

Prepared for

Colonial Terminals, Inc.
Savannah, Georgia
Georgia HSI Site No. 10098

Date

November 2015

COLONIAL TERMINALS PLANT #2

SEMI-ANNUAL PROGRESS REPORT

NOVEMBER 2015

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Acronyms and Abbreviations

11DCE	1,1-Dichloroethene
12DCE	1,2-Dichloroethene
AST	Aboveground Storage Tank
CAP	Corrective Action Plan
Colonial	Colonial Terminals
COPCs	Constituents Of Potential Concern
CSR	Compliance Status Report
ED	Exposure Domain
EPD	Georgia Environmental Protection Division
ERM	Environmental Resources Management
ft amsl	Feet Above Mean Sea Level
ft bgs	Feet Below Ground Surface
ft/d	Feet Per Day
HSI	Hazardous Site Inventory
HSRA	Hazardous Site Response Act
ISWQS	Georgia In-Stream Water Quality Standards
MeCl	Methylene Chloride
PCE	Tetrachloroethene
REH	Ramboll Environ
RP	Responsible Parties
RRS	Risk Reduction Standards
SVE	Soil Vapor Extraction
TCE	Trichloroethene
Test America	Test America Laboratories, Inc
UCL	Upper Confidence Limit
UEC	Uniform Environmental Covenant
USEPA	United States Environmental Protection Agency
VC	Vinyl Chloride
VOCs	Volatile Organic Compounds
VRP	Voluntary Remediation Program

Signature and Environmental Professional Statement

I certify that I am a qualified groundwater scientist who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this report was prepared by me or by a subordinate working under my direct supervision.


Kenneth E. Nye, P.G.
Registration No. 1789



1. INTRODUCTION

The Colonial Terminals (Colonial) Plant #2 site is listed on the Georgia Environmental Protection Division (EPD) Hazardous Site Inventory (HSI) as Site No. 10098 under the Hazardous Site Response Act (HSRA). The site is located at 373 North Lathrop Avenue, Savannah, Chatham County, Georgia (**Figure 1**). The approximately 78-acre property is comprised of six adjacent parcels of land identified by the Chatham County Board of Assessors as Tax Parcel IDs 1-0549-01-002 (3 parcels maintain this ID), 1-0549-01-002A, 1-0551-01-047, and 1-0550-02-004. The highly industrialized property is bordered by the Savannah River and is improved with administrative buildings, warehouses, bulk aboveground storage tanks (ASTs) and silos, shipping docks, truck loading racks, pipe racks, and rail spurs (**Figure 2**).

The site was formerly owned and operated by Virginia-Carolina Chemical Company and Swift Agricultural Chemicals Corporation for the manufacture of fertilizers from the late 1926 through 1972. During that time, the site maintained two sludge-settling ponds and an adjacent sludge pile that have been documented as likely sources of impacts at the site, and historical fertilizer production facilities were present at various locations to the east side of the current rail yard. Since the early 1970s, Colonial has owned and operated the site for use as a bulk storage facility for various chemicals, petroleum, and kaolin clay. According to previous investigations and facility personnel, from 1981 through 1985 tetrachloroethylene (PCE) and trichloroethylene (TCE) were transferred from vessels to railcars and then to trucks in the area adjacent to the two former settling ponds and the sludge pile. From 1985 through 1990, PCE and TCE was stored in ASTs T-77 and T-78, located near the central northern end of the site, and in the adjacent ASTs 110 through 113 from 1991 through 2009.

An investigation of the former settling ponds and sludge pile was conducted by the United States Environmental Protection Agency (USEPA) in 1984 and identified the presence of TCE at the site. Following an evaluation by the EPD in June 1994, the site was listed on the HSI for known releases of metals and volatile organic compounds (VOCs) to the soil and groundwater. In addition, methylene chloride (MeCl) and PCE degradation products 1,2-dichloroethene (12DCE); 1,1-dichloroethene (11DCE); and vinyl chloride (VC) were identified in soil and groundwater at the site during subsequent investigations. An initial Compliance Status Report (CSR) was submitted to EPD in 1999, and since that time numerous revised CSRs, Corrective Action Plans (CAPs), and other reports have been submitted that document the significant efforts that have been conducted at the site, including: the excavation and offsite disposal of more than 24,000 tons of impacted soil; the implementation of a soil vapor extraction system to address residual VOCs in the soil; completion of a large-scale in situ chemical oxidation pilot test that involved the installation of 250 injection wells and injection of more than 150,000 gallons of solution containing persulfate, lime, and caustic; and periodic groundwater sampling of onsite monitoring wells. Colonial submitted an application to the Georgia Voluntary Remediation Program (VRP) for the site in November 2012, and the application was approved by EPD in May 2013. A meeting to discuss EPD's comments and the responsible parties' (RPs'; Colonial, BFEL Indemnitor, Inc., and ExxonMobil Corporation) responses to those comments was held at EPD's offices on October 1, 2013.

Per the November 2012 VRP application (ENVIRON International Corporation, predecessor to Ramboll Environ [REH], 2012), additional corrective action for soil, groundwater, and surface water at the site is not warranted based on current site conditions, the exposure pathways, and the comparison of existing data to site-specific cleanup standards. As agreed upon with EPD, annual groundwater sampling of seven shallow and three deeper monitoring wells was to be conducted for two years to

identify and track potential future changes related to groundwater at the site, and the last sampling event occurred in November 2014. In addition, semi-annual surface water sampling was to be conducted for three years to monitor the concentrations of VOCs in the Savannah River. Additionally, an environmental covenant was to be executed on the site in conformance with O.C.G.A. 44-61-1, et seq., the "Georgia Uniform Environmental Covenants Act." This covenant will specify that the land use of the site remains industrial, no drinking water wells will be installed on the site, and any future plans for constructing new buildings on the site will be evaluated with respect to potential risks associated with vapor intrusion. Per the VRP, semi-annual surface water sampling was conducted in October 2015. The analytical results from the sampling event did not detect VOCs in the Savannah River adjacent to the site

The remainder of this Progress Report presents background site information (Section 2), site activities since the submittal of the May 2015 Status Report (Section 3), and a summary of expected future site activities (Section 4).

2. BACKGROUND

The Colonial site is located in a highly industrial area of Savannah, Georgia, and is bordered to the north and northeast by the Savannah River (which is in high industrial use and has been altered for that purpose), to the southeast by Georgia Recyclers, to the south by North Lathrop Avenue (on the other side of which is Great Dane Trailers), and to the west by Arboris, LLC and International Paper Company's Savannah Pulp and Paper Mill. With the exception of the earthen berms at the site that surround the ASTs, the surface topography at the site is relatively flat and ranges from approximately 9 feet above mean sea level (ft amsl) at the southern and western property boundaries to approximately 4 ft amsl at the northern property boundary along the Savannah River.

According to the Chatham County Board of Assessors, the site is owned and maintained by Colonial, and consists of Tax Parcel IDs 1-0549-01-002, 1-0549-01-002A, 1-0551-01-047, and 1-0550-02-004. The previous site owners include Virginia-Carolina Chemical Company (now Exxon Mobil Corporation) and Swift Agricultural Chemicals Corporation (now BFEL Indemnitor, Inc.). Per EPD's request, an updated tax parcel location map with tax identification numbers for the entire site is provided in **Figure 3**.

2.1 Site Geology

The site is located in the Barrier Island Sequence District of the Coastal Plain Physiographic Province of Georgia. Regional soils are characterized by Pleistocene and Holocene barrier island deposits and marsh and lagoon deposits. Pleistocene sea levels advanced and retreated several times over the Coastal Plain to form a step-like progression of decreasing elevation toward the sea (Clark and Zisa, 1976). The area during the time of the former, higher sea levels existed as barrier island-salt marsh environments similar to the present coast. The changes in sea level left shoreline deposit complexes parallel to the present coastline, composed predominantly of unconsolidated sand and clayey sand deposited during the former high sea levels.

The regional geology has been characterized as Coastal Plain strata consisting of unconsolidated to semi-consolidated layers of sand and clay, and semi-consolidated to very dense layers of limestone and dolomite (Clarke et al, 1990). These sediments range in age from the late Cretaceous to Holocene periods. The strata generally strike southwest and northeast, and dip and gradually thicken to the southeast.

Based on historical site assessment activities, the site geology from land surface to approximately 2 feet below ground surface (ft bgs) consists of sequences of sands, which are underlain by stiff sandy clays that extend to approximately 8 to 10 ft bgs. Clayey sands with clay stringers are present from approximately 10 ft bgs to 34 ft bgs, below which clay and silt is present to approximately 80 ft bgs.

2.2 Site Hydrogeology

The Coastal Plain is underlain by multiple aquifers. In the vicinity of the site, the surficial aquifer consists of the Satilla Formation (Payne, Rumman, and Clarke, 2005). Beneath the surficial aquifer are the upper and lower Brunswick aquifers, which consist of slightly phosphatic and dolomitic quartz sands and clay confining units. The Brunswick aquifer system is approximately 80 feet thick in the region of the site and has a higher percentage of low permeability, clayey deposits in the Savannah area. The underlying Upper Floridan aquifer, which consists of the Ocala Limestone, is the principal source of water in the coastal area (Clarke et al, 1990).

Due to the proximity of the site to the Savannah River and Atlantic Ocean, the surficial/shallow groundwater at the site is influenced by tidal activity, and the depth to groundwater at the site typically ranges from approximately 3 to 12 ft bgs. Additionally, the shallow groundwater at the site has a high saline content due to tidal influence and, as such, the groundwater in the shallow surficial aquifer is not potable.

Slug tests were performed in three wells (MW-16, MW-18, and TW-28) on May 25 and 26, 2006, for the purpose of evaluating the hydraulic conductivity of the shallow aquifer. Based on the results of the tests, the average hydraulic conductivity of the shallow surficial aquifer at the site is approximately 3.05×10^{-3} centimeters per second. Based on the site gradient, and assuming an effective porosity of 20 percent, the groundwater flow velocity is estimated to range between 0.1 feet per day (ft/d) and 0.2 ft/d.

2.3 Summary of Corrective Action

Corrective action has been undertaken for soil and groundwater at the site, as discussed in the 2012 VRP application and the November 2013 and May 2014 Semi-Annual Status Reports. Specifically, corrective action has consisted of the following activities:

- Excavation and offsite disposal of:
 - Approximately 23,415 tons of lead and/or arsenic-impacted soil from eight distinct areas of the site between October 2007 and December 2007.
 - Approximately 812 tons of VOC-impacted soil adjacent to Tank T-88 at the southeast portion of the site in December 2007.
 - Approximately 38 tons of soil from the area surrounding historical soil boring GP-07-06 in February and March 2009.
- Operation of a soil vapor extraction (SVE) system from May 2009 through May 2013 for the purpose of addressing VOC impacts in the vicinity of Tank 75 through Tank 78. Following removal of approximately 6,137 pounds of total VOCs and upon meeting the shutdown criteria specified in the Performance Monitoring Plan (Environmental Resources Management [ERM], 2009), the system was discontinued in May 2013.
- Injection of more than 150,000 gallons of a solution containing sodium persulfate, lime, and caustic using 250 injection wells for the purpose of treating metals and VOCs in the groundwater (ERM, 2010). In addition, a network of 34 groundwater monitoring wells were sampled annually from 2008 through 2010 to gauge the effectiveness of the chemical injections.

2.4 Risk Reduction Standards

The site and surrounding properties are used for non-residential purposes and, therefore, Type 4 risk reduction standards (RRS; non-residential, site-specific) for the site were submitted as part of the VRP application. Specifically, RRS for constituents of potential concern (COPCs) in surface soil were developed to be protective of commercial/industrial, utility, and construction workers at the site via direct contact, and RRS for COPCs in subsurface soil were developed to be protective of utility and construction workers via direct contact. Based on previous communication between the RPs and EPD, the following conditions have been agreed upon regarding the RRS for the site:

- The use of one exposure domain (ED) for surface soil (0 to 2 feet below ground surface) is acceptable;
- Development of Type 2 RRS is not necessary provided that the Uniform Environmental Covenant (UEC) for the site indicates non-residential use for the site;

- The UEC will include language that limits construction worker scenarios to 90 days of exposure to subsurface soil;
- Trespasser scenarios are not applicable to the site because the commercial/industrial worker exposure scenario is considered more conservative and, therefore, protective of a trespasser; and,
- Exposure to groundwater does not constitute a complete exposure pathway with regards to human health and, therefore, leaching to groundwater is not a required component of the site-specific RRS for soil. As such, and per EPD's request, the soil RRS will be herein referred to as Type 5 RRS.

The exposure conditions at the site have not changed since the submittal of the VRP application. Based on discussions with the EPD, the entire site is considered to comprise one ED for the surface soil, and three EDs were proposed for subsurface soil in the November 10, 2014, responses to EPD comments. In those responses to comments, an area averaging approach using 95 percent Upper Confidence Levels (UCLs) was used to determine that exposure point concentrations for arsenic and lead in surface and subsurface soil (i.e., the two constituents for which there were individual exceedances of the RRS) do not exceed their respective RRS.

In addition to the RRS presented in the VRP application, EPD previously approved Type 5 RRS for two conditions at the site, as presented in the 2012 VRP application and the November 2013 and May 2014 Semi-Annual Status Reports:

- Areas within 12 feet of the railroad centerline where excavations could result in a loss of structural integrity of the tracks; and,
- Deep soil adjacent to retaining walls and loading docks along the Savannah River.

The site maintains engineering and institutional controls for these Type 5 RRS areas, including a Restrictive Covenant on the deeds for the three parcels that comprise the site.

Because there is no direct exposure to groundwater via ingestion or inhalation at or within 1,000 feet of the site, updated RRS were not developed for groundwater.

2.5 Vapor Intrusion

Based on a comparison of the maximum detected concentrations of and 95 percent UCLs for VOCs in soil and groundwater with vapor intrusion criteria (ENVIRON, 2012), there are two locations at the site (GP-07-04 and GP-07-06, as presented in Figure 15 of the VRP application) that could result in unacceptable risks associated with vapor intrusion exposures, as presented in the 2012 VRP application and the November 2013 Semi-Annual Status Report. However, because these locations are not under or in immediate proximity to current site structures at which workers might be exposed to indoor air, cleanup standards have not been derived for the vapor intrusion pathway. As agreed upon by EPD in October 2013, location-specific vapor intrusion risks will be assessed if needed and mitigation measures, if necessary, will be implemented prior to or during future construction of inhabited structures at the site.

3. SITE ACTIVITIES – CURRENT PERIOD OF PERFORMANCE

In accordance with the agreement between the RPs and GA EPD under the VRP, surface water samples were collected from three locations along the bank of the Savannah River in October 2015. A summary of these activities is presented in the following sections.

3.1 Surface Water Sampling – October 2015

Per the approved monitoring plan presented in the VRP application, REH collected surface water samples from three locations along the bank of the Savannah River on October 6, 2015 (**Figure 4**). The surface water samples were collected from walkways to the main dock, as close to the river bank and slope of the river bottom as possible. Specifically, the surface water samples were collected from approximately 0.5 to 1 feet above the bottom of the river at locations where the water depth was less than 4 feet:

- **SW-01R.** Water Depth: 3.1 feet;
- **SW-02R.** Water Depth: 1.5 feet; and,
- **SW-03R.** Water Depth: 1.1 feet;

Prior to sampling at each location, surface water was withdrawn for 5 minutes with a peristaltic pump fitted with new, disposable tubing, after which the surface water samples were collected by filling laboratory-provided, appropriately-preserved, sample containers. Each sample container was labeled, placed on ice, and hand-delivered to Test America Laboratories, Inc. (Test America) in Savannah, Georgia, for analysis of VOCs by USEPA Method 8260. The surface water samples were collected between 11:20 am and 12:32 pm. Low tide for that day occurred at 10:30 am, and high tide occurred at 4:36 pm (Savannah, Georgia – Bull Street Monitoring Station).

3.2 Analytical Results

There were no detections of VOCs in the surface water (**Table 1** and **Figure 5**). The surface water sampling logs are included in **Appendix A**, and the laboratory analytical report is provided in **Appendix B**.

4. SUMMARY

Per the VRP, semi-annual surface water sampling was conducted in October 2015. The analytical results from the sampling event did not detect the presence of VOCs in the Savannah River adjacent to the site. As previously discussed, the surface water samples were collected as close as possible along the bank of the Savannah River, and shortly after low tide, to provide data that was representative of the most conservative conditions.

The potential exposure pathways at the site remain consistent with those defined in the VRP application and subsequent correspondence with EPD. Specifically, "there is no direct exposure to groundwater via ingestion or inhalation at or within 1,000 feet of the site," and the concentrations that have been previously identified in the Savannah River are less than the Georgia In-Stream Water Quality Standards (ISWQS). As such, and in accordance with the schedule set forth in the VRP application and subsequent correspondence with EPD, corrective action for the site consists of the implementation of a UEC, and one additional semi-annual surface water sampling event in the second quarter of 2016. The next Semi-Annual Progress Report will be submitted in May 2016. If no VOCs are detected in the 2016 surface water samples, the RPs will pursue final closure of the site, including the final CSR and implementation of the UEC.

5. REFERENCES

- Clark, William Z., and Zisa, Arnold C. 1976. Physiographic Map of Georgia. Georgia Department of Natural Resources, Geologic and Water Resources Division. 1 pl.
- Clarke, John S., Hackle, Charles M., and Peck, Michael F. 1990. Geology and Ground-Water Resources of the Coastal Area of Georgia; Georgia Geologic Survey Bulletin 113. 12 pl.
- Environmental Resources Management (ERM). 2009. Revised Corrective Action Plan for Volatile Organic Compounds. January.
- ERM. 2010. First Corrective Action Effectiveness Report (CAER) for Groundwater 2009. January.
- Payne, Dorothy F., Rumman, Malek A., and Clarke, John S. 2005. Simulation of ground-water flow in coastal Georgia and adjacent parts of South Carolina and Florida – Predevelopment, 1980, and 2000. United States Geological Survey Scientific Investigation Report 2005-5089.
- Ramboll Environ, formerly ENVIRON International Corporation. 2012. Voluntary Remediation Plan and Application – Colonial Terminals Plant #2.

TABLE

**Table 1 - Summary of VOCs in Surface Water
Colonial Terminals Plant #2 (HSI 10098)
November 2015 Status Report**

<i>Analyte</i> <i>GA ISWQS (1)</i> <i>Units</i>		PCE 3.3 ug/l	TCE 30 ug/l	c12DCE -- ug/l	t12DCE -- ug/l	Vinyl Chloride 2.4 ug/l
Location	Date Sampled					
SW-01	9/17/2010	< 1	< 1	< 1	< 1	< 1
	12/13/2013	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/19/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SW-01R	10/28/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/22/2015	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/6/2015	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SW-02	9/17/2010	< 1	< 1	< 1	< 1	< 1
	12/13/2013	1.4	< 1.0	< 1.0	< 1.0	< 1.0
	4/19/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SW-02R	10/28/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/22/2015	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/6/2015	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SW-03	9/17/2010	< 1	< 1	< 1	< 1	< 1
	12/13/2013	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/19/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SW-03R	10/28/2014	1.1	< 1.0	< 1.0	< 1.0	< 1.0
	4/22/2015	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/6/2015	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

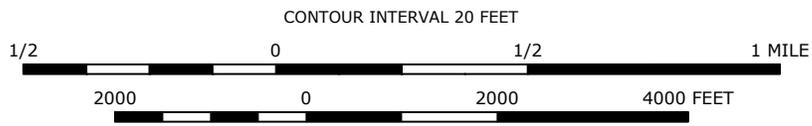
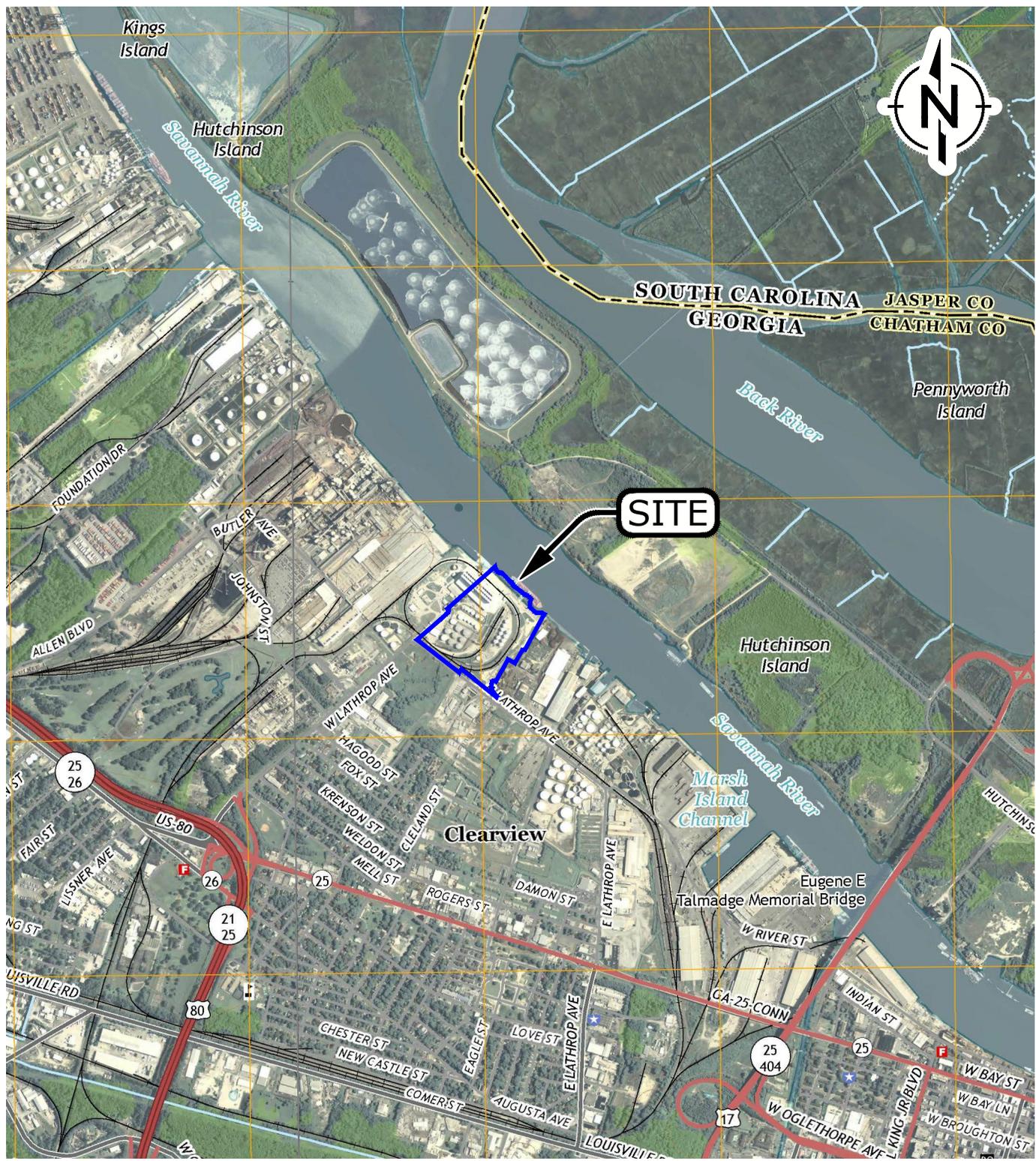
Notes:

(1) Georgia In-Stream Water Quality Standards (March 2012)

< -- Analyte was not detected at the laboratory reporting limit indicated

ug/l -- Micrograms per liter (parts per billion)

FIGURES



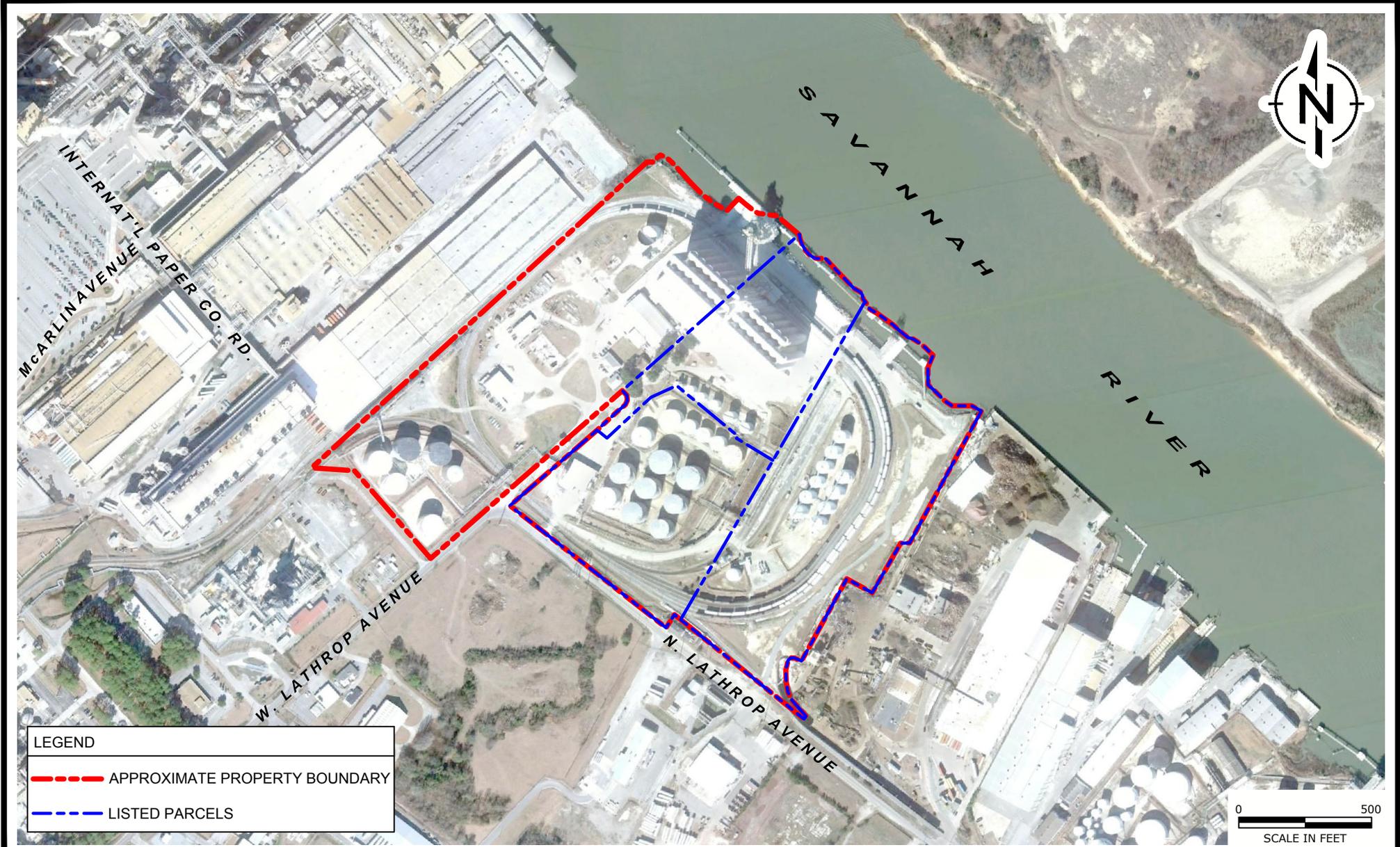
LEGEND:
 PROPERTY BOUNDARY (APPROXIMATE)

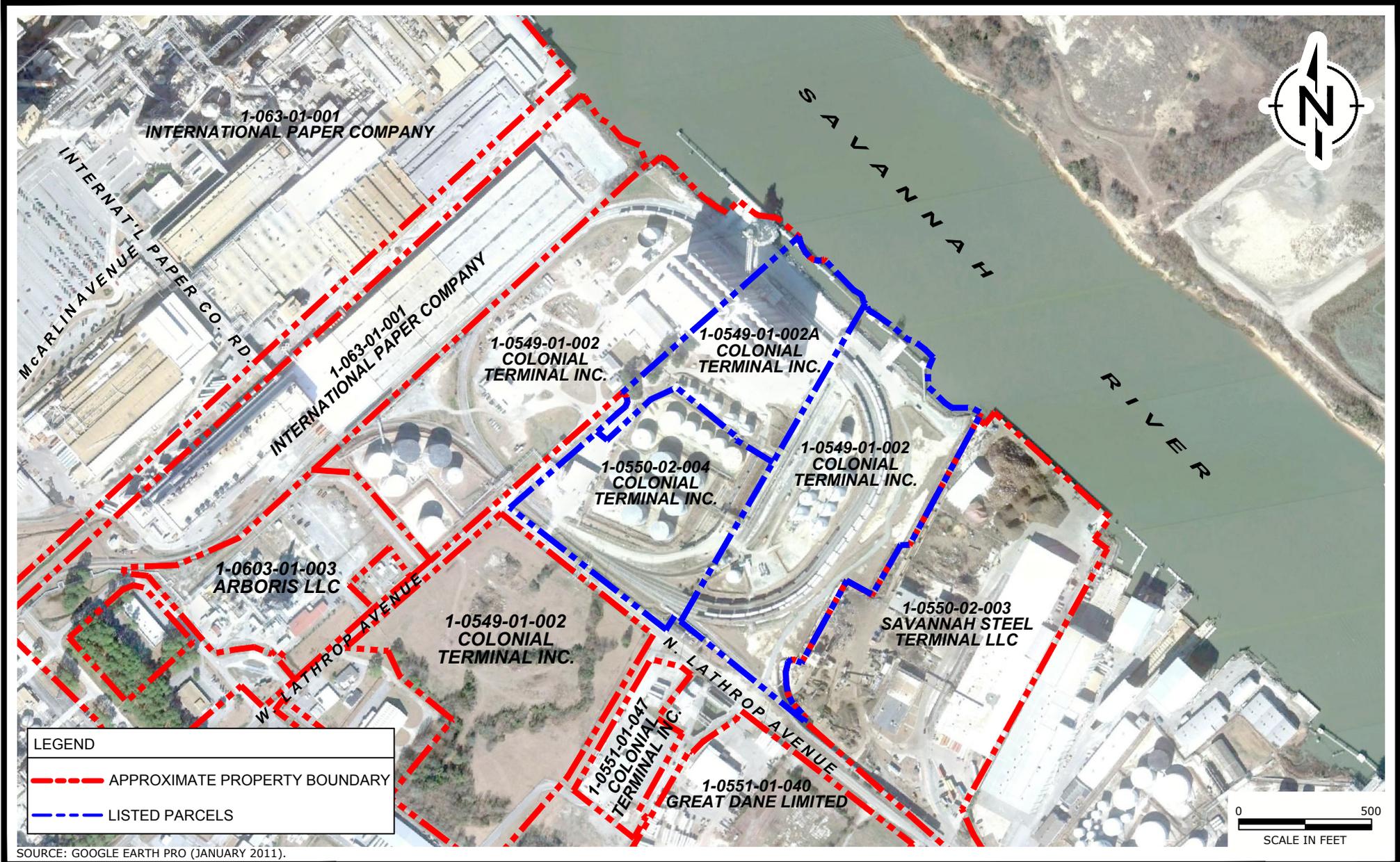
Source: USGS 7.5 minute series (topographic)
 Quadrangle: Garden City, Georgia (2014), Savannah, Georgia (2014).



L:\Loop Project Files\00_CAD FILES\07\Colonial Term. 2013-2014 Monitoring\0730114D\2015-10\01_Site Location Map.dwg

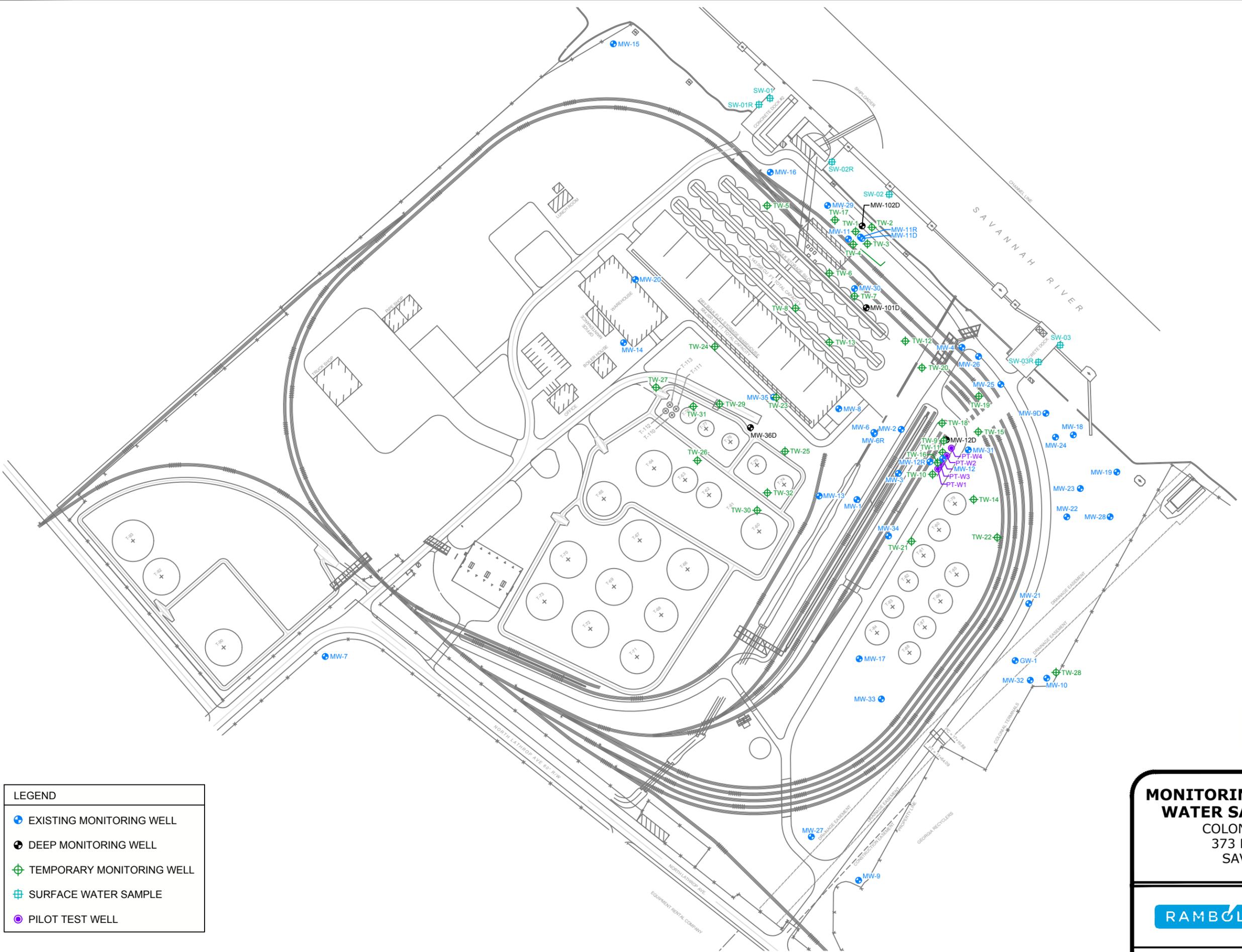
	<p>SITE LOCATION MAP COLONIAL TERMINALS, INC. 373 NORTH LANTHROP AVENUE SAVANNAH, GEORGIA</p>	<p>FIGURE 1</p>
DRAFTED BY: CKL	DATE: 10/29/15	0730114D







L:\Loop Project Files\00_CAD FILES\07\Colonial Term_2013-2014_Monitoring 0730114D\2015-10\04_MW and Surface Water Sampling Locations.dwg



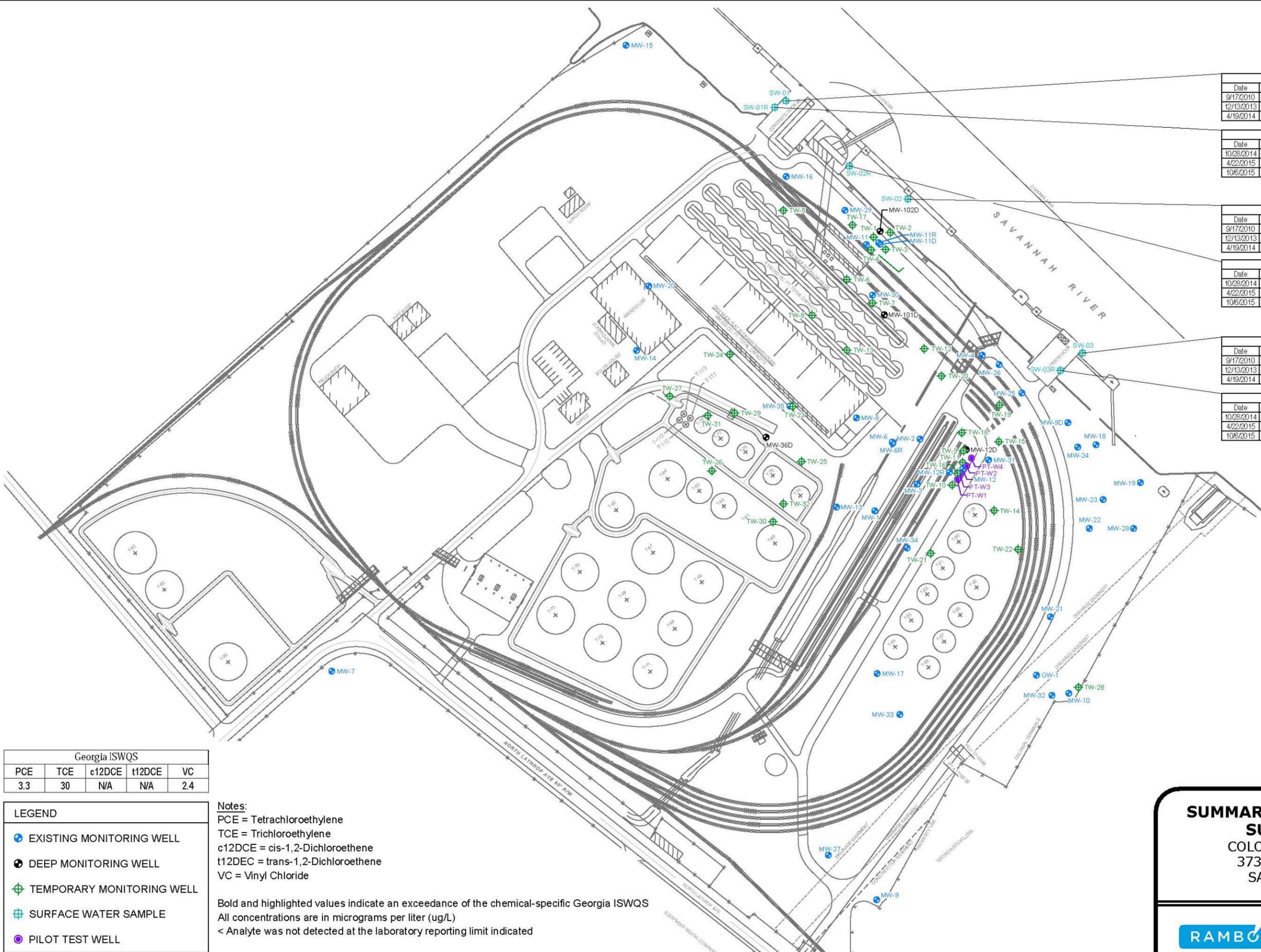
LEGEND	
	EXISTING MONITORING WELL
	DEEP MONITORING WELL
	TEMPORARY MONITORING WELL
	SURFACE WATER SAMPLE
	PILOT TEST WELL

MONITORING WELL AND SURFACE WATER SAMPLING LOCATIONS
 COLONIAL TERMINALS, INC.
 373 N. LATHROP AVENUE
 SAVANNAH, GEORGIA

	FIGURE 4
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Sources: Environmental Resources Management, Drawing 1, Site Layout Map, Revised Cap for VOCs, for Colonial Terminals, Inc.,

L:\Loop Project Files\00_CAD FILES\07\Colonial Term_2013-2014_Monitoring 07-30114D\2015-10\05_Summary of VOCs in Surface Water.dwg



SW-01					
Date	PCE	TCE	c12DCE	h12DCE	VC
9/17/2010	<1	<1	<1	<1	<1
12/13/2013	<1.0	<1.0	<1.0	<1.0	<1.0
4/19/2014	<1.0	<1.0	<1.0	<1.0	<1.0

SW-01R					
Date	PCE	TCE	c12DCE	h12DCE	VC
10/28/2014	<1.0	<1.0	<1.0	<1.0	<1.0
4/22/2015	<1.0	<1.0	<1.0	<1.0	<1.0
10/6/2015	<1.0	<1.0	<1.0	<1.0	<1.0

SW-02					
Date	PCE	TCE	c12DCE	h12DCE	VC
9/17/2010	<1	<1	<1	<1	<1
12/13/2013	1.4	<1.0	<1.0	<1.0	<1.0
4/19/2014	<1.0	<1.0	<1.0	<1.0	<1.0

SW-02R					
Date	PCE	TCE	c12DCE	h12DCE	VC
10/28/2014	<1.0	<1.0	<1.0	<1.0	<1.0
4/22/2015	<1.0	<1.0	<1.0	<1.0	<1.0
10/6/2015	<1.0	<1.0	<1.0	<1.0	<1.0

SW-03					
Date	PCE	TCE	c12DCE	h12DCE	VC
9/17/2010	<1	<1	<1	<1	<1
12/13/2013	<1.0	<1.0	<1.0	<1.0	<1.0
4/19/2014	<1.0	<1.0	<1.0	<1.0	<1.0

SW-03R					
Date	PCE	TCE	c12DCE	h12DCE	VC
10/28/2014	1.1	<1.0	<1.0	<1.0	<1.0
4/22/2015	<1.0	<1.0	<1.0	<1.0	<1.0
10/6/2015	<1.0	<1.0	<1.0	<1.0	<1.0

Georgia ISWQS				
PCE	TCE	c12DCE	t12DCE	VC
3.3	30	N/A	N/A	2.4

LEGEND	
	EXISTING MONITORING WELL
	DEEP MONITORING WELL
	TEMPORARY MONITORING WELL
	SURFACE WATER SAMPLE
	PILOT TEST WELL

Notes:
PCE = Tetrachloroethylene
TCE = Trichloroethylene
c12DCE = cis-1,2-Dichloroethene
t12DEC = trans-1,2-Dichloroethene
VC = Vinyl Chloride

Bold and highlighted values indicate an exceedance of the chemical-specific Georgia ISWQS
All concentrations are in micrograms per liter (ug/L)
< Analyte was not detected at the laboratory reporting limit indicated



SUMMARY OF VOC RESULTS IN SURFACE WATER
COLONIAL TERMINALS, INC.
373 N. LATHROP AVENUE
SAVANNAH, GEORGIA

RAMBOLL ENVIRON **FIGURE 5**

APPENDIX A

Surface Water Sampling Logs

Water Sampling Log

Project Colonial Terminals Project No. 07-30114D Page 1 of 1
 Site Location Savannah, GA Date 10/06/15
 Site/Well No. SW-02A Weather overcast, 60°F
 Site Personnel Aaron Hottenstein

Well Data		Purge Data	
Well Diameter/ Material	<u>NA</u>	Purge Method	<u>NA</u>
Well Depth (ft BTOC)	<u>NA</u>	Pump Type Used	<u>peristaltic</u>
Water Level (ft BTOC)	<u>NA</u>	WQ Meter(s) Used	<u>Horiiba U-52</u>
Water Column in Well (ft)	<u>1.5</u>	Pump Intake Depth	<u>9" off btm</u>
Casing Volume Multiplier	<u>NA</u>	Static Pumping Level	<u>NA</u>
Gallons in Well	<u>NA</u>	Total Gallons Purged	<u>NA</u>
Well Condition	<u>NA</u>		

Time		Field Parameters	
Begin Purge	<u>1158</u>	Initial Color	<u>light green</u> → Final →
End Purge	<u>1203</u>	Odor	<u>organics</u> →
Sample Time (as on COC)	<u>1203</u>	Appearance	<u>no silt</u> →

Field Measurements (note units)

Time	Water Level (ft BTOC)	Vol. Purged (Gal)	Turbidity (NTU)	Temp. (°C)	Sp. Conductance (µS/cm)	pH (SU)	DO (mg/L)	ORP (mV)
<u>1159</u>	<u>—</u>	<u>—</u>	<u>12.89</u>	<u>21.63</u>	<u>11,900</u>	<u>6.92</u>	<u>5.12</u>	<u>201</u>
<u>1201</u>	<u>—</u>	<u>—</u>	<u>12.92</u>	<u>21.77</u>	<u>11,800</u>	<u>6.95</u>	<u>5.05</u>	<u>196</u>
<u>1203</u>	<u>—</u>	<u>—</u>	<u>13.01</u>	<u>21.78</u>	<u>11,800</u>	<u>6.97</u>	<u>5.06</u>	<u>196</u>
		<u>DTW: 11.7'</u>						
		<u>DTB: 13.2'</u>						

Laboratory Data

Laboratory Used Test America QA/QC Samples: NA
 Analysis Requested VOCs via 8260B

Gal./Ft.	Casing Volume Multipliers				Stabilization Criteria	
	¾" = 0.023 1" = 0.041	1¼" = 0.064 1½" = 0.092	2" = 0.163 3" = 0.367	4" = 0.653 6" = 1.469	pH = +/- 0.1 SU Specific Conductance = 5%	Turbidity = Stable or < 10 NTU DO = 0.2 mg/L or 10%

APPENDIX B

Laboratory Analytical Report

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-117484-1
Client Project/Site: Colonial Terminals

For:
Ramboll Environ US Corporation
1600 Parkwood Circle, Suite 310
Atlanta, Georgia 30339

Attn: Mr. Ryan Slakman



Authorized for release by:
10/13/2015 1:56:50 PM

Michele Kersey, Project Manager I
(912)354-7858
michele.kersey@testamericainc.com

LINKS

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Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Job ID: 680-117484-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Ramboll Environ US Corporation

Project: Colonial Terminals

Report Number: 680-117484-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 10/6/2015 2:19 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.4° C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples SW-01R 20151006 (680-117484-1), SW-02R 20151006 (680-117484-2), SW-03R 20151006 (680-117484-3), DUP-01 20151006 (680-117484-4) and Trip Blank 20151006 (680-117484-5) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/09/2015 and 10/12/2015.

Manual integration was performed on the following samples: (CCVIS 680-404973/5), (LCS 680-404973/6) and (LCSD 680-404973/7).

The following analyte recovered outside control limits for the LCS associated with analytical batch 680-404973: Carbon Tetrachloride. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-404973.

Manual integration was performed on the following samples: (CCVIS 680-405239/3), (LCS 680-405239/4) and (LCSD 680-405239/5).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-405239.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-117484-1	SW-01R 20151006	Water	10/06/15 11:20	10/06/15 14:19
680-117484-2	SW-02R 20151006	Water	10/06/15 12:03	10/06/15 14:19
680-117484-3	SW-03R 20151006	Water	10/06/15 12:32	10/06/15 14:19
680-117484-4	DUP-01 20151006	Water	10/06/15 00:00	10/06/15 14:19
680-117484-5	Trip Blank 20151006	Water	10/06/15 00:00	10/06/15 14:19

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Method Summary

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV

Protocol References:

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

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



Client Sample Results

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Client Sample ID: SW-01R 20151006

Lab Sample ID: 680-117484-1

Date Collected: 10/06/15 11:20

Matrix: Water

Date Received: 10/06/15 14:19

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10		ug/L			10/09/15 18:03	1
Benzene	1.0	U	1.0		ug/L			10/09/15 18:03	1
Bromochloromethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
Bromodichloromethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
Bromoform	1.0	U	1.0		ug/L			10/09/15 18:03	1
Bromomethane	5.0	U	5.0		ug/L			10/09/15 18:03	1
2-Butanone	10	U	10		ug/L			10/09/15 18:03	1
Carbon disulfide	2.0	U	2.0		ug/L			10/09/15 18:03	1
Carbon tetrachloride	1.0	U *	1.0		ug/L			10/09/15 18:03	1
Chlorobenzene	1.0	U	1.0		ug/L			10/09/15 18:03	1
Chloroethane	5.0	U	5.0		ug/L			10/09/15 18:03	1
Chloroform	1.0	U	1.0		ug/L			10/09/15 18:03	1
Chloromethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
cis-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 18:03	1
cis-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/09/15 18:03	1
Cyclohexane	1.0	U	1.0		ug/L			10/09/15 18:03	1
Dibromochloromethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0		ug/L			10/09/15 18:03	1
1,2-Dibromoethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 18:03	1
Dichlorodifluoromethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,1-Dichloroethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,2-Dichloroethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,1-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,2-Dichloropropane	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,4-Dioxane	100	U	100		ug/L			10/09/15 18:03	1
Ethylbenzene	1.0	U	1.0		ug/L			10/09/15 18:03	1
2-Hexanone	10	U	10		ug/L			10/09/15 18:03	1
Isopropylbenzene	1.0	U	1.0		ug/L			10/09/15 18:03	1
Methyl acetate	5.0	U	5.0		ug/L			10/09/15 18:03	1
Methylcyclohexane	1.0	U	1.0		ug/L			10/09/15 18:03	1
Methylene Chloride	5.0	U	5.0		ug/L			10/09/15 18:03	1
4-Methyl-2-pentanone	10	U	10		ug/L			10/09/15 18:03	1
Methyl tert-butyl ether	10	U	10		ug/L			10/09/15 18:03	1
m-Xylene & p-Xylene	1.0	U	1.0		ug/L			10/09/15 18:03	1
o-Xylene	1.0	U	1.0		ug/L			10/09/15 18:03	1
Styrene	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
Tetrachloroethene	1.0	U	1.0		ug/L			10/09/15 18:03	1
Toluene	1.0	U	1.0		ug/L			10/09/15 18:03	1
trans-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 18:03	1
trans-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,2,3-Trichlorobenzene	5.0	U	5.0		ug/L			10/09/15 18:03	1
1,2,4-Trichlorobenzene	5.0	U	5.0		ug/L			10/09/15 18:03	1
1,1,1-Trichloroethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,1,2-Trichloroethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
Trichloroethene	1.0	U	1.0		ug/L			10/09/15 18:03	1

TestAmerica Savannah

Client Sample Results

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Client Sample ID: SW-01R 20151006

Lab Sample ID: 680-117484-1

Date Collected: 10/06/15 11:20

Matrix: Water

Date Received: 10/06/15 14:19

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0		ug/L			10/09/15 18:03	1
Vinyl chloride	1.0	U	1.0		ug/L			10/09/15 18:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	109		70 - 130					10/09/15 18:03	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	96		70 - 130					10/09/15 18:03	1
<i>Dibromofluoromethane (Surr)</i>	102		70 - 130					10/09/15 18:03	1
<i>4-Bromofluorobenzene (Surr)</i>	99		70 - 130					10/09/15 18:03	1

Client Sample ID: SW-02R 20151006

Lab Sample ID: 680-117484-2

Date Collected: 10/06/15 12:03

Matrix: Water

Date Received: 10/06/15 14:19

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10		ug/L			10/09/15 18:26	1
Benzene	1.0	U	1.0		ug/L			10/09/15 18:26	1
Bromochloromethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
Bromodichloromethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
Bromoform	1.0	U	1.0		ug/L			10/09/15 18:26	1
Bromomethane	5.0	U	5.0		ug/L			10/09/15 18:26	1
2-Butanone	10	U	10		ug/L			10/09/15 18:26	1
Carbon disulfide	2.0	U	2.0		ug/L			10/09/15 18:26	1
Carbon tetrachloride	1.0	U *	1.0		ug/L			10/09/15 18:26	1
Chlorobenzene	1.0	U	1.0		ug/L			10/09/15 18:26	1
Chloroethane	5.0	U	5.0		ug/L			10/09/15 18:26	1
Chloroform	1.0	U	1.0		ug/L			10/09/15 18:26	1
Chloromethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
cis-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 18:26	1
cis-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/09/15 18:26	1
Cyclohexane	1.0	U	1.0		ug/L			10/09/15 18:26	1
Dibromochloromethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0		ug/L			10/09/15 18:26	1
1,2-Dibromoethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 18:26	1
Dichlorodifluoromethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,1-Dichloroethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,2-Dichloroethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,1-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,2-Dichloropropane	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,4-Dioxane	100	U	100		ug/L			10/09/15 18:26	1
Ethylbenzene	1.0	U	1.0		ug/L			10/09/15 18:26	1
2-Hexanone	10	U	10		ug/L			10/09/15 18:26	1
Isopropylbenzene	1.0	U	1.0		ug/L			10/09/15 18:26	1
Methyl acetate	5.0	U	5.0		ug/L			10/09/15 18:26	1
Methylcyclohexane	1.0	U	1.0		ug/L			10/09/15 18:26	1
Methylene Chloride	5.0	U	5.0		ug/L			10/09/15 18:26	1

TestAmerica Savannah

Client Sample Results

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Client Sample ID: SW-02R 20151006

Lab Sample ID: 680-117484-2

Date Collected: 10/06/15 12:03

Matrix: Water

Date Received: 10/06/15 14:19

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone	10	U	10		ug/L			10/09/15 18:26	1
Methyl tert-butyl ether	10	U	10		ug/L			10/09/15 18:26	1
m-Xylene & p-Xylene	1.0	U	1.0		ug/L			10/09/15 18:26	1
o-Xylene	1.0	U	1.0		ug/L			10/09/15 18:26	1
Styrene	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
Tetrachloroethene	1.0	U	1.0		ug/L			10/09/15 18:26	1
Toluene	1.0	U	1.0		ug/L			10/09/15 18:26	1
trans-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 18:26	1
trans-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,2,3-Trichlorobenzene	5.0	U	5.0		ug/L			10/09/15 18:26	1
1,2,4-Trichlorobenzene	5.0	U	5.0		ug/L			10/09/15 18:26	1
1,1,1-Trichloroethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,1,2-Trichloroethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
Trichloroethene	1.0	U	1.0		ug/L			10/09/15 18:26	1
Trichlorofluoromethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0		ug/L			10/09/15 18:26	1
Vinyl chloride	1.0	U	1.0		ug/L			10/09/15 18:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		70 - 130		10/09/15 18:26	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		10/09/15 18:26	1
Dibromofluoromethane (Surr)	98		70 - 130		10/09/15 18:26	1
4-Bromofluorobenzene (Surr)	98		70 - 130		10/09/15 18:26	1

Client Sample ID: SW-03R 20151006

Lab Sample ID: 680-117484-3

Date Collected: 10/06/15 12:32

Matrix: Water

Date Received: 10/06/15 14:19

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10		ug/L			10/09/15 18:49	1
Benzene	1.0	U	1.0		ug/L			10/09/15 18:49	1
Bromochloromethane	1.0	U	1.0		ug/L			10/09/15 18:49	1
Bromodichloromethane	1.0	U	1.0		ug/L			10/09/15 18:49	1
Bromoform	1.0	U	1.0		ug/L			10/09/15 18:49	1
Bromomethane	5.0	U	5.0		ug/L			10/09/15 18:49	1
2-Butanone	10	U	10		ug/L			10/09/15 18:49	1
Carbon disulfide	2.0	U	2.0		ug/L			10/09/15 18:49	1
Carbon tetrachloride	1.0	U *	1.0		ug/L			10/09/15 18:49	1
Chlorobenzene	1.0	U	1.0		ug/L			10/09/15 18:49	1
Chloroethane	5.0	U	5.0		ug/L			10/09/15 18:49	1
Chloroform	1.0	U	1.0		ug/L			10/09/15 18:49	1
Chloromethane	1.0	U	1.0		ug/L			10/09/15 18:49	1
cis-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 18:49	1
cis-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/09/15 18:49	1
Cyclohexane	1.0	U	1.0		ug/L			10/09/15 18:49	1
Dibromochloromethane	1.0	U	1.0		ug/L			10/09/15 18:49	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0		ug/L			10/09/15 18:49	1
1,2-Dibromoethane	1.0	U	1.0		ug/L			10/09/15 18:49	1

TestAmerica Savannah

Client Sample Results

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Client Sample ID: SW-03R 20151006

Lab Sample ID: 680-117484-3

Date Collected: 10/06/15 12:32

Matrix: Water

Date Received: 10/06/15 14:19

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 18:49	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 18:49	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 18:49	1
Dichlorodifluoromethane	1.0	U	1.0		ug/L			10/09/15 18:49	1
1,1-Dichloroethane	1.0	U	1.0		ug/L			10/09/15 18:49	1
1,2-Dichloroethane	1.0	U	1.0		ug/L			10/09/15 18:49	1
1,1-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 18:49	1
1,2-Dichloropropane	1.0	U	1.0		ug/L			10/09/15 18:49	1
1,4-Dioxane	100	U	100		ug/L			10/09/15 18:49	1
Ethylbenzene	1.0	U	1.0		ug/L			10/09/15 18:49	1
2-Hexanone	10	U	10		ug/L			10/09/15 18:49	1
Isopropylbenzene	1.0	U	1.0		ug/L			10/09/15 18:49	1
Methyl acetate	5.0	U	5.0		ug/L			10/09/15 18:49	1
Methylcyclohexane	1.0	U	1.0		ug/L			10/09/15 18:49	1
Methylene Chloride	5.0	U	5.0		ug/L			10/09/15 18:49	1
4-Methyl-2-pentanone	10	U	10		ug/L			10/09/15 18:49	1
Methyl tert-butyl ether	10	U	10		ug/L			10/09/15 18:49	1
m-Xylene & p-Xylene	1.0	U	1.0		ug/L			10/09/15 18:49	1
o-Xylene	1.0	U	1.0		ug/L			10/09/15 18:49	1
Styrene	1.0	U	1.0		ug/L			10/09/15 18:49	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0		ug/L			10/09/15 18:49	1
Tetrachloroethene	1.0	U	1.0		ug/L			10/09/15 18:49	1
Toluene	1.0	U	1.0		ug/L			10/09/15 18:49	1
trans-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 18:49	1
trans-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/09/15 18:49	1
1,2,3-Trichlorobenzene	5.0	U	5.0		ug/L			10/09/15 18:49	1
1,2,4-Trichlorobenzene	5.0	U	5.0		ug/L			10/09/15 18:49	1
1,1,1-Trichloroethane	1.0	U	1.0		ug/L			10/09/15 18:49	1
1,1,2-Trichloroethane	1.0	U	1.0		ug/L			10/09/15 18:49	1
Trichloroethene	1.0	U	1.0		ug/L			10/09/15 18:49	1
Trichlorofluoromethane	1.0	U	1.0		ug/L			10/09/15 18:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0		ug/L			10/09/15 18:49	1
Vinyl chloride	1.0	U	1.0		ug/L			10/09/15 18:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		70 - 130		10/09/15 18:49	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130		10/09/15 18:49	1
Dibromofluoromethane (Surr)	100		70 - 130		10/09/15 18:49	1
4-Bromofluorobenzene (Surr)	101		70 - 130		10/09/15 18:49	1

Client Sample ID: DUP-01 20151006

Lab Sample ID: 680-117484-4

Date Collected: 10/06/15 00:00

Matrix: Water

Date Received: 10/06/15 14:19

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10		ug/L			10/09/15 19:12	1
Benzene	1.0	U	1.0		ug/L			10/09/15 19:12	1
Bromochloromethane	1.0	U	1.0		ug/L			10/09/15 19:12	1
Bromodichloromethane	1.0	U	1.0		ug/L			10/09/15 19:12	1

TestAmerica Savannah

Client Sample Results

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Client Sample ID: DUP-01 20151006

Lab Sample ID: 680-117484-4

Date Collected: 10/06/15 00:00

Matrix: Water

Date Received: 10/06/15 14:19

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	1.0	U	1.0		ug/L			10/09/15 19:12	1
Bromomethane	5.0	U	5.0		ug/L			10/09/15 19:12	1
2-Butanone	10	U	10		ug/L			10/09/15 19:12	1
Carbon disulfide	2.0	U	2.0		ug/L			10/09/15 19:12	1
Carbon tetrachloride	1.0	U *	1.0		ug/L			10/09/15 19:12	1
Chlorobenzene	1.0	U	1.0		ug/L			10/09/15 19:12	1
Chloroethane	5.0	U	5.0		ug/L			10/09/15 19:12	1
Chloroform	1.0	U	1.0		ug/L			10/09/15 19:12	1
Chloromethane	1.0	U	1.0		ug/L			10/09/15 19:12	1
cis-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 19:12	1
cis-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/09/15 19:12	1
Cyclohexane	1.0	U	1.0		ug/L			10/09/15 19:12	1
Dibromochloromethane	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0		ug/L			10/09/15 19:12	1
1,2-Dibromoethane	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 19:12	1
Dichlorodifluoromethane	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,1-Dichloroethane	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,2-Dichloroethane	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,1-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,2-Dichloropropane	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,4-Dioxane	100	U	100		ug/L			10/09/15 19:12	1
Ethylbenzene	1.0	U	1.0		ug/L			10/09/15 19:12	1
2-Hexanone	10	U	10		ug/L			10/09/15 19:12	1
Isopropylbenzene	1.0	U	1.0		ug/L			10/09/15 19:12	1
Methyl acetate	5.0	U	5.0		ug/L			10/09/15 19:12	1
Methylcyclohexane	1.0	U	1.0		ug/L			10/09/15 19:12	1
Methylene Chloride	5.0	U	5.0		ug/L			10/09/15 19:12	1
4-Methyl-2-pentanone	10	U	10		ug/L			10/09/15 19:12	1
Methyl tert-butyl ether	10	U	10		ug/L			10/09/15 19:12	1
m-Xylene & p-Xylene	1.0	U	1.0		ug/L			10/09/15 19:12	1
o-Xylene	1.0	U	1.0		ug/L			10/09/15 19:12	1
Styrene	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0		ug/L			10/09/15 19:12	1
Tetrachloroethene	1.0	U	1.0		ug/L			10/09/15 19:12	1
Toluene	1.0	U	1.0		ug/L			10/09/15 19:12	1
trans-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 19:12	1
trans-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,2,3-Trichlorobenzene	5.0	U	5.0		ug/L			10/09/15 19:12	1
1,2,4-Trichlorobenzene	5.0	U	5.0		ug/L			10/09/15 19:12	1
1,1,1-Trichloroethane	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,1,2-Trichloroethane	1.0	U	1.0		ug/L			10/09/15 19:12	1
Trichloroethene	1.0	U	1.0		ug/L			10/09/15 19:12	1
Trichlorofluoromethane	1.0	U	1.0		ug/L			10/09/15 19:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0		ug/L			10/09/15 19:12	1
Vinyl chloride	1.0	U	1.0		ug/L			10/09/15 19:12	1

Client Sample Results

Client: Ramboll Environ US Corporation
 Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Client Sample ID: DUP-01 20151006

Lab Sample ID: 680-117484-4

Date Collected: 10/06/15 00:00

Matrix: Water

Date Received: 10/06/15 14:19

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		70 - 130		10/09/15 19:12	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		10/09/15 19:12	1
Dibromofluoromethane (Surr)	100		70 - 130		10/09/15 19:12	1
4-Bromofluorobenzene (Surr)	99		70 - 130		10/09/15 19:12	1

Client Sample ID: Trip Blank 20151006

Lab Sample ID: 680-117484-5

Date Collected: 10/06/15 00:00

Matrix: Water

Date Received: 10/06/15 14:19

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10		ug/L			10/12/15 16:47	1
Benzene	1.0	U	1.0		ug/L			10/12/15 16:47	1
Bromochloromethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
Bromodichloromethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
Bromoform	1.0	U	1.0		ug/L			10/12/15 16:47	1
Bromomethane	5.0	U	5.0		ug/L			10/12/15 16:47	1
2-Butanone	10	U	10		ug/L			10/12/15 16:47	1
Carbon disulfide	2.0	U	2.0		ug/L			10/12/15 16:47	1
Carbon tetrachloride	1.0	U	1.0		ug/L			10/12/15 16:47	1
Chlorobenzene	1.0	U	1.0		ug/L			10/12/15 16:47	1
Chloroethane	5.0	U	5.0		ug/L			10/12/15 16:47	1
Chloroform	1.0	U	1.0		ug/L			10/12/15 16:47	1
Chloromethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
cis-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/12/15 16:47	1
cis-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/12/15 16:47	1
Cyclohexane	1.0	U	1.0		ug/L			10/12/15 16:47	1
Dibromochloromethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0		ug/L			10/12/15 16:47	1
1,2-Dibromoethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			10/12/15 16:47	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			10/12/15 16:47	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			10/12/15 16:47	1
Dichlorodifluoromethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
1,1-Dichloroethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
1,2-Dichloroethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
1,1-Dichloroethene	1.0	U	1.0		ug/L			10/12/15 16:47	1
1,2-Dichloropropane	1.0	U	1.0		ug/L			10/12/15 16:47	1
1,4-Dioxane	100	U	100		ug/L			10/12/15 16:47	1
Ethylbenzene	1.0	U	1.0		ug/L			10/12/15 16:47	1
2-Hexanone	10	U	10		ug/L			10/12/15 16:47	1
Isopropylbenzene	1.0	U	1.0		ug/L			10/12/15 16:47	1
Methyl acetate	5.0	U	5.0		ug/L			10/12/15 16:47	1
Methylcyclohexane	1.0	U	1.0		ug/L			10/12/15 16:47	1
Methylene Chloride	5.0	U	5.0		ug/L			10/12/15 16:47	1
4-Methyl-2-pentanone	10	U	10		ug/L			10/12/15 16:47	1
Methyl tert-butyl ether	10	U	10		ug/L			10/12/15 16:47	1
m-Xylene & p-Xylene	1.0	U	1.0		ug/L			10/12/15 16:47	1
o-Xylene	1.0	U	1.0		ug/L			10/12/15 16:47	1
Styrene	1.0	U	1.0		ug/L			10/12/15 16:47	1

TestAmerica Savannah

Client Sample Results

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Client Sample ID: Trip Blank 20151006

Lab Sample ID: 680-117484-5

Date Collected: 10/06/15 00:00

Matrix: Water

Date Received: 10/06/15 14:19

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
Tetrachloroethene	1.0	U	1.0		ug/L			10/12/15 16:47	1
Toluene	1.0	U	1.0		ug/L			10/12/15 16:47	1
trans-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/12/15 16:47	1
trans-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/12/15 16:47	1
1,2,3-Trichlorobenzene	5.0	U	5.0		ug/L			10/12/15 16:47	1
1,2,4-Trichlorobenzene	5.0	U	5.0		ug/L			10/12/15 16:47	1
1,1,1-Trichloroethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
1,1,2-Trichloroethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
Trichloroethene	1.0	U	1.0		ug/L			10/12/15 16:47	1
Trichlorofluoromethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0		ug/L			10/12/15 16:47	1
Vinyl chloride	1.0	U	1.0		ug/L			10/12/15 16:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		70 - 130		10/12/15 16:47	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 130		10/12/15 16:47	1
Dibromofluoromethane (Surr)	99		70 - 130		10/12/15 16:47	1
4-Bromofluorobenzene (Surr)	100		70 - 130		10/12/15 16:47	1

QC Sample Results

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-404973/11

Matrix: Water

Analysis Batch: 404973

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10		ug/L			10/09/15 12:10	1
Benzene	1.0	U	1.0		ug/L			10/09/15 12:10	1
Bromochloromethane	1.0	U	1.0		ug/L			10/09/15 12:10	1
Bromodichloromethane	1.0	U	1.0		ug/L			10/09/15 12:10	1
Bromoform	1.0	U	1.0		ug/L			10/09/15 12:10	1
Bromomethane	5.0	U	5.0		ug/L			10/09/15 12:10	1
2-Butanone	10	U	10		ug/L			10/09/15 12:10	1
Carbon disulfide	2.0	U	2.0		ug/L			10/09/15 12:10	1
Carbon tetrachloride	1.0	U	1.0		ug/L			10/09/15 12:10	1
Chlorobenzene	1.0	U	1.0		ug/L			10/09/15 12:10	1
Chloroethane	5.0	U	5.0		ug/L			10/09/15 12:10	1
Chloroform	1.0	U	1.0		ug/L			10/09/15 12:10	1
Chloromethane	1.0	U	1.0		ug/L			10/09/15 12:10	1
cis-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 12:10	1
cis-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/09/15 12:10	1
Cyclohexane	1.0	U	1.0		ug/L			10/09/15 12:10	1
Dibromochloromethane	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0		ug/L			10/09/15 12:10	1
1,2-Dibromoethane	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			10/09/15 12:10	1
Dichlorodifluoromethane	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,1-Dichloroethane	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,2-Dichloroethane	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,1-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,2-Dichloropropane	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,4-Dioxane	100	U	100		ug/L			10/09/15 12:10	1
Ethylbenzene	1.0	U	1.0		ug/L			10/09/15 12:10	1
2-Hexanone	10	U	10		ug/L			10/09/15 12:10	1
Isopropylbenzene	1.0	U	1.0		ug/L			10/09/15 12:10	1
Methyl acetate	5.0	U	5.0		ug/L			10/09/15 12:10	1
Methylcyclohexane	1.0	U	1.0		ug/L			10/09/15 12:10	1
Methylene Chloride	5.0	U	5.0		ug/L			10/09/15 12:10	1
4-Methyl-2-pentanone	10	U	10		ug/L			10/09/15 12:10	1
Methyl tert-butyl ether	10	U	10		ug/L			10/09/15 12:10	1
m-Xylene & p-Xylene	1.0	U	1.0		ug/L			10/09/15 12:10	1
o-Xylene	1.0	U	1.0		ug/L			10/09/15 12:10	1
Styrene	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0		ug/L			10/09/15 12:10	1
Tetrachloroethene	1.0	U	1.0		ug/L			10/09/15 12:10	1
Toluene	1.0	U	1.0		ug/L			10/09/15 12:10	1
trans-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/09/15 12:10	1
trans-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,2,3-Trichlorobenzene	5.0	U	5.0		ug/L			10/09/15 12:10	1
1,2,4-Trichlorobenzene	5.0	U	5.0		ug/L			10/09/15 12:10	1
1,1,1-Trichloroethane	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,1,2-Trichloroethane	1.0	U	1.0		ug/L			10/09/15 12:10	1

TestAmerica Savannah

QC Sample Results

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-404973/11
Matrix: Water
Analysis Batch: 404973

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0		ug/L			10/09/15 12:10	1
Trichlorofluoromethane	1.0	U	1.0		ug/L			10/09/15 12:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0		ug/L			10/09/15 12:10	1
Vinyl chloride	1.0	U	1.0		ug/L			10/09/15 12:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		70 - 130		10/09/15 12:10	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130		10/09/15 12:10	1
Dibromofluoromethane (Surr)	102		70 - 130		10/09/15 12:10	1
4-Bromofluorobenzene (Surr)	100		70 - 130		10/09/15 12:10	1

Lab Sample ID: LCS 680-404973/6
Matrix: Water
Analysis Batch: 404973

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	250	222		ug/L		89	60 - 154
Benzene	50.0	47.4		ug/L		95	73 - 131
Bromochloromethane	50.0	46.5		ug/L		93	77 - 122
Bromodichloromethane	50.0	47.7		ug/L		95	77 - 129
Bromoform	50.0	34.5		ug/L		69	69 - 135
Bromomethane	50.0	52.5		ug/L		105	20 - 180
2-Butanone	250	223		ug/L		89	75 - 133
Carbon disulfide	50.0	42.1		ug/L		84	73 - 127
Carbon tetrachloride	50.0	35.1	*	ug/L		70	75 - 130
Chlorobenzene	50.0	49.5		ug/L		99	80 - 120
Chloroethane	50.0	50.9		ug/L		102	50 - 151
Chloroform	50.0	46.8		ug/L		94	79 - 122
Chloromethane	50.0	40.0		ug/L		80	63 - 126
cis-1,2-Dichloroethene	50.0	45.8		ug/L		92	80 - 122
cis-1,3-Dichloropropene	50.0	46.6		ug/L		93	80 - 133
Cyclohexane	50.0	43.7		ug/L		87	69 - 130
Dibromochloromethane	50.0	40.2		ug/L		80	71 - 136
1,2-Dibromo-3-Chloropropane	50.0	31.8		ug/L		64	59 - 141
1,2-Dibromoethane	50.0	48.2		ug/L		96	77 - 131
1,2-Dichlorobenzene	50.0	46.0		ug/L		92	80 - 120
1,3-Dichlorobenzene	50.0	45.9		ug/L		92	80 - 120
1,4-Dichlorobenzene	50.0	46.2		ug/L		92	80 - 120
Dichlorodifluoromethane	50.0	39.3		ug/L		79	51 - 140
1,1-Dichloroethane	50.0	44.8		ug/L		90	80 - 120
1,2-Dichloroethane	50.0	45.6		ug/L		91	75 - 130
1,1-Dichloroethene	50.0	37.7		ug/L		75	74 - 125
1,2-Dichloropropane	50.0	46.7		ug/L		93	80 - 123
1,4-Dioxane	1000	768		ug/L		77	40 - 187
Ethylbenzene	50.0	48.2		ug/L		96	80 - 120
2-Hexanone	250	207		ug/L		83	70 - 141
Isopropylbenzene	50.0	47.7		ug/L		95	80 - 120
Methyl acetate	250	201		ug/L		80	66 - 134

TestAmerica Savannah

QC Sample Results

Client: Ramboll Environ US Corporation
 Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-404973/6
Matrix: Water
Analysis Batch: 404973

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylcyclohexane	50.0	45.1		ug/L		90	75 - 127
Methylene Chloride	50.0	47.6		ug/L		95	76 - 129
4-Methyl-2-pentanone	250	213		ug/L		85	75 - 135
Methyl tert-butyl ether	50.0	45.9		ug/L		92	74 - 135
m-Xylene & p-Xylene	50.0	47.8		ug/L		96	80 - 120
o-Xylene	50.0	48.2		ug/L		96	80 - 120
Styrene	50.0	49.2		ug/L		98	80 - 122
1,1,1,2-Tetrachloroethane	50.0	45.8		ug/L		92	72 - 128
Tetrachloroethene	50.0	42.3		ug/L		85	77 - 123
Toluene	50.0	48.4		ug/L		97	80 - 122
trans-1,2-Dichloroethene	50.0	46.3		ug/L		93	78 - 123
trans-1,3-Dichloropropene	50.0	46.0		ug/L		92	74 - 140
1,2,3-Trichlorobenzene	50.0	37.4		ug/L		75	61 - 151
1,2,4-Trichlorobenzene	50.0	39.5		ug/L		79	77 - 131
1,1,1-Trichloroethane	50.0	43.9		ug/L		88	74 - 128
1,1,2-Trichloroethane	50.0	47.0		ug/L		94	79 - 125
Trichloroethene	50.0	48.3		ug/L		97	80 - 123
Trichlorofluoromethane	50.0	40.0		ug/L		80	58 - 145
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	45.1		ug/L		90	65 - 131
Vinyl chloride	50.0	44.0		ug/L		88	68 - 132

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
Toluene-d8 (Surr)	97		70 - 130
1,2-Dichloroethane-d4 (Surr)	91		70 - 130
Dibromofluoromethane (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	84		70 - 130

Lab Sample ID: LCSD 680-404973/7
Matrix: Water
Analysis Batch: 404973

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	250	243		ug/L		97	60 - 154	9	40
Benzene	50.0	51.9		ug/L		104	73 - 131	9	30
Bromochloromethane	50.0	49.8		ug/L		100	77 - 122	7	20
Bromodichloromethane	50.0	51.3		ug/L		103	77 - 129	7	20
Bromoform	50.0	38.7		ug/L		77	69 - 135	11	20
Bromomethane	50.0	62.4		ug/L		125	20 - 180	17	40
2-Butanone	250	242		ug/L		97	75 - 133	8	30
Carbon disulfide	50.0	47.8		ug/L		96	73 - 127	13	20
Carbon tetrachloride	50.0	41.3		ug/L		83	75 - 130	16	20
Chlorobenzene	50.0	54.5		ug/L		109	80 - 120	10	20
Chloroethane	50.0	56.7		ug/L		113	50 - 151	11	30
Chloroform	50.0	51.2		ug/L		102	79 - 122	9	20
Chloromethane	50.0	42.5		ug/L		85	63 - 126	6	30
cis-1,2-Dichloroethene	50.0	50.3		ug/L		101	80 - 122	9	20
cis-1,3-Dichloropropene	50.0	51.2		ug/L		102	80 - 133	9	20

TestAmerica Savannah

QC Sample Results

Client: Ramboll Environ US Corporation
 Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-404973/7

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 404973

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyclohexane	50.0	52.2		ug/L		104	69 - 130	18	30
Dibromochloromethane	50.0	44.1		ug/L		88	71 - 136	9	20
1,2-Dibromo-3-Chloropropane	50.0	36.1		ug/L		72	59 - 141	13	30
1,2-Dibromoethane	50.0	51.3		ug/L		103	77 - 131	6	30
1,2-Dichlorobenzene	50.0	50.9		ug/L		102	80 - 120	10	20
1,3-Dichlorobenzene	50.0	51.3		ug/L		103	80 - 120	11	20
1,4-Dichlorobenzene	50.0	51.6		ug/L		103	80 - 120	11	20
Dichlorodifluoromethane	50.0	47.5		ug/L		95	51 - 140	19	40
1,1-Dichloroethane	50.0	50.3		ug/L		101	80 - 120	11	20
1,2-Dichloroethane	50.0	48.5		ug/L		97	75 - 130	6	20
1,1-Dichloroethene	50.0	45.8		ug/L		92	74 - 125	19	20
1,2-Dichloropropane	50.0	50.4		ug/L		101	80 - 123	8	20
1,4-Dioxane	1000	845		ug/L		85	40 - 187	10	50
Ethylbenzene	50.0	54.2		ug/L		108	80 - 120	12	20
2-Hexanone	250	225		ug/L		90	70 - 141	8	40
Isopropylbenzene	50.0	54.3		ug/L		109	80 - 120	13	20
Methyl acetate	250	220		ug/L		88	66 - 134	9	30
Methylcyclohexane	50.0	55.2		ug/L		110	75 - 127	20	30
Methylene Chloride	50.0	51.3		ug/L		103	76 - 129	8	20
4-Methyl-2-pentanone	250	231		ug/L		92	75 - 135	8	30
Methyl tert-butyl ether	50.0	49.2		ug/L		98	74 - 135	7	20
m-Xylene & p-Xylene	50.0	53.6		ug/L		107	80 - 120	11	20
o-Xylene	50.0	53.6		ug/L		107	80 - 120	11	20
Styrene	50.0	54.3		ug/L		109	80 - 122	10	20
1,1,2,2-Tetrachloroethane	50.0	51.1		ug/L		102	72 - 128	11	20
Tetrachloroethene	50.0	49.1		ug/L		98	77 - 123	15	20
Toluene	50.0	54.1		ug/L		108	80 - 122	11	20
trans-1,2-Dichloroethene	50.0	51.8		ug/L		104	78 - 123	11	20
trans-1,3-Dichloropropene	50.0	50.9		ug/L		102	74 - 140	10	20
1,2,3-Trichlorobenzene	50.0	41.1		ug/L		82	61 - 151	10	40
1,2,4-Trichlorobenzene	50.0	44.9		ug/L		90	77 - 131	13	20
1,1,1-Trichloroethane	50.0	50.3		ug/L		101	74 - 128	13	20
1,1,2-Trichloroethane	50.0	50.7		ug/L		101	79 - 125	7	20
Trichloroethene	50.0	52.9		ug/L		106	80 - 123	9	20
Trichlorofluoromethane	50.0	40.3		ug/L		81	58 - 145	1	30
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	54.5		ug/L		109	65 - 131	19	30
Vinyl chloride	50.0	51.5		ug/L		103	68 - 132	16	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
Toluene-d8 (Surr)	108		70 - 130
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
Dibromofluoromethane (Surr)	107		70 - 130
4-Bromofluorobenzene (Surr)	92		70 - 130

QC Sample Results

Client: Ramboll Environ US Corporation
 Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-405239/9

Matrix: Water

Analysis Batch: 405239

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10		ug/L			10/12/15 10:01	1
Benzene	1.0	U	1.0		ug/L			10/12/15 10:01	1
Bromochloromethane	1.0	U	1.0		ug/L			10/12/15 10:01	1
Bromodichloromethane	1.0	U	1.0		ug/L			10/12/15 10:01	1
Bromoform	1.0	U	1.0		ug/L			10/12/15 10:01	1
Bromomethane	5.0	U	5.0		ug/L			10/12/15 10:01	1
2-Butanone	10	U	10		ug/L			10/12/15 10:01	1
Carbon disulfide	2.0	U	2.0		ug/L			10/12/15 10:01	1
Carbon tetrachloride	1.0	U	1.0		ug/L			10/12/15 10:01	1
Chlorobenzene	1.0	U	1.0		ug/L			10/12/15 10:01	1
Chloroethane	5.0	U	5.0		ug/L			10/12/15 10:01	1
Chloroform	1.0	U	1.0		ug/L			10/12/15 10:01	1
Chloromethane	1.0	U	1.0		ug/L			10/12/15 10:01	1
cis-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/12/15 10:01	1
cis-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/12/15 10:01	1
Cyclohexane	1.0	U	1.0		ug/L			10/12/15 10:01	1
Dibromochloromethane	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0		ug/L			10/12/15 10:01	1
1,2-Dibromoethane	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			10/12/15 10:01	1
Dichlorodifluoromethane	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,1-Dichloroethane	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,2-Dichloroethane	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,1-Dichloroethene	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,2-Dichloropropane	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,4-Dioxane	100	U	100		ug/L			10/12/15 10:01	1
Ethylbenzene	1.0	U	1.0		ug/L			10/12/15 10:01	1
2-Hexanone	10	U	10		ug/L			10/12/15 10:01	1
Isopropylbenzene	1.0	U	1.0		ug/L			10/12/15 10:01	1
Methyl acetate	5.0	U	5.0		ug/L			10/12/15 10:01	1
Methylcyclohexane	1.0	U	1.0		ug/L			10/12/15 10:01	1
Methylene Chloride	5.0	U	5.0		ug/L			10/12/15 10:01	1
4-Methyl-2-pentanone	10	U	10		ug/L			10/12/15 10:01	1
Methyl tert-butyl ether	10	U	10		ug/L			10/12/15 10:01	1
m-Xylene & p-Xylene	1.0	U	1.0		ug/L			10/12/15 10:01	1
o-Xylene	1.0	U	1.0		ug/L			10/12/15 10:01	1
Styrene	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0		ug/L			10/12/15 10:01	1
Tetrachloroethene	1.0	U	1.0		ug/L			10/12/15 10:01	1
Toluene	1.0	U	1.0		ug/L			10/12/15 10:01	1
trans-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/12/15 10:01	1
trans-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,2,3-Trichlorobenzene	5.0	U	5.0		ug/L			10/12/15 10:01	1
1,2,4-Trichlorobenzene	5.0	U	5.0		ug/L			10/12/15 10:01	1
1,1,1-Trichloroethane	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,1,2-Trichloroethane	1.0	U	1.0		ug/L			10/12/15 10:01	1

TestAmerica Savannah

QC Sample Results

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-405239/9

Matrix: Water

Analysis Batch: 405239

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Trichloroethene	1.0	U	1.0		ug/L			10/12/15 10:01	1
Trichlorofluoromethane	1.0	U	1.0		ug/L			10/12/15 10:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0		ug/L			10/12/15 10:01	1
Vinyl chloride	1.0	U	1.0		ug/L			10/12/15 10:01	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Toluene-d8 (Surr)	110		70 - 130		10/12/15 10:01	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		10/12/15 10:01	1
Dibromofluoromethane (Surr)	100		70 - 130		10/12/15 10:01	1
4-Bromofluorobenzene (Surr)	98		70 - 130		10/12/15 10:01	1

Lab Sample ID: LCS 680-405239/4

Matrix: Water

Analysis Batch: 405239

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Acetone	250	227		ug/L		91	60 - 154
Benzene	50.0	52.9		ug/L		106	73 - 131
Bromochloromethane	50.0	49.8		ug/L		100	77 - 122
Bromodichloromethane	50.0	52.5		ug/L		105	77 - 129
Bromoform	50.0	40.1		ug/L		80	69 - 135
Bromomethane	50.0	54.9		ug/L		110	20 - 180
2-Butanone	250	234		ug/L		94	75 - 133
Carbon disulfide	50.0	50.0		ug/L		100	73 - 127
Carbon tetrachloride	50.0	42.3		ug/L		85	75 - 130
Chlorobenzene	50.0	55.1		ug/L		110	80 - 120
Chloroethane	50.0	62.6		ug/L		125	50 - 151
Chloroform	50.0	53.0		ug/L		106	79 - 122
Chloromethane	50.0	52.4		ug/L		105	63 - 126
cis-1,2-Dichloroethene	50.0	51.7		ug/L		103	80 - 122
cis-1,3-Dichloropropene	50.0	52.7		ug/L		105	80 - 133
Cyclohexane	50.0	53.7		ug/L		107	69 - 130
Dibromochloromethane	50.0	43.8		ug/L		88	71 - 136
1,2-Dibromo-3-Chloropropane	50.0	34.7		ug/L		69	59 - 141
1,2-Dibromoethane	50.0	53.6		ug/L		107	77 - 131
1,2-Dichlorobenzene	50.0	50.4		ug/L		101	80 - 120
1,3-Dichlorobenzene	50.0	50.8		ug/L		102	80 - 120
1,4-Dichlorobenzene	50.0	51.4		ug/L		103	80 - 120
Dichlorodifluoromethane	50.0	53.0		ug/L		106	51 - 140
1,1-Dichloroethane	50.0	49.6		ug/L		99	80 - 120
1,2-Dichloroethane	50.0	49.0		ug/L		98	75 - 130
1,1-Dichloroethene	50.0	45.1		ug/L		90	74 - 125
1,2-Dichloropropane	50.0	52.8		ug/L		106	80 - 123
1,4-Dioxane	1000	814		ug/L		81	40 - 187
Ethylbenzene	50.0	54.6		ug/L		109	80 - 120
2-Hexanone	250	218		ug/L		87	70 - 141
Isopropylbenzene	50.0	55.8		ug/L		112	80 - 120
Methyl acetate	250	204		ug/L		82	66 - 134

TestAmerica Savannah

QC Sample Results

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-405239/4

Matrix: Water

Analysis Batch: 405239

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylcyclohexane	50.0	56.5		ug/L		113	75 - 127
Methylene Chloride	50.0	53.0		ug/L		106	76 - 129
4-Methyl-2-pentanone	250	225		ug/L		90	75 - 135
Methyl tert-butyl ether	50.0	49.3		ug/L		99	74 - 135
m-Xylene & p-Xylene	50.0	54.2		ug/L		108	80 - 120
o-Xylene	50.0	53.2		ug/L		106	80 - 120
Styrene	50.0	54.8		ug/L		110	80 - 122
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/L		100	72 - 128
Tetrachloroethene	50.0	50.0		ug/L		100	77 - 123
Toluene	50.0	55.2		ug/L		110	80 - 122
trans-1,2-Dichloroethene	50.0	54.8		ug/L		110	78 - 123
trans-1,3-Dichloropropene	50.0	49.1		ug/L		98	74 - 140
1,2,3-Trichlorobenzene	50.0	38.6		ug/L		77	61 - 151
1,2,4-Trichlorobenzene	50.0	44.0		ug/L		88	77 - 131
1,1,1-Trichloroethane	50.0	50.8		ug/L		102	74 - 128
1,1,2-Trichloroethane	50.0	50.7		ug/L		101	79 - 125
Trichloroethene	50.0	55.7		ug/L		111	80 - 123
Trichlorofluoromethane	50.0	51.1		ug/L		102	58 - 145
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	54.9		ug/L		110	65 - 131
Vinyl chloride	50.0	55.1		ug/L		110	68 - 132

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	111		70 - 130
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
Dibromofluoromethane (Surr)	111		70 - 130
4-Bromofluorobenzene (Surr)	92		70 - 130

Lab Sample ID: LCSD 680-405239/5

Matrix: Water

Analysis Batch: 405239

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	250	245		ug/L		98	60 - 154	8	40
Benzene	50.0	53.2		ug/L		106	73 - 131	1	30
Bromochloromethane	50.0	51.3		ug/L		103	77 - 122	3	20
Bromodichloromethane	50.0	53.3		ug/L		107	77 - 129	2	20
Bromoform	50.0	40.2		ug/L		80	69 - 135	0	20
Bromomethane	50.0	62.1		ug/L		124	20 - 180	12	40
2-Butanone	250	236		ug/L		94	75 - 133	1	30
Carbon disulfide	50.0	49.3		ug/L		99	73 - 127	1	20
Carbon tetrachloride	50.0	43.6		ug/L		87	75 - 130	3	20
Chlorobenzene	50.0	54.3		ug/L		109	80 - 120	1	20
Chloroethane	50.0	63.0		ug/L		126	50 - 151	1	30
Chloroform	50.0	53.2		ug/L		106	79 - 122	0	20
Chloromethane	50.0	52.6		ug/L		105	63 - 126	0	30
cis-1,2-Dichloroethene	50.0	51.8		ug/L		104	80 - 122	0	20
cis-1,3-Dichloropropene	50.0	52.6		ug/L		105	80 - 133	0	20

TestAmerica Savannah

QC Sample Results

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-405239/5

Matrix: Water

Analysis Batch: 405239

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyclohexane	50.0	55.0		ug/L		110	69 - 130	2	30
Dibromochloromethane	50.0	43.5		ug/L		87	71 - 136	1	20
1,2-Dibromo-3-Chloropropane	50.0	35.2		ug/L		70	59 - 141	1	30
1,2-Dibromoethane	50.0	53.1		ug/L		106	77 - 131	1	30
1,2-Dichlorobenzene	50.0	51.0		ug/L		102	80 - 120	1	20
1,3-Dichlorobenzene	50.0	50.9		ug/L		102	80 - 120	0	20
1,4-Dichlorobenzene	50.0	51.2		ug/L		102	80 - 120	0	20
Dichlorodifluoromethane	50.0	54.2		ug/L		108	51 - 140	2	40
1,1-Dichloroethane	50.0	49.8		ug/L		100	80 - 120	1	20
1,2-Dichloroethane	50.0	49.0		ug/L		98	75 - 130	0	20
1,1-Dichloroethene	50.0	46.5		ug/L		93	74 - 125	3	20
1,2-Dichloropropane	50.0	52.4		ug/L		105	80 - 123	1	20
1,4-Dioxane	1000	787		ug/L		79	40 - 187	3	50
Ethylbenzene	50.0	54.0		ug/L		108	80 - 120	1	20
2-Hexanone	250	222		ug/L		89	70 - 141	2	40
Isopropylbenzene	50.0	55.2		ug/L		110	80 - 120	1	20
Methyl acetate	250	208		ug/L		83	66 - 134	2	30
Methylcyclohexane	50.0	56.2		ug/L		112	75 - 127	0	30
Methylene Chloride	50.0	53.2		ug/L		106	76 - 129	1	20
4-Methyl-2-pentanone	250	229		ug/L		91	75 - 135	1	30
Methyl tert-butyl ether	50.0	49.9		ug/L		100	74 - 135	1	20
m-Xylene & p-Xylene	50.0	53.7		ug/L		107	80 - 120	1	20
o-Xylene	50.0	52.5		ug/L		105	80 - 120	1	20
Styrene	50.0	54.2		ug/L		108	80 - 122	1	20
1,1,2,2-Tetrachloroethane	50.0	49.7		ug/L		99	72 - 128	0	20
Tetrachloroethene	50.0	50.2		ug/L		100	77 - 123	0	20
Toluene	50.0	55.6		ug/L		111	80 - 122	1	20
trans-1,2-Dichloroethene	50.0	54.9		ug/L		110	78 - 123	0	20
trans-1,3-Dichloropropene	50.0	49.9		ug/L		100	74 - 140	2	20
1,2,3-Trichlorobenzene	50.0	39.4		ug/L		79	61 - 151	2	40
1,2,4-Trichlorobenzene	50.0	44.8		ug/L		90	77 - 131	2	20
1,1,1-Trichloroethane	50.0	51.2		ug/L		102	74 - 128	1	20
1,1,2-Trichloroethane	50.0	51.0		ug/L		102	79 - 125	1	20
Trichloroethene	50.0	55.0		ug/L		110	80 - 123	1	20
Trichlorofluoromethane	50.0	50.0		ug/L		100	58 - 145	2	30
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	55.7		ug/L		111	65 - 131	2	30
Vinyl chloride	50.0	57.3		ug/L		115	68 - 132	4	30

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	111		70 - 130
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	111		70 - 130
4-Bromofluorobenzene (Surr)	93		70 - 130

QC Association Summary

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

GC/MS VOA

Analysis Batch: 404973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117484-1	SW-01R 20151006	Total/NA	Water	8260B	
680-117484-2	SW-02R 20151006	Total/NA	Water	8260B	
680-117484-3	SW-03R 20151006	Total/NA	Water	8260B	
680-117484-4	DUP-01 20151006	Total/NA	Water	8260B	
LCS 680-404973/6	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-404973/7	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-404973/11	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 405239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117484-5	Trip Blank 20151006	Total/NA	Water	8260B	
LCS 680-405239/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-405239/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-405239/9	Method Blank	Total/NA	Water	8260B	

Lab Chronicle

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Client Sample ID: SW-01R 20151006

Date Collected: 10/06/15 11:20

Date Received: 10/06/15 14:19

Lab Sample ID: 680-117484-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	404973	10/09/15 18:03	CEJ	TAL SAV
Instrument ID: CMSAC										

Client Sample ID: SW-02R 20151006

Date Collected: 10/06/15 12:03

Date Received: 10/06/15 14:19

Lab Sample ID: 680-117484-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	404973	10/09/15 18:26	CEJ	TAL SAV
Instrument ID: CMSAC										

Client Sample ID: SW-03R 20151006

Date Collected: 10/06/15 12:32

Date Received: 10/06/15 14:19

Lab Sample ID: 680-117484-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	404973	10/09/15 18:49	CEJ	TAL SAV
Instrument ID: CMSAC										

Client Sample ID: DUP-01 20151006

Date Collected: 10/06/15 00:00

Date Received: 10/06/15 14:19

Lab Sample ID: 680-117484-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	404973	10/09/15 19:12	CEJ	TAL SAV
Instrument ID: CMSAC										

Client Sample ID: Trip Blank 20151006

Date Collected: 10/06/15 00:00

Date Received: 10/06/15 14:19

Lab Sample ID: 680-117484-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	405239	10/12/15 16:47	CEJ	TAL SAV
Instrument ID: CMSAC										

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 99829

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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

TestAmerica Savannah
 5102 LaRoche Avenue
 Savannah, GA 31404

Alternate Laboratory Name/Location

Phone:
 Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)	MATRIX TYPE	REQUIRED ANALYSIS	PAGE	OF		
Catalina Terminals	07-30114	GA	NONAQUEOUS LIQUID (OIL SOLVENT, ...)		1	1		
Michele Kersey			AIR					
Ryan Slakman	770-874-5010	770-874-5011	SOLID OR SEMISOLID					
Ramboll Environ	rslakman@environcorp.com		AQUEOUS (WATER)					
1900 Parkwood Circle, Suite 310, Atlanta, GA			COMPOSITE (C) OR GRAB (G) INDICATE					
COMPANY CONTRACTING THIS WORK (if applicable)	30339							
SAMPLE DATE	TIME	SAMPLE IDENTIFICATION	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
10/6/15	1120	SW-01A 20151006	[Signature]	10/06/15	1419	[Signature]		
	1203	SW-02A 20151006	[Signature]			[Signature]		
	1232	SW-03A 20151006	[Signature]			[Signature]		
	-	DUP-01 20151006	[Signature]			[Signature]		
	-	TRIP BLANK 20151006	[Signature]			[Signature]		
 680-117484 Chain of Custody								
RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS			
[Signature]	10/06/15	1419		680-117484	50/54			

Login Sample Receipt Checklist

Client: Ramboll Environ US Corporation

Job Number: 680-117484-1

Login Number: 117484

List Number: 1

Creator: Kirkland, Keyon A

List Source: TestAmerica Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: Ramboll Environ US Corporation
Project/Site: Colonial Terminals

TestAmerica Job ID: 680-117484-1

Laboratory: TestAmerica Savannah

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E87052	06-30-16

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