	1,630	<50.0	<50.0	510	NA	
	6/11/2009	249	17.5	834	13.7	2.3	3.0	485	NA	
	12/17/2009	356	36.9	985	2,104.5	<2.0	<10.0	638	NA	
	6/23/2010	280	20.9	971	661.0	<10.0	63.1	564	NA	
	1/5/2011	140	5.4	557	238.8	BDL	26.3	393	BDL	
	7/19/2011	47.0	3.2	360	124	<2.5	31.6	259	NA	
	1/20/2012	560	113	8.7	145	<2.5	41.8	349	NA	
	8/15/2012	138	7.3	575	214	<5.0	37.7	466	NA	
	3/8/2013	182	14.4	752	345.6	<4.0	48.4	454	NA	
	10/23/2013	21.1	3.1	149	294.6	<1.0	11.0	114	NA	J-RW-3: Recommendation
	5/14/2014	Well Dry								Continue as MNA
	11/10/2014	Well Dry								
	11/12/2015	6.0	<5.0	323	1,067.3	<5.0	25	197	NA	
J-RW-4	12/5/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	
	12/20/1996	18	BDL	BDL	38	NS	NS	NA	BDL	
	6/19/1997	98	6.0	31.0	151	NS	NS	NA	BDL	
	12/10/1997	66	16.0	42.0	1,400	NS	NS	NA	BDL	
	6/19/1998	18.0	7.0	14.0	160	NS	NS	NA	660,000	
	12/16/1998	6.0	10.0	7.0	440	NS	NS	NA	475,000	
	2/15/1999	NS	NS	NS	NS	NS	NS	NA	337,000	
	6/25/1999	BDL	180	BDL	69	BDL	NS	NA	BDL	
	12/16/1999	BDL	2.3	BDL	27	BDL	NS	NA	BDL	
	6/9/2000	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	
	12/14/2000	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	J-RW-4: Comment
	6/13/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	No Longer Sampled
	12/5/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	
J-RW-5	6/25/1999	BDL	2	BDL	BDL	29	NS	NA	64,800	
	12/16/1999	BDL	BDL	4.0	BDL	25	NS	NA	BDL	J-RW-5: Comment
	6/14/2000	1.9	1.3	2.2	3.4	36	18.0	NA	BDL	No Longer Sampled
	12/6/2006	0.50	<5.0	<.50	3.2	14	<1.0	NA	NA	
J-RW-6	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/19/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/10/1997	BDL	BDL	1.0	BDL	NS	NS	NA	BDL	
	6/19/1998	BDL	6.0	BDL	5.0	NS	NS	NA	BDL	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/16/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	J-RW-6: Comment
	6/14/2000	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	No Longer Sampled
	12/5/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	
J-RW-7	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/19/1997	8.0	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/10/1997	BDL	BDL	0.5	BDL	NS	NS	NA	BDL	
	6/18/1998	200	9.0	56.0	51.0	NS	NS	NA	BDL	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	12/16/1999	BDL	BDL	3.6	BDL	BDL	NS	NA	BDL	J-RW-7: Comment
	6/14/2000	BDL	BDL	3.1	BDL	BDL	BDL	NA	BDL	No Longer Sampled
	12/5/2006	<0.50	<5.0	<0.50	2.8	<1.0	<1.0	NA	NA	

Prepared By: JAJ
Checked By: DPO

TABLE 3A

Historical Sampling Results - Northern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	IPE	Naphthalene	Methanol	Comments and Recommendations
NCGWQS (ug/L)		1	600	600	500	20	70	6	4000	
J-RW-8	12/20/1996	56	BDL	12.0	10.0	NS	NS	NA	BDL	
	6/19/1997	52	BDL	16.0	10.0	NS	NS	NA	BDL	
	12/10/1997	22.0	3.0	15.0	9.0	NS	NS	NA	BDL	
	6/19/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/5/2006	7.3	12.0	39.0	17.0	<1.0	<1.0	NA	NA	
	6/26/2007	1.6	9.4	17.7	21.7	<2.00	<1.00	NA	NS	
	12/12/2007	1.2	6.1	5.1	8.0	<2.00	<1.00	NA	NA	
	6/12/2008	25.7	8.1	9.7	26.5	<16.0	<8.00	51.2	NA	
	12/0/2008	<5.00	<5.00	5.1	<15.0	<5.00	<5.00	25.3	NA	
	6/11/2009	102	<50.0	65.5	137	<50.0	<50.0	<100	NA	J-RW-8: Recommendation
	6/23/2010	26.6	5.6	6.8	10.2	<1.0	34.7	5.6	NA	Continue FP recovery
	7/19/2011	<1.0	3.4	5.4	4.4	<1.0	49.1	<2.0	NA	
J-RW-9	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/19/1997	BDL	BDL	BDL	0.8	NS	NS	NA	BDL	
	12/10/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/19/1998	BDL	BDL	BDL	35	NS	NS	NA	BDL	
	12/16/1998	550	68.0	330	450	NS	NS	NA	BDL	
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	12/16/1999	BDL	BDL	BDL	BDL	6.2	NS	NA	BDL	
	6/13/2000	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	
	12/14/2000	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	
	6/13/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	J-RW-9: Comment
	12/5/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	Well Abandoned
	12/5/2006	Abandoned								
J-RW-10	12/20/1996	BDL	BDL	BDL	14	NS	NS	NA	BDL	
	6/19/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/10/1997	22.0	2.0	11.0	43.0	NS	NS	NA	BDL	
	6/19/1998	17.0	6.0	54.0	194	NS	NS	NA	BDL	
	12/16/1998	BDL	BDL	BDL	6.0	NS	NS	NA	BDL	
	6/25/1999	18.0	BDL	11.0	55.0	BDL	NS	NA	BDL	
	12/16/1999	42.0	BDL	5.9	96.0	BDL	NS	NA	BDL	
	6/13/2000	7.0	1.3	2.4	41.0	8.1	BDL	NA	BDL	
	12/14/2000	15.0	1.8	16.0	110	BDL	BDL	NA	BDL	
	6/13/2001	21.0	BDL	2.3	11.0	6.8	BDL	NA	BDL	
	12/5/2001	47.0	2.4	5.1	26.0	5.9	BDL	NA	BDL	
	6/26/2002	43.0	3.1	29.0	200	<5	<5	NA	NS	
	12/18/2002	6.7	<1	2.0	13.0	5.7	<5	NA	NS	
	6/18/2003	25.0	1.6	2.2	130	<5	<5	NA	NS	
	12/23/2003	99.0	6.7	70.0	270	<5	<5	NA	NS	
	7/9/2004	110	5.4	110	250	5.2	<5	NA	NS	
	12/8/2004	43.1	2.6	<1.0	4.5	<2.0	<1.0	NA	NS	
	6/21/2005	32.0	<50	26.0	200	<10	<10	NA	NS	
	12/20/2005	16.6	1.6	22.7	57.3	<2.00	<1.00	NA	NS	
	6/21/2006	10.0	<5.0	2.0	3.2	<1.0	<1.0	NA	NS	
	12/8/2006	0.9	<5.0	1.5	3.4	3.8	<1.0	NA	NA	
	6/26/2007	<1.00	<1.00	<1.00	<4.00	<2.00	<1.00	NA	NS	
	12/12/2007	1.9	<1.00	<1.00	<2.00	<2.00	<1.00	NA	NA	
	6/12/2008	<1.00	<1.00	<1.00	<4.00	3.6	<1.00	<1.00	NA	
	12/0/2008	1.5	<1.00	<1.00	<3.00	2.8	<1.00	<1.00	NA	
	6/11/2009	<1.0	<1.0	<1.0	<2.0	2.1	<1.0	13.5	NA	
	12/17/2009	1.4	<1.0	<1.0	2.1	3.4	<1.0	5.7	NA	
	6/23/2010	4.9	<1.0	<1.0	<3.0	3.0	<1.0	<2.0	NA	
	1/5/2011	<1.0	<1.0	<1.0	1.2	4.5	1.0	4.9	NA	
	7/19/2011	<1.0	<1.0	<1.0	<3.0	3.5	<1.0	<2.0	NA	J-RW-10: Comment
	1/20/2012	<1.0	<1.0	<1.0	<3.0	3.9	<1.0	<2.0	N/A	No Longer Sampled
	8/15/2012	<1.0	<1.0	2.5	<3.0	5.1	1.3	<2.0	NA	
J-RW-11	12/8/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	No Longer Sampled
J-UC-1	6/25/1999	BDL	1.4	5	4.5	BDL	NS	NA	BDL	
	12/16/1999	6.8	BDL	1.7	5.3	BDL	NS	NA	BDL	
	6/0/2000	BDL	2.9	13	8.9	BDL	2.5	NA	BDL	
	12/14/2000	4.0	6.5	6	10	BDL	5.2	NA	BDL	J-UC-1: Comment
	6/13/2001	BDL	BDL	4.8	7.2	BDL	BDL	NA	BDL	Well Destroyed
	12/5/2006	Destroyed								
J-UC-1R	1/20/2012	<1.0	1.3	7.5	6.5	<1.0	21.2	<2.0	NA	
	8/15/2012	<1.0	1.0	7.9	4.3	<1.0	13.4	<2.0	NA	J-UC-1R: Recommendation
	3/8/2013	<1.0	1.2	6.0	4.2	<1.0	15.3	<2.0	NA	Continue MNA
	5/14/2014	<2.0	2.9	17.3	5.9	<2.0	17.4	<4.0	NA	
	11/10/2014	<1.0	1.2	2.8	2.5	<1.0	14.4	<1.0	NA	
	5/18/2015	<1.0	1.3	2.2	4.8	<1.0	13.7	<2.0	NA	
	11/11/2015	<1.0	<1.0	1.5	<1.0	<1.0	12.2	<2.0	NA	

Prepared By: JAI
Checked By: DFG

TABLE 3A

Historical Sampling Results - Northern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	IPE	Naphthalene	Methanol	Comments and Recommendations
NCGWQS (ug/L)		1	600	600	500	20	70	6	4000	
J-UC-3	6/25/1999	BDL	BDL	BDL	1.1	BDL	NS	NA	BDL	
	12/16/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	6/9/2000	BDL	BDL	1.2	3.7	BDL	BDL	NA	BDL	
	12/14/2000	BDL	BDL	1	BDL	BDL	BDL	NA	BDL	
	6/13/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	J-UC-3: Comment
	12/5/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	Well Destroyed
	12/5/2006	Destroyed								
J-UC-4	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	J-UC-4: Comment
	12/5/2006	Destroyed								Well Destroyed
J-UC-5	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	6/13/2000	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	
	12/14/2000	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	
	6/13/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	
	12/5/2001	BDL	BDL	1.2	BDL	BDL	BDL	NA	BDL	J-UC-5: Comment
	12/6/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	No Longer Sampled
J-UC-6	12/20/1996	53.0	BDL	5	BDL	NS	NS	NA	BDL	
	6/19/1997	840	9	70	14	NS	NS	NA	BDL	
	12/9/1997	280	BDL	19.0	BDL	NS	NS	NA	BDL	
	6/18/1998	97.0	BDL	51.0	BDL	NS	NS	NA	14,000	
	12/16/1998	420	10.0	150	44.0	NS	NS	NA	BDL	
	6/25/1999	210	5.4	150	23.3	BDL	NS	NA	BDL	
	12/16/1999	190	20.0	520	660	BDL	NS	NA	BDL	
	6/13/2000	250	BDL	380	200	BDL	BDL	NA	BDL	
	12/14/2000	85.0	BDL	76.0	30.0	BDL	BDL	NA	BDL	
	6/13/2001	280	4.7	170.0	15.0	12.0	BDL	NA	BDL	
	12/5/2001	490	10.0	55.0	BDL	80.0	BDL	NA	BDL	
	6/26/2002	290	<10	44.0	<30	100	<50	NA	NS	
	12/18/2002	26.0	2.5	12.0	7.3	28.0	<5	NA	NA	
	6/18/2003	120	7.1	81.0	20.0	36.0	<5	NA	NA	
	12/23/2003	110	6.0	36.0	8.1	22.0	<5	NA	NA	
	7/9/2004	210	5.6	46.0	15.0	29.0	<5	NA	NA	
	12/8/2004	55.4	2.3	9.0	<4	5.8	3.3	NA	NA	
	6/21/2005	110	<5	10.0	3.8	28.0	<1	NA	NA	
	12/20/2005	50.9	2.1	4.9	<8.00	5.5	<2.00	NA	NA	
	12/6/2006	<0.50	<5.0	<0.50	<1.5	2.6	<1.0	NA	NA	
	6/26/2007	109	<8.00	37.2	<16.0	<16.0	<8.00	NA	NS	
	12/12/2007	29.9	4.4	6.6	8.9	30.3	<1.00	NA	NA	
	6/12/2008	90.3	8.9	88.9	55.0	31.4	11.3	35.9	NA	
	12/9/2008	106	<20.0	<20.0	<60.0	<20.0	<20.0	<20.0	NA	
	6/11/2009	54.5	6.8	14.5	7.0	26.0	<1.0	22.4	NA	
	12/17/2009	105	4.0	7.5	5.0	23.3	<1.0	5.4	NA	
	6/23/2010	33.8	3.5	23.3	3.0	7.8	24.9	<2.0	NA	
	1/5/2011	43.8	2.7	48.5	7.1	9.2	23.0	20.6	NA	
	7/19/2011	16.2	4.7	30.3	5.0	29.7	43.3	7.3	NA	
	6/15/2012	5.4	3.2	28.4	2.6	12.1	32.1	5.2	NA	
	3/8/2013	26.4	2.6	13.1	<3.0	10.0	21.7	<2.0	NA	
	10/23/2013	11.9	2.5	25.0	2.8	10.6	34.4	5.5	NA	J-UC-6: Recommendation
	5/14/2014	1.0	1.8	4.6	<3.0	13.6	25.4	2.5	NA	Transition to MNA
	11/10/2014	3.8	2.4	40.8	3.1	11.4	35.1	17.8	NA	
	5/16/2015	<1.0	<1.0	<1.0	<3.0	1.7	8.6	<2.0	NA	
	11/12/2015	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	NA	
J-UC-8	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/19/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/9/1997	BDL	1	BDL	BDL	NS	NS	NA	BDL	
	6/18/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	J-UC-8: Comment
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	No Longer Sampled
	12/5/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	
J-UC-10	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	06/19/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/9/1997	BDL	1	BDL	BDL	NS	NS	NA	BDL	
	6/18/1998	BDL	0.8	BDL	BDL	NS	NS	NA	54,000	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	J-UC-10: Comment
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	No Longer Sampled
	12/6/2006	<0.50	<5.0	<0.50	<1.5	3.5	<1.0	NA	NA	

Prepared By: [illegible]
Checked By: DPH

TABLE 3A

Historical Sampling Results - Northern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	IPE	Naphthalene	Methanol	Comments and Recommendations
NCGWQS (ug/L)		1	600	600	500	20	70	6	4000	
J-UC-11	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/19/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/9/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/18/1998	BDL	BDL	BDL	BDL	NS	NS	NA	12,000	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/25/1999	BDL	BDL	1.6	BDL	BDL	NS	NA	BDL	
	12/16/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	6/14/2000	BDL	BDL	2.2	BDL	BDL	BDL	NA	BDL	
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	12/16/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	6/9/2000	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	J-UC-11: Comment
	12/5/2006	<0.50	<5.0	<0.50	1.8	<1.0	<1.0	NA	NA	Well Abandoned
	6/11/2009	<1.0	<1.0	<1.0	2.7	<1.0	<1.0	NA	NA	
J-UC-12	12/14/2000	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	
	6/13/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	J-UC-12: Comment
	12/5/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	No Longer Sampled
	12/5/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	
J-UC-13D	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	06/19/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/9/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/18/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	12/16/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	6/9/2000	BDL	BDL	1.6	3.2	6.7	BDL	NA	BDL	
	12/14/2000	BDL	BDL	BDL	BDL	19	BDL	NA	BDL	
	6/13/2001	BDL	BDL	BDL	BDL	9.6	BDL	NA	BDL	
	12/5/2001	BDL	BDL	1.5	BDL	10.0	BDL	NA	BDL	J-UC-13D: Comment
	12/5/2006	<0.50	<5.0	<0.50	1.8	7.9	<1.0	NA	NA	Well Abandoned
	6/11/2009	<1.0	<1.0	<1.0	<2.0	7.8	<1.0	NA	NA	
J-MW-2	6/25/1999	2.5	BDL	8.6	6	BDL	NS	NA	BDL	
	12/16/1999	5.5	60	46.0	250	BDL	NS	NA	BDL	
	6/13/2000	BDL	BDL	BDL	BDL	10.0	BDL	NA	BDL	
	12/14/2000	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	
	6/13/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	J-MW-2: Comment
	12/5/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	No Longer Sampled
	12/5/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	
J-MW-3	6/25/1999	1.2	BDL	10.0	13.9	BDL	NS	NA	BDL	
	12/16/1999	BDL	BDL	23.0	150	BDL	NS	NA	BDL	
	6/13/2000	BDL	BDL	BDL	BDL	16.0	BDL	NA	BDL	
	12/14/2000	BDL	BDL	2.1	5.5	BDL	BDL	NA	BDL	
	6/13/2001	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	
	12/5/2001	110	38.0	360	1,200	BDL	BDL	NA	BDL	
	6/26/2002	12.0	3.4	36.0	97.0	<5	<5	NA	NS	
	12/18/2002	4.8	<1	28.0	99.0	<5	<5	NA	NS	
	6/18/2003	<1	<1	2.0	<3	<5	<5	NA	NS	
	12/23/2003	4.8	<1	<1	7.8	<5	<5	NA	NS	
	7/9/2004	32.0	2.6	25.0	25.0	5.3	<5	NA	NS	
	12/8/2004	36.6	3.7	51.2	202.6	<4.0	<2.0	NA	NS	
	6/21/2005	3.0	<50	30.0	120	<10	<10	NA	NS	
	12/20/2005	8.9	2.0	36.4	99.0	<2.00	<1.00	NA	NS	
	6/21/2006	17.0	<50	110	350	<10	<10	NA	NS	
	12/5/2006	9.9	<5.0	13.0	7.4	<1.0	<1.0	NA	NA	
	6/26/2007	34.2	6.1	91.3	25.1	<10.0	<5.00	NA	NA	
	12/12/2007	38.3	<4.00	76.8	41.0	<8.00	<4.00	NA	NA	
	6/12/2008	33.7	<8.00	74.6	99.1	<16.0	<8.00	77.2	NA	
	12/9/2008	<4.00	<4.00	8.4	30.2	<4.00	<4.00	19.0	NA	
	6/11/2009	4.6	<1.0	5.8	37.9	2.1	<1.0	48.4	NA	
	12/17/2009	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<2.0	NA	
	6/23/2010	<1.0	<1.0	<1.0	<3.0	1.2	<1.0	<2.0	NA	
	1/5/2011	19.3	3.0	1.7	10.1	3.2	24.1	7.8	NA	
	7/19/2011	20.4	3.1	8.4	<3.0	4.6	61.6	132	NA	
	1/20/2012	14.2	2.3	13.4	<3.0	1.8	37.2	32.7	NA	
	8/15/2012	<1.0	<1.0	<1.0	<3.0	<1.0	3.8	<2.0	NA	
	3/8/2013	<1.0	<1.0	<1.0	<3.0	<1.0	1.9	<2.0	NA	
	10/23/2013	<1.0	<1.0	1.6	2.7	<1.0	13.8	7.0	NA	J-MW-3: Recommendation
	5/14/2014	<1.0	<1.0	1.9	4.0	1.4	10.0	7.8	NA	Transition to MNA
	11/10/2014	<1.0	<1.0	4.4	64.3	<1.0	25.0	35.6	NA	
	5/18/2015	<1.0	<1.0	<1.0	15.5	<1.0	13.7	18.3	NA	
	11/12/2015	2.7	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	NA	
J-MW-4	12/5/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	Well Abandoned
J-MW-5	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/9/1997	BDL	0.8	BDL	BDL	NS	NS	NA	BDL	
	6/18/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	J-MW-5: Comment
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	No Longer Sampled
	12/5/2006	<0.50	<5.0	<0.50	<1.5	1.6	<1.0	NA	NA	

Prepared By: JAJ
Checked By: DPG

TABLE 3A

Historical Sampling Results - Northern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	IPE	Naphthalene	Methanol	Comments and Recommendations
NCGWQS (ug/L)		1	600	600	500	20	70	6	4000	
J-MW-6	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	06/19/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/9/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/18/1998	BDL	BDL	BDL	BDL	NS	NS	NA	68,000	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	NS	
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	06/18/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/9/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/18/1998	BDL	BDL	BDL	BDL	NS	NS	NA	170,000	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	NS	
	6/25/1999	BDL	BDL	BDL	BDL	58.0	NS	NA	BDL	J-MW-6: Comment
	6/26/2002	NS	NS	NS	NS	NS	NS	NA	<10	No Longer Sampled
	12/6/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	
J-MW-7	12/6/2006	<0.5	<5.0	<0.5	<1.5	<1.0	<1.0	NA	NA	Well Abandoned
J-MW-8	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	06/18/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/9/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/18/1998	BDL	BDL	BDL	BDL	NS	NS	NA	580,000	
	12/16/1998	16.0	BDL	3.0	BDL	NS	NS	NA	NS	
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	12/16/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	J-MW-8: Comment
	6/14/2000	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	No Longer Sampled
	12/6/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	
J-MW-9	12/20/1996	400	77.0	290	290	NS	NS	NA	BDL	
	06/18/1997	470	100	560	1,600	NS	NS	NA	BDL	
	12/9/1997	550	71.0	350	250	NS	NS	NA	BDL	
	6/18/1998	1,500	BDL	BDL	860	NS	NS	NA	76,000	
	12/18/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/25/1999	110	BDL	400	780	BDL	NS	NA	BDL	
	12/16/1999	120	44.0	450	830	BDL	90.0	NA	BDL	
	6/9/2000	130	69.0	880	2,300	BDL	BDL	NA	BDL	
	12/14/2000	130	BDL	340	620	BDL	BDL	NA	BDL	
	6/13/2001	67.0	31.0	380	1,000	BDL	BDL	NA	BDL	
	12/5/2001	130	54.0	150	310	BDL	BDL	NA	BDL	
	6/26/2002	220	100	190	320	<50	65.0	NA	NS	
	12/18/2002	64.0	35.0	320	470	<50	<50	NA	NS	
	6/16/2003	20.0	10.0	110	200	10.0	29.0	NA	NS	
	12/23/2003	39.0	28.0	240	370	<5	<5	NA	NS	
	7/9/2004	28.0	32.0	140	510	<5	11.0	NA	NS	
	12/8/2004	23.4	25.5	69.7	166	<8.0	<4.0	NA	NS	
	8/21/2005	39.0	<500	300	780	<100	<100	NA	NS	
	12/20/2005	18.2	31.8	250	699.1	<20.0	<10.0	NA	NS	
	8/21/2006	10.0	<120	400	1,320	<25	<25	NA	NS	
	12/5/2006	11.0	12.0	120	180.0	<1.0	<1.0	NA	NA	
	6/26/2007	16.6	27.6	90.1	384.4	<20.0	<10.0	NA	NA	
	12/12/2007	47.3	49.3	192	345.0	<16.0	<8.00	NA	NA	
	6/12/2008	26.3	34.5	442	775.8	<40.0	<20.0	93.6	NA	
	12/0/2008	<16.0	16.9	133	173.0	<16.0	<10.0	18.0	NA	
	6/11/2009	3.9	8.6	217	324.0	<1.0	40.6	72.7	NA	
	12/17/2009	4.8	6.6	82.4	119.3	<2.0	<1.0	8.7	NA	
	6/23/2010	2.9	7.5	116	215.0	<1.0	70.8	10.4	NA	
	1/5/2011	5.9	9.7	79.1	146.8	<1.0	90.3	11.2	NA	
	7/19/2011	7.0	21.1	43.0	104.1	<1.0	68.8	5.7	NA	
	1/20/2012	7.5	21.0	155	261.1	<1.0	95.2	17.6	NA	
	8/15/2012	7.1	35.4	284	242.5	<1.0	82.6	26.7	NA	
	3/8/2013	4.4	9.6	98.1	199.6	<1.0	104	4.8	NA	
	10/23/2013	4.5	6.2	47.6	110.9	<1.0	88.6	5.0	NA	J-MW-9: Recommendation
	5/14/2014	<5.0	<5.0	120	238.7	<5.0	80.5	28.9	NA	Transition to MNA
	11/10/2014	<1.0	1.8	16.8	19.6	2.8	34.2	ND	NA	
	5/18/2015	<1.0	1.6	24.7	46.0	<1.0	41.1	<2.0	NA	
	11/11/2015	<1.0	1.4	7.7	12.3	<1.0	60.4	<2.0	NA	

Prepared By: [illegible]
Checked By: DPO

TABLE 3A

Historical Sampling Results - Northern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	IPE	Naphthalene	Methanol	Comments and Recommendations
NCGWQS (ug/L)		1	600	600	500	20	70	6	4000	
J-MW-10	12/20/1996	400	53.0	260	952	NS	NS	NA	BDL	
	06/18/1997	600	9.0	65.0	580	NS	NS	NA	BDL	
	12/9/1997	860	26.0	64.0	460	NS	NS	NA	BDL	
	6/18/1998	870	18.0	32.0	350	NS	NS	NA	140,000	
	12/16/1998	41.0	ND	7.0	35.0	NS	NS	NA	BDL	
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	12/16/1999	74.0	BDL	6.7	100	BDL	6.8	NA	BDL	
	6/9/2000	490	24.0	83.0	650	BDL	BDL	NA	BDL	
	12/14/2000	560	BDL	41.0	660	BDL	BDL	NA	BDL	
	6/13/2001	430	BDL	180	700	BDL	BDL	NA	BDL	
	12/5/2001	390	14.0	52.0	260	BDL	BDL	NA	BDL	
	6/26/2002	220	13.0	19.0	290	<5	13.0	NA	NS	
	12/18/2002	260	11.0	54.0	340	12.0	15.0	NA	NS	
	6/18/2003	9.5	3.5	81.0	500	6.8	<5	NA	NS	
	12/23/2003	240	11.0	28.0	210	<5	<5	NA	NS	
	7/9/2004	230	9.9	120	600	14.0	<5	NA	NS	
	12/8/2004	275	11.0	105	763	<20.0	<10	NA	NS	
	6/21/2005	41.0	<50	50.0	270	<10	<10	NA	NS	
	12/20/2005	190	<16.0	42.1	863	<32.0	<10.0	NA	NS	
	6/21/2006	13.0	<50	<10	<30	<10	<1.0	NA	NS	
	12/5/2006	49.0	<25	19.0	560	<5.0	<5.0	NA	NA	
	6/26/2007	61.2	<8.00	<8.00	210	<16.0	<8.0	NA	NS	
	12/12/2007	82.5	<4.00	44.1	65.3	<8.00	<4.00	NA	NA	
	6/12/2008	63.0	4.6	17.6	105	<8.00	<4.00	29.2	NA	
	12/9/2008	23.3	<5.00	5.6	60.1	<5.00	<5.00	23.0	NA	
	6/11/2009	1.9	<1.0	33.6	114	<1.0	<1.0	19.8	NA	
	12/17/2009	4.5	<1.0	<1.0	2.0	<1.0	<1.0	<2.0	NA	
	6/23/2010	21.1	1.8	3.9	59.1	<1.0	18.0	<2.0	NA	
	1/5/2011	3.4	<1.0	83.1	138.7	<1.0	36.7	33.0	NA	
	7/19/2011	42.3	1.4	<1.0	2.4	<1.0	11.5	<2.0	NA	
	1/20/2012	33.1	<1.0	<1.0	6.1	<1.0	13.1	<2.0	NA	
	8/15/2012	40.6	1.9	17.7	32.6	<1.0	33.1	<2.0	NA	
	3/8/2013	<1.0	<1.0	<1.0	<3.0	<1.0	2.6	<2.0	NA	
	10/23/2013	44.0	3.9	54.1	41.5	<1.0	36.9	5.2	NA	J-MW-10: Recommendation
	5/14/2014	<1.0	<1.0	<1.0	<1.0	<1.0	2.0	<1.0	NA	Continue MNA
	11/10/2014	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	NA	
	5/18/2015	26.6	1.7	32.2	199.5	<1.0	29.6	69.6	NA	
	11/11/2015	1.0	<1.0	<1.0	<1.0	<1.0	16.0	<2.0	NA	
J-MW-11	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	06/18/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/9/1997	0.8	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/18/1998	BDL	BDL	BDL	BDL	NS	BDL	NA	11,000	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/25/1999	BDL	BDL	BDL	BDL	8.2	NS	NA	BDL	
	12/16/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	6/9/2000	BDL	BDL	BDL	BDL	16.0	BDL	NA	BDL	
	12/14/2000	BDL	BDL	BDL	4	27	BDL	NA	BDL	
	6/13/2001	BDL	BDL	BDL	BDL	9.7	BDL	NA	BDL	
	12/5/2001	BDL	BDL	BDL	2.5	8.3	BDL	NA	BDL	
	6/26/2002	<1	<1	<1	<3	7.6	<5	NA	NS	
	12/18/2002	<1	<1	1	<3	8.3	<5	NA	NS	
	6/18/2003	<1	<1	<1	<3	6.1	<5	NA	NS	
	12/23/2003	<1	<1	<1	<3	8.2	3.5	NA	NS	
	7/9/2004	0.63 J	<1	<1	1.6 J	5.9	<5	NA	NS	
	12/8/2004	<1.0	<1.0	<1.0	<2.0	3.15	<1.0	NA	NS	
	6/21/2005	<.50	<5	<.5	<1.5	3.4	<1	NA	NS	
	12/20/2005	<1.00	<1.00	<1.00	<4.00	2.99	<1.00	NA	NS	J-MW-11: Comment
	6/21/2006	<1.0	<5.0	<1.0	<3.0	3.5	<1.0	NA	NS	No Longer Sampled
	12/5/2006	<0.50	<5.0	<0.50	<1.5	3.3	<1.0	NA	NA	
J-MW-12	12/20/1996	BDL	BDL	22.0	110	NS	NS	NA	BDL	
	6/16/1997	BDL	BDL	10.0	87	NS	NS	NA	BDL	
	12/9/1997	2.0	0.8	16.0	81	NS	NS	NA	BDL	
	6/18/1998	BDL	BDL	17.0	140	NS	NS	NA	BDL	
	12/16/1998	BDL	BDL	23.0	76	NS	NS	NA	BDL	J-MW-12: Comment
	6/25/1999	BDL	BDL	BDL	130	BDL	NS	NA	BDL	No Longer Sampled
	12/5/2006	<0.50	<5.0	2.5	7.1	<1.0	<1.0	NA	NA	
J-MW-13	12/20/1996	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/18/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/9/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/18/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	J-MW-13: Comment
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	No Longer Sampled
	12/5/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	

Prepared By: JAS
Checked By: DRS

TABLE 3A

Historical Sampling Results - Northern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	IPE	Naphthalene	Methanol	Comments and Recommendations
NCGWQS (ug/L)		1	600	600	500	20	70	6	4000	
J-MW-14	12/20/1996	380	14.0	16.0	22	NS	NS	NA	BDL	
	6/18/1997	190	9.0	BDL	37	NS	NS	NA	BDL	
	12/9/1997	67.0	7.0	2.0	22.0	NS	NS	NA	BDL	
	6/18/1998	31.0	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/16/1998	280	16.0	17.0	120	NS	NS	NA	NS	
	6/25/1999	210	BDL	BDL	BDL	110	NS	NA	BDL	
	12/20/1999	150	24.0	100	65.0	62.0	21.0	NA	BDL	
	6/14/2000	BDL	BDL	BDL	4.8	BDL	BDL	NA	BDL	
	12/5/2006	180	<5.0	<0.50	<1.5	4.7	<1.0	NA	NA	
	6/26/2007	2.4	2.9	12.5	7.5	14.5	2.6	NA	NS	
	12/12/2007	3.0	1.6	<1.00	<4.00	<2.00	<1.00	NA	NA	
	6/12/2008	<1.00	2.2	2.8	6.9	13.7	2.8	6.5	NA	
	12/9/2008	<1.00	1.6	<1.00	3.8	9.0	<1.00	2.0	NA	
	6/11/2009	<1.0	1.5	<1.0	<2.0	13.0	<1.0	8.9	NA	
	12/17/2009	11.0	1.5	<1.0	4.9	12.2	<1.0	<2.0	NA	
	6/23/2010	16.5	3.3	1.8	14.9	3.3	67.4	<2.0	NA	
	1/5/2011	5.7	2.4	<1.0	9.1	2.9	77.6	<2.0	NA	
	7/19/2011	8.1	4.2	<1.0	4.8	5.0	40.9	<2.0	NA	
	1/26/2012	13.9	4.9	3.7	13.4	4.2	89.0	<2.0	NA	
	8/15/2012	7.6	3.7	<1.0	5.8	2.7	46.6	<2.0	NA	
	3/8/2013	24.7	4.5	2.1	9.4	2.4	71.3	<2.0	NA	J-MW-14: Comment
	10/23/2013	11.4	3.6	1.6	5.8	2.3	81.0	<2.0	NA	Well Destroyed
	5/14/2014	Well destroyed								
J-MW-16	6/25/1999	2.5	2.6	5.9	47.0	BDL	NS	NA	BDL	
	12/16/1999	10.0	BDL	93.0	570	BDL	NS	NA	BDL	
	6/14/2000	16.0	6.7	20.0	170	33.0	BDL	NA	BDL	
	12/8/2006	14.0	<5.0	35.0	170	7.8	<1.0	NA	NA	
	6/26/2007	<1.00	<1.00	<1.00	<4.00	<2.00	<1.00	NA	NS	
	12/12/2007	34.1	<1.00	3.7	8.5	<2.00	<1.00	NA	NA	
	6/12/2008	7.8	2.7	18.2	29.4	<4.00	<2.00	22.6	NA	
	12/9/2008	38.0	<10.0	23.0	61.2	<10.0	<10.0	63.4	NA	
	6/11/2009	31.3	2.1	37.9	42.0	1.5	<1.0	87.0	NA	
	12/17/2009	15.1	<2.0	18.6	20.4	<2.0	<2.0	37.4	NA	
	6/23/2010	15.3	<1.0	10.8	12.2	<1.0	6.1	35.0	NA	
	1/5/2011	7.1	<1.0	25.8	14.4	1.1	29.6	37.2	NA	
	7/19/2011	6.5	<1.0	22.0	82.4	4.6	14.8	68.4	NA	
	1/26/2012	10.5	1.0	23.8	101.3	1.3	51.8	32.7	NA	
	8/15/2012	18.5	<1.0	11.0	41.7	12.0	15.8	60.9	NA	
	3/8/2013	15.3	1.8	14.0	48.6	<1.0	13.0	51.5	NA	
	10/23/2013	7.9	<1.0	33.4	152.5	<1.0	99.8	66.7	NA	J-MW-16: Recommendation
	5/14/2014	14.7	1.0	18.7	33.4	<1.0	23.0	53.6	NA	Continue Pump & Treat
	11/10/2014	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	NA	
	5/19/2005	6.1	<1.0	15.2	1.9	<1.0	39.5	39.0	NA	
	11/12/2015	<1.0	<1.0	4.9	13.7	<1.0	103	16.0	NA	
J-MW-17	12/5/2006	<0.5	<5.0	<0.5	3.9	14	<1.0	NA	NA	No Longer Sampled
J-MW-18	12/16/1999	BDL	9.2	89.0	340	BDL	NS	NA	BDL	
	6/14/2000	BDL	14.0	150	640	BDL	BDL	NA	9,500,000	J-MW-18: Comment
	6/26/2002	NS	NS	NS	NS	NS	NS	NA	<10	Well Abandoned
	12/5/2006	Abandoned								
J-MW-19	11/10/2014	<1.0	<1.0	<1.0	<1.0	<1.0	1.8	<1.0	NA	J-MW-19: Recommendation
	5/18/2015	<1.0	<1.0	<1.0	<3.0	<1.0	2.7	<2.0	NA	
	11/11/2015	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<2.0	NA	Continue MNA
J-PW-1	6/18/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/9/1997	0.6	BDL	BDL	1	NS	NS	NA	BDL	
	6/18/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	NS	
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	12/16/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	6/14/2000	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	J-PW-1: Comment
	12/5/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	Well Abandoned
	6/11/2009	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	NA	NA	
J-PW-2	06/18/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/9/1997	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	6/18/1998	BDL	BDL	BDL	BDL	NS	NS	NA	BDL	
	12/16/1998	BDL	BDL	BDL	BDL	NS	NS	NA	NS	
	6/25/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	12/16/1999	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	
	6/14/2000	BDL	BDL	BDL	BDL	BDL	NS	NA	BDL	J-PW-2: Comment
	12/5/2006	<0.50	<5.0	<0.50	<1.5	1.9	<1.0	NA	NA	Well Abandoned
	6/11/2009	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	NA	NA	
J-URW-2	12/6/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	No Longer Sampled
J-OW-1	12/5/2006	<0.50	<5.0	<0.50	3.7	<1.0	<1.0	NA	NA	J-OW-1: Comment
	6/11/2009	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	NA	NA	Well Abandoned
J-OW-2	12/5/2006	<0.50	<5.0	<0.50	1.9	<1.0	<1.0	NA	NA	J-OW-2: Comment
	6/11/2009	<100	<100	<100	<200	<100	<100	NA	NA	Well Abandoned
J-OW-3	12/5/2006	<0.50	<5.0	<0.50	<1.5	<1.0	<1.0	NA	NA	J-OW-3: Comment
	6/11/2009	<1.0	<1.0	<1.0	4.0	<1.0	<1.0	NA	NA	Well Abandoned

Notes:

NCGWQS - North Carolina Groundwater Quality Standard as established in North Carolina Administrative Code Title 15A, Subchapter 2L, Section .0100, .0200, and .0300, Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina dated April 1, 2013.

Parameters reported in micrograms per liter (ug/L) unless otherwise noted.

MTBE - Methyl-tert-butyl-ether

IPE - Isopropylbenzene

NA = Not Analyzed

BDL = Below Laboratory Detection Limit

J = Estimated concentration, below calibration range and above the method detection limit

Bold values indicated detections above the laboratory detection limit.

Shaded values represent concentrations above NCGWQS

NS = Not Sampled

Prepared By: JAI
Checked By: DPO

TABLE 3B

Historical Sampling Results - Southern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	IPE	Comments and Recommendations
NCGWQS (ug/L)		1.0	600	600	500	20	6.0	70	
C-MW-1	1/18/1996	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/24/1996	NS	NS	NS	NS	NS	BDL	NS	
	1/15/1997	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/21/1998	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/7/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/27/2000	BDL	BDL	BDL	BDL	BDL	BDL	NS	C-MW-1: Comment
	1/26/2001	BDL	BDL	BDL	BDL	1.5	BDL	NS	No Longer Sampled
	12/5/2006	<1.0	<5.0	<1.0	<3.0	5.5	<5.0	NS	
C-TMW-2	1/18/1996	31	8	4.0	52	105	BDL	NS	
	4/24/1996	NS	NS	NS	NS	NS	BDL	NS	
	1/15/1997	9	2	1.0	9.0	20	BDL	NS	
	1/21/1998	6	6	3.0	13	14	BDL	NS	
	1/7/1999	18	8.5	6.2	109	6.9	BDL	NS	
	4/27/2000	33	15	BDL	160	BDL	BDL	NS	C-TMW-2: Comment
	1/26/2001	1.7	2.5	1.0	7.2	BDL	BDL	NS	No Longer Sampled
	12/5/2006	<1.0	<5.0	1.4	11	3.0	<5.0	NS	
C-MW-3	1/18/1996	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/24/1996	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	8/5/1996	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	10/17/1996	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/15/1997	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/21/1998	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/7/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/27/2000	BDL	BDL	BDL	BDL	BDL	BDL	NS	C-MW-3: Comment
	1/26/2001	BDL	BDL	BDL	BDL	BDL	BDL	NS	No Longer Sampled
	12/5/2006	<1.0	<5.0	<1.0	<3.0	<1.0	<5.0	NS	
C-MW-4	1/18/1996	315.0	7,420	4,050	16,400	BDL	606	NS	
	4/24/1996	270.0	4,140	2,480	7,960	BDL	606	NS	
	8/5/1996	130.0	1,350	1,170	3,330	BDL	294	NS	
	10/17/1996	10.0	110	70.0	130	5.0	BDL	NS	
	1/15/1997	360.0	3,870	2,070	12,500	15.0	2,980	NS	
	4/15/1997	290.0	6,980	3,380	14,800	70.0	610	NS	
	7/10/1997	180.0	8,780	5,400	22,500	BDL	190	NS	
	10/16/1997	270.0	9,320	1,890	20,700	BDL	660	NS	
	1/21/1998	140.0	4,140	2,340	10,700	BDL	525	NS	
	4/21/1998	20.0	360	630	830	30.0	338	NS	
	7/8/1998	126.0	1,210	1,200	2,740	24.2	BDL	NS	
	10/8/1998	112.0	4,060	3,060	11,600	BDL	510	NS	
	1/7/1999	168.0	6,100	3,680	14,900	32.0	615	NS	
	4/9/1999	211.0	6,870	1,970	14,200	BDL	631	NS	
	7/16/1999	38.0	2,920	2,160	10,400	BDL	141	NS	
	11/16/1999	8.5	290	270	599	4.6	76.0	NS	
	2/1/2000	7.9	224	446	2,080	41.0	66.0	NS	
	4/27/2000	54.0	2,500	2,500	9,100	BDL	940	NS	
	7/28/2000	BDL	990	1,600	7,200	BDL	860	NS	
	10/17/2000	76.0	2,200	1,100	5,400	BDL	640	NS	
	1/26/2001	64.0	1,900	1,500	5,400	BDL	820	NS	
	4/25/2001	34.0	960	750	3,200	BDL	NA	NS	
	7/24/2001	BDL	4,200	3,600	13,000	BDL	1,580	NS	
	10/17/2002	BDL	4,300	3,100	10,000	BDL	780	NS	
	6/26/2002	<200	3,200	4,100	17,000	<200	1,300	NS	
	12/18/2002	<50	1,500	2,200	8,400	<50	860	NS	
	6/16/2003	18.0	1,400	2,200	9,100	<50	780	NS	
	12/23/2003	29.0	1,400	1,700	6,500	<50	520	NS	
	7/9/2004	18.0	670	1,500	5,700	<50	860	NS	
	12/8/2004	19.1	288	589	2,000	<80.0	472	NS	
	6/21/2005	160.0	<500	1,100	4,600	<100	370	NS	
	12/20/2005	7.9	177	349	1,219	<2.0	240	NS	
	6/21/2006	28.0	710	1,100	3,900	<20	900	NS	
	12/5/2006	11.0	270	540	2,100	<10	410	NS	
	6/28/2007	<80.0	854	1,510	5,970	<160	NA	NS	
	12/12/2007	<50.0	100	806	1,625	<100	NA	NS	
	6/12/2008	<100	353	2,290	7,320	<200	1,070	NS	
	12/9/2008	<160	252	1,940	8,650	<160	1,010	NS	
	6/11/2009	5.2	127	480	1,040	<1.0	681	NS	
	12/17/2009	<10.0	156	988	2,694	<10.0	586	NS	
	6/23/2010	2.6	71.2	1,290	4,754	<1.0	575	NS	
	1/5/2011	<10.0	754	754	2,513	<10.0	359	NS	
	7/19/2011	2.2	152	223	838	<1.0	174	NS	
	1/20/2012	<2.5	105	222	679	<2.5	175	NS	
	8/15/2012	<2.0	67.9	185	573	<2.0	227	NS	
	3/8/2013	1.1	137	248	792	<1.0	182	73.1	C-MW-4: Recommendation
	10/23/2013	<1.0	7.7	73.2	192.8	<1.0	117	28.9	Continue Pump & Treat
	11/10/2014	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	5/18/2015	<1.0	2.2	98.4	279.7	<1.0	170.0	50.9	
	11/11/2015	<1.0	<1.0	4.2	8.4	<1.0	8.6	1.9	

Prepared By : IAJ
Checked By: DPO

TABLE 3B

Historical Sampling Results - Southern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	IPE	Comments and Recommendations
NCGWQS (ug/L)		1.0	600	600	500	20	6.0	70	
C-MW-5	1/18/1996	BDL	BDL	BDL	BDL	28	BDL	NS	
	4/24/1996	NS	NS	NS	NS	NS	BDL	NS	
	1/15/1997	13	BDL	BDL	BDL	3.0	8.0	NS	
	4/15/1997	23	BDL	BDL	BDL	2.0	BDL	NS	
	7/10/1997	7	BDL	BDL	2,864	BDL	BDL	NS	
	10/16/1997	10	BDL	BDL	BDL	1.0	BDL	NS	
	1/21/1998	16	BDL	BDL	BDL	BDL	BDL	NS	
	4/21/1998	7	BDL	BDL	BDL	BDL	BDL	NS	
	7/8/1998	5.6	BDL	BDL	2.3	BDL	BDL	NS	
	10/6/1998	3.1	BDL	BDL	BDL	BDL	BDL	NS	
	1/7/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/9/1999	1.6	BDL	BDL	BDL	BDL	BDL	NS	
	7/16/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	11/16/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	2/1/2000	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/27/2000	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	7/28/2000	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	10/17/2000	BDL	BDL	BDL	1.6	BDL	5.1	NS	
	1/26/2001	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/25/2001	BDL	BDL	BDL	BDL	BDL	NA	NS	
	7/24/2001	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	10/17/2001	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	6/26/2002	<5	<5	<5	<10	<5	<5	NS	
	12/18/2002	<1	<1	<1	<1	<1	<1	NS	
	6/18/2003	<1	<1	<1	<3	<5	<5	NS	
	12/23/2003	<1	<1	<1	<3	<5	<5	NS	
	7/9/2004	<1	<1	<1	<3	<5	<5	NS	
	12/8/2004	<1	<1	<1	<4	<2	12.2	NS	
	6/21/2005	<.50	<5	<.50	<1.5	<1	<5	NS	
	12/20/2005	<1.0	<1.0	<1.0	<4	<2.0	21.6	NS	
	6/21/2006	<1.0	<5.0	<1.0	<3.0	<1.0	<5.0	NS	
	12/5/2006	FP = Not Sampled							C-MW-5: Comment
	6/28/2007	FP = Not Sampled							No Longer Sampled
	12/12/2007	FP = Not Sampled							
C-MW-6	1/18/1996	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/24/1996	NS	NS	NS	NS	NS	BDL	NS	
	1/15/1997	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/21/1998	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/7/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/27/2000	BDL	BDL	BDL	6.2	BDL	5.3	NS	C-MW-6: Comment
	1/28/2001	BDL	BDL	BDL	BDL	BDL	BDL	NS	No Longer Sampled
	12/5/2006	<1.0	<5.0	<1.0	<3.0	<1.0	<5.0	NS	
C-MW-7	1/18/1996	2,480	360	135	270	BDL	110	NS	
	4/24/1996	2,880	1,300	540	1,350	180	110	NS	
	6/5/1998	495	68	112	112	45	35.0	NS	
	10/17/1996	56,200	26,100	15,800	54,400	6,300	16,600	NS	
	1/15/1997	LPH	LPH	LPH	LPH	LPH	LPH	NS	
	4/15/1997	5,760	765	405	1,300	900	168	NS	
	7/10/1997	3130	540	945	2,720	768	135	NS	
	10/16/1997	823	BDL	BDL	619	BDL	135	NS	
	1/21/1998	2,250	200	328	476	148	210	NS	
	4/21/1998	LPH	LPH	LPH	LPH	LPH	LPH	NS	
	7/8/1998	LPH	LPH	LPH	LPH	LPH	LPH	NS	
	10/6/1998	LPH	LPH	LPH	LPH	LPH	LPH	NS	
	1/7/1999	LPH	LPH	LPH	LPH	LPH	LPH	NS	
	4/9/1999	4,690	300	210	590	360	243	NS	
	7/16/1999	2,070	BDL	BDL	BDL	63	BDL	NS	
	11/16/1999	LPH	LPH	LPH	LPH	LPH	LPH	NS	
	2/1/2000	3,880	290	1,150	3,310	440	625	NS	
	4/27/2000	4,500	360	1,400	2,800	BDL	360	NS	
	7/28/2000	4,600	370	1,600	2,700	BDL	580	NS	
	10/17/2000	3,900	1,600	900	2,000	360	3,400	NS	
	1/26/2001	2,000	280	350	360	100	150	NS	
	4/25/2001	5,200	650	340	600	300	NA	NS	
	7/24/2001	5,400	520	BDL	BDL	510	2,800	NS	
	10/17/2001	4,200	BDL	760	540	BDL	510	NS	
	12/5/2006	2,800	210	200	630	100	210	NS	
	6/28/2007	FP = Not Sampled							C-MW-7: Recommendation
	12/12/2007	FP = Not Sampled							Continue Groundwater
	6/12/2008	1,190	54.7	299	272	<100	70.1	NS	Elevation Monitoring
	12/9/2008	FP = Not Sampled							

Prepared By: LAJ
Checked By: DPO

TABLE 3B

Historical Sampling Results - Southern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	IPE	Comments and Recommendations
NCGWQS (ug/L)		1.0	600	800	500	20	6.0	70	
C-MW-8	1/18/1996	1.0	BDL	BDL	10	BDL	BDL	NS	
	4/24/1996	BDL	BDL	BDL	5.0	1.0	BDL	NS	
	6/5/1996	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	10/17/1996	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/15/1997	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/21/1998	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/7/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/27/2000	BDL	BDL	BDL	BDL	BDL	BDL	NS	C-MW-8: Comment
	1/26/2001	BDL	BDL	BDL	5.2	BDL	1.1	NS	Well Abandoned
	12/5/2006	<1.0	<5.0	<1.0	<3.0	20	<5.0	NS	
C-MW-9	1/18/1996	49.0	6.0	5.0	161	69	BDL	NS	
	1/15/1997	5.0	1.0	3.0	124	35	6	NS	
	1/21/1998	46	5.0	5.0	116	66	BDL	NS	
	1/7/1999	17.0	4.8	2.0	78.7	22.9	BDL	NS	
	4/27/2000	8.1	BDL	BDL	21.0	BDL	BDL	NS	
	1/26/2001	25	2.5	4.2	120	29	6.3	NS	
	12/5/2006	2.1	<5.0	<1.0	11	9.2	<5.0	NS	
	6/26/2007	2.0	1.49	<1.00	18.5	5.02	NS	NS	
	12/12/2007	7.9	1.4	<1.00	51.3	<2.00	NA	NS	
	6/12/2008	<1.00	<1.00	<1.00	<4.00	<2.00	<1.00	NS	C-MW-9: Comment
	12/9/2008	<1.00	3.0	<1.00	7.0	3.88	3.45	NS	No Longer Sampled
	6/23/2010	<1.00	<1.0	<1.0	<3.0	<1.0	<2.0	NS	
C-TMW-10	1/18/1996	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/15/1997	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/21/1998	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/7/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/27/2000	BDL	BDL	BDL	BDL	BDL	BDL	NS	C-TMW-10: Comment
	1/26/2001	BDL	BDL	BDL	BDL	BDL	BDL	NS	No Longer Sampled
	12/5/2006	<1.0	<5.0	<1.0	<3.0	<1.0	<5.0	NS	
C-MW-11	1/18/1996	145	5.0	105	120	50.0	64.0	NS	
	4/24/1996	170	10.0	60.0	40.0	80.0	66.0	NS	
	6/5/1996	101	2.0	62.0	21.0	44.0	42.0	NS	
	10/17/1996	29	3.0	26.0	17.0	8.0	BDL	NS	
	1/15/1997	123	4.0	100	109	42.0	74.0	NS	
	4/15/1997	105	4.0	50.0	32.0	19.0	32.0	NS	
	7/10/1997	102	5.0	73.0	58.0	23.0	78.0	NS	
	10/16/1997	BDL	BDL	3.0	8.0	6.0	71.0	NS	
	1/21/1998	105	7.6	76.7	69.6	50.8	108	NS	
	4/21/1998	84.0	9.0	83.0	108	33.0	68.0	NS	
	7/8/1998	46.4	7.0	66.8	63.5	4.0	38.0	NS	
	10/8/1998	117	6.4	115	175	12.2	84.0	NS	
	1/7/1999	60.7	2.0	36.6	41.9	51.8	51.0	NS	
	4/9/1999	43.9	2.5	14.8	30.6	4.9	13.7	NS	
	7/16/1999	48.0	4.6	33.7	20.4	64.0	BDL	NS	
	11/16/1999	45.7	4.7	85.2	134	25.1	42.0	NS	
	2/1/2000	37.7	3.3	31.0	43.4	19.1	45.0	NS	
	4/27/2000	95.0	5.2	74.0	85.0	BDL	150	NS	
	7/26/2000	34.0	BDL	30.0	8.3	BDL	48.0	NS	
	10/17/2000	51.0	2.1	110	6.6	18.0	42.0	NS	
	1/26/2001	44.0	1.6	28.0	3.9	10.0	38.0	NS	
	4/25/2001	39.0	BDL	56.0	13.0	9.3	NA	NS	
	7/24/2001	47.0	BDL	49.0	25.0	11.0	43.0	NS	
	10/17/2001	10.0	BDL	8.4	BDL	BDL	8.4	NS	
	6/28/2002	<5	<5	7.2	<10	68.0	5.6	NS	
	12/18/2002	5.9	2.2	12.0	28.0	78.0	27.0	NS	
	6/16/2003	1.3	1.7	1.9	7.3	110	<5	NS	
	12/23/2003	7.5	1.5	9.9	46.0	75.0	84.0	NS	
	7/9/2004	39.0	6.3	23.0	49.0	14.0	130	NS	
	12/6/2004	19.9	3.1	13.5	20.8	8.9	103	NS	
	6/21/2005	4.4	<5	5.2	2.9	<1	51.0	NS	
	12/20/2005	5.6	4.7	28.3	22.9	<4.0	90.0	NS	
	6/21/2006	2.3	<5.0	<1.0	<3.0	<1.0	14.0	NS	
	12/5/2006	7.1	<5.0	19.0	32.0	13.0	65.0	NS	
	6/26/2007	11.7	<1.00	<1.00	3.0	3.0	NS	NS	
	12/12/2007	7.7	<1.00	<1.00	<4.00	<2.00	NA	NS	
	6/12/2008	6.3	<1.00	<1.00	<4.00	<2.00	18.3	NS	
	12/9/2008	<4.00	<4.00	4.2	<12.00	<4.00	24.1	NS	
	6/11/2009	1.3	<1.0	7.6	16.4	<1.0	50.9	NS	
	12/17/2009	2.2	2.5	30.1	31.2	4.3	108	NS	
	6/23/2010	7.2	1.8	7.7	9.0	1.7	59.3	NS	
	1/5/2011	4.6	1.8	15.7	24.5	1.9	44.8	NS	
	7/18/2011	7.4	<1.0	<1.0	<3.0	2.4	10.3	NS	
	1/20/2012	5.4	1.3	11.3	26.6	1.7	27.5	NS	
	8/15/2012	2.1	<1.0	1.7	4.3	5.0	15.8	NS	
	3/6/2013	3.7	1.5	6.1	18.7	2.6	47.8	18.6	
	10/23/2013	1.9	<1.0	2.6	7.5	1.6	29.5	20.7	C-MW-11: Recommendation
	5/14/2014	2.4	<1.0	5.6	2.7	<1.0	17.4	10.0	Continue MNA
	11/10/2014	<1.0	<1.0	<1.0	<1.0	23.7	4.5	4.6	
	5/18/2015	1.8	<1.0	1.2	12.7	4.8	24.9	16.3	
	11/11/2015	<1.0	<1.0	1.1	2.4	<1.0	13.7	7.6	

Prepared By: EAI
Checked By: DPO

TABLE 3B

Historical Sampling Results - Southern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	IPE	Comments and Recommendations
NCGWQS (ug/L)		1.0	600	600	500	20	6.0	70	
C-MW-12	10/17/1996	2.0	29.0	58.0	180	BDL	BDL	NS	
	1/15/1997	1.0	2.0	14.0	7.0	BDL	6.0	NS	
	1/21/1998	BDL	BDL	1.5	BDL	BDL	BDL	NS	
	1/7/1999	1.6	3.4	2.6	6.9	BDL	BDL	NS	C-MW-12: Comment
	4/27/2000	BDL	BDL	BDL	BDL	BDL	14.0	NS	No Longer Sampled
	12/6/2006	<1.0	<5.0	<1.0	<3.0	<1.0	<5.0	NS	
C-MW-13	1/18/1996	2.0	1.0	BDL	3	98	BDL	NS	
	1/15/1997	28.0	2.0	2.0	5	265	BDL	NS	
	1/21/1998	1.9	BDL	BDL	2.9	168	BDL	NS	
	1/7/1999	BDL	BDL	BDL	BDL	69.8	BDL	NS	
	4/27/2000	BDL	BDL	BDL	BDL	80.0	BDL	NS	C-MW-13: Comment
	1/26/2001	18.0	1.1	BDL	2.2	56.0	BDL	NS	No Longer Sampled
	12/5/2006	<1.0	<5.0	<1.0	<3.0	8.5	<5.0	NS	
C-MW-14	1/18/1996	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/15/1997	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/21/1998	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/7/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/27/2000	BDL	BDL	BDL	BDL	BDL	BDL	NS	C-MW-14: Comment
	1/26/2001	BDL	BDL	BDL	BDL	BDL	BDL	NS	No Longer Sampled
	12/5/2006	<1.0	<5.0	<1.0	<3.0	<1.0	<5.0	NS	
C-MW-15	1/18/1996	1.0	BDL	1.0	3.0	BDL	BDL	NS	
	4/24/1996	1.0	1.0	2.0	4.0	1.0	BDL	NS	
	8/5/1996	BDL	BDL	1.0	2.0	2.0	BDL	NS	
	10/17/1996	NS	BDL	BDL	3.0	BDL	BDL	NS	
	1/15/1997	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/15/1997	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	7/10/1997	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	10/16/1997	1.0	BDL	BDL	BDL	BDL	BDL	NS	
	1/21/1998	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/21/1998	BDL	BDL	BDL	2.0	BDL	BDL	NS	
	7/8/1998	BDL	BDL	1.3	4.2	BDL	BDL	NS	
	10/6/1998	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/7/1999	BDL	1.6	4.5	2.0	BDL	BDL	NS	
	4/9/1999	1.4	BDL	6.0	2.8	BDL	8.8	NS	
	7/16/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	11/16/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	2/1/2000	1.1	BDL	3.3	2.7	3.0	4.0	NS	
	4/27/2000	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	7/28/2000	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	10/17/2000	BDL	BDL	1.1	2.9	BDL	4.0	NS	
	1/26/2001	BDL	BDL	1.4	BDL	BDL	5.7	NS	
	4/25/2001	BDL	BDL	BDL	BDL	BDL	NA	NS	
	7/24/2001	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	10/17/2001	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	6/26/2002	<5	<5	<5	<10	<5	<5	NS	
	12/18/2002	<1	<1	1.1	1.0	<1	<1	NS	
	6/18/2003	<1	<1	2.2	4.8	<5	8.5	NS	
	12/23/2003	<1	<1	<1	3.9	<5	7.4	NS	
	7/9/2004	<1	<1	1.1	2.3 J	<5	13	NS	
	12/8/2004	<1	<1	<1	0.697J	<2	15.4	NS	
	6/21/2005	<.50	<5	<.50	<1.5	<1.0	<5	NS	
	12/20/2005	<1.0	<1.0	<1.0	<4.0	<2.0	5.48	NS	C-MW-15: Comment
	6/21/2006	<1.0	<5.0	<1.0	<3.0	<1.0	<5.0	NS	No Longer Sampled
	12/5/2006	<1.0	<5.0	<1.0	<3.0	<1.0	<5.0	NS	

Prepared By: JAI
Checked By: DPD

TABLE 3B

Historical Sampling Results - Southern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	IPE	Comments and Recommendations
NCGWQS (ug/L)		1.0	600	600	500	20	6.0	70	
C-MW-16	1/18/1996	14.0	10.0	3.0	14.0	65.0	BDL	NS	
	1/15/1997	360	33.0	15.0	73.0	130	BDL	NS	
	4/15/1997	765	50.0	50.0	290	230	20.0	NS	
	7/10/1997	610	BDL	20.0	170	180	BDL	NS	
	10/16/1997	236	BDL	BDL	32.0	262	BDL	NS	
	1/21/1998	487	BDL	14.2	62.4	169	BDL	NS	
	4/21/1998	530	10.0	BDL	50.0	130	BDL	NS	
	7/8/1998	171	5.4	2.6	18.3	54.7	BDL	NS	
	10/6/1998	405	29.3	525	1,060	99.7	37.0	NS	
	1/7/1999	76.4	8.6	BDL	18.5	56.9	BDL	NS	
	4/9/1999	115	5.2	2.2	17.0	120	BDL	NS	
	7/16/1999	125	1.0	BDL	2.8	136	31.0	NS	
	11/16/1999	1,640	250	1,650	3,780	225	780	NS	
	2/1/2000	129	NS	184	247	221	26.0	NS	
	4/27/2000	780	39.0	950	5,000	180	110	NS	
	7/28/2000	1,000	BDL	900	1,400	160	620	NS	
	10/17/2000	460	16.0	230	230	130	280	NS	
	1/26/2001	71.0	4.8	9.0	17.0	100	6.0	NS	
	4/25/2001	210	6.0	15.0	23.0	100	NA	NS	
	7/24/2001	110	8.0	12.0	26.0	110	BDL	NS	
	10/17/2001	65.0	5.0	BDL	6.0	62.0	7.0	NS	
	8/26/2002	56.0	5.1	<5	<5	43.0	<5	NS	
	12/18/2002	11.0	6.4	<1	9.0	54.0	<1	NS	
	6/18/2003	5.6	6.3	3.5	8.8	59.0	6.2	NS	
	12/23/2003	5.1	3.5	<1	11.0	55.0	5.4	NS	
	7/9/2004	3.8	5.4	2.3	7.9	45.0	5.5	NS	
	12/5/2006				Could not locate				
	6/23/2010	1.7	<1.0	<1.0	<3.0	14.3	<2.0	NS	
	1/4/2011	<1.0	<1.0	<1.0	4.1	11.8	<2.0	NS	
	7/19/2011	<1.0	<1.0	<1.0	3.0	12.2	<2.0	NS	
	1/20/2012	<1.0	<1.0	<1.0	3.4	11.2	<2.0	NS	
	8/15/2012	1.2	<1.0	<1.0	3.8	10.1	<2.0	NS	
	3/8/2013	1.0	1.2	<1.0	2.7	7.2	<2.0	39.0	
	10/23/2013	<1.0	<1.0	<1.0	<3.0	5.5	<2.0	5.5	C-MW-16: Recommendation
	5/14/2014	1.3	1.5	<1.0	3.0	7.9	<2.0	32.7	Continue Pump & Treat
	11/10/2014	<1.0	<1.0	<1.0	4.3	5.0	26.1	<1.0	
	5/18/2015	<1.0	1.2	<1.0	2.9	4.6	<2.0	43.3	
	11/11/2015	1.2	<1.0	<1.0	3.1	3.9	<2.0	51.7	
C-MW-17	1/15/1997	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/21/1998	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/7/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/27/2000	BDL	BDL	BDL	BDL	BDL	BDL	NS	C-MW-17: Comment
	1/26/2001	BDL	BDL	BDL	BDL	BDL	BDL	NS	No Longer Sampled
	12/5/2006	<1.0	<5.0	<1.0	<3.0	<1.0	<5.0	NS	

Prepared By: TAJ
Checked By: DPO

TABLE 3B

Historical Sampling Results - Southern Portion of the Site
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Well Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	IPE	Comments and Recommendations
NCGWQS (ug/L)		1.0	600	600	500	20	6.0	70	
C-MW-18	1/18/1996	320	BDL	30.0	BDL	BDL	BDL	NS	
	1/15/1997	118	9.0	16.0	5.0	3.0	5.0	NS	
	4/15/1997	72.0	3.0	6.0	1.0	2.0	BDL	NS	
	7/10/1997	71.0	4.0	7.0	1.0	4.0	8.0	NS	
	10/16/1997	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/21/1998	37.6	2.6	4.8	3.1	6.6	BDL	NS	
	4/21/1998	79.0	1.0	2.0	BDL	7.0	11.0	NS	
	7/8/1998	104	7.7	24.9	BDL	20.8	17.0	NS	
	10/6/1998	72.9	3.5	6.8	BDL	3.3	24.0	NS	
	1/7/1999	80.2	7.8	13.0	BDL	2.0	23.0	NS	
	4/8/1999	64.2	2.1	6.0	6.0	6.2	12.3	NS	
	7/16/1999	76.8	2.3	1.4	BDL	3.4	12.0	NS	
	11/16/1999	67.5	5.4	11.7	8.5	3.8	18.0	NS	
	2/1/2000	52.3	6.6	12.4	8.8	19.3	20.0	NS	
	4/27/2000	42.0	BDL	BDL	BDL	BDL	BDL	NS	
	7/28/2000	33.0	BDL	6.1	BDL	BDL	BDL	NS	
	10/17/2000	65.0	5.2	14.0	12.0	BDL	21.0	NS	
	1/26/2001	30.0	3.1	2.7	1.3	BDL	2.0	NS	
	4/25/2001	20.0	BDL	BDL	BDL	BDL	NA	NS	
	7/24/2001	28.0	6.3	7.6	BDL	BDL	BDL	NS	
	10/17/2001	11.0	BDL	BDL	BDL	BDL	BDL	NS	
	6/26/2002	<5	<5	<5	<10	<5	<5	NS	
	12/18/2002	<1	<1	<1	1.1	<1	<1	NS	
	6/18/2003	<1	<1	<1	<3	<5	<5	NS	
	12/23/2003	<1	<1	<1	<3	<5	<5	NS	
	7/9/2004	<1	<1	<1	<3	<5	<5	NS	
	12/8/2004	40.7	10.1	6.0	6.5	<2	13.4	NS	
	6/21/2005	3.4	<5	<.50	<1.5	<1.0	<5	NS	
	12/20/2005	35.7	7.5	6.3	4.3	<2.0	9.9	NS	
	6/21/2006	20.0	<5.0	3.2	3.1	<1.0	<5.0	NS	
	12/5/2006	1.8	<5.0	<1.0	<3.0	<1.0	<5.0	NS	
	6/26/2007	<1.00	<1.00	1.8	2.4	<2.00	NS	NS	
	12/12/2007	<1.00	<1.00	<1.00	<4.00	<2.00	NA	NS	
	6/12/2008	6.1	3.5	1.1	<4.00	<2.00	<1.00	NS	
	12/9/2008	4.4	2.4	<1.00	5.1	<1.00	<1.00	NS	
	6/11/2009	3.8	3.3	<1.0	<2.0	<1.0	12.2	NS	
	12/17/2009	11.5	4.1	3.2	<3.0	<1.0	<2.0	NS	
	6/23/2010	9.8	5.4	4.7	3.2	<1.0	<2.0	NS	
	1/4/2011	5.5	2.2	1.6	1.4	<1.0	<2.0	NS	
	7/19/2011	<1.0	1.1	<1.0	<3.0	<1.0	3.0	NS	
	1/20/2012	2.1	1.8	<1.0	<3.0	<1.0	<2.0	NS	
	8/15/2012	1.9	1.6	2.0	2.1	<1.0	<2.0	NS	
	3/8/2013	3.5	1.8	<1.0	<3.0	<1.0	<2.0	36.5	
	10/23/2013	1.1	<1.0	<1.0	<3.0	<1.0	<2.0	26.3	C-MW-18: Recommendation
	5/14/2014	1.7	1.3	<1.0	<3.0	<1.0	<2.0	27.7	Continue Recovery
	11/10/2014	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	<1.0	
	5/18/2015	<1.0	<1.0	<1.0	<3.0	<1.0	<2.0	18.4	
	11/11/2015	<1.0	<1.0	<1.0	<3.0	<1.0	<2.0	29.4	
C-MW-20	10/17/1996	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/15/1997	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/21/1998	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	1/7/1999	BDL	BDL	BDL	BDL	BDL	BDL	NS	
	4/27/2000	BDL	BDL	BDL	BDL	BDL	BDL	NS	C-MW-20: Comment
	1/26/2001	BDL	BDL	BDL	BDL	BDL	BDL	NS	Well Destroyed
	12/5/2006	Destroyed							
C-MW-21	6/23/2010	<1.0	<1.0	<1.0	<3.0	<1.0	<2.0	NS	No Longer Sampled
C-MW-22	6/23/2010	<1.0	<1.0	<1.0	<3.0	<1.0	<2.0	NS	No Longer Sampled

Notes:
NCGWQS - North Carolina Groundwater Quality Standard as established in North Carolina Administrative Code Title 15A, Subchapter 2L, Section .0100, .0200, and .0300, Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina dated April 1, 2013.
Parameters reported in micrograms per liter (ug/L)
MTBE - Methyl-tert-butyl-ether
IPE - Isopropylbenzene
NS = Not Sampled
J = Estimated concentration, below calibration range and above the method detection limit
BDL = Below Laboratory Detection Limit
Bold values represent cocentratiosn above the labortory detection limit
Shaded values represent concentrations above NCGWQS
FP =Free Product

Prepared By: JAI
Checked By: DPO

TABLE 4

Groundwater Pump and Treat System - Flow Measurements
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Date	Days Since Previous Reading	Flow Meter Reading	Total Gallons Since Previous Reading	Flow Rate (GPM)
2006			System Down	
3/23/07	0	0	0	0
3/31/07	8	20,084	20,084	1.74
4/01/07	1	20,084	0	0.00
4/11/07	10	20,084	0	0.00
4/18/07	7	25,489	5,405	0.54
4/30/07	12	28,813	3,324	0.19
5/1/07	1	28,813	0	0.00
5/9/07	8	32,503	3,690	0.32
5/18/07	9	34,944	2,441	0.19
5/23/07	5	37,124	2,180	0.30
5/31/07	8	39,002	1,878	0.16
6/1/07	1	39,002	0	0.00
6/6/2007	5	41,531	2,529	0.35
6/14/07	8	43,382	1,851	0.16
6/21/07	7	43,992	610	0.06
6/29/07	8	50,123	6,131	0.53
6/30/07	1	50,943	820	0.57
7/1/07	1	50,943	0	0.00
7/12/07	11	61,369	10,426	0.66
7/19/07	7	67,523	6,154	0.61
7/31/07	12	71,908	4,385	0.25
8/10/07	10	83,720	11,812	0.82
8/15/07	5	86,793	3,073	0.43
8/22/07	7	90,724	3,931	0.39
8/29/07	7	96,065	5,341	0.53
9/5/07	7	97,001	936	0.09
9/12/07	7	103,422	6,421	0.64
9/19/07	7	110,635	7,213	0.72
9/26/07	7	118,626	7,991	0.79
10/3/07	7	130,554	11,928	1.18
10/10/07	7	141,473	10,919	1.08
10/17/07	7	147,065	5,592	0.55
10/24/07	7	149,461	2,396	0.24
10/31/07	7	167,438	17,977	1.78
11/7/07	7	182,161	14,723	1.46
11/14/07	7	188,927	6,766	0.67
11/21/07	7	194,529	5,602	0.56
11/29/07	8	200,303	5,774	0.50
12/6/07	7	203,237	2,934	0.29
12/12/07	6	205,469	2,232	0.26
12/19/07	7	210,744	5,275	0.52
12/26/07	7	219,775	9,031	0.90
2007 Totals	**278**		**219,775**	**0.55**

Prepared By : IAI
Checked By: DPO

TABLE 4

Groundwater Pump and Treat System - Flow Measurements
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Date	Days Since Previous Reading	Flow Meter Reading	Total Gallons Since Previous Reading	Flow Rate (GPM)
01/02/08	7	221,613	1,838	0.18
01/09/08	7	221,613	0	0.00
01/16/08	7	226,004	4,391	0.44
01/23/08	7	239,272	13,268	1.32
01/30/08	7	253,939	14,667	1.46
02/06/08	12	264,503	10,564	0.61
02/13/08	7	270,296	5,793	0.57
02/20/08	7	274,535	4,239	0.42
02/27/08	7	277,210	2,675	0.27
03/05/08	7	279,854	2,644	0.26
03/11/08	6	281,195	1,341	0.16
03/19/08	8	283,264	2,069	0.18
03/26/08	New Meter			
04/02/08	7	481,508	0	0.00
04/11/08	9	514,567	33,059	2.55
04/16/08	5	536,126	21,559	2.99
04/23/08	7	561,421	25,295	2.51
04/30/08	7	579,094	17,673	1.75
05/07/08	7	590,942	11,848	1.18
05/14/08	7	607,404	16,462	1.63
05/15/08 - 09/15/08	NO DATA AVAILABLE			
09/16/08	120	837,133	229,729	
09/24/08	8	856,268	19,135	1.66
09/30/08	6	888,491	32,223	3.73
10/07/08	7	909,745	21,254	2.11
10/14/08	7	928,620	18,875	1.87
10/21/08	7	955,118	26,498	2.63
10/28/2008	7	983,114	27,996	2.78
11/4/2008	7	1,011,459	28,345	2.81
11/13/2008	9	1,040,623	29,164	2.25
11/19/2008	6	1,053,311	12,688	1.47
12/2/2008	12	1,072,808	19,497	1.13
12/10/2008	8	1,106,760	33,952	2.95
12/16/2008	6	1,131,732	24,972	2.89
12/24/2008	8	1,159,298	27,566	2.39
12/30/2008	6	1,175,637	16,339	1.89
2008 Totals	**362**		**757,618**	**1.45**

Prepared By: IAI
Checked By: DPO

TABLE 4

Groundwater Pump and Treat System - Flow Measurements
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Date	Days Since Previous Reading	Flow Meter Reading	Total Gallons Since Previous Reading	Flow Rate (GPM)
01/06/09	7	1,192,921	17,284	1.71
01/20/09	14	1,220,829	27,908	1.38
01/29/09	9	1,221,515	686	0.05
02/03/09	5	1,236,068	14,553	2.02
02/10/09	7	1,240,924	4,856	0.48
02/17/09	7	1,251,824	10,900	1.08
02/24/09	7	1,259,970	8,146	0.81
03/05/09	9	1,271,922	11,952	0.92
03/11/09	6	1,281,206	9,284	1.07
03/17/09	6	1,289,030	7,824	0.91
03/23/09	6	1,306,334	17,304	2.00
03/31/09	8	1,323,382	17,048	1.48
04/07/09	7	1,344,673	21,291	2.11
04/14/09	7	1,360,563	15,890	1.58
04/21/09	7	1,374,556	13,993	1.39
04/28/09	7	1,383,238	8,682	0.86
05/05/09	7	1,390,327	7,089	0.70
05/12/09	7	1,398,068	7,741	0.77
05/19/09	7	1,409,837	11,769	1.17
05/26/09	7	1,431,674	21,837	2.17
06/09/09	14	1,463,717	32,043	1.59
06/16/09	7	1,479,834	16,117	1.60
06/23/09	7	1,494,322	14,488	1.44
06/30/09	7	1,516,041	21,719	2.15
07/07/09	7	1,535,246	19,205	1.91
07/14/09	7	1,574,188	38,942	3.86
07/21/09	7	1,625,650	51,462	5.11
07/28/09	7	1,652,534	26,884	2.67
08/04/09	7	1,686,740	34,206	3.39
08/12/09	8	1,713,681	26,941	2.34
08/18/09	6	1,733,372	19,691	2.28
08/25/09	7	1,773,807	40,435	4.01
09/01/09	7	1,815,902	42,095	4.18
09/08/09	7	1,852,723	36,821	3.65
09/15/09	7	1,890,899	38,176	3.79
09/22/09	7	1,921,257	30,358	3.01
System Used for Construction De-Watering				
10/07/09	15	2,031,523	0	0.00
10/13/09	6	2,048,006	16,483	1.91
10/26/09	13	2,082,266	34,260	1.83
11/04/09	9	2,087,792	5,526	0.43
11/09/09	5	2,112,444	24,652	3.42
11/18/09	9	2,147,585	35,141	2.71
11/24/09	6	2,182,703	35,118	4.06
12/01/09	7	2,222,323	39,620	3.93
12/08/09	7	2,254,954	32,631	3.24
12/15/09	7	2,282,702	27,748	2.75
12/24/09	9	2,337,820	55,118	4.25
2009 Totals	**359**		**1,051,917**	**2.03**

Prepared By : IAI
Checked By: DPO

TABLE 4

Groundwater Pump and Treat System - Flow Measurements
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Date	Days Since Previous Reading	Flow Meter Reading	Total Gallons Since Previous Reading	Flow Rate (GPM)
1/19/10	26	2,346,331	8,511	0.23
1/26/10	7	2,391,531	45,200	4.48
2/3/10	8	2,423,903	32,372	2.81
2/17/10	14	2,443,138	19,235	0.95
2/23/10	6	2,470,785	27,647	3.20
3/2/10	7	2,484,431	13,646	1.35
3/9/10	7	2,514,078	29,647	2.94
3/16/10	7	2,543,007	28,929	2.87
3/23/10	7	2,557,209	14,202	1.41
3/30/10	7	2,579,119	21,910	2.17
4/6/10	7	2,601,709	22,590	2.24
4/14/10	8	2,628,162	26,453	2.30
4/20/10	6	2,644,060	15,898	1.84
5/5/10	15	2,660,880	16,820	0.78
5/11/10	6	2,676,076	15,196	1.76
5/18/10	7	2,697,276	21,200	2.10
5/25/10	7	2,721,808	24,532	2.43
6/1/10	7	2,747,231	25,423	2.52
6/8/10	7	2,774,973	27,742	2.75
6/15/10	7	2,793,275	18,302	1.82
6/22/10	7	2,818,506	25,231	2.50
7/6/10	14	2,840,369	21,863	1.08
7/13/10	7	2,858,422	18,053	1.79
7/20/10	7	2,885,864	27,442	2.72
7/27/10	7	2,911,440	25,576	2.54
8/3/10	7	2,935,709	24,269	2.41
8/10/10	7	2,963,054	27,345	2.71
8/17/10	7	2,985,650	22,596	2.24
8/24/10	7	3,015,875	30,225	3.00
8/31/10	7	3,060,052	44,177	4.38
9/7/10	7	3,087,799	27,747	2.75
9/14/10	7	3,115,943	28,144	2.79
9/21/10	7	3,135,306	19,363	1.92
10/05/10	14	3,135,741	435	0.02
10/12/10	7	3,136,234	493	0.05
10/19/10	7	3,174,212	37,978	3.77
10/26/10	7	3,222,040	47,828	4.74
11/11/10	16	3,301,310	79,270	3.44
11/16/10	5	3,326,284	24,974	3.47
11/23/10	7	3,356,487	30,203	3.00
11/30/10	7	3,382,378	25,891	2.57
System down due to freezing weather				
2010 Totals	**341**		**1,044,558**	**2.13**

Prepared By: IAI
Checked By: DPO

TABLE 4

Groundwater Pump and Treat System - Flow Measurements
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Date	Days Since Previous Reading	Flow Meter Reading	Total Gallons Since Previous Reading	Flow Rate (GPM)
02/02/11	64	3,409,436	27,058	0.29
02/08/11	6	3,432,795	23,359	2.70
02/15/11	7	3,440,053	7,258	0.72
02/22/11	7	3,467,641	27,588	2.74
03/01/11	7	3,495,039	27,398	2.72
03/08/11	7	3,514,886	19,847	1.97
03/15/11	7	3,542,722	27,836	2.76
03/22/11	7	3,573,863	31,141	3.09
03/29/11	7	3,601,070	27,207	2.70
04/05/11	7	3,632,085	31,015	3.08
04/12/11	7	3,660,060	27,975	2.78
04/19/11	7	3,686,414	26,354	2.61
04/26/11	7	3,703,385	16,971	1.68
05/02/11	6	3,709,348	5,963	0.69
05/10/11	8	3,714,825	5,477	0.48
05/17/11	7	3,729,521	14,696	1.46
05/24/11	7	3,749,005	19,484	1.93
05/31/11	7	3,766,724	17,719	1.76
06/07/11	7	3,782,799	16,075	1.59
06/14/11	7	3,797,267	14,468	1.44
06/21/11	7	3,812,796	15,529	1.54
06/28/11	7	3,824,106	11,310	1.12
07/05/11	7	3,839,062	14,956	1.48
07/12/11	7	3,848,392	9,330	0.93
07/19/11	7	3,850,005	1,613	0.16
07/26/11	7	3,868,582	18,577	1.84
08/03/11	8	3,894,446	25,864	2.25
08/09/11	6	3,910,463	16,017	1.85
08/16/11	7	3,927,378	16,915	1.68
9/30/11	45	4,011,003	83,625	1.29
10/4/11	4	4,059,555	48,552	8.43
10/11/11	7	4,097,804	38,249	3.79
10/18/11	7	4,131,356	33,552	3.33
10/20/11	2	4,142,483	11,127	3.86
10/20/11	system reset	0	0	0.00
10/27/11	7	2,459	2,459	0.24
11/1/11	5	24,414	21,955	3.05
11/8/11	7	57,348	32,934	3.27
11/15/11	7	94,226	36,878	3.66
11/22/11	7	129,475	35,249	3.50
11/29/11	7	157,145	27,670	2.75
12/6/11	7	178,015	20,870	2.07
12/13/11	7	201,172	23,157	2.30
12/20/11	7	218,422	17,250	1.71
12/27/11	7	232,290	13,868	1.38
2011 Totals	**392**		**992,395**	**1.76**

Prepared By : IAI
Checked By: DPO

TABLE 4

Groundwater Pump and Treat System - Flow Measurements
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Date	Days Since Previous Reading	Flow Meter Reading	Total Gallons Since Previous Reading	Flow Rate (GPM)
1/3/12	7	250,211	17,921	1.78
1/10/12	7	259,731	9,520	0.94
1/17/12	7	268,575	8,844	0.88
1/24/12	7	286,595	18,020	1.79
01/30/12	6	303,097	16,502	1.91
02/07/12	8	318,624	15,527	1.35
02/14/12	7	334,422	15,798	1.57
02/21/12	7	341,958	7,536	0.75
02/28/12	7	360,749	18,791	1.86
03/06/12	7	379,138	18,389	1.82
03/13/12	7	403,241	24,103	2.39
03/20/12	7	419,301	16,060	1.59
03/27/12	7	440,198	20,897	2.07
04/03/12	7	459,489	19,291	1.91
04/10/12	7	479,277	19,788	1.96
04/17/12	7	495,696	16,419	1.63
04/24/12	7	509,555	13,859	1.37
05/01/12	7	523,622	14,067	1.40
05/08/12	7	545,169	21,547	2.14
05/15/12	7	563,707	18,538	1.84
05/22/12	7	587,588	23,881	2.37
05/31/12	9	619,114	31,526	2.43
06/05/12	5	650,784	31,670	4.40
06/12/12	7	686,306	35,522	3.52
06/19/12	7	731,330	45,024	4.47
06/26/12	7	767,454	36,124	3.58
07/03/12	7	797,485	30,031	2.98
07/10/12	7	822,330	24,845	2.46
07/17/12	7	849,382	27,052	2.68
07/24/12	7	877,450	28,068	2.78
07/31/12	7	894,380	16,930	1.68
08/07/12	7	920,029	25,649	2.54
08/14/12	7	938,330	18,301	1.82
08/21/12	7	966,535	28,205	2.80
08/28/12	7	993,457	26,922	2.67
09/03/12	6	1,015,900	22,443	2.60
09/11/12	8	1,047,397	31,497	2.73
09/18/12	7	1,092,244	44,847	4.45
09/25/12	7	1,119,717	27,473	2.73
10/02/12	7	1,154,420	34,703	3.44
10/09/12	7	1,193,840	39,420	3.91
10/16/12	7	1,215,110	21,270	2.11
10/23/12	7	1,234,605	19,495	1.93
10/30/12	7	1,252,319	17,714	1.76
11/06/12	7	1,274,219	21,900	2.17
11/13/12	7	1,294,230	20,011	1.99
11/20/12	7	1,316,894	22,664	2.25
11/27/12	7	1,339,095	22,201	2.20
12/04/12	7	1,358,545	19,450	1.93
12/11/12	7	1,397,908	39,363	3.91
12/18/12	7	1,430,108	32,200	3.19
12/26/12	8	1,464,000	33,892	2.94
2012 Totals	**365**		**1,231,710**	**2.34**

Prepared By : IAI
Checked By: DPO

TABLE 4

Groundwater Pump and Treat System - Flow Measurements
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Date	Days Since Previous Reading	Flow Meter Reading	Total Gallons Since Previous Reading	Flow Rate (GPM)
01/02/13	7	1,497,908	33,908	3.36
01/08/13	6	1,522,854	24,946	2.89
01/15/13	7	1,552,551	29,697	2.95
01/22/13	7	1,581,858	29,307	2.91
01/29/13	7	1,587,234	5,376	0.53
02/05/13	7	1,599,413	12,179	1.21
02/12/13	7	1,626,010	26,597	2.64
02/19/13	7	1,653,899	27,889	2.77
02/26/13	7	1,677,122	23,223	2.30
03/05/13	7	1,707,558	30,436	3.02
03/12/13	7	1,739,600	32,042	3.18
03/19/13	7	1,768,423	28,823	2.86
03/26/13	7	1,791,849	23,426	2.32
04/02/13	7	1,818,364	26,515	2.63
04/09/13	7	1,840,564	22,200	2.20
04/16/13	7	1,869,406	28,842	2.86
04/23/13	7	1,901,960	32,554	3.23
04/30/13	7	1,931,602	29,642	2.94
05/07/13	7	1,962,095	30,493	3.03
05/14/13	7	1,987,613	25,518	2.53
05/21/13	7	2,006,845	19,232	1.91
05/28/13	7	2,019,010	12,165	1.21
06/04/13	7	2,044,810	25,800	2.56
06/11/13	7	2,079,150	34,340	3.41
06/18/13	7	2,113,919	34,769	3.45
06/25/13	7	2,143,011	29,092	2.89
07/03/13	8	2,143,018	7	0.00
07/09/13	6	2,161,820	18,802	2.18
07/16/13	7	2,161,820	0	0.00
07/23/13	7	2,194,355	32,535	3.23
07/30/13	7	2,248,054	53,699	5.33
08/06/13	7	2,301,428	53,374	5.30
08/13/13	7	2,342,845	41,417	4.11
08/20/13	7	2,394,599	51,754	5.13
08/27/13	7	2,455,034	60,435	6.00
09/03/13	7	2,506,345	51,311	5.09
09/10/13	7	2,544,392	38,047	3.77
09/17/13	7	2,578,896	34,504	3.42
		New Meter		
09/24/13	7	730,259	0	0.00
10/01/13	7	755,352	25,093	2.49
10/08/13	7	781,788	26,436	2.62
10/15/13	7	814,591	32,803	3.25
10/22/13	7	843,290	28,699	2.85
10/29/13	7	861,524	18,234	1.81
11/05/13	7	881,598	20,074	1.99
11/12/13	7	898,467	16,869	1.67
11/19/13	7	909,178	10,711	1.06
11/26/13	7	913,239	4,061	0.40
12/03/13	7	915,829	2,590	0.26
12/10/13	7	934,723	18,894	1.87
12/18/13	8	949,428	14,705	1.28
12/24/13	6	961,686	12,258	1.42
12/31/13	7	973,990	12,304	1.22
2013 Totals	**370**		**1,358,627**	**2.55**

Prepared By : IAI
Checked By: DPO

TABLE 4

Groundwater Pump and Treat System - Flow Measurements
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Date	Days Since Previous Reading	Flow Meter Reading	Total Gallons Since Previous Reading	Flow Rate (GPM)
01/09/14	9	979,602	5,612	0.43
01/15/14	6	994,984	15,382	1.78
01/21/14	6	1,006,518	11,534	1.33
02/14/14	24	1,014,300	7,782	0.23
02/18/14	4	1,038,341	24,041	4.17
02/25/14	7	1,057,868	19,527	1.94
03/11/14	14	1,089,615	31,747	1.57
03/18/14	7	1,109,570	19,955	1.98
03/25/14	7	1,130,084	20,514	2.04
04/01/14	7	1,141,241	11,157	1.11
04/08/14	7	1,164,675	23,434	2.32
04/15/14	7	1,189,545	24,870	2.47
04/22/14	7	1,217,917	28,372	2.81
04/29/14	7	1,254,816	36,899	3.66
05/06/14	7	1,286,441	31,625	3.14
05/13/14	7	1,310,625	24,184	2.40
05/20/14	7	1,337,236	26,611	2.64
05/27/14	7	1,360,768	23,532	2.33
06/03/14	7	1,380,363	19,595	1.94
06/10/14	7	1,396,711	16,348	1.62
06/17/14	7	1,416,568	19,857	1.97
06/24/14	7	1,429,525	12,957	1.29
07/01/14	7	1,448,423	18,898	1.87
07/08/14	7	1,473,860	25,437	2.52
07/15/14	7	1,510,610	36,750	3.65
07/22/14	7	1,547,410	36,800	3.65
07/29/14	7	1,592,743	45,333	4.50
08/05/14	7	1,627,418	34,675	3.44
08/12/14	7	1,677,380	49,962	4.96
08/19/14	7	1,733,782	56,402	5.60
08/26/14	7	1,777,637	43,855	4.35
09/02/14	7	1,813,715	36,078	3.58
09/09/14	7	1,845,170	31,455	3.12
		New Meter		
09/16/14	7	2,620,508	0	0.00
09/23/14	7	2,642,449	21,941	2.18
09/30/14	7	2,664,791	22,342	2.22
10/07/14	7	2,696,667	31,876	3.16
10/14/14	7	2,723,509	26,842	2.66
10/21/14	7	2,748,910	25,401	2.52
10/28/14	7	2,759,756	10,846	1.08
11/04/14	7	2,777,981	18,225	1.81
11/11/14	7	2,794,889	16,908	1.68
11/18/14	7	2,801,880	6,991	0.69
11/25/14	7	2,809,053	7,173	0.71
12/02/14	7	2,821,599	12,546	1.24
12/09/14	7	2,840,988	19,389	1.92
12/16/14	7	2,848,117	7,129	0.71
12/23/14	7	2,860,182	12,065	1.20
12/30/14	7	2,892,674	32,492	3.22
2014 Totals	**364**		**1,143,346**	**2.18**

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Checked By: DPO

TABLE 4

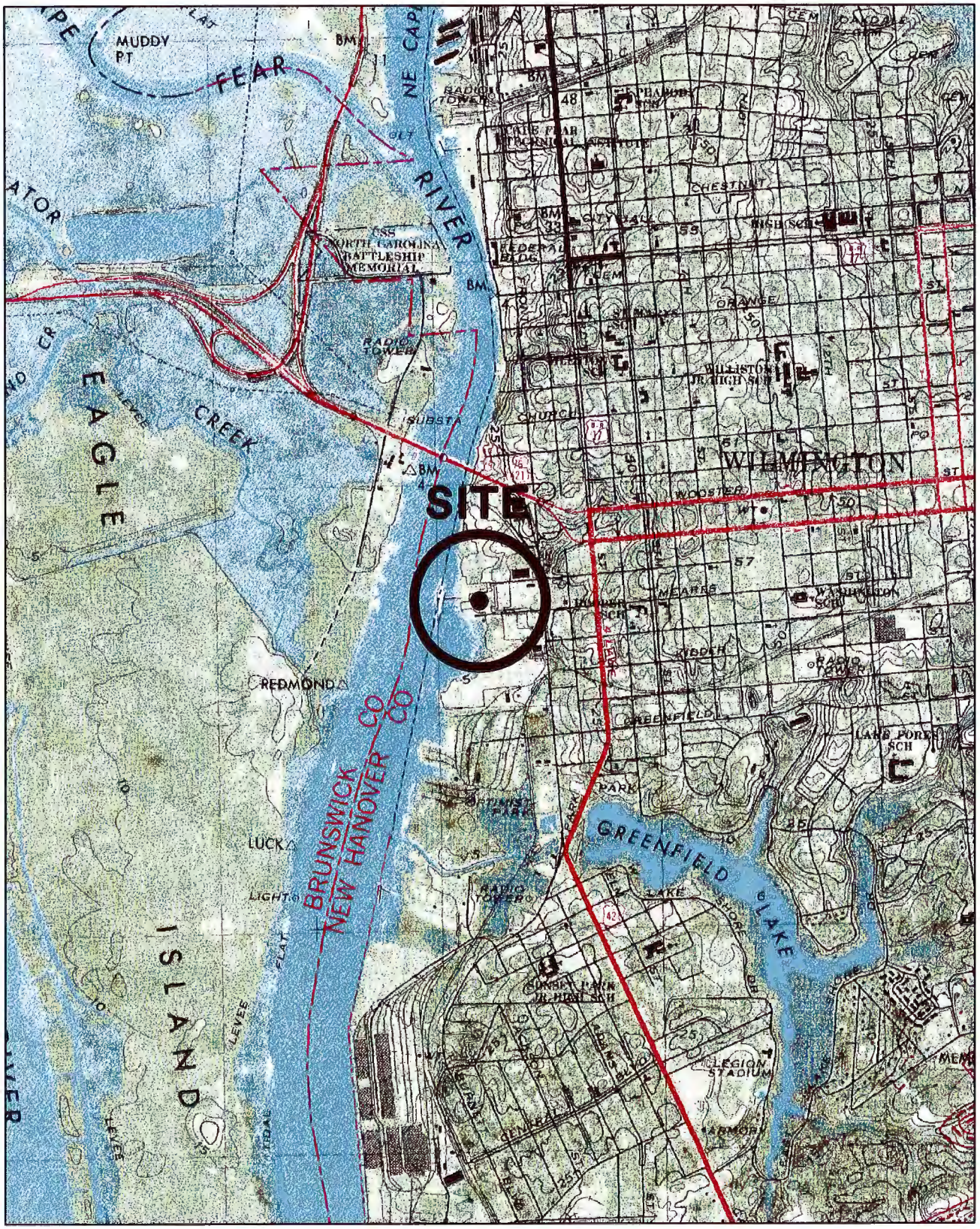
Groundwater Pump and Treat System - Flow Measurements
CTI-NC Cape Fear Terminal
Wilmington, New Hanover County, North Carolina
NCDEQ Incident No #6107
BLE Project Number J15-9119-03

Date	Days Since Previous Reading	Flow Meter Reading	Total Gallons Since Previous Reading	Flow Rate (GPM)
01/06/15	7	2,916,316	23,642	2.35
01/13/15	7	2,922,068	5,752	0.57
01/20/15	7	2,949,232	27,164	2.69
01/27/15	7	2,983,538	34,306	3.40
02/03/15	System shutdown due to freezing weather			
02/10/15	14	3,000,979	17,441	0.87
02/17/15	7	3,005,205	4,226	0.42
02/24/15	System shutdown due to freezing weather			
03/03/15	14	3,008,911	3,706	0.18
03/10/15	7	3,031,998	23,087	2.29
03/17/15	7	3,058,461	26,463	2.63
03/24/15	7	3,089,504	31,043	3.08
03/31/15	7	3,106,779	17,275	1.71
04/07/15	7	3,127,667	20,888	2.07
04/14/15	7	3,146,742	19,075	1.89
04/21/15	7	3,165,885	19,143	1.90
04/28/15	7	3,182,244	16,359	1.62
05/05/15	7	3,196,544	14,300	1.42
05/12/15	7	3,218,118	21,574	2.14
05/19/15	7	3,245,441	27,323	2.71
05/26/15	7	3,272,475	27,034	2.68
06/02/15	7	3,291,872	19,397	1.92
06/09/15	7	3,312,778	20,906	2.07
06/16/15	7	3,340,758	27,980	2.78
06/23/15	7	3,359,089	18,331	1.82
06/30/15	7	3,382,504	23,415	2.32
07/07/15	7	3,399,528	17,024	1.69
07/14/15	7	3,416,771	17,243	1.71
07/21/15	7	3,431,049	14,278	1.42
07/28/15	7	3,440,398	9,349	0.93
08/04/15	7	3,460,769	20,371	2.02
08/11/15	7	3,476,416	15,647	1.55
2015 Totals: To Date	**224**		**583,742**	**1.81**

Notes: Data provided by CTI-NC

Prepared By : IAI
Checked By: DPO

FIGURES



2000 1000 0 2000 4000

APPROXIMATE SCALE IN FEET

REFERENCE:
USGS TOPOGRAPHIC MAP, 7.5 MINUTE SERIES, WILMINGTON, N.C. QUADRANGLE, 1979.

DRAWN: ACE	DATE: 12-21-15	BLE INC. BUNNELL-LAMMONS ENGINEERING, INC. 6004 PONDERS COURT GREENVILLE, SOUTH CAROLINA 29615 PHONE: (864)288-1265 FAX: (864)288-4430	SITE LOCATION MAP COLONIAL WILMINGTON TERMINAL WILMINGTON, NORTH CAROLINA	FIGURE
CHECKED: DPO	CAD: COLWILMNOV15-SLM			1
APPROVED:	JOB NO: J15-9119-04			

200 100 0 200 400

APPROXIMATE SCALE IN FEET

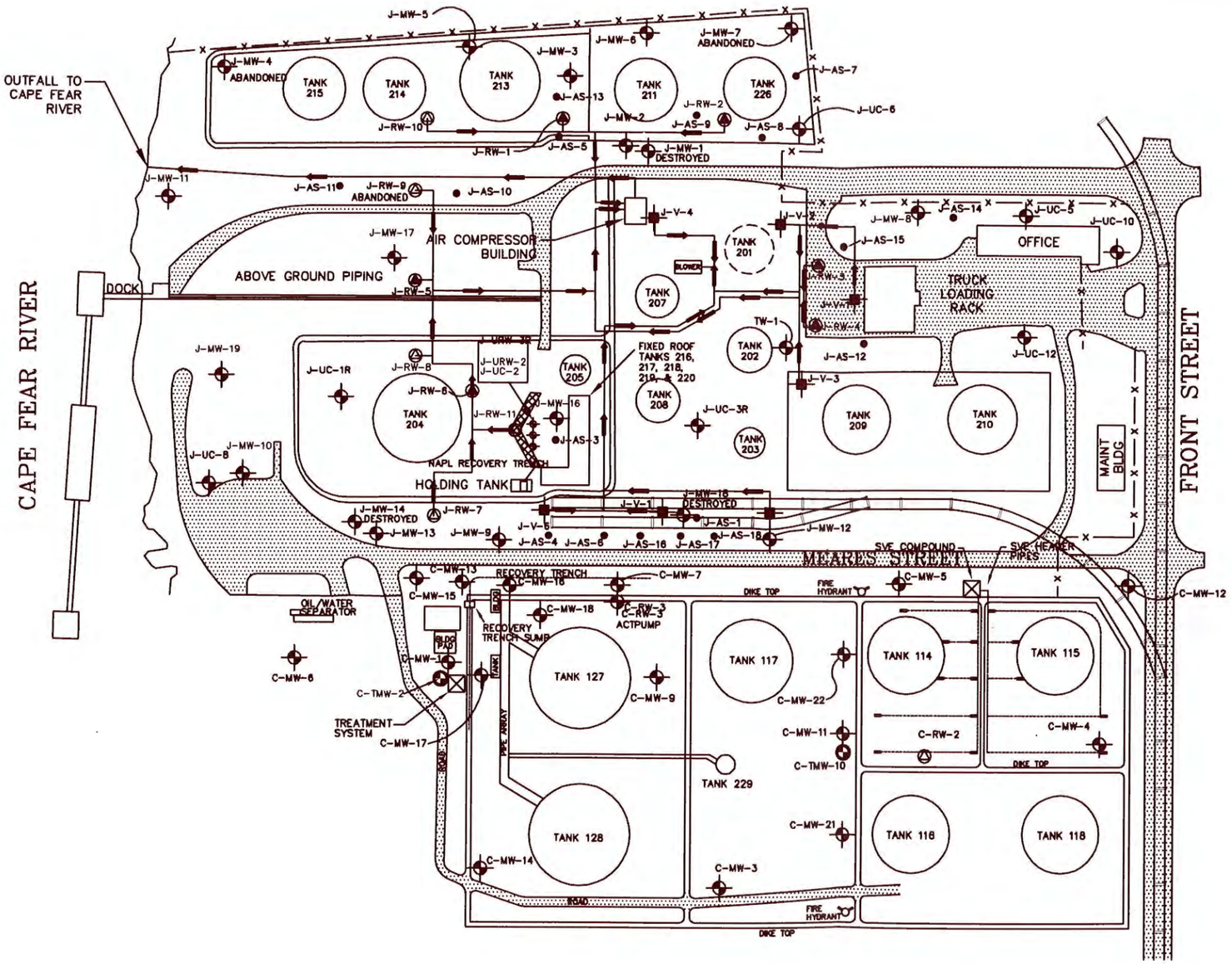
REFERENCE:
GOOGLE EARTH IMAGE DATED 1-3-2013.

DRAWN BY:	ACE	DATE:	12-21-15	REVISIONS			
CHECKED BY:	DPO	FILE:	COLWILMNOV15-APSS	No.	DESCRIPTION	BY	
APPROVED BY:		JOB NO:	J15-9119-03				

BLE INC.
BUNNELL-LAMMONS ENGINEERING, INC.
6004 PONDERS COURT
GREENVILLE, SOUTH CAROLINA 29615
PHONE: (864)288-1265 FAX: (864)288-4430

AERIAL PHOTOGRAPH OF SUBJECT SITE
COLONIAL WILMINGTON TERMINAL
WILMINGTON, NORTH CAROLINA

FIGURE
2



150 75 0 150 300

APPROXIMATE SCALE IN FEET

NOTES:

1. BASE MAP FOR FORMER JLM/UNOCAL TERMINAL PROVIDED BY JLM. DISCHARGE TO CAPE FEAR RIVER FROM FORMER JLM/ UNOCAL SITE DISCONTINUED 6-17-99.
2. SITE PLAN FOR COLONIAL TERMINAL SITE ADAPTED FROM HANDEX OF THE CAROLINAS, INC. REPORT DATED 10-2-2001.

LEGEND

- GROUNDWATER MONITORING WELL LOCATION
- TELESCOPING GROUNDWATER MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- FORMER RECOVERY WELL LOCATION
- AIR SPARGE WELL LOCATION
- VAPOR EXTRACTION WELL LOCATION

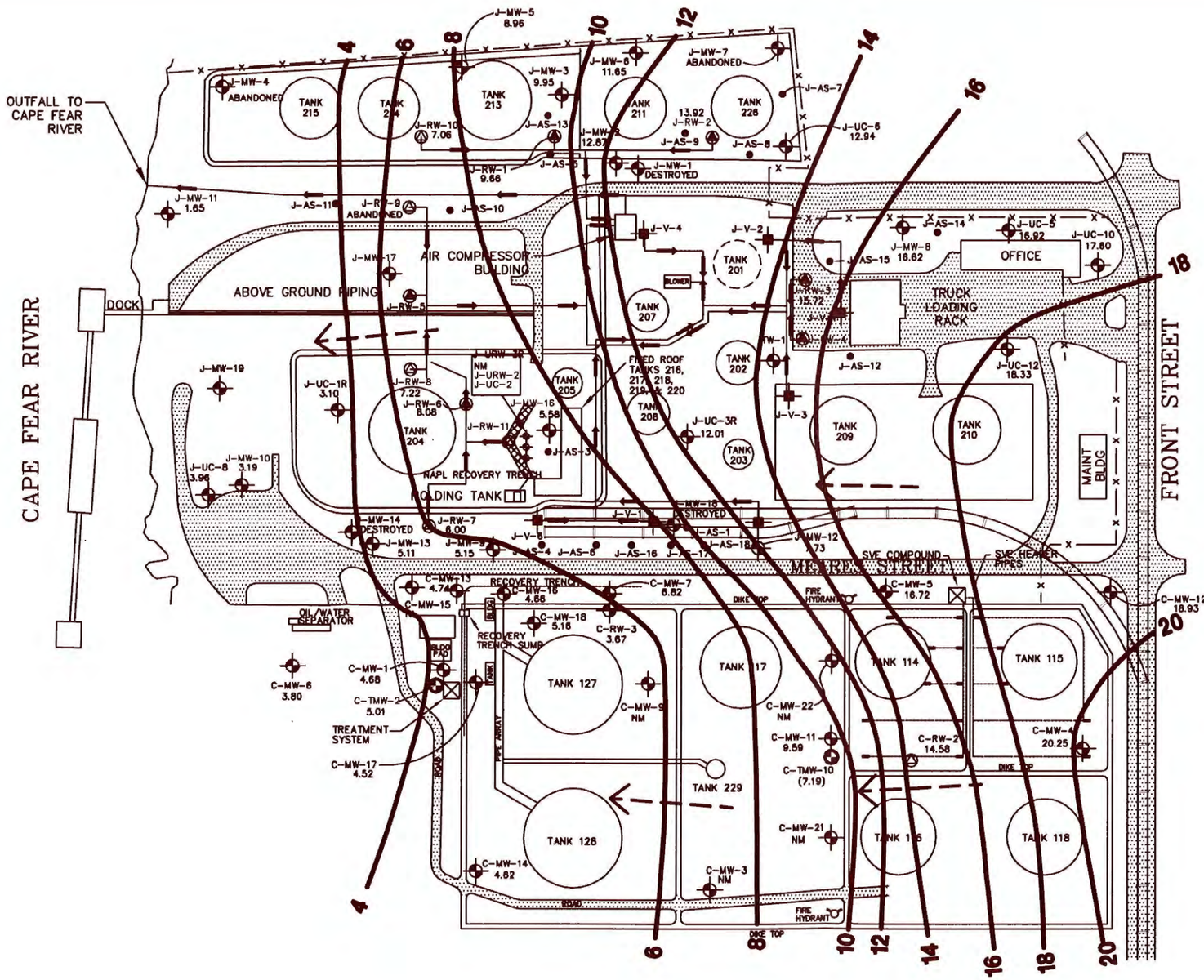
REFERENCE:
DRAWING TITLED "POTENTIOMETRIC SURFACE MAP" BY ECS DATED 1-6-14.

DRAWN BY: ACE	DATE: 12-21-15	REVISIONS	
CHECKED BY: OPO	FILE: COLWILMNOV15-SBM	No. / DESCRIPTION / BY	
APPROVED BY:	JOB NO: J15-9119-03		

BLE INC.
BUNNELL-LAMMONS ENGINEERING, INC.
6004 PONDERS COURT
GREENVILLE, SOUTH CAROLINA 29615
PHONE: (864)288-1265 FAX: (864)288-4430

SITE MAP
COLONIAL WILMINGTON TERMINAL
WILMINGTON, NORTH CAROLINA

FIGURE 3



NOTES:

1. BASE MAP FOR FORMER JLM/UNOCAL TERMINAL PROVIDED BY JLM. DISCHARGE TO CAPE FEAR RIVER FROM FORMER JLM/UNOCAL SITE DISCONTINUED 6-17-99.
2. SITE PLAN FOR COLONIAL TERMINAL SITE ADAPTED FROM HANDEX OF THE CAROLINAS, INC. REPORT DATED 10-2-2001.
3. WELL C-TMW-10 NOT USED FOR CONTOURING PURPOSES.

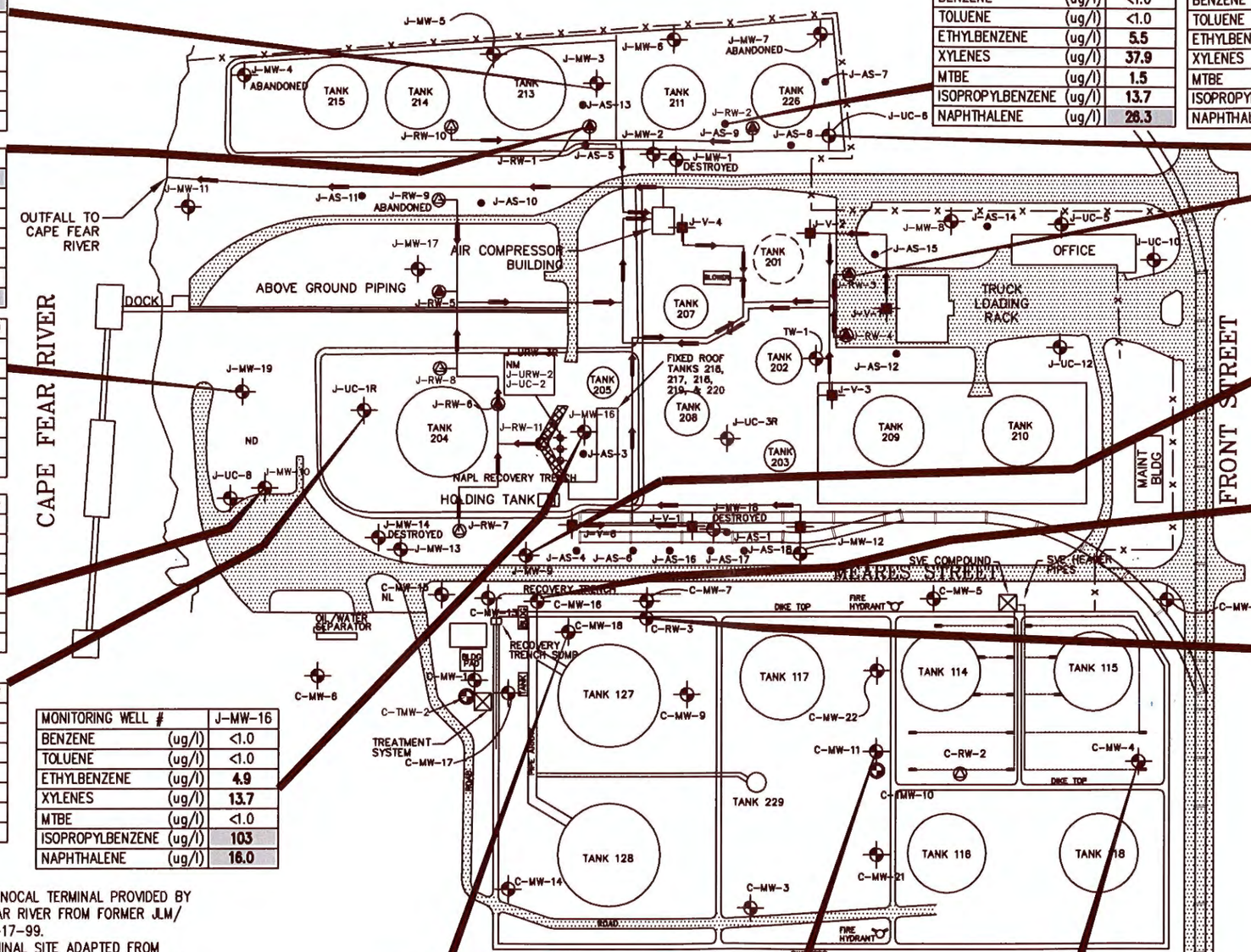
LEGEND

- GROUNDWATER MONITORING WELL LOCATION
- TELESCOPING GROUNDWATER MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- FORMER RECOVERY WELL LOCATION
- AIR SPARGE WELL LOCATION
- VAPOR EXTRACTION WELL LOCATION
- 3.10 GROUNDWATER ELEVATION (FEET)
- 16 GROUNDWATER ELEVATION CONTOUR CONTOUR INTERVAL = 2 FEET
- GROUNDWATER FLOW DIRECTION

150 75 0 150 300
APPROXIMATE SCALE IN FEET

REFERENCE:
DRAWING TITLED "POTENTIOMETRIC SURFACE MAP" BY ECS DATED 1-6-14.

DRAWN BY: ACE	DATE: 12-21-15	REVISIONS No. / DESCRIPTION / BY	BLE INC. BUNNELL-LAMMONS ENGINEERING, INC. 6004 PONDERS COURT GREENVILLE, SOUTH CAROLINA 29615 PHONE: (864)288-1265 FAX: (864)288-4430
CHECKED BY: IAI	FILE: COLWILMNOV15-WTM		POTENTIOMETRIC MAP – NOVEMBER 2015 COLONIAL WILMINGTON TERMINAL WILMINGTON, NORTH CAROLINA
APPROVED BY:	JOB NO: J15-9119-03		FIGURE 4



MONITORING WELL #		J-MW-3
BENZENE	(ug/l)	**2.7**
TOLUENE	(ug/l)	<1.0
ETHYLBENZENE	(ug/l)	<1.0
XYLENES	(ug/l)	<1.0
MTBE	(ug/l)	<1.0
ISOPROPYLBENZENE	(ug/l)	<1.0
NAPHTHALENE	(ug/l)	<2.0

MONITORING WELL #		J-RW-1
BENZENE	(ug/l)	**8.3**
TOLUENE	(ug/l)	**3.5**
ETHYLBENZENE	(ug/l)	**14.9**
XYLENES	(ug/l)	**6.5**
MTBE	(ug/l)	**7.4**
ISOPROPYLBENZENE	(ug/l)	**61.3**
NAPHTHALENE	(ug/l)	**20.5**

MONITORING WELL #		J-MW-19
BENZENE	(ug/l)	<1.0
TOLUENE	(ug/l)	<1.0
ETHYLBENZENE	(ug/l)	<1.0
XYLENES	(ug/l)	<1.0
MTBE	(ug/l)	<1.0
ISOPROPYLBENZENE	(ug/l)	**1.2**
NAPHTHALENE	(ug/l)	<2.0

MONITORING WELL #		J-MW-10
BENZENE	(ug/l)	**1.0**
TOLUENE	(ug/l)	<1.0
ETHYLBENZENE	(ug/l)	<1.0
XYLENES	(ug/l)	<1.0
MTBE	(ug/l)	<1.0
ISOPROPYLBENZENE	(ug/l)	**16.0**
NAPHTHALENE	(ug/l)	<2.0

MONITORING WELL #		J-UC-1R
BENZENE	(ug/l)	<1.0
TOLUENE	(ug/l)	<1.0
ETHYLBENZENE	(ug/l)	**1.5**
XYLENES	(ug/l)	<1.0
MTBE	(ug/l)	<1.0
ISOPROPYLBENZENE	(ug/l)	**12.2**
NAPHTHALENE	(ug/l)	<2.0

MONITORING WELL #		J-MW-16
BENZENE	(ug/l)	<1.0
TOLUENE	(ug/l)	<1.0
ETHYLBENZENE	(ug/l)	**4.9**
XYLENES	(ug/l)	**13.7**
MTBE	(ug/l)	<1.0
ISOPROPYLBENZENE	(ug/l)	**103**
NAPHTHALENE	(ug/l)	**16.0**

MONITORING WELL #		J-RW-2
BENZENE	(ug/l)	<1.0
TOLUENE	(ug/l)	<1.0
ETHYLBENZENE	(ug/l)	**5.5**
XYLENES	(ug/l)	**37.9**
MTBE	(ug/l)	**1.5**
ISOPROPYLBENZENE	(ug/l)	**13.7**
NAPHTHALENE	(ug/l)	**26.3**

MONITORING WELL #		J-UC-6
BENZENE	(ug/l)	<1.0
TOLUENE	(ug/l)	<1.0
ETHYLBENZENE	(ug/l)	<1.0
XYLENES	(ug/l)	<1.0
MTBE	(ug/l)	<1.0
ISOPROPYLBENZENE	(ug/l)	<1.0
NAPHTHALENE	(ug/l)	<2.0

MONITORING WELL #		J-RW-3
BENZENE	(ug/l)	**6.0**
TOLUENE	(ug/l)	<5.0
ETHYLBENZENE	(ug/l)	**323**
XYLENES	(ug/l)	**1087.3**
MTBE	(ug/l)	<5.0
ISOPROPYLBENZENE	(ug/l)	**25**
NAPHTHALENE	(ug/l)	**197**

MONITORING WELL #		J-MW-9
BENZENE	(ug/l)	<1.0
TOLUENE	(ug/l)	**1.4**
ETHYLBENZENE	(ug/l)	**7.7**
XYLENES	(ug/l)	**12.3**
MTBE	(ug/l)	<1.0
ISOPROPYLBENZENE	(ug/l)	**60.4**
NAPHTHALENE	(ug/l)	<2.0

MONITORING WELL #		C-MW-16
BENZENE	(ug/l)	**1.2**
TOLUENE	(ug/l)	<1.0
ETHYLBENZENE	(ug/l)	<1.0
XYLENES	(ug/l)	**3.1**
MTBE	(ug/l)	**3.9**
ISOPROPYLBENZENE	(ug/l)	**51.7**
NAPHTHALENE	(ug/l)	<2.0

MONITORING WELL #		C-RW-3
BENZENE	(ug/l)	**122.0**
TOLUENE	(ug/l)	**27.1**
ETHYLBENZENE	(ug/l)	**591.0**
XYLENES	(ug/l)	**942.8**
MTBE	(ug/l)	<10.0
ISOPROPYLBENZENE	(ug/l)	**386**
NAPHTHALENE	(ug/l)	**616**

MONITORING WELL #		C-MW-18
BENZENE	(ug/l)	<1.0
TOLUENE	(ug/l)	<1.0
ETHYLBENZENE	(ug/l)	<1.0
XYLENES	(ug/l)	<1.0
MTBE	(ug/l)	<1.0
ISOPROPYLBENZENE	(ug/l)	**29.4**
NAPHTHALENE	(ug/l)	<2.0

MONITORING WELL #		C-MW-11
BENZENE	(ug/l)	<1.0
TOLUENE	(ug/l)	<1.0
ETHYLBENZENE	(ug/l)	**1.1**
XYLENES	(ug/l)	**2.4**
MTBE	(ug/l)	<1.0
ISOPROPYLBENZENE	(ug/l)	**7.6**
NAPHTHALENE	(ug/l)	**13.7**

MONITORING WELL #		C-MW-4
BENZENE	(ug/l)	<1.0
TOLUENE	(ug/l)	<1.0
ETHYLBENZENE	(ug/l)	**4.2**
XYLENES	(ug/l)	**8.4**
MTBE	(ug/l)	<1.0
ISOPROPYLBENZENE	(ug/l)	**1.9**
NAPHTHALENE	(ug/l)	**8.6**

NOTES:

1. BASE MAP FOR FORMER JLM/UNOCAL TERMINAL PROVIDED BY JLM. DISCHARGE TO CAPE FEAR RIVER FROM FORMER JLM/UNOCAL SITE DISCONTINUED 6-17-99.
2. SITE PLAN FOR COLONIAL TERMINAL SITE ADAPTED FROM HANDEX OF THE CAROLINAS, INC. REPORT DATED 10-2-2001.
3. SAMPLES COLLECTED ON 11-11 AND 11-12, 2015.
4. BOLD VALUES REPRESENT CONCENTRATIONS ABOVE THE LABORATORY METHOD DETECTION LIMITS.
5. SHADED VALUES REPRESENT CONCENTRATIONS ABOVE 15A NCAC 2L STANDARDS.
6. PARAMETERS REPORTED IN MICROGRAMS PER LITER (UG/L).

150 75 0 150 300

APPROXIMATE SCALE IN FEET

LEGEND

- GROUNDWATER MONITORING WELL LOCATION
- TELESCOPING GROUNDWATER MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- FORMER RECOVERY WELL LOCATION
- AIR SPARGE WELL LOCATION
- VAPOR EXTRACTION WELL LOCATION

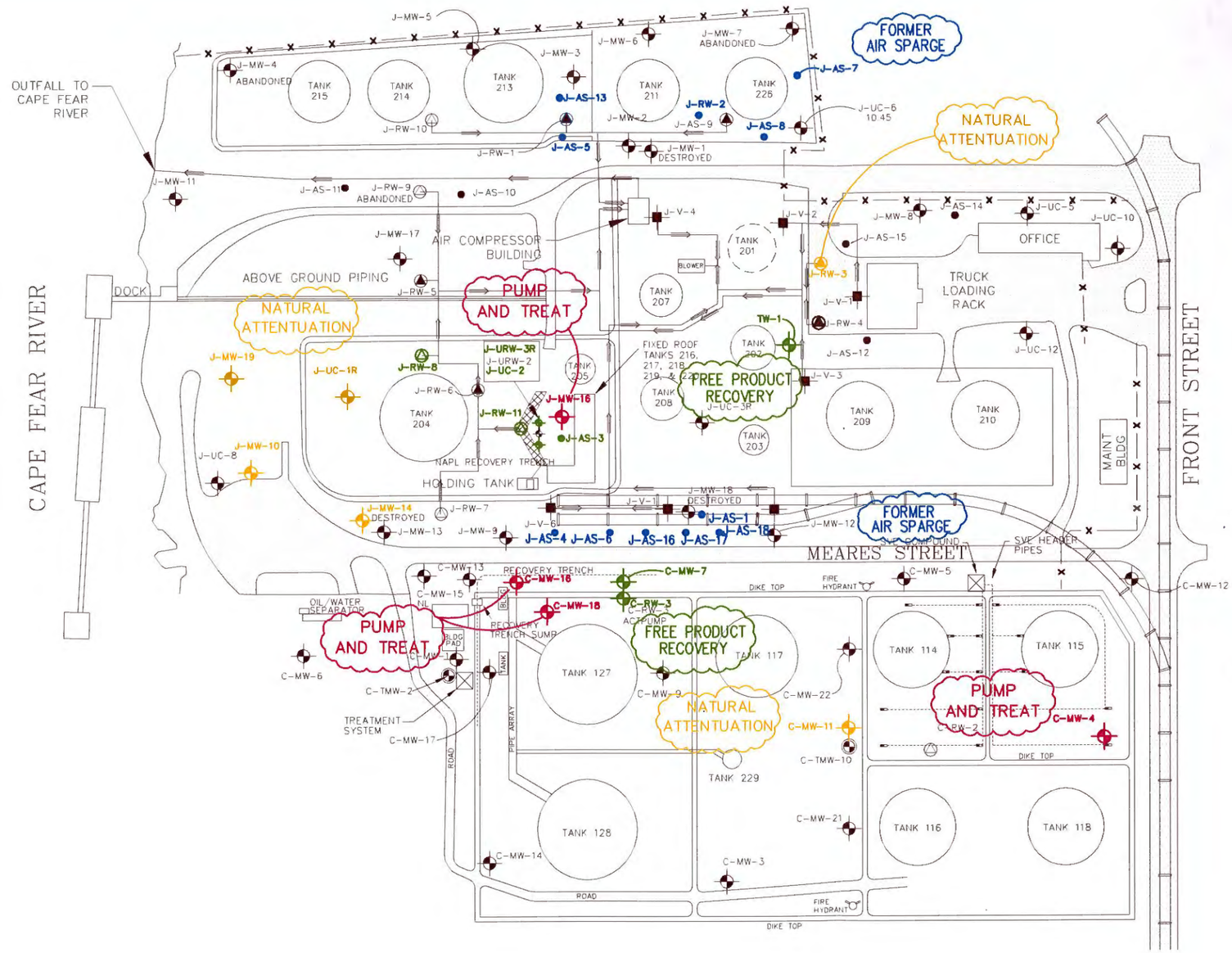
REFERENCE:
DRAWING TITLED "POTENTIOMETRIC SURFACE MAP" BY ECS DATED 1-6-14.

DRAWN BY: ACE	DATE: 12-21-15	REVISIONS	
CHECKED BY: IAI	FILE: COLWILMNOV15-GWCOC	No. / DESCRIPTION / BY	
APPROVED BY:	JOB NO: J15-9119-03		

BLE INC.
BUNNELL-LAMMONS ENGINEERING, INC.
6004 PONDERS COURT
GREENVILLE, SOUTH CAROLINA 29615
PHONE: (864)288-1265 FAX: (864)288-4430

GROUNDWATER COC MAP – NOVEMBER 2015
COLONIAL WILMINGTON TERMINAL
WILMINGTON, NORTH CAROLINA

FIGURE 5



NOTES:

1. BASE MAP FOR FORMER JLM/UNOCAL TERMINAL PROVIDED BY JLM. DISCHARGE TO CAPE FEAR RIVER FROM FORMER JLM/ UNOCAL SITE DISCONTINUED 6-17-99.
2. SITE PLAN FOR COLONIAL TERMINAL SITE ADAPTED FROM HANDEX OF THE CAROLINAS, INC. REPORT DATED 10-2-2001.

LEGEND

- GROUNDWATER MONITORING WELL LOCATION
- TELESCOPING GROUNDWATER MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- FORMER RECOVERY WELL LOCATION
- FORMER AIR SPARGE WELL LOCATION
- VAPOR EXTRACTION WELL LOCATION

150 75 0 150 300

APPROXIMATE SCALE IN FEET

REFERENCE:
DRAWING TITLED "POTENTIOMETRIC SURFACE MAP" BY ECS DATED 1-6-14.

DRAWN BY:	ACE	DATE:	12-21-15	REVISIONS			
CHECKED BY:	DPO	FILE:	COLWILMNOV15-REML	No.	DESCRIPTION	BY	
APPROVED BY:		JOB NO:	J15-9119-D3				

BLE INC.
BUNNELL-LAMMONS ENGINEERING, INC.
6004 PONDERS COURT
GREENVILLE, SOUTH CAROLINA 29615
PHONE: (864)288-1265 FAX: (864)288-4430

REMEDIATION SYSTEM LOCATIONS
COLONIAL WILMINGTON TERMINAL
WILMINGTON, NORTH CAROLINA

FIGURE 6

APPENDICES

APPENDIX A

MONITORING WELL PURGING AND SAMPLING PROCEDURES AND SAMPLING LOGS

BLE

APPENDIX A

MONITORING WELL PURGING AND SAMPLING PROCEDURES

The monitoring wells are purged prior to sample collection to remove any stagnant water from the well so that the samples collected are representative of the groundwater quality in the vicinity of each well. For wells that recovered quickly, a minimum of three volumes of water were evacuated. Specific conductance, pH, turbidity, and water temperature are measured periodically during well evacuation using instruments which were calibrated accordingly. Wells that are evacuated to dryness with less than three well volumes being removed are sampled as soon as the well has recovered enough to yield sufficient volume for a sample.

The monitoring wells are purged using a 3-foot long by 1.6-inch diameter disposable polyethylene bailer attached to an unused nylon cord. The wells are also sampled using a bailer as described above. To minimize the potential for cross-contamination between wells, a new clean bailer is used at each well.

Samples are placed in the appropriate laboratory supplied containers and marked with identifying numbers. Samples are maintained at 4°Celsius in a refrigerated sample cooler and shipped to Pace Analytical Services in Huntersville, NC via courier service for analysis.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	J-MW-3			
Well Diameter (D)	2	inch of	18.00	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	18.00	ft		
Depth to Groundwater (DGW)	9.91	ft		
Length of Water Colum (LWC = TWD-DGW)			8.09	ft
1 Casing Volume (LWC*C) =	8.09		1.37	gals
3 Casing Volumes = 3 X	1.37	=	4.11	gals
(Standard Purge Volume)				
Total Volume of Water Purged Before Sampling			4.50	gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	1.5	3.0	4.5						
Time (military)	838	842	846	851						
pH (s.u)	5.95	6.07	6.13	6.03						
Specific Conductivity	447.1	218.9	216.7	214.8						
Water Temperature (°C)	21.3	21.8	21.5	21.4						
Turbidity (NTU)	3.4	29.7	18.8	18.3						
Dissolved Oxygen (mg/l)	0.7	1.3	1.6	1.5						

Remarks: Sampled at 851 on 11-12-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	J-MW-9			
Well Diameter (D)	2	inch of	13.00	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	13.00	ft		
Depth to Groundwater (DGW)	3.84	ft		
Length of Water Colum (LWC = TWD-DGW)			9.16	ft
1 Casing Volume (LWC*C) =	9.16		1.56	gals
3 Casing Volumes = 3 X	1.56	=	4.68	gals
(Standard Purge Volume)				
Total Volume of Water Purged Before Sampling			6.0	gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	2	4.0	6.0						
Time (military)	1452	1454	1456	1458						
pH (s.u)	6.22	6.2	5.99	5.98						
Specific Conductivity	288.5	271.3	243.8	213.5						
Water Temperature (°C)	21.2	21.3	21.5	21.7						
Turbidity (NTU)	174.6	18.9	21.3	18.6						
Dissolved Oxygen (mg/l)	0.3	0.5	0.6	0.7						

Remarks: Sampled at 1458 on 11-11-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	J-MW-10			
Well Diameter (D)	2	inch of	35.00	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	35.00	ft		
Depth to Groundwater (DGW)	3.38	ft		
Length of Water Colum (LWC = TWD-DGW)			31.62	ft
1 Casing Volume (LWC*C) =	31.62		5.37	gals
3 Casing Volumes = 3 X	5.37	=	16.11	gals
(Standard Purge Volume)				
Total Volume of Water Purged Before Sampling				gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	5.5	10.5	16.5						
Time (military)	1605	1610	1615	1620						
pH (s.u)	6.19	6.2	6.18	6.17						
Specific Conductivity	136.4	136.8	136.70	136.90						
Water Temperature (°C)	2.4	20.3	20.7	20.6						
Turbidity (NTU)	1.72	8.31	6.55	5.16						
Dissolved Oxygen (mg/l)	1.0	1.3	0.2	0.1						

Remarks: Sampled at 1630 on 11-11-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	J-MW-14			
Well Diameter (D)	2	inch of	34.00	feet(ft)

conversion factor (C): 3.143*(D/2)^2
for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

*Free Product Thickness	NA	ft
Total Well Depth (TWD)	34.00	ft
Depth to Groundwater (DGW)		ft
Length of Water Colum (LWC = TWD-DGW)	34.00	ft
1 Casing Volume (LWC*C) =		gals
3 Casing Volumes = 3 X	=	gals

(Standard Purge Volume)

Total Volume of Water Purged Before Sampling _____ gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--									
Time (military)										
pH (s.u)										
Specific Conductivity										
Water Temperature (°C)										
Turbidity (NTU)										
Dissolved Oxygen (mg/l)										

Well has been destroyed not present.

Remarks:

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15		
Field Personnel	Ivan Irizarry, Michael Parks		
General weather Conditions	Rainy		
Ambient Air Temperature (°C)	20.4		
Facility Name:	Colonial Terminal	Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	J-MW-16			
Well Diameter (D)	2	inch of	33.00	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	33.00	ft		
Depth to Groundwater (DGW)	3.23	ft		
Length of Water Colum (LWC = TWD-DGW)			29.77	ft
1 Casing Volume (LWC*C) =	29.77		5.06	gals
3 Casing Volumes = 3 X	5.06	=	15.18	gals
(Standard Purge Volume)				
Total Volume of Water Purged Before Sampling			11.0	gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	5.5	11.0							
Time (military)	856	903	910							
pH (s.u)	6.23	6.31	6.21							
Specific Conductivity	114.6	113	113							
Water Temperature (°C)	20.7	20.8	21.0							
Turbidity (NTU)	9.64	11	30.6							
Dissolved Oxygen (mg/l)	0.4	1.1	1.5							

Remarks: Well dry at 11.5 gallons. Sampled at 913 on 11-12-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	J-MW-19			
Well Diameter (D)	2	inch of	12.00	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	12.00	ft		
Depth to Groundwater (DGW)	3.22	ft		
Length of Water Colum (LWC = TWD-DGW)			8.78	ft
1 Casing Volume (LWC*C) =	8.78		1.49	gals
3 Casing Volumes = 3 X	1.49	=	4.47	gals
(Standard Purge Volume)				
Total Volume of Water Purged Before Sampling			4.50	gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	1.5	3.0	4.50						
Time (military)	1624	1627	1630	1633						
pH (s.u)	5.96	6.01	6.00	6.05						
Specific Conductivity	781.4	783.4	785.8	797.3						
Water Temperature (°C)	21.2	21.3	21.3	21.1						
Turbidity (NTU)	14.1	18.9	30.3	53.9						
Dissolved Oxygen (mg/l)	0.5	0.5	0.7	0.9						

Remarks: Well sampled at 1633 on 11-11-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	J-RW-1			
Well Diameter (D)	2	inch of	13.00	feet(ft)

conversion factor (C): 3.143*(D/2)^2
for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	13.00	ft		
Depth to Groundwater (DGW)	0.34	ft		
Length of Water Colum (LWC = TWD-DGW)			12.66	ft
1 Casing Volume (LWC*C) =	12.66	x0.65	8.22	gals
3 Casing Volumes = 3 X	8.22	=	24.66	gals

(Standard Purge Volume)

Total Volume of Water Purged Before Sampling 18.0 gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	8.5	17.0							
Time (military)	830	8410	850							
pH (s.u)	5.96	5.94	5.94							
Specific Conductivity	463.3	450.9	430.9							
Water Temperature (°C)	19.5	19.5	19.6							
Turbidity (NTU)	4.25	11.8	10.25							
Dissolved Oxygen (mg/l)	1.3	1.8	1.2							

Remarks: Well dry at 18.0 gallons. Sampled at 850 on 11-12-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	J-RW-2			
Well Diameter (D)	2	inch of	14.00	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	14.00	ft		
Depth to Groundwater (DGW)	5.32	ft		
Length of Water Colum (LWC = TWD-DGW)			8.68	ft
1 Casing Volume (LWC*C) =	8.68	x0.65	5.64	gals
3 Casing Volumes = 3 X	5.64	=	16.92	gals
(Standard Purge Volume)				
Total Volume of Water Purged Before Sampling				gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	6	12.0							
Time (military)	913	916	919							
pH (s.u)	6.28	6.25	6.21							
Specific Conductivity	459.7	460.3	469.8							
Water Temperature (°C)	22.4	21.9	21.7							
Turbidity (NTU)	12.3	32	62.3							
Dissolved Oxygen (mg/l)	2.2	2.1	2.2							

Remarks: Well dry at 13.0 gallons. Sampled at 922 on 11-12-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	J-RW-3			
Well Diameter (D)	2	inch of	22.00	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	22.00	ft		
Depth to Groundwater (DGW)	7.59	ft		
Length of Water Colum (LWC = TWD-DGW)			14.41	ft
1 Casing Volume (LWC*C) =	14.41		9.36	gals
3 Casing Volumes = 3 X	9.36	=	7.50	gals
(Standard Purge Volume)				
Total Volume of Water Purged Before Sampling			19.0	gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	9.5	19.0							
Time (military)	1330	1415	1425							
pH (s.u)	6.10	16.08	6.04							
Specific Conductivity	493.8	433.5	400.5							
Water Temperature (°C)	24.1	24.1	24.1							
Turbidity (NTU)	5.31	5.99	6.59							
Dissolved Oxygen (mg/l)	3.5	3.00	3.00							

Remarks: Well dry at 19.0 gallons. Sampled at 1425 on 11-11-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	J-UC-1R			
Well Diameter (D)	2	inch of	12.00	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	12.00	ft		
Depth to Groundwater (DGW)	4.29	ft		
Length of Water Colum (LWC = TWD-DGW)			7.71	ft
1 Casing Volume (LWC*C) =	7.71		1.31	gals
3 Casing Volumes = 3 X	1.31	=	3.93	gals
(Standard Purge Volume)				
Total Volume of Water Purged Before Sampling			3.0	gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	1.5	3.0							
Time (military)	1551	1554	1558							
pH (s.u)	6.21	6.19	6.15							
Specific Conductivity	704.3	701.4	700.6							
Water Temperature (°C)	21.1	21.4	21.4							
Turbidity (NTU)	20.2	52.3	52.9							
Dissolved Oxygen (mg/l)	0.4	0.3	0.9							

Remarks: Well dry at 3.0 gallons. Well sampled at 1600 on 11-11-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	J-UC-6			
Well Diameter (D)	2	inch of	11.90	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	11.90	ft		
Depth to Groundwater (DGW)	6.96	ft		
Length of Water Colum (LWC = TWD-DGW)			4.94	ft
1 Casing Volume (LWC*C) =	4.94		0.83	gals
3 Casing Volumes = 3 X	0.83	=	2.49	gals
	(Standard Purge Volume)			
Total Volume of Water Purged Before Sampling			1.50	gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	1.0								
Time (military)	923	924								
pH (s.u)	6.61	6.58								
Specific Conductivity	324.9	327.6								
Water Temperature (°C)	27.6	22.4								
Turbidity (NTU)	10	300								
Dissolved Oxygen (mg/l)	2.4	3.4								

Remarks: Dry at 1.5 gallons sampled at 925 on 11-12-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	C-MW-4			
Well Diameter (D)	2	inch of	14.50	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	14.50	ft		
Depth to Groundwater (DGW)	5.86	ft		
Length of Water Colum (LWC = TWD-DGW)			8.64	ft
1 Casing Volume (LWC*C) =	8.64		1.50	gals
3 Casing Volumes = 3 X	1.50	=	4.50	gals
(Standard Purge Volume)				
Total Volume of Water Purged Before Sampling			4.0	gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	1.5	4.0							
Time (military)	1510	1512	1514							
pH (s.u)	6.22	6.4	6.43							
Specific Conductivity	237.2	241.0	250.7							
Water Temperature (°C)	21.8	21.8	21.8							
Turbidity (NTU)	4.67	20.9	19.6							
Dissolved Oxygen (mg/l)	3.5	3	2.8							

Remarks: Well dry at 4.0 gallons. Sampled at 1514 on 11-11-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	C-MW-11			
Well Diameter (D)	2	inch of	14.00	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	14.00	ft		
Depth to Groundwater (DGW)	2.69	ft		
Length of Water Colum (LWC = TWD-DGW)			11.31	ft
1 Casing Volume (LWC*C) =	11.31		1.92	gals
3 Casing Volumes = 3 X	1.92	=	5.76	gals
	(Standard Purge Volume)			
Total Volume of Water Purged Before Sampling			6.00	gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	2	4.0	6.0						
Time (military)	1523	1526	1529	1533						
pH (s.u)	5.96	6.03	6.11	6.12						
Specific Conductivity	297.2	266.8	260.0	259.1						
Water Temperature (°C)	20.4	20.5	20.5	20.6						
Turbidity (NTU)	3.52	33.8	29.5	23.4						
Dissolved Oxygen (mg/l)	3.3	1.8	1.5	1.2						

Remarks: Sampled at 1533 on 11-11-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	C-MW-16			
Well Diameter (D)	2	inch of	11.00	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	11.00	ft		
Depth to Groundwater (DGW)	1.66	ft		
Length of Water Colum (LWC = TWD-DGW)			9.34	ft
1 Casing Volume (LWC*C) =	9.34		1.60	gals
3 Casing Volumes = 3 X	1.60	=	4.80	gals
(Standard Purge Volume)				
Total Volume of Water Purged Before Sampling			6.0	gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	2	4.0	6.0						
Time (military)	1450	1453	1456	1459						
pH (s.u)	6.22	6.23	6.25	6.26						
Specific Conductivity	750.0	750.8	750.6	750.9						
Water Temperature (°C)	22.5	22.5	22.4	22.3						
Turbidity (NTU)	3.5	11.5	19.3	20.6						
Dissolved Oxygen (mg/l)	0.0	0.2	0.1	0.3						

Remarks: Sampled at 1459 om 11-11-15

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15		
Field Personnel	Ivan Irizarry, Michael Parks		
General weather Conditions	Rainy		
Ambient Air Temperature (°C)	20.4		
Facility Name:	Colonial Terminal	Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	C-MW-18			
Well Diameter (D)	2	inch of	10.00	feet(ft)
conversion factor (C): 3.143*(D/2)^2				
for a 2 inch well C = 0.163				
for a 4 inch well C = 0.652				
*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	10.00	ft		
Depth to Groundwater (DGW)	0.62	ft		
Length of Water Colum (LWC = TWD-DGW)			9.38	ft
1 Casing Volume (LWC*C) =	9.38		1.59	gals
3 Casing Volumes = 3 X	1.59	=	4.77	gals
(Standard Purge Volume)				
Total Volume of Water Purged Before Sampling			4.0	gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	2.0	4.0							
Time (military)	1537	1540	1543							
pH (s.u)	6.21	6.010	5.93							
Specific Conductivity	611.9	609.3	605.9							
Water Temperature (°C)	18.8	18.7	18.7							
Turbidity (NTU)	9.73	28.7	22.9							
Dissolved Oxygen (mg/l)	0.6	1	1.2							

Remarks: Well dry at 4.0 gallons. Sampled at 1544 on 11-11-15.

Field Data Information Sheet for Ground Water Sampling

Date	11/11/15
Field Personnel	Ivan Irizarry, Michael Parks
General weather Conditions	Rainy
Ambient Air Temperature (°C)	20.4
Facility Name:	Colonial Terminal
Site ID#	NA

Quality Assurance

pH Sensor:	Oakton 35630-62	**Conductivity Sensor:**	35630-32
serial no.	324976	serial no.	324976
pH =4.0	4.0	Standard	15,000
pH = 7.0	7.0	Standard	1,413
pH = 10.0	10.0	Standard	447
DO Meter	YSI 60	Standard	84
Standard	0% cal	**Turbidity:**	1.0-10.0 NTU

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Well #	C-RW-3		
Well Diameter (D)	2	inch of	15.00 feet(ft)

conversion factor (C): 3.143*(D/2)^2
for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

*Free Product Thickness	NA	ft		
Total Well Depth (TWD)	15.00	ft		
Depth to Groundwater (DGW)	7.88	ft		
Length of Water Colum (LWC = TWD-DGW)			7.12	ft
1 Casing Volume (LWC*C) =	7.12		4.63	gals
3 Casing Volumes = 3 X	4.63	=	13.89	gals
	(Standard Purge Volume)			
Total Volume of Water Purged Before Sampling			10.0	gals

*If free product is present over 1/8 inch, sampling will not be required.

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	6th Vol.	7th Vol.	8th Vol.	Post
Volume Purged (gallons)	--	5	10.0							
Time (military)	14.35	1440	1445							
pH (s.u)	5.89	5.900	594							
Specific Conductivity	381.4	390.7	395.3							
Water Temperature (°C)	23	23.1	23.1							
Turbidity (NTU)	17.8	17.8	18.8							
Dissolved Oxygen (mg/l)	0.5	0.3	0.2							

Remarks: Dry at 10 gallons. Sampled at 1445 on 11-11-15.

APPENDIX B

LABORATORY ANALYTICAL REPORTS

Pace Analytical®
www.pacelabs.com

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

November 23, 2015

Mr. Dan Osbourne
Bunnell-Lammons Engineering
6004 Ponders Court
Greenville, SC 29615

RE: Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Dear Mr. Osbourne:
Enclosed are the analytical results for sample(s) received by the laboratory on November 13, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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

CERTIFICATIONS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92276168001	J-MW-3	Water	11/12/15 08:51	11/13/15 12:40
92276168002	J-MW-9	Water	11/11/15 14:58	11/13/15 12:40
92276168003	J-MW-16	Water	11/12/15 09:13	11/13/15 12:40
92276168004	J-MW-10	Water	11/11/15 16:30	11/13/15 12:40
92276168005	J-MW-19	Water	11/11/15 16:33	11/13/15 12:40
92276168006	J-RW-1	Water	11/12/15 08:50	11/13/15 12:40
92276168007	J-RW-2	Water	11/12/15 09:22	11/13/15 12:40
92276168008	J-RW-3	Water	11/11/15 14:25	11/13/15 12:40
92276168009	J-VC-1R	Water	11/11/15 16:00	11/13/15 12:40
92276168010	J-VC-6	Water	11/12/15 09:25	11/13/15 12:40
92276168011	C-MW-4	Water	11/11/15 15:14	11/13/15 12:40
92276168012	C-MW-11	Water	11/11/15 15:33	11/13/15 12:40
92276168013	C-MW-16	Water	11/11/15 14:59	11/13/15 12:40
92276168014	C-MW-18	Water	11/11/15 15:44	11/13/15 12:40
92276168015	C-RW-3	Water	11/11/15 14:45	11/13/15 12:40
92276168016	INFLUENT	Water	11/12/15 09:46	11/13/15 12:40
92276168017	MIDFLUENT	Water	11/12/15 09:51	11/13/15 12:40
92276168018	EFFLUENT	Water	11/12/15 09:58	11/13/15 12:40

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Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92276168001	J-MW-3	SM 6200B	CAH	16	PASI-C
92276168002	J-MW-9	SM 6200B	CAH	16	PASI-C
92276168003	J-MW-16	SM 6200B	CAH	16	PASI-C
92276168004	J-MW-10	SM 6200B	CAH	16	PASI-C
92276168005	J-MW-19	SM 6200B	CAH	16	PASI-C
92276168006	J-RW-1	SM 6200B	CAH	16	PASI-C
92276168007	J-RW-2	SM 6200B	CAH	16	PASI-C
92276168008	J-RW-3	SM 6200B	CAH	16	PASI-C
92276168009	J-VC-1R	SM 6200B	CAH	16	PASI-C
92276168010	J-VC-6	SM 6200B	CAH	16	PASI-C
92276168011	C-MW-4	SM 6200B	CAH	16	PASI-C
92276168012	C-MW-11	SM 6200B	CAH	16	PASI-C
92276168013	C-MW-16	SM 6200B	CAH	16	PASI-C
92276168014	C-MW-18	SM 6200B	CAH	16	PASI-C
92276168015	C-RW-3	SM 6200B	CAH	16	PASI-C
92276168016	INFLUENT	SM 6200B	CAH	16	PASI-C
92276168017	MIDFLUENT	SM 6200B	CAH	16	PASI-C
92276168018	EFFLUENT	SM 6200B	CAH	16	PASI-C

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: J-MW-3 **Lab ID: 92276168001** Collected: 11/12/15 08:51 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/22/15 20:54	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 20:54	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 20:54	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 20:54	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 20:54	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/22/15 20:54	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1.0	1		11/22/15 20:54	100-41-4	
Isopropylbenzene (Cumene)	**2.7**	ug/L	1.0	1.0	1		11/22/15 20:54	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	1.0	1.0	1		11/22/15 20:54	1634-04-4	
Naphthalene	ND	ug/L	2.0	2.0	1		11/22/15 20:54	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/22/15 20:54	108-88-3	
m&p-Xylene	ND	ug/L	2.0	2.0	1		11/22/15 20:54	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/22/15 20:54	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/22/15 20:54	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		11/22/15 20:54	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		11/22/15 20:54	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: J-MW-9 **Lab ID: 92276168002** Collected: 11/11/15 14:58 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/22/15 21:10	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:10	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:10	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:10	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:10	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/22/15 21:10	108-20-3	
Ethylbenzene	**7.7**	ug/L	1.0	1.0	1		11/22/15 21:10	100-41-4	
Isopropylbenzene (Cumene)	**60.4**	ug/L	1.0	1.0	1		11/22/15 21:10	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	1.0	1.0	1		11/22/15 21:10	1634-04-4	
Naphthalene	ND	ug/L	2.0	2.0	1		11/22/15 21:10	91-20-3	
Toluene	**1.4**	ug/L	1.0	1.0	1		11/22/15 21:10	108-88-3	
m&p-Xylene	**11.1**	ug/L	2.0	2.0	1		11/22/15 21:10	179601-23-1	
o-Xylene	**1.2**	ug/L	1.0	1.0	1		11/22/15 21:10	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/22/15 21:10	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		11/22/15 21:10	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		11/22/15 21:10	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: J-MW-16 **Lab ID: 92276168003** Collected: 11/12/15 09:13 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/22/15 21:27	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:27	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:27	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/22/15 21:27	108-20-3	
Ethylbenzene	**4.9**	ug/L	1.0	1.0	1		11/22/15 21:27	100-41-4	
Isopropylbenzene (Cumene)	**103**	ug/L	1.0	1.0	1		11/22/15 21:27	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	1.0	1.0	1		11/22/15 21:27	1634-04-4	
Naphthalene	**16.0**	ug/L	2.0	2.0	1		11/22/15 21:27	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/22/15 21:27	108-88-3	
m&p-Xylene	**13.7**	ug/L	2.0	2.0	1		11/22/15 21:27	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/22/15 21:27	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		11/22/15 21:27	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		11/22/15 21:27	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		11/22/15 21:27	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: J-MW-10 **Lab ID: 92276168004** Collected: 11/11/15 16:30 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	**1.0**	ug/L	1.0	1.0	1		11/22/15 21:44	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:44	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:44	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:44	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:44	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/22/15 21:44	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1.0	1		11/22/15 21:44	100-41-4	
Isopropylbenzene (Cumene)	**16.0**	ug/L	1.0	1.0	1		11/22/15 21:44	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	1.0	1.0	1		11/22/15 21:44	1634-04-4	
Naphthalene	ND	ug/L	2.0	2.0	1		11/22/15 21:44	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/22/15 21:44	108-88-3	
m&p-Xylene	ND	ug/L	2.0	2.0	1		11/22/15 21:44	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/22/15 21:44	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/22/15 21:44	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		11/22/15 21:44	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		11/22/15 21:44	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: J-MW-19 **Lab ID: 92276168005** Collected: 11/11/15 16:33 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/22/15 22:00	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:00	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:00	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:00	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:00	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/22/15 22:00	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:00	100-41-4	
Isopropylbenzene (Cumene)	**1.2**	ug/L	1.0	1.0	1		11/22/15 22:00	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	1.0	1.0	1		11/22/15 22:00	1634-04-4	
Naphthalene	ND	ug/L	2.0	2.0	1		11/22/15 22:00	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/22/15 22:00	108-88-3	
m&p-Xylene	ND	ug/L	2.0	2.0	1		11/22/15 22:00	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/22/15 22:00	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/22/15 22:00	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		11/22/15 22:00	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		11/22/15 22:00	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: J-RW-1 **Lab ID: 92276168006** Collected: 11/12/15 08:50 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	**8.3**	ug/L	1.0	1.0	1		11/22/15 22:17	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:17	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:17	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:17	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:17	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/22/15 22:17	108-20-3	
Ethylbenzene	**14.9**	ug/L	1.0	1.0	1		11/22/15 22:17	100-41-4	
Isopropylbenzene (Cumene)	**61.3**	ug/L	1.0	1.0	1		11/22/15 22:17	98-82-8	
Methyl-tert-butyl ether	**7.4**	ug/L	1.0	1.0	1		11/22/15 22:17	1634-04-4	
Naphthalene	**20.5**	ug/L	2.0	2.0	1		11/22/15 22:17	91-20-3	
Toluene	**3.5**	ug/L	1.0	1.0	1		11/22/15 22:17	108-88-3	
m&p-Xylene	**6.5**	ug/L	2.0	2.0	1		11/22/15 22:17	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/22/15 22:17	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/22/15 22:17	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		11/22/15 22:17	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		11/22/15 22:17	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: J-RW-2 **Lab ID: 92276168007** Collected: 11/12/15 09:22 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/22/15 22:34	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:34	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:34	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/22/15 22:34	108-20-3	
Ethylbenzene	**5.5**	ug/L	1.0	1.0	1		11/22/15 22:34	100-41-4	
Isopropylbenzene (Cumene)	**13.7**	ug/L	1.0	1.0	1		11/22/15 22:34	98-82-8	
Methyl-tert-butyl ether	**1.5**	ug/L	1.0	1.0	1		11/22/15 22:34	1634-04-4	
Naphthalene	**26.3**	ug/L	2.0	2.0	1		11/22/15 22:34	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/22/15 22:34	108-88-3	
m&p-Xylene	**37.9**	ug/L	2.0	2.0	1		11/22/15 22:34	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/22/15 22:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/22/15 22:34	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		11/22/15 22:34	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		11/22/15 22:34	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: J-RW-3 **Lab ID: 92276168008** Collected: 11/11/15 14:25 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	**6.0**	ug/L	5.0	5.0	5		11/23/15 15:35	71-43-2	
Chlorobenzene	ND	ug/L	5.0	5.0	5		11/23/15 15:35	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	5.0	5.0	5		11/23/15 15:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	5.0	5		11/23/15 15:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	5.0	5		11/23/15 15:35	106-46-7	
Diisopropyl ether	ND	ug/L	5.0	5.0	5		11/23/15 15:35	108-20-3	
Ethylbenzene	**323**	ug/L	5.0	5.0	5		11/23/15 15:35	100-41-4	
Isopropylbenzene (Cumene)	**24.6**	ug/L	5.0	5.0	5		11/23/15 15:35	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	5.0	5.0	5		11/23/15 15:35	1634-04-4	
Naphthalene	**197**	ug/L	10.0	10.0	5		11/23/15 15:35	91-20-3	
Toluene	ND	ug/L	5.0	5.0	5		11/23/15 15:35	108-88-3	
m&p-Xylene	**1060**	ug/L	10.0	10.0	5		11/23/15 15:35	179601-23-1	
o-Xylene	**7.3**	ug/L	5.0	5.0	5		11/23/15 15:35	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		5		11/23/15 15:35	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		5		11/23/15 15:35	17060-07-0	
Toluene-d8 (S)	99	%	70-130		5		11/23/15 15:35	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: J-VC-1R **Lab ID: 92276168009** Collected: 11/11/15 16:00 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/22/15 22:51	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:51	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 22:51	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/22/15 22:51	108-20-3	
Ethylbenzene	**1.5**	ug/L	1.0	1.0	1		11/22/15 22:51	100-41-4	
Isopropylbenzene (Cumene)	**12.2**	ug/L	1.0	1.0	1		11/22/15 22:51	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	1.0	1.0	1		11/22/15 22:51	1634-04-4	
Naphthalene	ND	ug/L	2.0	2.0	1		11/22/15 22:51	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/22/15 22:51	108-88-3	
m&p-Xylene	ND	ug/L	2.0	2.0	1		11/22/15 22:51	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/22/15 22:51	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		11/22/15 22:51	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		11/22/15 22:51	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		11/22/15 22:51	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: J-VC-6 **Lab ID: 92276168010** Collected: 11/12/15 09:25 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/22/15 23:07	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:07	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:07	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:07	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:07	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/22/15 23:07	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:07	100-41-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1.0	1		11/22/15 23:07	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	1.0	1.0	1		11/22/15 23:07	1634-04-4	
Naphthalene	ND	ug/L	2.0	2.0	1		11/22/15 23:07	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/22/15 23:07	108-88-3	
m&p-Xylene	ND	ug/L	2.0	2.0	1		11/22/15 23:07	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/22/15 23:07	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		11/22/15 23:07	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		11/22/15 23:07	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		11/22/15 23:07	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: C-MW-4 **Lab ID: 92276168011** Collected: 11/11/15 15:14 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/23/15 01:37	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 01:37	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 01:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 01:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 01:37	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/23/15 01:37	108-20-3	
Ethylbenzene	**4.2**	ug/L	1.0	1.0	1		11/23/15 01:37	100-41-4	
Isopropylbenzene (Cumene)	**1.9**	ug/L	1.0	1.0	1		11/23/15 01:37	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	1.0	1.0	1		11/23/15 01:37	1634-04-4	
Naphthalene	**8.6**	ug/L	2.0	2.0	1		11/23/15 01:37	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/23/15 01:37	108-88-3	
m&p-Xylene	**8.4**	ug/L	2.0	2.0	1		11/23/15 01:37	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/23/15 01:37	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/23/15 01:37	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		11/23/15 01:37	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		11/23/15 01:37	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: C-MW-11 **Lab ID: 92276168012** Collected: 11/11/15 15:33 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/22/15 23:24	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:24	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:24	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/22/15 23:24	108-20-3	
Ethylbenzene	**1.1**	ug/L	1.0	1.0	1		11/22/15 23:24	100-41-4	
Isopropylbenzene (Cumene)	**7.6**	ug/L	1.0	1.0	1		11/22/15 23:24	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	1.0	1.0	1		11/22/15 23:24	1634-04-4	
Naphthalene	**13.7**	ug/L	2.0	2.0	1		11/22/15 23:24	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/22/15 23:24	108-88-3	
m&p-Xylene	**2.4**	ug/L	2.0	2.0	1		11/22/15 23:24	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/22/15 23:24	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/22/15 23:24	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		11/22/15 23:24	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		11/22/15 23:24	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: C-MW-16 **Lab ID: 92276168013** Collected: 11/11/15 14:59 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	**1.2**	ug/L	1.0	1.0	1		11/22/15 23:41	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:41	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:41	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:41	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:41	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/22/15 23:41	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:41	100-41-4	
Isopropylbenzene (Cumene)	**51.7**	ug/L	1.0	1.0	1		11/22/15 23:41	98-82-8	
Methyl-tert-butyl ether	**3.9**	ug/L	1.0	1.0	1		11/22/15 23:41	1634-04-4	
Naphthalene	ND	ug/L	2.0	2.0	1		11/22/15 23:41	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/22/15 23:41	108-88-3	
m&p-Xylene	**3.1**	ug/L	2.0	2.0	1		11/22/15 23:41	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/22/15 23:41	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/22/15 23:41	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		11/22/15 23:41	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		11/22/15 23:41	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: C-MW-18 **Lab ID: 92276168014** Collected: 11/11/15 15:44 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/22/15 23:57	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:57	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:57	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:57	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:57	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/22/15 23:57	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1.0	1		11/22/15 23:57	100-41-4	
Isopropylbenzene (Cumene)	**29.4**	ug/L	1.0	1.0	1		11/22/15 23:57	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	1.0	1.0	1		11/22/15 23:57	1634-04-4	
Naphthalene	ND	ug/L	2.0	2.0	1		11/22/15 23:57	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/22/15 23:57	108-88-3	
m&p-Xylene	ND	ug/L	2.0	2.0	1		11/22/15 23:57	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/22/15 23:57	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/22/15 23:57	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		11/22/15 23:57	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		11/22/15 23:57	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: C-RW-3 **Lab ID: 92276168015** Collected: 11/11/15 14:45 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	**122**	ug/L	10.0	10.0	10		11/23/15 15:51	71-43-2	
Chlorobenzene	ND	ug/L	10.0	10.0	10		11/23/15 15:51	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	10.0	10.0	10		11/23/15 15:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	10.0	10		11/23/15 15:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	10.0	10		11/23/15 15:51	106-46-7	
Diisopropyl ether	ND	ug/L	10.0	10.0	10		11/23/15 15:51	108-20-3	
Ethylbenzene	**591**	ug/L	10.0	10.0	10		11/23/15 15:51	100-41-4	
Isopropylbenzene (Cumene)	**386**	ug/L	10.0	10.0	10		11/23/15 15:51	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	10.0	10.0	10		11/23/15 15:51	1634-04-4	
Naphthalene	**616**	ug/L	20.0	20.0	10		11/23/15 15:51	91-20-3	
Toluene	**27.1**	ug/L	10.0	10.0	10		11/23/15 15:51	108-88-3	
m&p-Xylene	**914**	ug/L	20.0	20.0	10		11/23/15 15:51	179601-23-1	
o-Xylene	**28.8**	ug/L	10.0	10.0	10		11/23/15 15:51	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		10		11/23/15 15:51	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		10		11/23/15 15:51	17060-07-0	
Toluene-d8 (S)	102	%	70-130		10		11/23/15 15:51	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: INFLUENT **Lab ID: 92276168016** Collected: 11/12/15 09:46 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/23/15 00:14	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:14	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:14	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/23/15 00:14	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:14	100-41-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1.0	1		11/23/15 00:14	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	1.0	1.0	1		11/23/15 00:14	1634-04-4	
Naphthalene	ND	ug/L	2.0	2.0	1		11/23/15 00:14	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/23/15 00:14	108-88-3	
m&p-Xylene	ND	ug/L	2.0	2.0	1		11/23/15 00:14	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/23/15 00:14	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/23/15 00:14	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		11/23/15 00:14	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		11/23/15 00:14	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: MIDFLUENT **Lab ID: 92276168017** Collected: 11/12/15 09:51 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/23/15 00:31	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:31	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:31	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:31	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:31	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/23/15 00:31	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:31	100-41-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1.0	1		11/23/15 00:31	98-82-8	
Methyl-tert-butyl ether	**1.0**	ug/L	1.0	1.0	1		11/23/15 00:31	1634-04-4	
Naphthalene	ND	ug/L	2.0	2.0	1		11/23/15 00:31	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/23/15 00:31	108-88-3	
m&p-Xylene	ND	ug/L	2.0	2.0	1		11/23/15 00:31	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/23/15 00:31	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/23/15 00:31	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		11/23/15 00:31	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		11/23/15 00:31	2037-26-5	

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ANALYTICAL RESULTS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Sample: EFFLUENT **Lab ID: 92276168018** Collected: 11/12/15 09:58 Received: 11/13/15 12:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
602 Volatiles by Method 6200	Analytical Method: SM 6200B								
Benzene	ND	ug/L	1.0	1.0	1		11/23/15 00:47	71-43-2	
Chlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:47	108-90-7	
1,2-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:47	106-46-7	
Diisopropyl ether	ND	ug/L	1.0	1.0	1		11/23/15 00:47	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1.0	1		11/23/15 00:47	100-41-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1.0	1		11/23/15 00:47	98-82-8	
Methyl-tert-butyl ether	**1.0**	ug/L	1.0	1.0	1		11/23/15 00:47	1634-04-4	
Naphthalene	ND	ug/L	2.0	2.0	1		11/23/15 00:47	91-20-3	
Toluene	ND	ug/L	1.0	1.0	1		11/23/15 00:47	108-88-3	
m&p-Xylene	ND	ug/L	2.0	2.0	1		11/23/15 00:47	179601-23-1	
o-Xylene	ND	ug/L	1.0	1.0	1		11/23/15 00:47	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		11/23/15 00:47	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		11/23/15 00:47	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		11/23/15 00:47	2037-26-5	

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

QUALITY CONTROL DATA

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

QC Batch: MSV/34386 Analysis Method: SM 6200B
QC Batch Method: SM 6200B Analysis Description: 602 by 6200B
Associated Lab Samples: 92276168001, 92276168002, 92276168003, 92276168004, 92276168005, 92276168006, 92276168007, 92276168009, 92276168010, 92276168011, 92276168012, 92276168013, 92276168014, 92276168016, 92276168017, 92276168018

METHOD BLANK: 1612751 Matrix: Water
Associated Lab Samples: 92276168001, 92276168002, 92276168003, 92276168004, 92276168005, 92276168006, 92276168007, 92276168009, 92276168010, 92276168011, 92276168012, 92276168013, 92276168014, 92276168016, 92276168017, 92276168018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichlorobenzene	ug/L	ND	1.0	1.0	11/22/15 20:37	
1,3-Dichlorobenzene	ug/L	ND	1.0	1.0	11/22/15 20:37	
1,4-Dichlorobenzene	ug/L	ND	1.0	1.0	11/22/15 20:37	
Benzene	ug/L	ND	1.0	1.0	11/22/15 20:37	
Chlorobenzene	ug/L	ND	1.0	1.0	11/22/15 20:37	
Diisopropyl ether	ug/L	ND	1.0	1.0	11/22/15 20:37	
Ethylbenzene	ug/L	ND	1.0	1.0	11/22/15 20:37	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	1.0	11/22/15 20:37	
m&p-Xylene	ug/L	ND	2.0	2.0	11/22/15 20:37	
Methyl-tert-butyl ether	ug/L	ND	1.0	1.0	11/22/15 20:37	
Naphthalene	ug/L	ND	2.0	2.0	11/22/15 20:37	
o-Xylene	ug/L	ND	1.0	1.0	11/22/15 20:37	
Toluene	ug/L	ND	1.0	1.0	11/22/15 20:37	
1,2-Dichloroethane-d4 (S)	%	97	70-130		11/22/15 20:37	
4-Bromofluorobenzene (S)	%	101	70-130		11/22/15 20:37	
Toluene-d8 (S)	%	101	70-130		11/22/15 20:37	

LABORATORY CONTROL SAMPLE: 1612752

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	ug/L	50	47.8	96	60-140	
1,3-Dichlorobenzene	ug/L	50	48.3	97	60-140	
1,4-Dichlorobenzene	ug/L	50	48.3	97	60-140	
Benzene	ug/L	50	47.1	94	60-140	
Chlorobenzene	ug/L	50	46.8	94	60-140	
Diisopropyl ether	ug/L	50	47.9	96	60-140	
Ethylbenzene	ug/L	50	45.3	91	60-140	
Isopropylbenzene (Cumene)	ug/L	50	49.3	99	60-140	
m&p-Xylene	ug/L	100	91.7	92	60-140	
Methyl-tert-butyl ether	ug/L	50	50.6	101	60-140	
Naphthalene	ug/L	50	50.8	102	60-140	
o-Xylene	ug/L	50	44.8	90	60-140	
Toluene	ug/L	50	44.4	89	60-140	
1,2-Dichloroethane-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			100	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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(704)875-9092

QUALITY CONTROL DATA

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1612753 1612754

Parameter	Units	92276168001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichlorobenzene	ug/L	ND	20	20	18.9	20.0	94	100	60-140	6	30	
1,3-Dichlorobenzene	ug/L	ND	20	20	18.7	20.2	93	101	60-140	8	30	
1,4-Dichlorobenzene	ug/L	ND	20	20	19.0	20.3	95	102	60-140	7	30	
Benzene	ug/L	ND	20	20	21.1	22.0	104	108	60-140	4	30	
Chlorobenzene	ug/L	ND	20	20	19.7	20.9	98	104	60-140	6	30	
Diisopropyl ether	ug/L	ND	20	20	20.7	20.9	103	104	60-140	1	30	
Ethylbenzene	ug/L	ND	20	20	19.1	20.6	96	103	60-140	7	30	
Isopropylbenzene (Cumene)	ug/L	2.7	20	20	22.9	24.8	101	111	60-140	8	30	
m&p-Xylene	ug/L	ND	40	40	40.5	43.2	96	103	60-140	7	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	21.2	21.1	106	105	60-140	1	30	
Naphthalene	ug/L	ND	20	20	19.8	21.1	92	99	60-140	7	30	
o-Xylene	ug/L	ND	20	20	18.8	20.2	93	100	60-140	7	30	
Toluene	ug/L	ND	20	20	19.3	20.8	96	104	60-140	8	30	
1,2-Dichloroethane-d4 (S)	%						96	96	70-130			
4-Bromofluorobenzene (S)	%						101	102	70-130			
Toluene-d8 (S)	%						100	100	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

QC Batch: MSV/34398 Analysis Method: SM 6200B
QC Batch Method: SM 6200B Analysis Description: 602 by 6200B
Associated Lab Samples: 92276168008, 92276168015

METHOD BLANK: 1613282 Matrix: Water
Associated Lab Samples: 92276168008, 92276168015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichlorobenzene	ug/L	ND	1.0	1.0	11/23/15 13:21	
1,3-Dichlorobenzene	ug/L	ND	1.0	1.0	11/23/15 13:21	
1,4-Dichlorobenzene	ug/L	ND	1.0	1.0	11/23/15 13:21	
Benzene	ug/L	ND	1.0	1.0	11/23/15 13:21	
Chlorobenzene	ug/L	ND	1.0	1.0	11/23/15 13:21	
Diisopropyl ether	ug/L	ND	1.0	1.0	11/23/15 13:21	
Ethylbenzene	ug/L	ND	1.0	1.0	11/23/15 13:21	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	1.0	11/23/15 13:21	
m&p-Xylene	ug/L	ND	2.0	2.0	11/23/15 13:21	
Methyl-tert-butyl ether	ug/L	ND	1.0	1.0	11/23/15 13:21	
Naphthalene	ug/L	ND	2.0	2.0	11/23/15 13:21	
o-Xylene	ug/L	ND	1.0	1.0	11/23/15 13:21	
Toluene	ug/L	ND	1.0	1.0	11/23/15 13:21	
1,2-Dichloroethane-d4 (S)	%	99	70-130		11/23/15 13:21	
4-Bromofluorobenzene (S)	%	100	70-130		11/23/15 13:21	
Toluene-d8 (S)	%	101	70-130		11/23/15 13:21	

LABORATORY CONTROL SAMPLE: 1613283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	ug/L	50	53.1	106	60-140	
1,3-Dichlorobenzene	ug/L	50	54.4	109	60-140	
1,4-Dichlorobenzene	ug/L	50	54.5	109	60-140	
Benzene	ug/L	50	52.5	105	60-140	
Chlorobenzene	ug/L	50	52.7	105	60-140	
Diisopropyl ether	ug/L	50	51.7	103	60-140	
Ethylbenzene	ug/L	50	50.9	102	60-140	
Isopropylbenzene (Cumene)	ug/L	50	56.2	112	60-140	
m&p-Xylene	ug/L	100	105	105	60-140	
Methyl-tert-butyl ether	ug/L	50	53.0	106	60-140	
Naphthalene	ug/L	50	53.2	106	60-140	
o-Xylene	ug/L	50	50.5	101	60-140	
Toluene	ug/L	50	50.6	101	60-140	
1,2-Dichloroethane-d4 (S)	%			95	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			98	70-130	

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REPORT OF LABORATORY ANALYSIS

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Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

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Huntersville, NC 28078
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: COLONIAL-WILMINGTON TERMINAL
Pace Project No.: 92276168

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92276168001	J-MW-3	SM 6200B	MSV/34386		
92276168002	J-MW-9	SM 6200B	MSV/34386		
92276168003	J-MW-16	SM 6200B	MSV/34386		
92276168004	J-MW-10	SM 6200B	MSV/34386		
92276168005	J-MW-19	SM 6200B	MSV/34386		
92276168006	J-RW-1	SM 6200B	MSV/34386		
92276168007	J-RW-2	SM 6200B	MSV/34386		
92276168008	J-RW-3	SM 6200B	MSV/34398		
92276168009	J-VC-1R	SM 6200B	MSV/34386		
92276168010	J-VC-6	SM 6200B	MSV/34386		
92276168011	C-MW-4	SM 6200B	MSV/34386		
92276168012	C-MW-11	SM 6200B	MSV/34386		
92276168013	C-MW-16	SM 6200B	MSV/34386		
92276168014	C-MW-18	SM 6200B	MSV/34386		
92276168015	C-RW-3	SM 6200B	MSV/34398		
92276168016	INFLUENT	SM 6200B	MSV/34386		
92276168017	MIDFLUENT	SM 6200B	MSV/34386		
92276168018	EFFLUENT	SM 6200B	MSV/34386		

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Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 16, 2016 Page 1 of 2*
	Document Number: **F-CHR-CS-003-rev.16**	Issuing Authority: Pace Huntersville Quality Office

Client Name: BLE

* Page 2 of 2 is for Internal Use Only

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

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

Optional
Proj. Due Date:
Proj. Name:

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

Thermometer Used: IR Gun T1402 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Temp Correction Factor **T1402** No Correction

Corrected Cooler Temp.: 1.1 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11/13/15

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: Client requested 602 compound list. KG

SCURF Review: Date: 11/13/15

SRF Review: Date: 11/13/15

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

WO# : 92276168

92276168

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

2000517

Section A Required Client Information:

Company: BLE
Address: 6004 Powders CT
Greenville, SC 29615
Email To: Dan.OsBourne@Blecorp.com
Phone: 864 288 1265 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Dan Os Bourne
Copy To:
Purchase Order No.:
Project Name: Colonial - Wilmington Terminal
Project Number: 9119-03

Section C Invoice Information:

Attention: Dan Os Bourne
Company Name: BLE
Address: SAME
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 6036-2

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

Site Location STATE: NC

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N): Analysis Test: 6200 B

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. (92276168)
1	J-MW-3	WT	G			11/12/15	851		4				✓					✓		001
2	J-MW-9					11/11/15	1458													002
3	J-MW-16					11/12/15	913													003
4	J-MW-10					11/11/15	1630													004
5	J-MW-19					11/11/15	1633													005
6	J-RW-1					11/12/15	850													006
7	J-RW-2					11/12/15	922													007
8	J-RW-3					11/11/15	1425													008
9	J-VC-1R					11/11/15	1600													009
10	J-VC-6					11/12/15	925													010
11	C-MW-4					11/11/15	1514													011
12	C-MW-11					11/11/15	1533		✓				✓					✓		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
		11/12/15	1240	[illegible]	11/12/15	1240
	[illegible]	11/12/15	1500	[illegible]	11/12/15	1500

SAMPLE CONDITIONS: Temp in °C 1.1; Received on Ice (Y/N) ✓; Custody Sealed Cooler (Y/N) ~; Samples Intact (Y/N) ✓

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Ivan Irizarry
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 11/12/15

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

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

2000585

Section A Required Client Information:

Company: BLE
Address: 6004 Powders CT
Greenville, SC 29615
Email To: Dan.OsBourne@Blecorp.com
Phone: 864 288 1265 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Dan Os Bourne
Copy To:
Purchase Order No.:
Project Name: Colonial-Wilmington Terminal
Project Number: 9119-03

Section C Invoice Information:

Attention: Dan Os Bourne
Company Name: BLE
Address: Same
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 6036-2

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NC

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N) 6200B	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92276168
1	C-MW-16	WT	G			11/11/15	1459		4				✓					✓		013
2	C-MW-18	↓	↓			11/11/15	1544		↓				↓					↓		014
3	C-RW-3	↓	↓			11/11/15	1445		↓				↓					↓		015
4	Influent	WT	G			11/12/15	946		↓				↓					↓		016
5	Midfluent	↓	↓			11/12/15	951		↓				↓					↓		017
6	Effluent	↓	↓			11/12/15	958		↓				↓					↓		018
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		11/13/15	1240	[illegible]	11/13/15	1240				
	[illegible]	11/13/15	1500	[illegible]	11/13/15	1500	1.1	✓	✓	✓

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

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Ivan Ivicevic

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 11/12/15

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

CT1 Cape Pear Terminal - 6/07

JRW-8 did not sample.

JUC1R - meets standards for
benzene, toluene, ethylbenzene, xylene, MTBE
Isopropyl benzene, napthalene