

# STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

July 3, 2012

The 205 Group
Mr. Bill Thomas
PO Box 412
Cathlamet, Washington 98612

Re:

Underground Storage Tank Decommissioning, Contaminated Soil Excavation, and

Confirmation Soil and Groundwater Sampling Report, L&C Deli, FS# 1035

Dear Mr. Thomas:

The Washington State Department of Ecology (Ecology) works with The 205 Group and Vancouver Oil Company on the L&C Deli Site under Enforcement Order No. DE92TC-S112. Ecology has reviewed the report entitled "Underground Storage Tank Decommissioning, Contaminated Soil Excavation, and Confirmation Soil and Groundwater Sampling" for the Former L&C Deli/Vista Mart Site located in Vancouver, Washington. This work by BB&A Environmental included the removal of the canopy, fuel dispensers, fuel island, underground, storage tanks, and associated petroleum contaminated soil.

Confirmation groundwater sampling after treatment with activated carbon and petrophyllic bacteria, along with three rounds of groundwater monitoring at wells MW-3 and MW-5a, indicates that groundwater for the entire Site is now in compliance with the Model Toxics Control Act (MTCA), both on the property as well as off-property. Ecology does not require additional groundwater investigation or cleanup.

BB&A performed confirmational soil sampling following the recent excavation. One confirmation soil sample indicates an exceedance of diesel remains in the excavation sidewall at location SE (Figure 6). The diesel soil concentration was 780 mg/Kg and the 1991 MTCA soil cleanup level was 200 mg/Kg. This location of diesel is now part of the property recently purchased by the State Department of Transportation (WSDOT) and will become protective of human health and the environment when WSDOT implements institutional controls. WSDOT collected soil samples at this Site in March of 2011. One sample location, PP-9-9, detected lube oil at 405 mg/Kg but was not excavated as part of the recent underground storage tank work. The 1991 cleanup level for lube oil was 200 mg/Kg.

You are required to take appropriate steps to ensure protection of human health and the environment at this one location (PP-9-9). You can either:

- collect soil samples at this location at the same depth and location as PP-9-9 to see if MTCA cleanup levels are still being exceeded for lube oil.
- excavate the soil at this location and take confirmation soil samples to demonstrate that the soil is in compliance with the MTCA.
- record an environmental covenant to protect human health on your property.

Please consider these three alternatives and let me know how you are going to proceed. I can be reached at 360-407-7115.

Sincerely,

Guy Barrett, LHG

Site Manager

Southwest Regional Office

May Barrell

Toxics Cleanup Program

GB/ksc:LC Deli UST letter

By Certified Mail: (7009 2820 0001 7161 0930)

cc: Stephen Omo, BB&A Environmental

Mr. Bruce Holmstrom, Vancouver Oil Company, Inc.

James DeMay, Ecology



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## RECEIVED

JUN 18 2012

WA State Department of Ecology (SWRO)

June 14, 2012

Guy Barrett, LHG Southwest Regional Office, Toxics Cleanup Program P.O. Box 47775, Olympia, WA 98504-7775

RE: Underground Storage Tank Decommissioning, Contaminated Soil Excavation, and

Confirmation Soil and Groundwater Sampling

FOR: Former L&C Deli / Vista Mart

Ecology Facility ID's 1035 and 7176

13908 and 13912 NE 20th Avenue; Vancouver, WA 98686

#### Dear Mr. Barrett:

This letter report documents activities to decommission by removal three (3) underground storage tanks (USTs) at the *subject property*, identified as the former L&C Deli / Vista Mart, located at 13908 and 13912 NE 20th Avenue, in Vancouver, Washington (See **Attachment A** for a Site Location Map and all Site Figures). Additional activities that were conducted at this time included:

- Removal of the canopy, fuel dispensers and fuel island;
- Removal of approximately 220 tons of petroleum-contaminated soil (PCS) and offsite disposal at an authorized landfill;
- Treatment of groundwater within the excavation with activated carbon and petrophyllic bacteria;
- Confirmation sampling and laboratory analysis of soil from the limits of the excavation;
- Confirmation sampling and laboratory analysis of groundwater within the limits of the excavation; and
- · Replacement and repair of stormwater piping through the excavation; and
- Backfill and compaction of the excavation.

Each of these activities are discussed in detail in appropriate Sections of this report.

## 1.0 SITE DESCRIPTION HISTORY

The subject property, identified as the former L&C Deli and Vista Mart, is located at the northwest corner of the intersection of NE 20th Avenue and NE 139th Street near the intersection of Interstate I-5 and Interstate I-205. The subject property formerly contained three (3) 12,000-gallon single-walled steel USTs formerly containing diesel, and premium and regular unleaded gasoline. Product from the USTs were dispensed from two (2) multiple product dispensers located beneath an adjacent canopy to the east of the UST cavity. Notice of temporary closure of the UST system was received by the Washington Department of Ecology (Ecology) in September 25, 2009.

#### 2.0 SITE HISTORY

## 2.1 Initial Release and Investigations

The following historical information was provided in a March 2010 *Periodic Review* report by the Toxics Cleanup Program of Ecology for the subject property:

In September 1987, gasoline product and vapors were discovered in a sanitary sewer line in a location near the L&C Deli Site. In addition, gasoline product was discovered floating on the groundwater in a number of test pits excavated in the vicinity of the subject Site. In November 1987, an extraction well and recovery system were installed by an Ecology contractor at the subject Site to recover the free product gasoline floating on the groundwater.

Subsequent integrity testing of the USTs and lines located on the subject property indicated that although the tanks appeared to be sound, the associated lines may have been leaking product. The recovery of gasoline product from the extraction well diminished in late 1988, and in February 1989, Ecology allowed the recovery system to be permanently shut down. A total of 524 gallons of gasoline product was recovered during the operation of the recovery system. On August 10, 1990, the clients received an Order from Ecology requiring that a remedial investigation and feasibility study (RI/FS) be performed to facilitate the remediation of the gasoline product that may have remained adsorbed in the soils and dissolved in the groundwater in the vicinity of the subject Site.

Hahn and Associates, Inc. (HAI) performed remedial investigative activities at the subject Site from October 1990 to March 1991 through the installation of 11 soil borings and 7 groundwater monitoring wells. The remedial investigation appeared to define the extent of the impacts to the soil and groundwater on and in the vicinity of the subject Site. A feasibility study of remedial options was also prepared by HAI.

In January 1992, WDOE prepared a Cleanup Action Plan (CAP) which summarized the results of the RI/FS and outlined the preferred cleanup alternative. In summary, the preferred cleanup alternative involved: 1) the partial removal of contaminated soils; 2) the surface treatment of the excavated soils by bioremediation; 3) the in-situ degradation of the remaining soil contamination

by natural processes; and 4) a modified pump and treat method for remediation of the shallow groundwater from the excavation pit.

On March 2, 1992, Ecology issued an Enforcement Order requiring implementation of the preferred cleanup alternative as outlined in the CAP. Also included in the Enforcement Order was a request for additional documents including: 1) an engineering design report; 2) construction plans and specifications; 3) an operation and maintenance plan; 4) a compliance monitoring plan; 5) a sampling and analysis plan; and 6) a health and safety plan.

Contaminated soil removal activities, confirmation soil sampling activities and groundwater removal activities took place in September 1992. Remedial excavation was conducted in areas identified during the RI/FS to contain soil contamination at concentrations exceeding MTCA Method A cleanup levels.

The final depth of the soil excavation ranged from approximately 9 to 11 feet below the ground surface. Groundwater was encountered in the excavation pit at a depth of approximately 8 to 9 feet. The excavation of soil proceeded unencumbered in all directions, except to the east and southeast, where excavation activities were halted so as not to undermine underground utilities in these areas. The confirmation sampling indicated that the contaminated soil was removed both laterally and vertically to below regulatory cleanup levels, with the exception of the east and southeast walls where soil contamination was left in-place at concentrations of 43 to 1,100 parts per million of gasoline-range petroleum hydrocarbons (TPH-G).

Further, Ecology's Periodic Review report identified cleanup levels for the site as follows:

Because a no further action determination was issued for the Site prior to 2001, MTCA Method A cleanup levels prior to 2001 will be used to determine whether or not the remedial activities at the Site have been effective in protecting human health and the environment.

#### 2.2 Washington Department of Transportation Investigation and Acquisition

In March 2011, an investigation was conducted at the subject property to determine the magnitude and extent of residual contamination in soil and groundwater beneath the subject property, a portion of which was proposed to be purchased as part of a road-widening project that involves both adjacent right-of-ways to the east (20<sup>th</sup> Ave.) and south (139<sup>th</sup> St.). As part of the investigation, ten (10) direct push-probe borings, PP-1 through PP-10 were advanced within the area to be purchased by Washington Department of Transportation (WSDOT), and near all four (4) sides of the UST area. Two push-probe borings (PP-2 and PP-3) were located within the adjacent roadways to the east and south to evaluate possible off-site contaminant migration which may impact future road and utility construction.

## Soil Analytical Results

All soil samples were analyzed for gasoline-range Total Petroleum Hydrocarbons per Northwest Method NWTPH-Gx, diesel-range TPH per Northwest Method NWTPH-Dx, and benzene, toluene, ethylbenzene and xylene (BTEX) compounds per EPA Method 8260B. The results of the investigation did **not** detect diesel, gasoline, or BTEX contamination in soil above method-reporting limits (MRLs) from the push-probe borings PP1, PP3, PP4, PP7, PP8, PP9, PP10. The results of the investigation, however, detected elevated levels of gasoline and diesel TPH, and BTEX compounds in soil from boring PP5, located east of the former diesel UST. It is important to note that push-probe boring PP5 is located on the newly acquired WSDOT property. Soil analytical results are summarized in **Table 1**. **Figure 4** identifies the probe locations and soil analytical results from the WSDOT investigation.

## **Table 1: WSDOT Soil Sample Analytical Results**

Former L&C Deli / Vista Mart, 13912 NE 20th Ave., Vancouver, WA

Soil contaminant concentrations in milligrams per kilogram (mg/Kg) or parts per million (ppm). ND: Not detected above method-reporting limits (MRLs), shown in parentheses.

J: Estimated value below the method-reporting limit (MRL), yet above the Method-Detection Limit (MDL). Highlighted concentrations exceed MTCA cleanup values.

			C	ontaminants-of-	Potential-Conce	rn	
Soil Sample indicated de	and the second s	Gasoline-Range TPH	Diesel- Range TPH Benzene		Toluene	Ethylbenzene	Total Xylenes
PP1 - 6'		ND (<6.63)	24.4 J	ND (<0.017)	ND (<0.063)	ND (<0.033)	ND (<0.099)
PP2 - 7.5'		13.6	ND (<34.7)	0.09	ND (<0.017)	0.991	0.63
PP3 - 6'		ND (<6.63)	ND (<34.6)	ND (<0.02)	ND (<0.08)	ND (<0.04)	ND (<0.12)
PP4 - 6'	(onsite)	ND (<6.63)	ND (<36.2)	ND (<0.02)	ND (<0.09)	ND (<0.045)	ND (<0.13)
PP5 - 7'		198	1,630	1.1	0.251	0.379	0.883
PP6 - 6'		ND (<6.28)	ND (<25)	0.47	ND (<0.063)	ND (<0.03)	ND (<0.09)
PP7 - 7'		ND (<6.83)	ND (<29.2)	ND (<0.017)	ND (<0.068)	ND (<0.034)	ND (<0.1)
PP8 - 6.5'	(onsite)	ND (<8.65)	ND (<31.9)	ND (<0.02)	ND (<0.086)	ND (<0.043)	ND (<0.13)
PP9 - 9'	(onsite)	ND (<8.74)	18.1 J	ND (<0.02)	ND (<0.087)	ND (<0.044)	ND (<0.13)
PP10 - 13'		ND (<8.12)	18.7 J	ND (<0.02)	ND (<0.08)	ND (<0.04)	ND (<0.12)
1991 MTCA ( Levels	Cleanup	100	200	0.50	40	20	20
2001 MTCA N Soil Cleanup Unrestricted I	Levels for	100 no benzene 30 with benzene	2,000	0.03	7	6	9

For comparison in **Table 1** are 1991 MTCA Cleanup Levels and 2001 MTCA Method A cleanup levels for unrestricted landuse. Detected concentrations of gasoline-range TPH, diesel-range TPH and benzene in soil from boring PP5 exceed the 1991 MTCA Cleanup levels. Only gasoline-range

TPH and benzene in soil from boring PP5 were detected above 2001 MTCA Method A cleanup levels for unrestricted land use. No other detected contaminants exceeded MTCA Method A cleanup levels for unrestricted land use.

## **Groundwater Analytical Results**

All groundwater samples were analyzed for gasoline-range TPH per Northwest Method NWTPH-Gx, diesel-range TPH per Northwest Method NWTPH-Dx, and BTEX compounds per EPA Method 8260B. The groundwater analytical results are summarized in **Table 2** and on **Figure 5**.

## Table 2: WSDOT Groundwater Sample Analytical Results

Former L&C Deli / Vista Mart, 13912 NE 20th Ave., Vancouver, WA

Soil contaminant concentrations in micrograms per Liter (µg/L) or parts per billion (ppb). Highlighted concentrations exceed MTCA cleanup values.

			C	ontaminants-of-	Potential-Conce	rn	
Soil Sam	ple ID	Gasoline-Range TPH	Diesel- Range TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
PP1		ND (<100)	ND (<122)	ND (<0.25)	ND (<1.0)	ND (<0.5)	ND (<1.5)
PP2		2,550	522	3.58	2.53	102	205
PP3		ND (<100)	ND (<120)	ND (<0.25)	ND (<1.0)	ND (<0.5)	ND (<1.5)
PP4	(onsite)	ND (<100)	155	ND (<0.25)	ND (<1.0)	ND (<0.5)	ND (<1.5)
PP5		10,900	13,900	2,030	78.8	59.8	99.6
PP6		2,300	620	724	1.25	4.07	ND (<1.5)
PP7		108	250	4.04	ND (<1.0)	ND (<0.5)	ND (<1.5)
PP8	(onsite)	ND (<100)	ND (<134)	ND (<0.25)	ND (<1.0)	ND (<0.5)	ND (<1.5)
PP9	(onsite)	ND (<100)	ND (<130)	ND (<0.25)	ND (<1.0)	ND (<0.5)	ND (<1.5)
PP10		ND (<100)	ND (<134)	ND (<0.25)	ND (<1.0)	ND (<0.5)	ND (<1.5)
1991 MTC Levels	CA Cleanup	No Value (TPH <b>1,000</b> )	No Value (TPH <b>1,000</b> )	<u>5</u>	40	30	20
Cleanup L	CA Method A Levels for ed Land Use	1,000 no benzene 800 with benzene	500	5	1,000	700	1,000

The results of the investigation did **not** detect diesel, gasoline, or BTEX contamination in groundwater from push-probe borings PP1, PP3, PP4, PP8, PP9, or PP10. The highest detected contaminant concentrations were detected in boring PP5, a short distance east of the UST cavity, and located on the newly acquired WSDOT property. Lesser contaminant concentrations were detected downgradient (east) in groundwater from push-probe boring PP2 a short distance southeast of PP5, and PP6, further east of PP2.

In **Table 2** are 1991 MTCA Cleanup Levels and 2001 MTCA Method A cleanup levels for unrestricted landuse. No contaminants were detected in groundwater from onsite borings. TPH (as gasoline and diesel) and BTEX compounds detected in groundwater from offsite boring PP5 exceed 1991 MTCA Cleanup values. Similarly, TPH (as gasoline), benzene, ethylbenzene and xylenes were detected in groundwater from offsite borings PP2 and PP6 were also detected above the 1991 MTCA Cleanup values.

When compared to the 2001 MTCA Method A Cleanup values, gasoline- and diesel-range TPH and benzene were detected at concentrations in groundwater from offsite borings PP5 and PP6 exceeding the 2001 cleanup values. Similarly, gasoline- and diesel-range TPH were detected in groundwater from boring PP2 at concentrations exceeding the 2001 MTCA Method A cleanup values.

### 3.0 BB&A UST DECOMMISSIONING AND CLEANUP ACTIVITIES

Prior to performing UST decommissioning activities, all utilities were identified within the work area, and all appropriate forms, permits and authorizations were completed and obtained, including: Ecology 30-day Notice, Clark County Fire Marshall Permit, Waste Management Hillsboro Landfill Disposal Permit #110305OR (for disposal of petroleum-contaminated soil), and Ecology Underground Injection Control (UIC) authorization for backfill with activated carbon and petrophyllic bacteria to treat soil and groundwater in the excavation.

### 3.1 UST Decommissioning and Removal of Fuel Dispensers and Product Lines

During the week of April 23 to 27, 2012, BB&A decommissioned by removal, three (3) 12,000-gallon USTs, including the southernmost UST, which formerly contained diesel fuel, the central UST formerly containing regular unleaded fuel; and the northern UST formerly containing premium unleaded fuel. On April 23<sup>rd</sup>, the fuel dispensers were disconnected and removed, and the product lines flushed with water back into the USTs to remove any residual fuel. Any groundwater accumulation within the turbines sumps was pumped into the USTs as well. Additional activities performed on April 23<sup>rd</sup> included canopy demolition and metal recycling.

On April 24<sup>th</sup>, the concrete pad and asphalt above the USTs, product lines and fuel dispenser island were removed. Soil above the USTs and product lines was excavated, as was soil alongside the north and south side of the UST cavity. Soil was screened using an organic vapor meter with photoionization detector (OVM-PID). All concrete and clean fill was set aside for reuse as backfill. Any soil with evidence of contamination was set aside for offsite disposal at Waste Management's Hillsboro landfill. The product lines were removed, and the USTs were tilted. Each of the USTs were noted to be eight (8) feet in diameter and 32 feet long. Soil contamination was most noted in the walls of the excavation – especially immediately southeast of the UST cavity (i.e., east of the

Mr. Guy Barrett Page 7

diesel UST). Groundwater was noted in the UST cavity at approximately seven (7) to seven and one-half (7.5) feet below land surface (BLS). A sheen was noted on groundwater within the UST cavity.

On April 25<sup>th</sup>, at the time that the USTs were tilted, only a small amount of residual fuel was noted in each UST. All residual fuel product within the USTs were evacuated by Oil Re-Refining (ORRCO) using their vacuum truck. The USTs were triple rinsed, with the resulting sludge and oil/water mixture evacuated using ORRCO'S vacuum truck. Approximately 242 gallons of fuel product, sludge, and rinse water was removed from the three (3) USTs. A copy of ORRCO's receipt is provided in **Attachment B**.

The USTs were inerted by ventilation using an air compressor and eductor apparatus. Tank atmosphere was measured to determine if the tanks were safe for removal. This determination was made on the basis of field measurements relative to the lower explosive limit (LEL). The USTs were inerted by reducing the LEL within the USTs to levels below five (5) percent LEL. The USTs were not removed until this level was attained. Upon removal, the USTs were transported to Metro Metals for recycling.

Soil contamination was observed in the area immediately southeast of the UST cavity (i.e., east of the diesel UST), and to a lesser extent in the northern, western, and southeastern walls of the UST cavity. On April 26<sup>th</sup>, contaminated soil in these areas was excavated to a depth of approximately eight (8) feet below land surface (BLS), just below the soil/water interface. The excavation of contaminated soil was extended east of the UST cavity, beneath the former fuel dispenser islands. It is important to note that the excavation extended slightly offsite southeast of the former UST cavity, in the former location of PP5. However, because this portion of the site is owned by WSDOT (as right-of-way), no additional excavation was conducted in this area of residual contamination.

During excavation activities, approximately 242 tons petroleum-contaminated soil (PCS) was excavated for transport to Waste Management's Hillsboro landfill under permit number 110305OR. Also during these activities, the stormwater pipe crossing beneath the fuel dispenser island was removed. Upon completion of the excavation activities, the stormwater pipe was replaced.

#### 3.2 Confirmation Soil Sample Analytical Results

Upon completion of excavation activities, and prior to backfill, confirmation soil samples were collected for laboratory analysis of gasoline-range TPH per Northwest Method NWTPH-Gx, diesel-range TPH per Northwest Method NWTPH-Dx, and several soil samples were additionally analzyed for BTEX compounds per EPA Method 8260B. The analytical results are shown below in **Table 3**. Soil sample locations and analytical results are shown on **Figure 6** (**Attachment A**).

Laboratory analysis of the confirmation soil samples detected diesel-range TPH at 780 ppm in soil sample SE-7', which was collected at the soil/water interface a short distance east of former push-probe boring PP5, the former location of highest detected soil contamination. BTEX and gasoline-range TPH were not detected in soil sample SE-7'. The only other contaminant detected in confirmation soil samples was toluene at the low concentration of 0.022 ppm in soil sample SWDISP-7'. The complete laboratory report is provided in **Attachment C**.

## Table 3: BB&A Excavation Confirmation Soil Sample Analytical Results

Former L&C Deli / Vista Mart, 13912 NE 20th Ave., Vancouver, WA

Soil contaminant concentrations in milligrams per kilogram (mg/Kg) or parts per million (ppm).

ND: Not detected above method-reporting limits (MRLs), shown in parentheses.

J: Estimated value below the method-reporting limit (MRL), yet above the Method-Detection Limit (MDL).

Highlighted concentrations exceed MTCA cleanup values.

			Conta	minants-of-Po	tential-Concer	n	
Soil Samplindicated of	The state of the s	Gasoline-Range TPH	Diesel-Range TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
S1 - 7.5'		ND (<5.5)	ND (<17)				
SW2 - 7.5'		ND (<5.2)	ND (<17)				
W3 - 7.5'		ND (<5.4)	ND (<17)				
NW4 - 7.5'		ND (<5.4)	ND (<17)				
N5 - 7.5'		ND (<5.3)	ND (<17)				
SWDISP -	7'	ND (<4.8)	ND (<15)	ND (<0.024)	0.022	ND (<0.021)	ND (<0.07)
NEDISP - 7	71	ND (<4.7)	ND (<15)	ND (<0.023)	ND (<0.018)	ND (<0.021)	ND (<0.069)
SE - 7'	(offsite)	ND (<4.2)	780	ND (<0.021)	ND (<0.016)	ND (<0.019)	ND (<0.061)
E - 7'	(offsite)	ND (<4.4)	ND (<15)	ND (<0.022)	ND (<0.016)	ND (<0.02)	ND (<0.064)
NE - 7'		ND (<4.5)	ND (<15)	ND (<0.022)	ND (<0.017)	ND (<0.022)	ND (<0.066)
NE6 - 7.5'		ND (<4.3)	ND (<14)	ND (<0.021)	ND (<0.016)	ND (<0.019)	ND (<0.063)
1991 MTCA Levels	A Cleanup	100	200	0.50	40	20	20
2001 MTCA Soil Cleanu Unrestricted	p Levels for	100 no benzene 30 with benzene	2,000	0.03	7	6	9

For comparison in **Table 3** are the 1991 MTCA Cleanup Levels and 2001 MTCA Method A Cleanup Levels for unrestricted landuse. The detected diesel concentration of 780 ppm in soil sample SE-7' exceeds the 1991 MTCA Cleanup level at 200 ppm, but not the 2001 MTCA Method A cleanup level (for unrestricted land use) at 2,000 ppm. No other contaminants were detected at concentrations exceeding either of the 1991 or 2001 MTCA cleanup levels.

## 3.3 Soil and Groundwater Treatment with Activated Carbon and Petrophyllic Bacteria

Upon completion of excavation activities, and prior to backfill, groundwater within the UST cavity, and soil along the walls of the excavation were treated using petrophyllic bacteria and BOS-200®1, an activated carbon product with nutrients. The activated carbon chemically binds with petroleum contaminants in soil and groundwater, and the nutrients and petrophyllic microbes promote biological degradation of the contaminants. This product is relatively new, yet has been shown to be very effective at binding available petroleum contamination including dissolved and free-floating petroleum in groundwater. The BOS-200® activated carbon has an adsorption capacity of approximately 70 grams dissolved hydrocarbon per one (1) pound of carbon. The bacteria mixture injected with the carbon consumes the hydrocarbon bound to carbon, and the bacteria essentially reactivates the carbon so that it can absorb further contaminant. This cycle will continue until "source food" (i.e., all petroleum hydrocarbons) are been removed. As a result, the activated carbon creates a "biobarrier" through which groundwater can flow, removing free-phase and dissolved phase petroleum contamination, and preventing contaminated groundwater from migrating beyond the "biobarrier." One significant advantage over other alternatives is that the carbon binds the hydrocarbons immediately upon contact allowing almost immediate contaminant reduction. Ms. Mary Shaleen Hansen of the UIC Program authorized the use of BOS-200® activated carbon and petrophyllic bacteria in the excavation without any UIC registration.

On April 27<sup>th</sup>, the BOS-200® and bacteria was mixed and applied to the excavation in batches. In each batch, 50 pounds of BOS-200® powder was mixed with 50 gallons of water in a drum, along with approximately 16 ounces of petrophyllic bacteria. A pump was used to apply the carbon, water and bacteria mixture to the walls of the excavation, and all areas of the excavation with groundwater accumulation to treat the sheen on water and any dissolved-phase contamination.

#### 3.4 Excavation Backfill

1

Upon completion of all excavation activities, confirmation soil sampling, and treatment using BOS-200® and bacteria, the excavation was backfilled by first placing the broken concrete pad at the bottom of the excavation, on top of which, clean overburden and imported gravel fill material was placed. The backfill material was compacted in lifts to rough grade to allow for paving by others.

### 3.5 UST Decommissioning Forms and Checklists

Included in Attachment D are all appropriate UST decommissioning checklists and forms.

BOS-200® is a product produced by Remediation Products Inc. Information regarding this product can be found at: http://www.trapandtreat.com/products/bos-200/

## 3.6 Groundwater Confirmation Sample Analytical Results

## 3.6.1 Methodology

On May 8<sup>th</sup>, 10 days after soil and groundwater treatment using BOS-200® and bacteria, and backfilling of the excavation, two (2) borings were advanced within the excavation boundary. Pushprobe boring P11 was advanced a short distance east of the southwest dispenser island. Pushprobe boring P12 was placed in the northwest quarter of the excavation. **Figure 7** shows the pushprobe boring locations.

The temporary push-probe borings were advanced using a GeoProbe® 6600 truck and tooling equipment. Both push-probe borings were advanced to an approximate depth of 10 feet BLS. The core barrels are constructed of stainless steel. Additional core barrels were added as the probe was advanced. No soil was collected from either boring. Upon completion of the soil borings, temporary well casings (made of schedule 40 PVC) were placed within the borings. The bottom five (5) feet of each temporary well casing was slotted and positioned to intercept the upper portion of the groundwater table. Prior to collecting groundwater samples, approximately three (3) gallons of groundwater was purged from the push probes using a low-flow peristaltic pump and dedicated polyethylene tubing to remove drilling-derived sediments and to draw representative groundwater into the well.

Following purging, a groundwater sample was collected using clean, dedicated polyethylene tubing connected to a peristaltic pump set at its lowest setting (0.1 to 0.3 liters per minute). The flow rate was minimized to reduce off gassing of volatile contaminants. Samples were transferred into laboratory-supplied containers with appropriate preservative, uniquely labeled, documented on a chain-of-custody record, placed in a cooler on synthetic ice, and delivered to Test America Analytical Laboratory in Beaverton, Oregon. Both groundwater samples were analyzed for gasoline-range TPH per Northwest Method NWTPH-Gx, diesel-range TPH per Northwest Method NWTPH-Dx, and BTEX compounds per EPA Method 8260B. The groundwater sample from boring P12 was additionally analyzed for polynuclear aromatic hydrocarbons (PAHs) per EPA Method 8270SIM.

Upon completion of groundwater sampling, the temporary well casings were removed, and the borings backfilled with bentonite to seal the borehole. Each temporary boring was registered with the Washington Department of Ecology.

## 3.6.2 Groundwater Analytical Results

MTCA Method A is not available.

The groundwater analytical results are summarized on **Table 4**, and **Figure 7** (**Attachment A**). In groundwater from boring P11, diesel-range TPH was detected at the method-reporting limit of 80 ppb. Gasoline-range TPH and BTEX compounds were not detected in this sample.

#### Table 4: Groundwater Analytical Results, May 8, 2012

UNITS: Groundwater Concentrations in micrograms per liter (µg/L), or parts per billion (ppb).

ND: Not Detected above laboratory method-reporting limits (MRLs).

J: Contaminant concentration estimated below the method-reporting limit (MRL), yet above the method-detection limit (MDL).

\*\*Model Toxics Control Act (MTCA) Cleanup Levels: Method A for Unrestricted Land Use; Risk-Based Method B is provided where

CONTAMINANTS OF	Push-Probe Bo	oring Locations	MTCA N	Methods**
CONCERN	P11	P12	1991 MTCA	2001 MTCA
Gasoline-Range TPH	ND (<80)	87	1,000 (TPH)	800 (benzene present)
Diesel-Range TPH	80	<mark>510</mark>	1,000 (TPH)	500 <sup>A</sup>
Heavy Oil-Range TPH	ND (<470)	50 J	1,000 (TPH)	500 <sup>A</sup>
Benzene	ND (<1.0)	0.63 J	5	5 <sup>A</sup>
Toluene	ND (<1.0)	0.33 J	40	1,000 <sup>A</sup>
Ethylbenzene	ND (<1.0)	0.2 J	30	700 <sup>A</sup>
Xylenes	ND (<3.0)	1.9 J	20	1,000 <sup>A</sup>
Acenaphthene		0.053 J	0.2 (MCL)	960 <sup>B</sup>
Acenaphthylene		ND (<0.095)	0.2 (MCL)	No MTCA Value
Anthracene		ND (<0.095)	0.2 (MCL)	4,800 <sup>B</sup>
Benzo(a)anthracene		ND (<0.095)	0.2 (MCL)	0.120 <sup>B</sup>
Benzo(a)pyrene		ND (<0.095)	0.2 (MCL)	0.1^
Benzo(b)fluoranthene		ND (<0.095)	0.2 (MCL)	0.12 <sup>B</sup>
Benzo(ghi)perylene		ND (<0.095)	0.2 (MCL)	No MTCA Value
Benzo(k)fluoranthene		ND (<0.095)	0.2 (MCL)	1.2 <sup>B</sup>
Chrysene		ND (<0.095)	0.2 (MCL)	1.2 <sup>B</sup>
Dibenzo(a,h)anthracene		ND (<0.095)	0.2 (MCL)	0.012 <sup>B</sup>
Fluoranthene		ND (<0.095)	0.2 (MCL)	640 <sup>B</sup>
Fluorene		0.18	0.2 (MCL)	640 <sup>B</sup>
Indeno(1,2,3-cd)pyrene		ND (<0.095)	0.2 (MCL)	0.12 <sup>B</sup>
1-Methylnaphthalene		ND (<0.095)	0.2 (MCL)	1.5 <sup>B</sup>
2-Methylnaphthalene		ND (<0.095)	0.2 (MCL)	32 <sup>B</sup>
Naphthalene		0.15	0.2 (MCL)	160 <sup>A</sup>
Phenanthrene		0.16	0.2 (MCL)	No MTCA Value
Pyrene		ND (<0.095)	0.2 (MCL)	480 <sup>B</sup>

In the groundwater sample from boring P12, gasoline-range TPH was detected at 87 ppb, diesel-range TPH was detected at 510 ppb, and heavy oil TPH and BTEX compounds were all estimated below the method-reporting limit (MRL), yet above the method-detection limit (MDL). Due to the detected diesel TPH in groundwater from boring P12, this sample was additionally analyzed for PAHs; although the hold time for this analysis was exceeded. Acenaphthene, fluorene, naphthalene and phenanthrene were all detected at concentration less than 0.2 ppb.

In **Table 4** are 1991 MTCA Cleanup Levels and 2001 MTCA Method A cleanup levels for unrestricted landuse. No contaminants were detected in groundwater from borings P11 and P12 at concentrations exceeding 1991 MTCA Cleanup values. Further, the only contaminant exceeding 2001 MTCA Method A Cleanup values was diesel-range TPH in boring P12 at 510 ppb, slightly above the 2001 MTCA Method A cleanup value of 500 ppb. The detected diesel-range TPH concentration in groundwater from boring P12 exceeds the 2001 MTCA Method A cleanup value by two (2) percent. Turbidity and bio-interference could potentially account for some portion of the detected diesel-range TPH.

## 4.0 COMPLIANCE OF MONITORING WELLS MW3 AND MW5A

Enforcement Order #DE 92TC-S112 required three (3) quarterly groundwater sampling events from monitoring well MW3 and replacement monitoring well MW5A, with laboratory analysis for gasoline-range TPH and BTEX compounds. Three (3) quarterly groundwater monitoring events have been completed at monitoring well MW3 and replacement monitoring well MW5A. Gasoline-range TPH and BTEX compounds were not detected in groundwater from either monitoring well during any of the three (3) groundwater monitoring events. As such, groundwater from monitoring wells MW3 and MW5A meets MTCA Method A cleanup levels for unrestricted land use. Upon approval from Mr. Guy Barrett, monitoring well MW3 was decommissioned during redevelopment of the intersection of 20<sup>th</sup> Avenue and 139<sup>th</sup> Street. On May 8<sup>th</sup>, 2012, monitoring well MW5A was decommissioned, and the sidewalk repaired to meet surrounding sidewalk slope, elevation, and texture.

## 5.0 SUMMARY OF RESIDUAL SOIL AND GROUNDWATER CONTAMINATION

The results of the WSDOT investigation did not detect any contamination in soil or groundwater from onsite borings at concentrations exceeding the 1991 MTCA Cleanup values or the 2001 MTCA Method A Cleanup values. Similarly, confirmation soil sampling conducted by BB&A after UST decommissioning and PCS excavation activities, did not detect any contamination in soil at concentrations exceeding the 1991 MTCA Cleanup values or the 2001 MTCA Method A Cleanup values. Confirmation groundwater sampling conducted by BB&A did not detect any contaminants in groundwater form borings P11 and P12 exceeding 1991 MTCA Cleanup values, and only diesel-

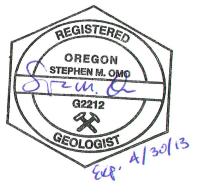
range TPH was detected in groundwater from boring P12 at a concentration (two [2] percent) above the 2001 MTCA Method A Cleanup values.

Lastly, three (3) quarterly groundwater monitoring events were completed at monitoring well MW3 and replacement monitoring well MW5A, the results of which did not detect any gasoline-range TPH or BTEX compounds in groundwater from either monitoring well. As such, groundwater from monitoring wells MW3 and MW5A meets MTCA Method A cleanup levels for unrestricted land use.

Based on these findings, BB&A requests that a no further action (NFA) determination be issued for the former L&C Deli / Vista Mart site, without any further periodic review.

Should you have any questions regarding this update letter, please do not hesitate to contact us.

Sincerely, BB&A Environmental



Stephen Omo, RG Project Manager

Wa Site Assessor # 8142160

Hydrogeologist 1082 1082

Randall Jon Boese

Randall J. Boese, RG President / Principal

Attachment A:

**Figures** 

Attachment B:

**Disposal Receipts** 

Attachment C:

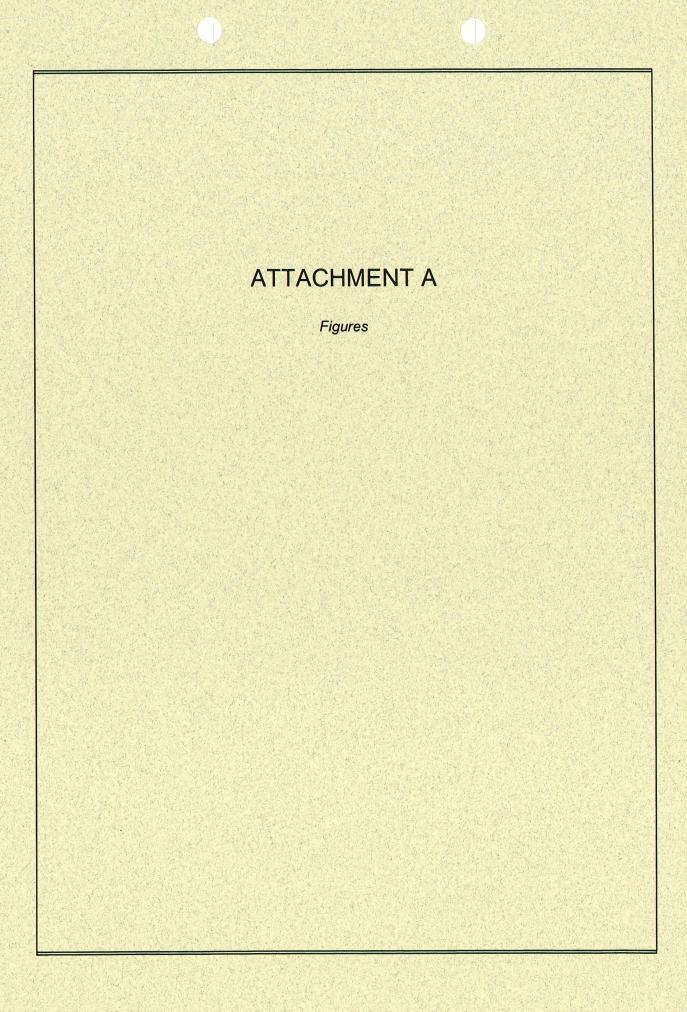
Laboratory Reports and Chain of Custody Documents

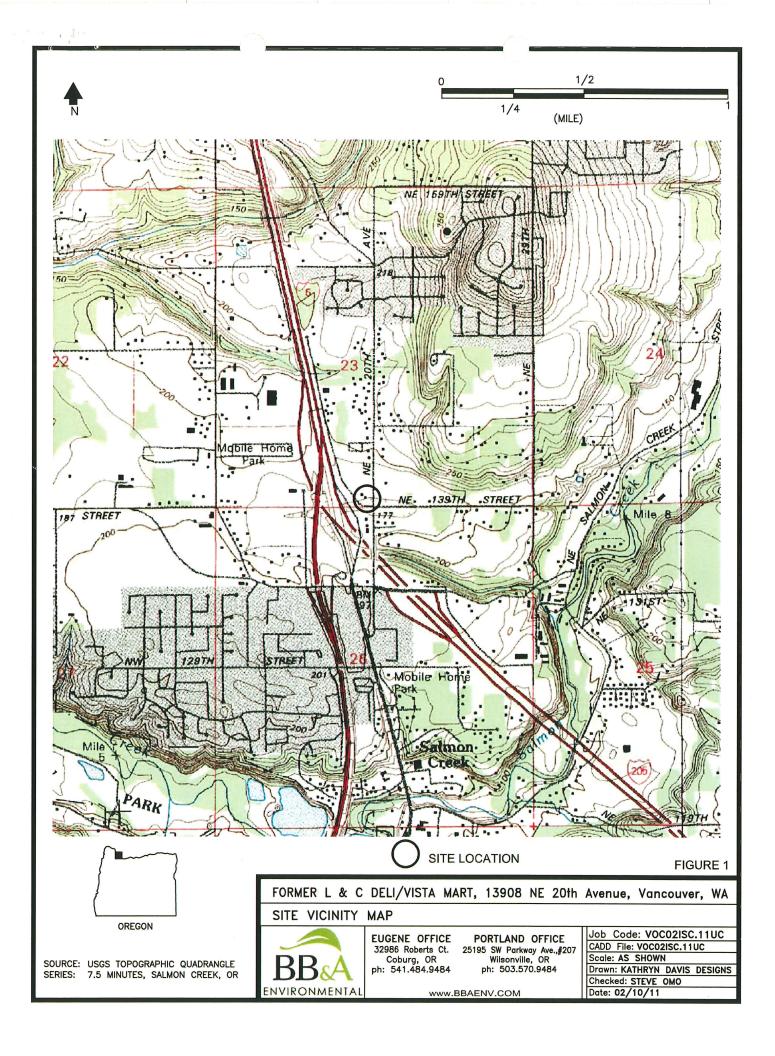
Attachment D:

CC:

**UST Decommissioning Checklists and Forms** 

Don Holsinger, The 205 Group, 2151 NW 21st Place, Ridgefield, WA 98642











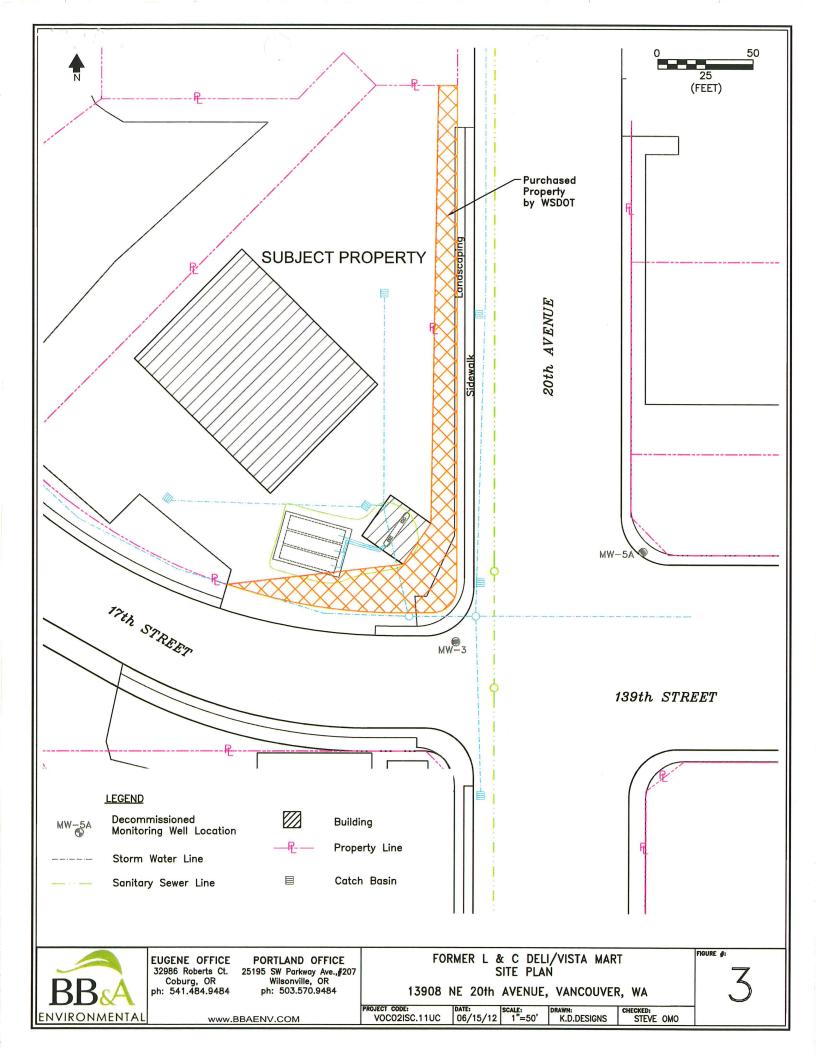


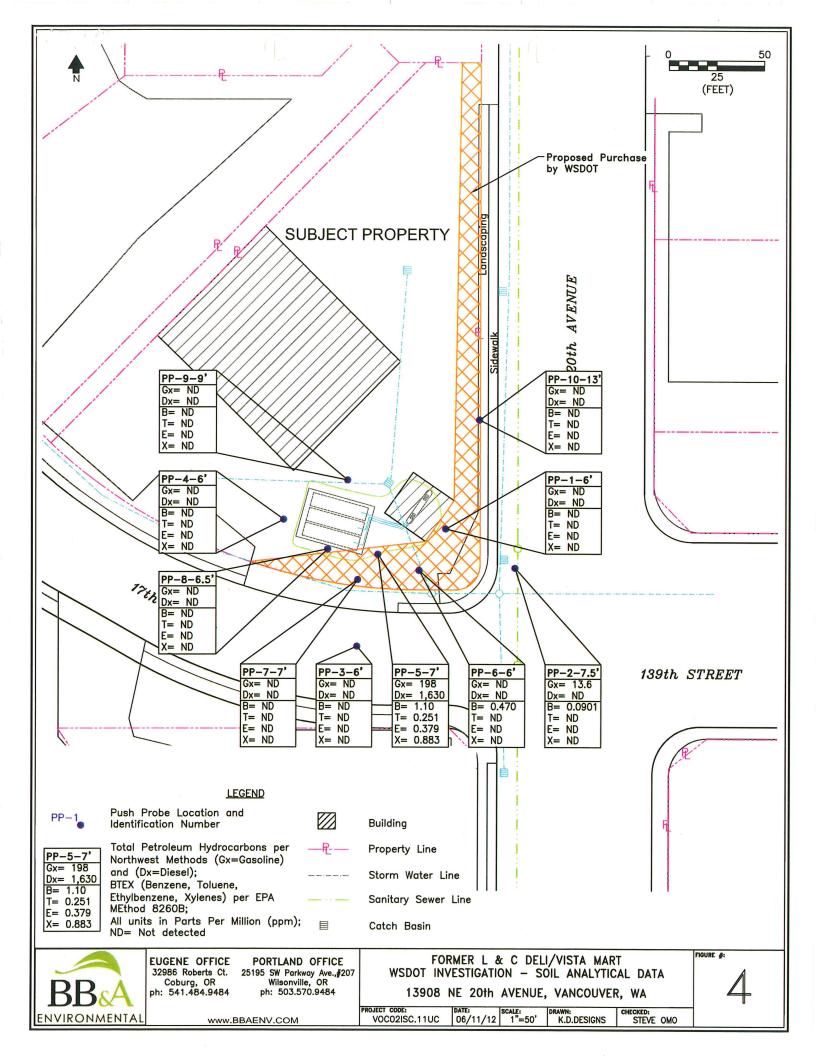
EUGENE OFFICE 32986 Roberts Ct.
Coburg, OR
ph: 541.484.9484 PoRTLAND OFFICE 25195 SW Parkway Ave., #207 Wilsonville, OR
ph: 503.570.9484

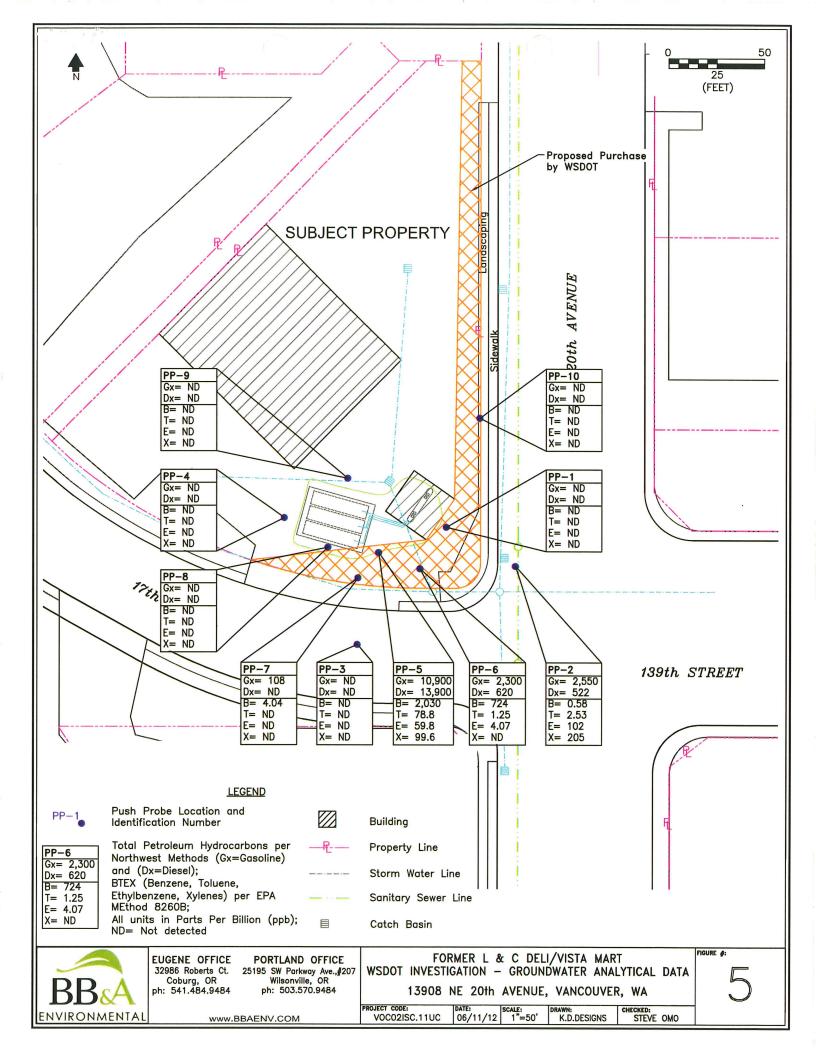
www.BBAENV.COM

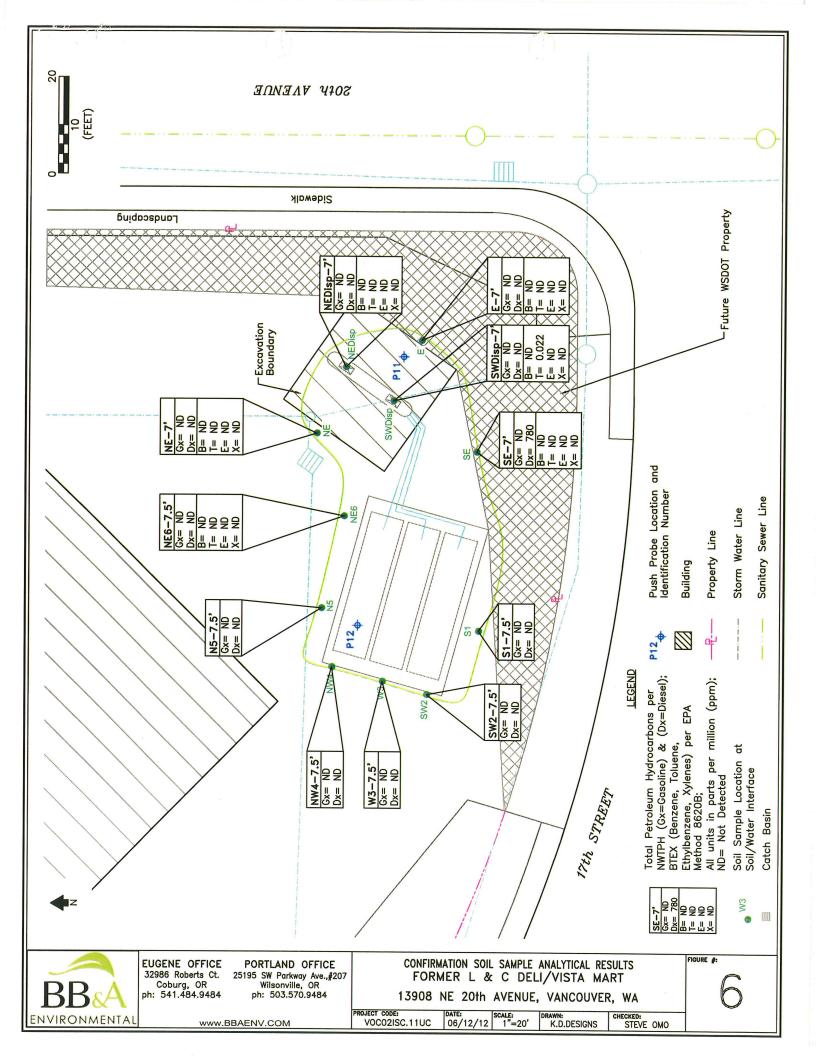
COMMERCIAL PROPERTY AERIAL 13908 NE 20th AVENUE, VANCOUVER, WA

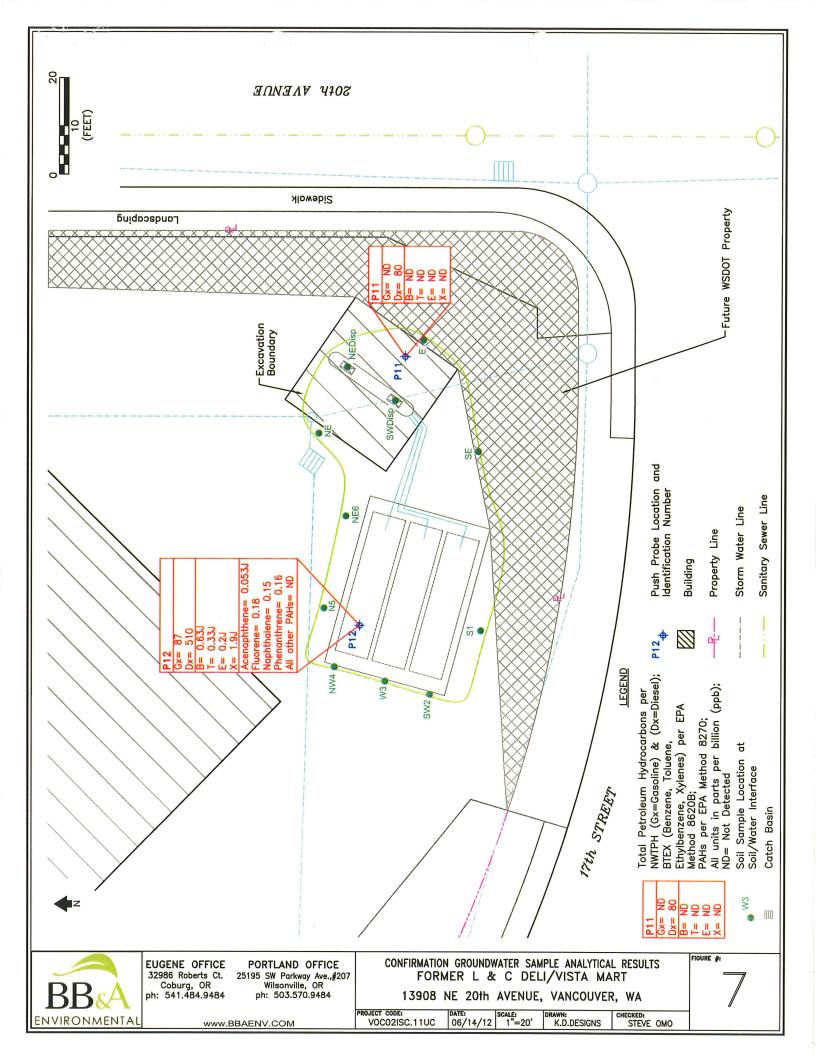
PROJECT CODE: VOCO1ISC.11UC DATE: SCALE: DRAWN: K.D.DESIGNS CHECKED: STEVE OMO FIGURE #:

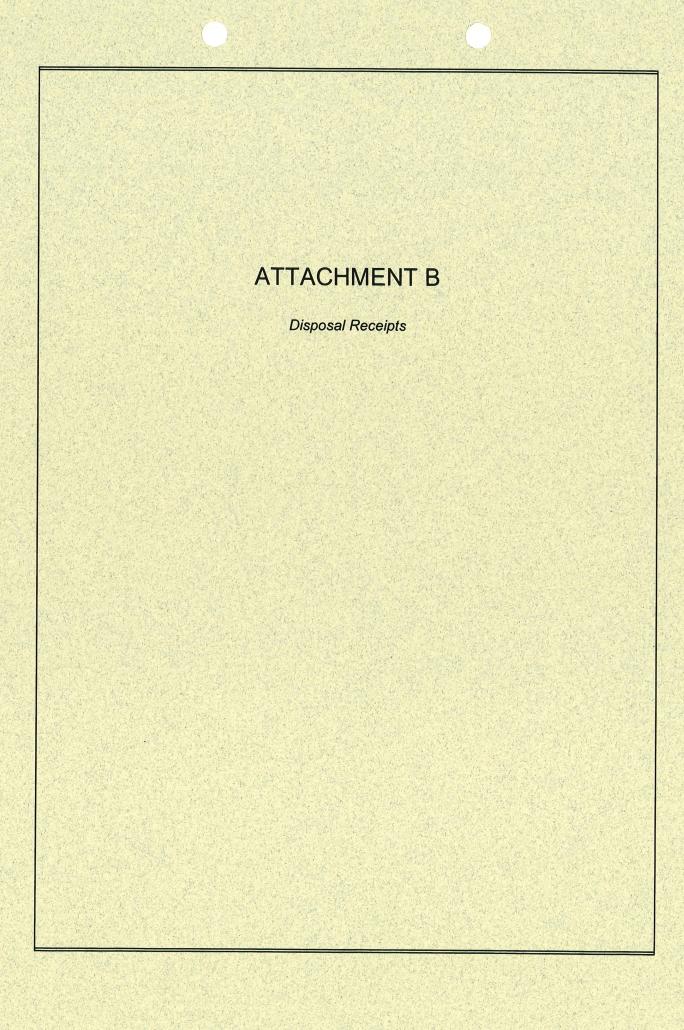












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Gene	ame 1908 NE 20 <sup>+1</sup> dress	MYE City	UANCOL State	IVER WA	98684 County	<b>)</b>	Addr	A				Truck!
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Via Ca	mier: OVULCO		1					Profile Dat	e: 4/	- 25.	- 12	
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Gal./Brl.	C	Description				Sniffer P / F	CDT/ HCDT	рН	Flash Point	Rate per Gal./Brl.	Rate per Hour	Charge
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Ĭ.	HYDROCLOR	-0 77	551 61	i .						30.0	C	2000
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Customer pesticides other mat or by any customer	warrants that the waste petr c, chlorinated solvents at con erial classified as hazardous equivalent state hazardous (generator) agrees to pay for	oleum produ centrations g waste by 40 substance cla call disposal	cts being trans reater than 10 GFR part 261, ssification pro costs incurred	sferred by the at 00 PPM, PCBs Subparts C and gram.Should La	pove collector de at concentration d D (implementing aboratory tests f	o not cons greating the find this	entain a er than federal waste i	ny conta 2 PPM Resourc not in co	minants (or 50 P e Conse mplianc	including PM with A rvation ar e with 40	, without nalytical) id Recove CFR Par	limitation, , or any ery Act), t 261,
SIGNE	DX / / / / / / / / / / / / / / / / / / /	J	) order					DAT	E: 0	Service of the servic	A STATE OF THE STA	- Andrews
**************************************	E	ar human or			and the Agents of the State of	\$		*** ****				
							,					



Hillsboro Landfill, Inc 3205 SE Minter Bridge Hillsboro, DR, 97123 Ph: (503)-640-9427

Original Ticket# 1287542

Volume

Justomer Name BERGESONBOES BB & A ENVINONME Carrier

icket Date 04/25/2012

Payment Type Credit Account

ianual Ticket#

Mauling Ticket#

equof

State Waste Code

Manifest

)estination

VOCORDEC. 12UC Profile 110305OR (PCS)

lenerator

OR-205 GROUP 205 GROUP

KEN MARTIN

Vehicle# 25

Container

Driver roger

Check#

Billing # 00000429

Gen EPA ID N/A

Grid

Time In

Comments

04/25/2012 16:21:20 Jut 04/25/2012 16:21:30

Scale Outbound Duteboand

Operator Wef

wef : \* Manual Weight Inbound

Tax

Gross Tare

127320 15# 43220 lb

Origin

Net Tons 84100 lb 42.05

Consumer Comments? We want to knows 中和 lease tall,

Rate

1.0% Moduct Cont Soil Pet-RGC- 100

13% FEA-13% FEA FE 100

Oty 42.05

Tons 30

UCM

23.24 13.00 \$977.24

Amount

CLARK

\$127.04 CLARK

Total Tax Total Ticket

\$1104,28

miver's Signature

VUSIVIV



Hillsboro Landfill, Inc 3205 SE Minter Bridge Hillsboro, DR, 97123 Ph: (503)-640-9427 Original Ticket# 1287632

Volume

lustomer Name BERGESONBOES BB & A ENVIRONME Carrier

Ticket Date 04/86/2018

Payment Type Credit Account

danual Ticketh

lead to seem To be to all the

Hauling Ticket#

Route

State Waste Code

Time

Manifest

*jestination* 

20

Profile

17:

Jut

Benerator

VOC02DEC. 12UC 110305OR (PCS)

OR-205 GROUP 205 GROUP

Carrier KEN MARTIN

Vehicle# 25

Container

Driver roger

Check#

Billing # 0000429

Gen EPA ID N/A

Grid

Comments

04/26/2012 15:55:02

04/26/2012 15:55:02

Scale

7 Mart

Inbound 1

Operator

ajm

 Inbound

nd Gross

Tare Net Tons 100200 1b\*

43220 lb\* 56980 lb

28,49

Consumer Comments? We want to knows Please well.

## WASTE MARAGERERY

Product		LD%	Qty	MOM	Rate	Tax	Amount	Origin
	mercurely works when your chine come before many supplement order since with body the			the test has not been also with any time of		the such states and a state such such such such such such s		
i Con	t Soil Pet-RGC-	ivo	28, 49	Tons	23.24		\$662.11	CLARK
2 13%	FEA-13% FEA FE	100		%	13.00		\$86.07	CLARK

Total Tax Total Ticket

\$748,18



Hillsboro Landfill, Inc 3205 SE Minter Bridge Hillsbore, OR, 97123 Ph: (503)-640-9427

Original Ticket# 1287584

Justomer Name BERGESCHEGES BB & A ENVIRONME Carrier licket Date 04/26/2012

'ayment Type Credit Account

lanual Ticket#

lauling Ticket# loute

Hate Waste Code

lanifest

*lestination* 

117 rofile

lemments

it'i

3414

VOCGEDEC, 12UC 1103050R (PCS)

ienerator

GR-205 GROUP 205 GROUP

Time

04/26/2012 10:03:00

04/26/2012 10:03:00

Scale

Inbound 2

a jn

\* Manual Weight

Volume

0000429

KEN MARTIN

Gen EPA ID MIA

roger

Grid

Operator

sjm

Vehiclet

Container

Billing #

Driver

Check#

Inbound Gross

> Tare Net Tons

114900 16\* 43220 1b\*

71680 lb

35, 84

Consumer Comments? We want with thouse Please

); oditet	1.0%	Qty	NOM	Rate	Tax	Amount	Origin
Cont Soil Pet-RGC- 1 13% FEA-13% FEA FE	100	35. 84	Tons	23. 24 13. 00	MPAN Starts hitser started was a works shake which with the start with the start with the start with the start will be started as the start with the start will be started as the started	*632.92 *108.28	CLARK CLARK

Total Tax Total Ticket

\$941, RØ



Hillsboro Landfill, Inc 3205 SE Minter Bridge Hillsboro, DR, 97123 Ph: (503)-640-9427

Ticket# 1287612

Customer Name BERGESONBOES BB & A EWVIRONME Carrier

Ticket Date

04/26/2012

Payment Type Credit Account

Manual Ticket# Hauling Ticket#

Route

State Waste Code

Manifest

Destination

PO

VOC@EDEC. 18UC

Profile Generator

Comments

110305OR (PCS) OR-205 GROUP 205 GROUP

Time In

04/26/2012 13:16:42

04/26/2012 13:16:42

Scale

Inbound\_i

Operator ajm

àjħ (第576)群岛6% \* Manual Weight

KEN MARTIN

Vehicle# 25 Container

. Driver roger

Chreck#

0000429 Billing # Gen EPA ID W/A

Graid

Original

Volume

Inbound Gross 107860 16\*

Tare 43220 lb\* Net 64540 lb

Tons 32.32

Consumer Conments? We want to knows Please #11 .- 4 Waste I anasembni

Product		LD%	Oty	HOM	Rate	Tax	Amount	Origin
	a will recht inter gefe wege find bit, dere spie eine delt wege best met beid benbete.	The same was and the same at a contract			Allan		er jament, marriere ir en mærere imre værer	ner transfer, ten enn men met net net net ett net.
1 Con	it Soil Pet-RGC-	100	32.32	Tons	23.24		\$751.12	CLARK
2 13%	FEA-13% FEA FE	1,00		*/*	13.00		\$97.65	CLARK

Total Tax Total Ticket

\$848,77



Hillsboro Landfill, Inc 3205 BE Winter Bridge Hillsboro, OR, 97123 Ph: (503)-640-9427

Original Ticket# 1287635

Volume

Justomer Name BERGESONBOES BB & A ENVIRONME Carrier Ticket Date

04/26/2012

Payment Type Credit Account

Manual Ticket#

dauling Ticket#

Youte

State Waste Code

Manifest

Destination

DO

Profile

Benerator

VOCØ2DEC. 12UC 1103050R (PCS)

OR-205 GROUP 205 GROUP

KEN MARTIN

Vehicles 24

Container

Driver jerry

Check#

Billing # 0000429

Gen EPA ID N/A

Brid

Time

04/26/2012 16:08:19 04/26/2012 15:00:19 Scale

Inbound\_1

Operator ajm .

EN J. Ber

\* Manual Weight

Inbound

Gross

Tare Net

61560 lbx 39060 lb\* 22500 lb

11.25

Connents

In

Jut

Consumer Comments? We want to knows Please 211

PERSON TERRESPORTED TO THE ROOM

Product	LD%	Oty	UOM	Rete	Tax	, V	Amount	Origin
Gont Soil Pet-RGC- 13% FEA-13% FEA FE		11,25	Tons %	23, 24 13, 00	Anni delle Sante Salel. Blad Ve	5- Am :752 km	\$261, 45 \$33, 99	CLARK CLARK

Total Tax Total Ticket

\$295,44



Hillsbore Landfill, Inc -3205 SE Minter Bridge Hillsboro, OR, 97123 Ph: (503)-640-9427

Original Ticket# 1287615

Volume

Customer Name BERGESONBOES BR & A ENVIRONME Carrier

Ticket Date 04/26/2012

Dayment Type Credit Account

Manual Ticket#

Hauling Ticket#

Route

State Waste Code

Manifest

Destination

30 Profile

Comments

VOCGEDEC, LEUC 110305OR (PCS)

Senerator

OR-205 GROUP 205 GROUP

Vehicle# 24

Container

Driver TOTTY

· Check#

Billing # 0000489

KEN MARTIN

Gen EPA ID N/A

Grid

Time 04/26/2012 13:27:51 1 13 Jut 04/26/2012 13:27:51

Scale Inbound i

Operator jdb db

\* Manual Weight

Inbound

Gross Tare Net

Toris

95340 1時 39060 1b\*

56280 1b 28, 14

Consumer Comments? We want to know Piesse will.

WARTE MANAGOTANIA

Product	LDX	Qt y	UDM	Rate	Tax	Amount	Origin
1 Cont Soil Pet-ROC- 2 13% FEA-13% FEA FE	100	28. 14	Tons %	23, 24 13, <b>0</b> 0		\$653.97 \$85.02	CLARK CLARK

Total Tax Total Ticket

8738.99



Hillsboro Landfill, Inc 3205 SE Minter Aridge Hillsboro, OR, 17123 Phy: (503)-646-9427

Original Ticket# 1287589

Volume

Justomer Name BENGESONBOES BB & A ENVIRONME Carrier

04/26/2012 icket Date

Payment Type Credit Account

fanual Ticket#

Wauling Ticket#

loute State Waste Code

tanifest na

)estination

2<u>0</u> VOCORDEC. 12UC

rofile Jenerator'

1103050R (PCS) OR-205 GROUP 205 GROUP KEN MARTIN

Vehicle# 24

Container

Driver jerry

Checkt

Billing # 0000429

Gen EPA ID

Brid

04/26/2012 10:29:08 Jus 04/26/2012 10:29:08

Scale Imbound\_1 Operator

Inbound

Gross Tare

99980 16\* 39060 lb\*

· Net

60920 lb

30,46 Tons

Comments

Consumer Comments? We want to knows . Please dell. --

- WARTE BARRASEARCHT

"\* Manual Weight.

Product	LD%	0ty	HOM	Rate	r ex	Ascunt	Origin,
1 Cont Soil Pet-RGC- 2 13% FEA-13% FEA FE	100	36.46	Tons %	23, 24 13, 00		\$7 <b>0</b> 7.89 \$92. <b>0</b> 3	CLARK CLARK

Total Tax Total Ticket

\$799,98



Hillsboro Landfill, Inc 3205 SE Minter Bridge Hillsboro, DR, 97123 Phil (503)-640-9427

Original Ticket# 1287543

Ticket Date

Justomer Name BERGESONBOES BB & A ENVIRONME Carrier

04/25/2012

Payment Type Credit Account

Manual Ticket# Hauling Ticket#

Route

State Waste Code

Manifest Ti A

Destination

Profile

VOC@2DEC. 12UC 1103050R (PCS)

Benerator

OR-205 GROUP 205 GROUP

KEN MARTIN

jerry

Vehicle\*

Container

Driver

· Checks

Billing # 0000429

Gen EPA ID N/A

Grid

Time

04/25/2012 16:22:07 Jut 04/25/2012 16:27:28 Scale

Outbound Dutbound Uperator

wef **许马孙** 

\* Manual Weight

bnwodni

Gross Tare

Volume

107400 lb\* 39060 lb

Net 68340 lb Tons

34.17

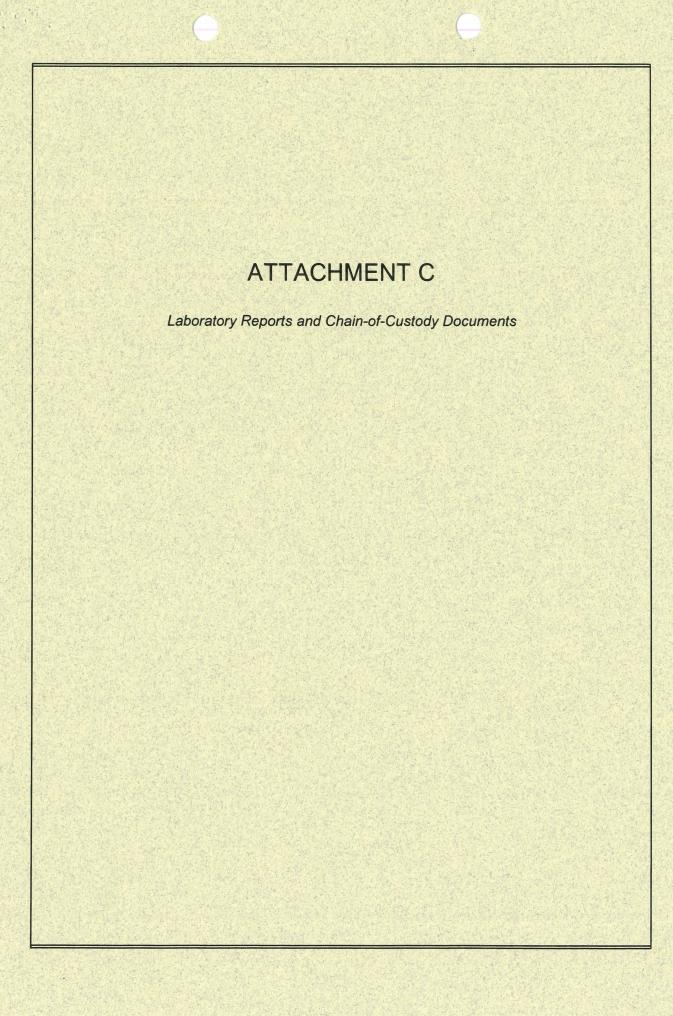
Comments

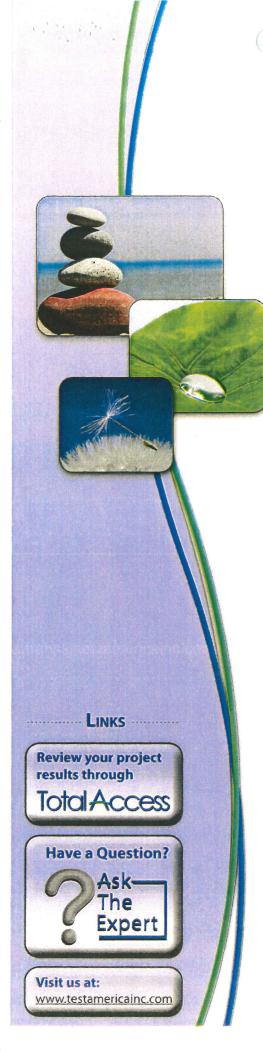
Consumer Comments? We want to know. Please Call. **淡水等**(1)

Product LD% Qty LIOM Rate Tak Amount Cont Soil Pet-RGC- 100 34.17 Tons 23.24 \$794.11 CLARK 13% FEA-13% FEA FE 100 5/ 13.00 \$103.23 CLARK

Total Tax Total Ticket

\$897.34







THE LEADER IN ENVIRONMENTAL TESTING

## **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc.

TestAmerica Portland 9405 SW Nimbus Ave. Beaverton, OR 97008 Tel: (503)906-9200

TestAmerica Job ID: 250-2179-1

TestAmerica Sample Delivery Group: VOC02DEC.12UE

Client Project/Site: L&C Deli

For:

BB&A Environmental 25195 SW Parkway Ave Suite # 207 Wilsonville, Oregon 97070

Attn: Steve Omo

Vannsa Fran

Authorized for release by: 5/6/2012 7:15:38 PM

Vanessa Frahs
Project Manager I
vanessa.frahs@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	
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Detection Summary	6
Client Sample Results	7
QC Sample Results	10
Certification Summary	12
Chain of Custody	13
Receipt Checklists	14

### Sample Summary

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2179-1 SDG: VOC02DEC.12UE

Lab Sample ID	Client Sample ID	Matrix	Collected Receiv
250-2179-1	VOC02-S1-7.5'	Solid	04/25/12 15:20 04/25/12
250-2179-2	VOC02-SW2-7.5'	Solid	04/25/12 15:25 04/25/12
250-2179-3	VOC02-W3-7.5'	Solid	04/25/12 15:30 04/25/12
250-2179-4	VOC02-NW4-7.5'	Solid	04/25/12 15:35 04/25/12
250-2179-5	VOC02-N5-7.5'	Solid	04/25/12 15:40 04/25/12

### **Case Narrative**

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ÎD: 250-2179-1 SDG: VOC02DEC.12UE

### Job ID: 250-2179-1

### Laboratory: TestAmerica Portland

### Narrative

### Receipt

The samples were received on 4/25/2012 4:35 PM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 14.80 C.

### Except:

The following sample(s) was received at the laboratory outside the required temperature criteria: . The sample(s) is considered acceptable since it was collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun.

### GC VOA

No analytical or quality issues were noted.

### GC Semi VOA

No analytical or quality issues were noted.

### **Organic Prep**

No analytical or quality issues were noted.

### **VOA Prep**

No analytical or quality issues were noted.

### Definitions/Glossary

Client BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2179-1 SDG: VOC02DEC.12UE

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☆	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

### **Detection Summary**

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ÎD: 250-2179-1 SDG: VOC02DEC.12UE

Client Sample ID: VOC02-S1-7.5'	Lab Sample ID: 250-2179-1
No Detections	
Client Sample ID: VOC02-SW2-7.5'	Lab Sample ID: 250-2179-2
No Detections	
Client Sample ID: VOC02-W3-7.5'	Lab Sample ID: 250-2179-3
No Detections	
Client Sample ID: VOC02-NW4-7.5'	Lab Sample ID: 250-2179-4
No Detections	
Client Sample ID: VOC02-N5-7.5'	Lab Sample ID: 250-2179-5
No Detections	

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2179-1 SDG: VOC02DEC.12UE

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Client Sample ID: VOC02-S1-7.5'							Lab	Sample ID: 250	0-2179-1
Date Collected: 04/25/12 15:20								Matri	ix: Solid
Date Received: 04/25/12 16:35								Percent Soli	ds: 72.
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Hydrocarbons	ND		5500	1800	ug/Kg	₽	04/26/12 19:20	04/27/12 12:33	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
a,a,a-Trifluorotoluene (fid)	95		50 - 150				04/26/12 19:20	04/27/12 12:33	
Client Sample ID: VOC02-SW2-7.5'							Lab	Sample ID: 250	0-2179-2
Date Collected: 04/25/12 15:25								Matri	ix: Solid
Date Received: 04/25/12 16:35								Percent Soli	ds: 71.8
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Hydrocarbons	ND		5200	1700	ug/Kg	<del>*</del>	04/26/12 19:20	04/27/12 11:37	-
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
a,a,a-Trifluorotoluene (fid)	98		50 - 150				04/26/12 19:20	04/27/12 11:37	
Client Sample ID: VOC02-W3-7.5'							Lab	Sample ID: 250	0-2179-3
Date Collected: 04/25/12 15:30								Matr	ix: Solid
Date Received: 04/25/12 16:35								Percent Soli	ds: 72.2
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Hydrocarbons	ND		5400	1800	ug/Kg	<del>\$</del>	04/26/12 19:20	04/27/12 11:09	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
a,a,a-Trifluorotoluene (fid)	89		50 - 150				04/26/12 19:20	04/27/12 11:09	
Client Sample ID: VOC02-NW4-7.5'							Lab	Sample ID: 250	0-2179-
Date Collected: 04/25/12 15:35								Matr	ix: Solid
Date Received: 04/25/12 16:35								Percent Soli	ids: 71.8
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Hydrocarbons	ND		5400	1700	ug/Kg	*	04/26/12 19:20	04/27/12 10:41	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
a,a,a-Trifluorotoluene (fid)	99		50 - 150				04/26/12 19:20	04/27/12 10:41	
Client Sample ID: VOC02-N5-7.5'							Lab	Sample ID: 250	0-2179-
Date Collected: 04/25/12 15:40								Matr	ix: Solid
Date Received: 04/25/12 16:35								Percent Soli	ids: 73.3
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Hydrocarbons	ND		5300	1700	ug/Kg	₩	04/26/12 19:20	04/27/12 10:13	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
a,a,a-Trifluorotoluene (fid)	102		50 - 150				04/26/12 19:20	04/27/12 10:13	

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2179-1 SDG: VOC02DEC.12UE

### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Client Sample ID: VOC02-S1-7.5'							Lab	Sample ID: 250	0-2179-
Date Collected: 04/25/12 15:20								Matri	ix: Soli
Date Received: 04/25/12 16:35								Percent Soli	ds: 72.
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
DRO (C10-C25)	ND		17	17	mg/Kg	<u></u>	04/25/12 20:37	04/26/12 09:05	-
RRO (nC25-nC36)	ND		35	35	mg/Kg	₿	04/25/12 20:37	04/26/12 09:05	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctadecane	84		50 - 150				04/25/12 20:37	04/26/12 09:05	
Client Sample ID: VOC02-SW2-7.5'							Lab	Sample ID: 250	0-2179-
Date Collected: 04/25/12 15:25									ix: Sol
Date Received: 04/25/12 16:35								Percent Soli	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
DRO (C10-C25)	ND		17	17	mg/Kg	<del>\</del>	04/25/12 20:37	04/26/12 09:23	
RRO (nC25-nC36)	ND		35		mg/Kg	₩	04/25/12 20:37	04/26/12 09:23	
NNO (NO25-NO50)	ND		35	30	mg/kg	T	04/25/12 20.5/	04/20/12 09.23	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1-Chlorooctadecane	78		50 - 150				04/25/12 20:37	04/26/12 09:23	
Client Sample ID: VOC02-W3-7.5'							Lab	Sample ID: 250	0-2179
Date Collected: 04/25/12 15:30								-	ix: Sol
Date Received: 04/25/12 16:35								Percent Soli	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil F
DRO (C10-C25)	ND		17	17		<del>\</del>	04/25/12 20:37	04/26/12 13:27	
RRO (nC25-nC36)	ND		34		mg/Kg	₩	04/25/12 20:37	04/26/12 13:27	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1-Chlorooctadecane	81		50 - 150				04/25/12 20:37	04/26/12 13:27	
Client Sample ID: VOC02-NW4-7.5'							Lab	Sample ID: 250	0-2179
Date Collected: 04/25/12 15:35									ix: Sol
Date Received: 04/25/12 16:35								Percent Soli	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil F
DRO (C10-C25)	ND		17	17	mg/Kg	<del>*</del>	04/25/12 20:37	04/26/12 09:58	
RRO (nC25-nC36)	ND		35		mg/Kg	<b>\$</b>	04/25/12 20:37	04/26/12 09:58	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1-Chlorooctadecane	81		50 - 150				04/25/12 20:37	04/26/12 09:58	
Client Sample ID: VOC02-N5-7,5'							Lab	Sample ID: 250	0.2470
Date Collected: 04/25/12 15:40							Lab	-	
									ix: Sol
Date Received: 04/25/12 16:35	B 19	0	<u> </u>		11-4	_		Percent Soli	
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil F
DRO (C10-C25)	ND		17		mg/Kg	*	04/25/12 20:37	04/26/12 10:37	
RRO (nC25-nC36)	ND		34	34	mg/Kg	❖	04/25/12 20:37	04/26/12 10:37	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1-Chlorooctadecane	76		50 - 150				04/25/12 20:37	04/26/12 10:37	

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2179-1 SDG: VOC02DEC.12UE

### **General Chemistry**

Client Sample ID: VOC02-S1-7.5'							Lab	Sample ID: 250	
Date Collected: 04/25/12 15:20								Matri	x: Solid
Date Received: 04/25/12 16:35		0 110				_			
Analyte	0.00000	Qualifier	RL -		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		0.010	0.010	%			04/25/12 19:48	1
Percent Solids	72		0.010	0.010	%			04/25/12 19:48	1
Client Sample ID: VOC02-SW2-7.5							Lat	Sample ID: 250	-2179-2
Date Collected: 04/25/12 15:25								Matri	x: Solid
Date Received: 04/25/12 16:35									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		0.010	0.010	%			04/25/12 19:48	1
Percent Solids	72		0.010	0.010	%			04/25/12 19:48	1
Client Sample ID: VOC02-W3-7.5'							Lat	Sample ID: 250	-2179-3
Date Collected: 04/25/12 15:30									x: Solid
Date Received: 04/25/12 16:35								101011	X. Cona
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		0.010	0.010	%			04/25/12 19:48	1
Percent Solids	72		0.010	0.010	%			04/25/12 19:48	1
Client Sample ID: VOC02-NW4-7.5'							Lat	Sample ID: 250	)-2179-4
Date Collected: 04/25/12 15:35									x: Solid
Date Received: 04/25/12 16:35									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		0.010	0.010	%			04/25/12 19:48	1
Percent Solids	72		0.010	0.010	%			04/25/12 19:48	1
Client Sample ID: VOC02-N5-7.5'							Lat	Sample ID: 250	)-2179-5
Date Collected: 04/25/12 15:40									x: Solid
Date Received: 04/25/12 16:35						_	D		D:: F
Date Received: 04/25/12 16:35 Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result 27	Qualifier	0.010	0.010	40.000		Prepared	04/25/12 19:48	1

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2179-1 SDG: VOC02DEC.12UE

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 250-4261/1-A

Matrix: Solid

Analysis Batch: 4307

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

Prep Batch: 4261

Qualifier Analyte RL MDL Unit D Dil Fac Result Prepared Analyzed 3800 04/26/12 19:20 Gasoline Range Hydrocarbons ND 1200 ug/Kg 04/27/12 09:31

> MB MB

LCS LCS

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 50 150 04/26/12 19:20 a,a,a-Trifluorotoluene (fid) 103 04/27/12 09:31

Lab Sample ID: LCS 250-4261/2-A

Matrix: Solid

**Matrix: Solid** 

Analysis Batch: 4307

Analysis Batch: 4307

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 4261

Surrogate %Recovery Qualifier Limits a,a,a-Trifluorotoluene (fid) 109 50 - 150

Lab Sample ID: 250-2179-2 MS Client Sample ID: VOC02-SW2-7.5'

Prep Type: Total/NA

Prep Batch: 4261

MS MS Surrogate %Recovery Qualifier Limits

50 - 150 a,a,a-Trifluorotoluene (fid) 94

Lab Sample ID: 250-2179-1 DU

Matrix: Solid

DRO (C10-C25)

Analysis Batch: 4307

Client Sample ID: VOC02-S1-7.5'

Prep Type: Total/NA

Prep Batch: 4261

RPD

Result Qualifier Result Qualifier RPD Analyte Unit D Limit \* Gasoline Range Hydrocarbons ND ND ug/Kg NC 40

DU DU

DII DII

Sample Sample

Surrogate Qualifier Limits %Recovery

a,a,a-Trifluorotoluene (fid) 91 50 - 150

### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 250-4206/1-A Client Sample ID: Method Blank Matrix: Solid Prep Type: Total/NA

Analysis Batch: 4236

MB

Prep Batch: 4206

Analyte Result Qualifier RL RL Unit D Prepared Analyzed Dil Fac DRO (C10-C25) ND 12 12 mg/Kg 04/25/12 20:37 04/26/12 09:40 RRO (nC25-nC36) ND 25 25 mg/Kg 04/25/12 20:37 04/26/12 09:40

> MB MR

Qualifier Limits Surrogate %Recovery Prepared Analyzed Dil Fac 04/25/12 20:37 94 50 - 150 1-Chlorooctadecane 04/26/12 09:40

Lab Sample ID: LCS 250-4206/2-A

Matrix: Solid Prep Type: Total/NA Analysis Batch: 4236 Prep Batch: 4206

98.4

mg/Kg

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits

124

Client Sample ID: Lab Control Sample

50 - 150

### QC Sample Results

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2179-1

SDG: VOC02DEC.12UE

### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 250-4206/2-A

Matrix: Solid

Analysis Batch: 4236

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 4206

		Spike	LCS	LCS				%Rec.
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits
RRO (nC25-nC36)		74.6	72.4		mg/Kg	_	97	50 - 150

LCS LCS

Surrogate %Recovery Qualifier Limits 1-Chlorooctadecane 86 50 - 150

Lab Sample ID: 250-2179-1 DU

Matrix: Solid

Analysis Batch: 4236

Client Sample ID: VOC02-S1-7.5'

Prep Type: Total/NA

Prep Batch: 4206

	Sample	Sample	DU	DU					RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D		RPD	Limit
DRO (C10-C25)	ND		ND		mg/Kg	\$		NC	40
RRO (nC25-nC36)	ND		ND		mg/Kg	<b>\$</b>		NC	40

DU DU

Surrogate %Recovery Qualifier Limits 1-Chlorooctadecane 50 - 150 85

### Method: D2216-80 - Percent Dry Weight (Solids) per ASTM D2216-80

Lab Sample ID: 250-2179-4 DU

Matrix: Solid

Analysis Batch: 4203

Client Sample ID: VOC02-NW4-7.5'

Prep Type: Total/NA

Analysis Daten. 4200									
	Sample	Sample	DU	DU					RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D		RPD	Limit
Percent Moisture	28		29		%			4	20
Percent Solids	72		71		%			2	20

### **Certification Summary**

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2179-1 SDG: VOC02DEC.12UE

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Portland	Alaska	State Program	10	OR00040
TestAmerica Portland	Alaska (UST)	State Program	10	UST-012
TestAmerica Portland	California	State Program	9	2597
TestAmerica Portland	Oregon	NELAC	10	OR100021
TestAmerica Portland	USDA	Federal		P330-11-00092
TestAmerica Portland	Washington	State Program	10	C586

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

# **TestAmerica**

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210 11922 B. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290 9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210 9707-873-9200 FAX 906-9210

THE LEADER IN ENVIRONMENTAL TESTING	ONMENTAL TESTI	U Z		2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119		907-563-9200 FAX 563-9210	
,			CHAIN OF CUSTODY REPORT	Y REPORT	Work Order #: 250 - 2179	0-2179	
THENT: KEEA EAV	EN VITONMENTAL		INVOICE TO:		TURNAROUND REQUEST	REQUEST	
REPORT TO: 25,45 SW	Parkway Bue	4207			in Business Days *	Days *	
so; (fe	on giono				Organic & Inorgar	ic Analyses	
HONE 303 570 9484 BAX			P.O. NUMBER:		etroleum Hydroc	7	
0			PRESERVATIVE	ATIVE	5 4 3	2 1 <1	,
	<u>.</u>		-		STD.		
PROJECT NUMBER: VOCO2 DEC. [LUC	ic. (102		REQUESTED ANALYSES	ANALYSES	OTHER Specify:		
SAMPLED BY: STEVE ONO	no	190	>		* Turnaround Requests less than standard may incur Rush Charges.	dard may incur Rush Charges.	
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	RWT GX NWT NWT	(372)		MATRIX # OF LO (W, S, O) CONT. CO	LOCATION/ TA COMMENTS WO ID	
Vocaz-51-7,5' 4.	4.25, (2 18:20	1			Š		
, VOCE1 - SAR 7.5'	32:28	>			1 5		
VOCAR- 123-7,51	15.30	\ \	·		· · · · · · · · · · · · · · · · · · ·		
10/02-NW4-7,5'	K 32	\ \ \			) 5		
VOCHZ- N. 5-7.5'		1			<i>S</i>		
0							
RELEASED BY: 0 1 M ON ONS	FIRM:	68E4	DATE: 4,25,12	PRINTINAME VAN 1550 FOR W	15 FIRM: PTH	DATE: 4.25	110
RELEASED BY:			DATE:	RECEIVED BY:	)	DATE:	
PRINT NAME:	FIRM:		TIME:	PRINT NAME:	FIRM:	TIME:	
ADDITIONAL REMARKS:					TE TE	TEMP:	
THE RESERVE AND THE PERSON OF						TAL-1000(0408)	

# Login Sample Receipt Checklist

Client: BB&A Environmental

Job Number: 250-2179-1

SDG Number: VOC02DEC.12UE List Source: TestAmerica Portland

Login Number: 2179 List Number: 1

Creator: Svabik-Seror, Philip

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	Comment
The cooler's custody seal, if present, is intact.	N/A	
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.	False	above temp
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?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	





THE LEADER IN ENVIRONMENTAL TESTING

# **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc.

TestAmerica Portland 9405 SW Nimbus Ave. Beaverton, OR 97008 Tel: (503)906-9200

TestAmerica Job ID: 250-2279-1

TestAmerica Sample Delivery Group: VOC02DEC.12.UC

Client Project/Site: L&C Deli

For:

BB&A Environmental 25195 SW Parkway Ave Suite # 207 Wilsonville, Oregon 97070

Attn: Steve Omo

Vannsa Fran

Authorized for release by: 5/8/2012 4:18:08 PM

Vanessa Frahs
Project Manager I
vanessa.frahs@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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QC Sample Results	13
Certification Summary	16
Chain of Custody	17
Receipt Checklists	18

### Sample Summary

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2279-1 SDG: VOC02DEC.12.UC

Lab Samula ID	Client Semule ID	Madain	0.11.4.1	
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
250-2279-1	VOC02-SWDISP-7'	Solid	04/25/12 15:00	04/27/12 13:45
250-2279-2	VOC02-NEDISP-7'	Solid	04/25/12 15:00	04/27/12 13:45
250-2279-3	VOC02-SE-7'	Solid	04/25/12 15:00	04/27/12 13:45
250-2279-4	VOC02-E-7'	Solid	04/25/12 15:05	04/27/12 13:45
250-2279-5	VOC02-NE-7'	Solid	04/25/12 15:10	04/27/12 13:45
250-2279-6	VOC02-NE6-7.5'	Solid	04/25/12 15:15	04/27/12 13:45

### Case Narrative

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2279-1 SDG: VOC02DEC.12.UC

Job ID: 250-2279-1

Laboratory: TestAmerica Portland

Narrative

### Receipt

The samples were received on 4/27/2012 1:45 PM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 4.80 C.

### GC/MS VOA

No analytical or quality issues were noted.

### GC VOA

Method(s) NWTPH-Gx: VOC02-SE-7' (250-2279-3) Hydrocarbon result is due to diesel in quantitation range,

No other analytical or quality issues were noted.

### GC Semi VOA

Method(s) NWTPH-Dx: Detected hydrocarbons appear to be due to weathered diesel.VOC02-SE-7' (250-2279-3)

No other analytical or quality issues were noted.

### **Organic Prep**

No analytical or quality issues were noted.

### **VOA Prep**

No analytical or quality issues were noted.

### Definitions/Glossary

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2279-1 SDG: VOC02DEC.12.UC

### Qualifiers

### **GC VOA**

Qualifier Qualifier Description

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

ML

Abbreviation	These commonly used abbreviations may or may not be present in this report.
<del>\$</del>	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit

ND Not detected at the reporting limit (or MDL or EDL if shown)
PQL Practical Quantitation Limit

QC Quality Control RL Reporting Limit

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

Minimum Level (Dioxin)

### **Detection Summary**

Client: BB&A Environmental Project/Site: L&C Deli

Client Sample ID: VOC02-NE6-7.5'

No Detections

TestAmerica Job ID: 250-2279-1

SDG: VOC02DEC.12.UC

Lab Sample ID: 250-2279-6

						-	o on impro	): <b>250-2279-</b> 1
Result	Qualifier	MDL	MDL	Unit	Dil Fac	D	Method	Prep Type
22		18	18	ug/Kg	1	₩	8260B	Total/NA
SP-7'					ı	at	Sample ID	): 250-2279-2
					L	al	Sample ID	): <b>250-227</b> 9-3
Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
86000		4200	1400	ug/Kg	1	₩	NWTPH-Gx	Total/NA
Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
780		14	14	mg/Kg	1	₩	NWTPH-Dx	Total/NA
					ı	al	Sample ID	): <b>250-2279-</b> 4
							•	
					Ĺ	al	Sample ID	): <b>250-2279-</b> 5
					и			
	Result 86000 Result 780	Result Qualifier 86000 Result Qualifier 780	Result 86000         Qualifier 4200           Result Qualifier 780         RL 14	Result 86000         Qualifier 4200         MDL 1400           Result Qualifier RL 780         RL RL 14	Result 86000         Qualifier         RL 4200         MDL 1400         Unit ug/Kg           Result Qualifier         RL RL Unit mg/Kg	Result 86000         Qualifier         RL 4200         MDL 1400         Unit ug/Kg         Dil Fac 1 14           Result 780         RE RL 14 14 mg/Kg         1	Result   Qualifier   RL   MDL   Unit   Dil Fac   D	Lab Sample IC

Client: BB&A Environmental Project/Site: L&C Deli

Client Sample ID: VOC02-SWDISP-7'

TestAmerica Job ID: 250-2279-1 SDG: VOC02DEC.12.UC

Lab Sample ID: 250-2279-1

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

Date Collected: 04/25/12 15:00								Matri	x: Sol
Date Received: 04/27/12 13:45								Percent Solid	ds: 80
Analyte	Result	Qualifier	MDL	MDL	Unit	D	Prepared	Analyzed	Dil F
Xylenes, Total	ND		70	70	ug/Kg	₩	05/01/12 12:59	05/07/12 15:37	
Benzene	ND		24	24	ug/Kg	₩	05/01/12 12:59	05/07/12 15:37	
Ethylbenzene	ND		21	21	ug/Kg	₽	05/01/12 12:59	05/07/12 15:37	
Toluene	22		18		ug/Kg	₩	05/01/12 12:59	05/07/12 15:37	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1,2-Dichloroethane-d4 (Surr)	100		75 - 125				05/01/12 12:59	05/07/12 15:37	
4-Bromofluorobenzene (Surr)	93		75 - 125				05/01/12 12:59	05/07/12 15:37	
Dibromofluoromethane (Surr)	98		75 - 125				05/01/12 12:59	05/07/12 15:37	
Toluene-d8 (Surr)	103		75 - 125				05/01/12 12:59	05/07/12 15:37	
Client Sample ID: VOC02-NEDISP-7'							Lab	Sample ID: 250	-2279
Date Collected: 04/25/12 15:00									x: So
Date Received: 04/27/12 13:45								Percent Soli	
Analyte	Result	Qualifier	MDL	MDL	Unit	D	Prepared	Analyzed	Dil F
Xylenes, Total	ND		69	69	ug/Kg	<del></del>	05/01/12 12:59	05/07/12 15:59	
Benzene	ND		23	23	ug/Kg	*	05/01/12 12:59	05/07/12 15:59	
Ethylbenzene	ND		21		ug/Kg	<b>\$</b>	05/01/12 12:59	05/07/12 15:59	
Toluene	ND		18		ug/Kg	*	05/01/12 12:59	05/07/12 15:59	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1,2-Dichloroethane-d4 (Surr)	104		75 - 125				05/01/12 12:59	05/07/12 15:59	
4-Bromofluorobenzene (Surr)	96		75 <sub>-</sub> 125				05/01/12 12:59	05/07/12 15:59	
Dibromofluoromethane (Surr)	102		<b>75 - 125</b>				05/01/12 12:59	05/07/12 15:59	
Toluene-d8 (Surr)	106		75 - 125				05/01/12 12:59	05/07/12 15:59	
Client Sample ID: VOC02-SE-7'							Lab	Sample ID: 250	-2279
Date Collected: 04/25/12 15:00									x: So
Date Received: 04/27/12 13:45								Percent Soli	ds: 89
Analyte	Result	Qualifier			Unit	_	Prepared	A a b a al	
			MDL	MDL		D	ricpurcu	Analyzed	Dil F
Xylenes, Total	ND		61		ug/Kg	— <del>*</del>	05/01/12 12:59	05/07/12 17:28	Dil F
	ND ND			61					Dil F
Benzene			61	61 21	ug/Kg	₩	05/01/12 12:59	05/07/12 17:28	Dil F
Benzene Ethylbenzene	ND		61 21	61 21 19	ug/Kg ug/Kg	*	05/01/12 12:59 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28	Dil
Benzene Ethylbenzene Toluene	ND ND	Qualifier	61 21 19	61 21 19	ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/01/12 12:59 05/01/12 12:59 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28	
Benzene Ethylbenzene Toluene Surrogate	ND ND ND	Qualifier	61 21 19 16	61 21 19	ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28	
Benzene Ethylbenzene Toluene  Surrogate 1,2-Dichloroethane-d4 (Surr)	ND ND ND %Recovery	Qualifier	61 21 19 16	61 21 19	ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Prepared	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28	
Benzene Ethylbenzene Toluene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr)	ND ND ND **Recovery	Qualifier	61 21 19 16 <b>Limits</b> 75 - 125	61 21 19	ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Prepared 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 Analyzed 05/07/12 17:28	
Benzene Ethylbenzene Toluene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	ND ND ND **Recovery 113 103	Qualifier	61 21 19 16 <b>Limits</b> 75 - 125 75 - 125	61 21 19	ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Prepared 05/01/12 12:59 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 Analyzed 05/07/12 17:28	
Benzene Ethylbenzene Toluene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)	ND ND ND **Recovery 113 103 106	Qualifier	61 21 19 16  Limits 75 - 125 75 - 125 75 - 125	61 21 19	ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Prepared 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 Analyzed 05/07/12 17:28 05/07/12 17:28	Dil I
Benzene Ethylbenzene Toluene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  Client Sample ID: VOC02-E-7'	ND ND ND **Recovery 113 103 106	Qualifier	61 21 19 16  Limits 75 - 125 75 - 125 75 - 125	61 21 19	ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Prepared 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28	Dil I
Benzene Ethylbenzene Toluene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  Client Sample ID: VOC02-E-7' Date Collected: 04/25/12 15:05	ND ND ND **Recovery 113 103 106	Qualifier	61 21 19 16  Limits 75 - 125 75 - 125 75 - 125	61 21 19	ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Prepared 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28	Dil I
Benzene Ethylbenzene Foluene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  Client Sample ID: VOC02-E-7' Date Collected: 04/25/12 15:05 Date Received: 04/27/12 13:45	ND ND ND **Recovery 113 103 106 112	Qualifier  Qualifier	61 21 19 16  Limits 75 - 125 75 - 125 75 - 125	61 21 19 16	ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Prepared 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 Analyzed 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 Sample ID: 250 Matri	Dil I
Benzene Ethylbenzene Toluene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  Client Sample ID: VOC02-E-7' Date Collected: 04/25/12 15:05 Date Received: 04/27/12 13:45 Analyte	ND ND ND **Recovery 113 103 106 112		61 21 19 16  Limits 75 - 125 75 - 125 75 - 125	61 21 19 16	ug/Kg ug/Kg ug/Kg ug/Kg	* * *	05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Prepared 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 Sample ID: 250 Matri Percent Soli	Dil I
Benzene Ethylbenzene Toluene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  Client Sample ID: VOC02-E-7' Date Collected: 04/25/12 15:05 Date Received: 04/27/12 13:45 Analyte Kylenes, Total	ND ND %Recovery 113 103 106 112		61 21 19 16  Limits 75 - 125 75 - 125 75 - 125 75 - 125	61 21 19 16 MDL 64	ug/Kg ug/Kg ug/Kg ug/Kg	× × ×	05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Prepared 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Lab	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 25/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 Matri Percent Soli Analyzed	Dil I
Benzene Ethylbenzene Toluene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  Client Sample ID: VOC02-E-7' Date Collected: 04/25/12 15:05 Date Received: 04/27/12 13:45 Analyte Kylenes, Total Benzene	%Recovery  113 103 106 112  Result		61 21 19 16  Limits 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 25 26  MDL 64 22	MDL 64 22	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg		05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Prepared 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Lab Prepared 05/01/12 12:59 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 Sample ID: 250 Matri Percent Soli Analyzed 05/07/12 16:21 05/07/12 16:21	Dil I
Benzene Ethylbenzene Toluene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  Client Sample ID: VOC02-E-7' Date Collected: 04/25/12 15:05 Date Received: 04/27/12 13:45 Analyte Kylenes, Total Benzene Ethylbenzene	ND ND %Recovery 113 103 106 112 Result		61 21 19 16  Limits 75 - 125 75 - 125 75 - 125 75 - 125	MDL 64 22 20	ug/Kg ug/Kg ug/Kg ug/Kg		05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Prepared 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 Lab Prepared 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 Sample ID: 250 Matri Percent Soli Analyzed 05/07/12 16:21	Dil I
Xylenes, Total Benzene Ethylbenzene Toluene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  Client Sample ID: VOC02-E-7' Date Collected: 04/25/12 15:05 Date Received: 04/27/12 13:45 Analyte  Xylenes, Total Benzene Ethylbenzene Toluene Surrogate	Result  ND ND  **Recovery  113 103 106 112  Result  ND ND ND	Qualifier	61 21 19 16  Limits 75 - 125 75 - 125 75 - 125 75 - 125 25 20	MDL 64 22 20	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	X	05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59  Prepared 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59 05/01/12 12:59	05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 05/07/12 17:28 Sample ID: 250 Matri Percent Soli Analyzed 05/07/12 16:21 05/07/12 16:21 05/07/12 16:21	x: Sol

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2279-1 SDG: VOC02DEC.12.UC

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

Client Sample ID: VOC02-E-7'
Date Collected: 04/25/12 15:05
Date Received: 04/27/12 13:45

Lab Sample ID: 250-2279-4

Matrix: Solid

Percent Solids: 85.4

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	97	75 _ 125
Dibromofluoromethane (Surr)	99	75 - 125
Toluene-d8 (Surr)	106	75 <sub>-</sub> 125

Prepared	Analyzed	Dil Fac	
05/01/12 12:59	05/07/12 16:21	1	
05/01/12 12:59	05/07/12 16:21	1	
05/01/12 12:59	05/07/12 16:21	1	

Client Sample ID: VOC02-NE-7'
Date Collected: 04/25/12 15:10
Date Received: 04/27/12 13:45

Matrix: Solid
Percent Solids: 84.8

Lab Sample ID: 250-2279-5

									i cicciii oon	43. 04.0
Analyte	Result	Qualifier	MDL	MDL	Unit	ı	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		66	66	ug/Kg	3	₩	05/01/12 12:59	05/07/12 16:43	1
Benzene	ND		22	22	ug/Kg	3	<b>#</b>	05/01/12 12:59	05/07/12 16:43	1
Ethylbenzene	ND		20	20	ug/Kg	÷	₩	05/01/12 12:59	05/07/12 16:43	1
Toluene	ND		17	17	ug/Kg	+	<b>P</b>	05/01/12 12:59	05/07/12 16:43	1

	Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
١	1,2-Dichloroethane-d4 (Surr)	105		75 - 125	05/01/12 12:59	05/07/12 16:43	1
	4-Bromofluorobenzene (Surr)	97		75 - 125	05/01/12 12:59	05/07/12 16:43	1
۱	Dibromofluoromethane (Surr)	101		75 - 125	05/01/12 12:59	05/07/12 16:43	1
	Toluene-d8 (Surr)	107		75 - 125	05/01/12 12:59	05/07/12 16:43	1

Client Sample ID: VOC02-NE6-7.5'
Date Collected: 04/25/12 15:15

Lab Sample ID: 250-2279-6

Matrix: Solid

Date Received: 04/27/12 13:45 Percent Solids: 86.0 Analyte MDL Result Qualifier MDL Unit D Prepared Analyzed Dil Fac Xylenes, Total ND 63 63 ug/Kg 05/01/12 12:59 05/07/12 17:05 Benzene ND 21 21 ug/Kg \* 05/01/12 12:59 05/07/12 17:05 1 Ethylbenzene ND 19 19 ug/Kg 05/01/12 12:59 05/07/12 17:05 1 Toluene ND 16 05/01/12 12:59 16 ug/Kg 05/07/12 17:05

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		75 - 125	05/01/12 12:59	05/07/12 17:05	1
4-Bromofluorobenzene (Surr)	95		75 - 125	05/01/12 12:59	05/07/12 17:05	1
Dibromofluoromethane (Surr)	96		75 <sub>-</sub> 125	05/01/12 12:59	05/07/12 17:05	1
Toluene-d8 (Surr)	105		75 - 125	05/01/12 12:58	05/07/12 17:05	1

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2279-1 SDG: VOC02DEC.12.UC

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Client Sample ID: VOC02-SWDISP-7							Lab	Sample ID: 250	-2279
Date Collected: 04/25/12 15:00								Matri	x: Soli
Date Received: 04/27/12 13:45								Percent Soli	ds: 80
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Hydrocarbons	ND		4800	1500	ug/Kg	<del>\oldsymbol{\pi}</del>	05/01/12 11:16	05/02/12 13:01	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
a,a,a-Trifluorotoluene (fid)	91		50 - 150				05/01/12 11:16	05/02/12 13:01	
Client Sample ID: VOC02-NEDISP-7							Lab	Sample ID: 250	)-2279
Date Collected: 04/25/12 15:00								Matri	x: Sol
Date Received: 04/27/12 13:45								Percent Soli	ds: 84
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Gasoline Range Hydrocarbons	ND		4700	1500	ug/Kg	*	05/01/12 11:16	05/02/12 13:29	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
a,a,a-Trifluorotoluene (fid)	99		50 - 150				05/01/12 11:16	05/02/12 13:29	
Client Sample ID: VOC02-SE-7'							Lab	Sample ID: 250	)-2279
Date Collected: 04/25/12 15:00									x: So
Date Received: 04/27/12 13:45								Percent Soli	ds: 89
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Gasoline Range Hydrocarbons	86000		4200	1400	ug/Kg	₩	05/01/12 11:16	05/02/12 12:05	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
a,a,a-Trifluorotoluene (fid)	102		50 - 150				05/01/12 11:16	05/02/12 12:05	
Client Sample ID: VOC02-E-7'							Lab	Sample ID: 250	)-2279
Date Collected: 04/25/12 15:05									x: Sol
								Percent Soli	
Date Received: 04/2//12 13:45							B		
	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Date Received: 04/27/12 13:45 Analyte Gasoline Range Hydrocarbons	Result	Qualifier	4400 RL	MDL 1400	Unit ug/Kg	— <del>D</del>	05/01/12 11:16	Analyzed 05/02/12 15:57	Dil F
Analyte									Dil F
Analyte Gasoline Range Hydrocarbons	ND		4400				05/01/12 11:16	05/02/12 15:57	
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)	ND %Recovery		4400				05/01/12 11:16  Prepared  05/01/12 11:16	05/02/12 15:57  Analyzed	Dil F
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE-7'	ND %Recovery		4400				05/01/12 11:16  Prepared  05/01/12 11:16	05/02/12 15:57  Analyzed  05/02/12 15:57  Sample ID: 250	Dil F
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE-7' Date Collected: 04/25/12 15:10	ND %Recovery		4400				05/01/12 11:16  Prepared  05/01/12 11:16	05/02/12 15:57  Analyzed  05/02/12 15:57  Sample ID: 250  Matri	Dil F
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE-7' Date Collected: 04/25/12 15:10 Date Received: 04/27/12 13:45	ND %Recovery 95		4400	. 1400			05/01/12 11:16  Prepared  05/01/12 11:16	05/02/12 15:57  Analyzed  05/02/12 15:57  Sample ID: 250	Dil F 0-2279 ix: So ds: 84
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE-7' Date Collected: 04/25/12 15:10 Date Received: 04/27/12 13:45 Analyte	ND %Recovery 95	Qualifier	4400  Limits  50 - 150	1400 MDL	ug/Kg Unit	*	05/01/12 11:16  Prepared  05/01/12 11:16  Lab	05/02/12 15:57  Analyzed  05/02/12 15:57  Sample ID: 250  Matri Percent Soli	Dil F 0-2279 ix: Sol ds: 84
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE-7' Date Collected: 04/25/12 15:10 Date Received: 04/27/12 13:45 Analyte Gasoline Range Hydrocarbons	ND  %Recovery  95	Qualifier  Qualifier	4400  Limits  50 - 150	1400 MDL	ug/Kg Unit		05/01/12 11:16  Prepared  05/01/12 11:16  Lab  Prepared	05/02/12 15:57  Analyzed  05/02/12 15:57  Sample ID: 250  Matri Percent Soli Analyzed	Dil F 0-2279 ix: So ds: 84 Dil F
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE-7' Date Collected: 04/25/12 15:10 Date Received: 04/27/12 13:45 Analyte Gasoline Range Hydrocarbons	ND %Recovery 95  Result ND	Qualifier  Qualifier	4400  Limits  50 - 150  RL  4500	1400 MDL	ug/Kg Unit		05/01/12 11:16  Prepared  05/01/12 11:16  Lab  Prepared  05/01/12 11:16	05/02/12 15:57  Analyzed  05/02/12 15:57  Sample ID: 250  Matri Percent Soli Analyzed  05/02/12 11:09	Dil F 0-2279 ix: So ds: 84 Dil F
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE-7' Date Collected: 04/25/12 15:10 Date Received: 04/27/12 13:45 Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)	ND  %Recovery  95  Result  ND  %Recovery	Qualifier  Qualifier	### A400    Limits	1400 MDL	ug/Kg Unit		05/01/12 11:16  Prepared  05/01/12 11:16  Lab  Prepared  05/01/12 11:16  Prepared  05/01/12 11:16	05/02/12 15:57  Analyzed  05/02/12 15:57  Sample ID: 250  Matri Percent Soli Analyzed  05/02/12 11:09  Analyzed  05/02/12 11:09	Dil F
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE-7' Date Collected: 04/25/12 15:10 Date Received: 04/27/12 13:45 Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE6-7.5'	ND  %Recovery  95  Result  ND  %Recovery	Qualifier  Qualifier	### A400    Limits	1400 MDL	ug/Kg Unit		05/01/12 11:16  Prepared  05/01/12 11:16  Lab  Prepared  05/01/12 11:16  Prepared  05/01/12 11:16	05/02/12 15:57  Analyzed  05/02/12 15:57  Sample ID: 250  Matri Percent Soli Analyzed  05/02/12 11:09  Analyzed  05/02/12 11:09  Sample ID: 250	Dil F Dil F Dil F
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE-7' Date Collected: 04/25/12 15:10 Date Received: 04/27/12 13:45 Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE6-7.5' Date Collected: 04/25/12 15:15	ND  %Recovery  95  Result  ND  %Recovery	Qualifier  Qualifier	### A400    Limits	1400 MDL	ug/Kg Unit		05/01/12 11:16  Prepared  05/01/12 11:16  Lab  Prepared  05/01/12 11:16  Prepared  05/01/12 11:16	05/02/12 15:57  Analyzed  05/02/12 15:57  Sample ID: 250  Matri Percent Soli Analyzed  05/02/12 11:09  Analyzed  05/02/12 11:09  Sample ID: 250  Matri	Dil F Dil F Dil F Dil S Dil S Dil S Dil S Dil S Dil S
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE-7' Date Collected: 04/25/12 15:10 Date Received: 04/27/12 13:45 Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE6-7.5' Date Collected: 04/25/12 15:15 Date Received: 04/27/12 13:45	ND  %Recovery  95  Result  ND  %Recovery  98	Qualifier  Qualifier  Qualifier	### ##################################	MDL 1500	Unit ug/Kg	D	05/01/12 11:16  Prepared  05/01/12 11:16  Lab  Prepared  05/01/12 11:16  Prepared  05/01/12 11:16  Lab	05/02/12 15:57  Analyzed  05/02/12 15:57  Sample ID: 250  Matri Percent Soli Analyzed  05/02/12 11:09  Analyzed  05/02/12 11:09  Sample ID: 250  Matri Percent Soli	Dil F Dil F Dil F Dil S Dix: Sol
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE-7' Date Collected: 04/25/12 15:10 Date Received: 04/27/12 13:45 Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE6-7.5' Date Collected: 04/25/12 15:15 Date Received: 04/27/12 13:45 Analyte	ND  %Recovery  95  Result  ND  %Recovery  98	Qualifier  Qualifier	### A400    Limits	MDL 1500	ug/Kg Unit		05/01/12 11:16  Prepared  05/01/12 11:16  Lab  Prepared  05/01/12 11:16  Prepared  05/01/12 11:16	05/02/12 15:57  Analyzed  05/02/12 15:57  Sample ID: 250  Matri Percent Soli Analyzed  05/02/12 11:09  Analyzed  05/02/12 11:09  Sample ID: 250  Matri	Dil F Dil F Dil F Dil S
Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE-7' Date Collected: 04/25/12 15:10 Date Received: 04/27/12 13:45 Analyte Gasoline Range Hydrocarbons  Surrogate a,a,a-Trifluorotoluene (fid)  Client Sample ID: VOC02-NE6-7.5'	ND  %Recovery  95  Result  ND  %Recovery  98	Qualifier  Qualifier  Qualifier	### A400    Limits	MDL 1500	Unit ug/Kg	D	05/01/12 11:16  Prepared  05/01/12 11:16  Lab  Prepared  05/01/12 11:16  Prepared  05/01/12 11:16  Lab	05/02/12 15:57  Analyzed  05/02/12 15:57  Sample ID: 250  Matri Percent Soli Analyzed  05/02/12 11:09  Analyzed  05/02/12 11:09  Sample ID: 250  Matri Percent Soli Analyzed	Dil F  Dil F  Dil F  Dil F  Dil S  Di

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2279-1 SDG: VOC02DEC.12.UC

### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Client Sample ID: VOC02-SWDISP-7	,,						Lab	Sample ID: 250	0-2279-
Date Collected: 04/25/12 15:00								Matri	ix: Soli
Date Received: 04/27/12 13:45								<b>Percent Soli</b>	ds: 80
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil F
DRO (C10-C25)	ND		15	15	mg/Kg	₩	05/01/12 16:15	05/02/12 08:53	
RRO (nC25-nC36)	ND		31	31	mg/Kg	₽	05/01/12 16:15	05/02/12 08:53	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctadecane	80		50 - 150				05/01/12 16:15	05/02/12 08:53	-
Client Sample ID: VOC02-NEDISP-7							Lab	Sample ID: 250	0-2279
Date Collected: 04/25/12 15:00									ix: Sol
Date Received: 04/27/12 13:45								Percent Soli	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil F
DRO (C10-C25)	ND		15	15	mg/Kg	— <del>*</del>	05/01/12 16:15	05/02/12 10:38	-
RRO (nC25-nC36)	ND		30		mg/Kg	⋫	05/01/12 16:15	05/02/12 10:38	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	***		30	30	mg/kg	•	05/01/12 16.15	05/02/12 10:38	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1-Chlorooctadecane	79		50 - 150				05/01/12 16:15	05/02/12 10:38	
Client Sample ID: VOC02-SE-7'							Lab	Sample ID: 250	1-2279
Date Collected: 04/25/12 15:00									x: Soli
Date Received: 04/27/12 13:45								Percent Soli	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil F
DRO (C10-C25)	780		14	14	mg/Kg	— <del>*</del>	05/01/12 16:15	05/02/12 10:56	- DII F
RRO (nC25-nC36)	ND		28		mg/Kg	₩	05/01/12 16:15		
(1020 11000)	ND		20	20	mg/kg	~	05/01/12 16:15	05/02/12 10:56	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1-Chlorooctadecane	86		50 - 150				05/01/12 16:15	05/02/12 10:56	
Client Sample ID: VOC02-E-7'							Lab	Sample ID: 250	-2279
Date Collected: 04/25/12 15:05									x: Soli
Date Received: 04/27/12 13:45								Percent Soli	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
DRO (C10-C25)	ND		15		mg/Kg	— <del>*</del>	05/01/12 16:15	05/02/12 11:14	DIIT
RRO (nC25-nC36)	ND		29			₩	05/01/12 16:15	05/02/12 11:14	
(1020 11000)	110		25	29	mg/Kg	~	05/01/12 16:15	05/02/12 11:14	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1-Chlorooctadecane	91		50 - 150				05/01/12 16:15	05/02/12 11:14	
Client Sample ID: VOC02-NE-7'							Lah	Sample ID: 250	1-2279-
Date Collected: 04/25/12 15:10									x: Soli
Date Received: 04/27/12 13:45								Percent Soli	
Analyte	Result	Qualifier	RL	RI	Unit	D	Prepared	Analyzed	us: 04. Dil Fa
DRO (C10-C25)	ND	- Guarrier	15		mg/Kg	— <del>☆</del>	05/01/12 16:15		DIIFa
RRO (nC25-nC36)	ND		29		mg/Kg	<b>☆</b>	05/01/12 16:15	05/02/12 11:32 05/02/12 11:32	
Surrogate	9/ 🗖	0							
-Chlorooctadecane	%Recovery	Quaimer	Limits				Prepared	Analyzed	Dil Fa
-Chiorooctadecane	84		50 <sub>-</sub> 150				05/01/12 16:15	05/02/12 11:32	
Client Sample ID: VOC02-NE6-7.5'							Lab	Sample ID: 250	-2279-
Date Collected: 04/25/12 15:15									x: Soli
Date Received: 04/27/12 13:45								Percent Solid	
nalyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil ⊩a
nalyte PRO (C10-C25)	Result	Qualifier	RL		Unit mg/Kg	— <del>□</del>	<b>Prepared</b> 05/01/12 16:15	Analyzed 05/02/12 11:50	Dil Fa

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2279-1 SDG: VOC02DEC.12.UC

### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

 Surrogate
 %Recovery
 Qualifier
 Limits
 Prepared
 Analyzed
 Dil Fac

 1-Chlorooctadecane
 80
 50 - 150
 05/01/12 16:15
 05/02/12 11:50
 1

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2279-1

SDG: VOC02DEC.12.UC

General	Chemi	strv
		- e- y

Client Sample ID: VOC02-SWDISP-7'							Lab	Sample ID: 250	0-2279
Date Collected: 04/25/12 15:00								Matr	x: Soli
Date Received: 04/27/12 13:45									
Analyte		Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil F
Percent Moisture	19		0.010	0.010	%			05/01/12 12:39	
Percent Solids	81		0.010	0.010	%			05/01/12 12:39	
Client Sample ID: VOC02-NEDISP-7'							Lab	Sample ID: 250	)-2279
Date Collected: 04/25/12 15:00								Matr	x: Sol
Date Received: 04/27/12 13:45									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil F
Percent Moisture	16		0.010	0.010	%			05/01/12 12:39	
Percent Solids	84		0.010	0.010	%			05/01/12 12:39	
Client Sample ID: VOC02-SE-7'							Lab	Sample ID: 250	)-2279
Date Collected: 04/25/12 15:00									ix: Sol
Date Received: 04/27/12 13:45									X. OUI
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil F
Percent Moisture	11		0.010	0.010	%			05/01/12 12:39	
Percent Solids	89		0.010	0.010	%			05/01/12 12:39	
Client Sample ID: VOC02-E-7'							Lab	Sample ID: 250	0-2279
Date Collected: 04/25/12 15:05								Matr	x: Sol
Date Received: 04/27/12 13:45									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil F
Percent Moisture	15		0.010	0.010	%			05/01/12 12:39	
Percent Solids	85		0.010	0.010	%			05/01/12 12:39	
Client Sample ID: VOC02-NE-7'							Lab	Sample ID: 250	)-2279
Date Collected: 04/25/12 15:10								Matr	x: Sol
Date Received: 04/27/12 13:45									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil F
Percent Moisture	15		0.010	0.010	%			05/01/12 12:39	
Percent Solids	85		0.010	0.010	%			05/01/12 12:39	
Client Sample ID: VOC02-NE6-7.5'							Lab	Sample ID: 250	0-2279
Date Collected: 04/25/12 15:15								•	x: Sol
Date Received: 04/27/12 13:45									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil F
Percent Moisture	14		0.010	0.010	%			05/01/12 12:39	-

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2279-1 SDG: VOC02DEC.12.UC

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

Lab Sample ID: MB 250-4430/1-A

Matrix: Solid

Analysis Batch: 4459

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 4430

	MB	MB							
Analyte	Result	Qualifier	MDL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		58	58	ug/Kg	_	05/01/12 18:04	05/02/12 11:54	1
Benzene	ND		20	20	ug/Kg		05/01/12 18:04	05/02/12 11:54	1
Ethylbenzene	ND		18	18	ug/Kg		05/01/12 18:04	05/02/12 11:54	1
Toluene	ND		15	15	ug/Kg		05/01/12 18:04	05/02/12 11:54	1

MB MB

	Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	1,2-Dichloroethane-d4 (Surr)	104		75 - 125	05/01/12 18:04	05/02/12 11:54	1
	4-Bromofluorobenzene (Surr)	100		75 - 125	05/01/12 18:04	05/02/12 11:54	1
	Dibromofluoromethane (Surr)	102		75 - 125	05/01/12 18:04	05/02/12 11:54	1
١	Toluene-d8 (Surr)	102		75 - 125	05/01/12 18:04	05/02/12 11:54	1

Lab Sample ID: LCS 250-4430/2-A

Matrix: Solid

Analysis Batch: 4459

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 4430

	Spike	LCS	LCS			%Rec.	
Analyte	Added	Result	Qualifier	Unit D	%Rec	Limits	
Xylenes, Total	5930	6580		ug/Kg	111	70 - 130	
Benzene	1980	2350		ug/Kg	119	80 - 120	
Ethylbenzene	1980	2170		ug/Kg	110	80 - 125	
Toluene	1980	2320		ug/Kg	118	80 - 120	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		75 - 125
4-Bromofluorobenzene (Surr)	93		75 <sub>- 125</sub>
Dibromofluoromethane (Surr)	102		<b>75 - 125</b>
Toluene-d8 (Surr)	104		75 - 125

Lab Sample ID: 250-2319-B-1-A MS

Matrix: Solid

Analysis Batch: 4459

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 4430

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Xylenes, Total	270		6700	7420		ug/Kg	*	107	70 - 130	
Benzene	ND		2230	2680		ug/Kg	₽	120	80 - 125	
Ethylbenzene	60		2230	2510		ug/Kg	₽	109	80 - 125	
Toluene	100		2230	2750		ug/Kg	*	119	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		75 - 125
4-Bromofluorobenzene (Surr)	94		75 - 125
Dibromofluoromethane (Surr)	103		75 - 125
Toluene-d8 (Surr)	103		75 - 125

Lab Sample ID: 250-2319-B-1-B MSD

Matrix: Solid

Analysis Batch: 4459

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA Prep Batch: 4430

D

,										P	
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Xylenes, Total	270		6760	7780		ug/Kg	\$	111	70 - 130	5	25

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2279-1 SDG: VOC02DEC.12.UC

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

Lab Sample ID: 250-2319-B-1-B MSD

Matrix: Solid

Analysis Batch: 4459

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 4430

										P Duton	
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	ND		2250	2750		ug/Kg	<del>*</del>	122	80 - 125	2	25
Ethylbenzene	60		2250	2620		ug/Kg	₽	114	80 - 125	4	25
Toluene	100		2250	2870		ug/Kg	₽	123	70 - 130	4	25

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106	-	75 - 125
4-Bromofluorobenzene (Surr)	96		75 - 125
Dibromofluoromethane (Surr)	103		75 - 125
Toluene-d8 (Surr)	106		75 - 125

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 250-4393/1-A	Client Sample ID: Method Blank
Matrix: Solid	Prep Type: Total/NA

Analysis Batch: 4509

MB MB Analyte Qualifier Result RL MDL Unit D Prepared Analyzed Dil Fac Gasoline Range Hydrocarbons ND 3700 1200 ug/Kg 05/01/12 11:16 05/02/12 10:02

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac a,a,a-Trifluorotoluene (fid) 103 50 - 150 05/01/12 11:16 05/02/12 10:02

Lab Sample ID: LCS 250-4393/2-A

Matrix: Solid

Analysis Batch: 4509

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 4393

Prep Type: Total/NA

Prep Batch: 4393

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Gasoline Range Hydrocarbons 70 - 130 112

23200 26000 ug/Kg LCS LCS

Surrogate Qualifier %Recovery Limits a,a,a-Trifluorotoluene (fid) 107 50 - 150

Lab Sample ID: 250-2279-2 MS

Matrix: Solid

Analysis Batch: 4509

Client Sample ID: VOC02-NEDISP-7'

Prep Type: Total/NA Prep Batch: 4393

Sample Sample Spike MS MS Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits ₩ Gasoline Range Hydrocarbons ND 29200 30300 ug/Kg 104 65 - 130

MS MS Surrogate Qualifier %Recovery Limits a,a,a-Trifluorotoluene (fid) 100 50 - 150

Lab Sample ID: 250-2279-1 DU

Matrix: Solid

Analysis Batch: 4509

Client Sample ID: VOC02-SWDISP-7' Prep Type: Total/NA

Prep Batch: 4393 RPD

40

Sample Sample DU DU Analyte Result Qualifier Result Qualifier Unit D Limit ₩ Gasoline Range Hydrocarbons ND 2090 ug/Kg NC

### QC Sample Results

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2279-1 SDG: VOC02DEC.12.UC

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 250-2279-1 DU

Matrix: Solid

Analysis Batch: 4509

Client Sample ID: VOC02-SWDISP-7'

Prep Type: Total/NA

Prep Batch: 4393

DU DU

Surrogate %Recovery Qualifier

93

a,a,a-Trifluorotoluene (fid)

Limits 50 - 150

### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 250-4423/1-A

Matrix: Solid

Analysis Batch: 4440

MR MR

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 4423

1										
ı	Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
ı	DRO (C10-C25)	ND		12	12	mg/Kg	_	05/01/12 16:15	05/02/12 07:59	1
l	RRO (nC25-nC36)	ND		25	25	mg/Kg		05/01/12 16:15	05/02/12 07:59	1

MB MB

Surrogate Limits %Recovery Qualifier Prepared Analyzed Dil Fac 1-Chlorooctadecane 50 - 150 91 05/01/12 16:15 05/02/12 07:59

Lab Sample ID: LCS 250-4423/2-A

Matrix: Solid

Analysis Batch: 4440

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 4423

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
DRO (C10-C25)	124	119		mg/Kg	_	96	50 - 150	
RRO (nC25-nC36)	74.4	69.0		mg/Kg		93	50 - 150	

LCS LCS

Surrogate %Recovery Qualifier I imits 1-Chlorooctadecane 87 50 - 150

Lab Sample ID: 250-2279-1 DU

**Matrix: Solid** 

Analysis Batch: 4440

Client Sample ID: VOC02-SWDISP-7'

Prep Type: Total/NA Prep Batch: 4423

Sample Sample DU DU RPD **Analyte** Result Qualifier Result Qualifier Unit D RPD Limit ₩ DRO (C10-C25) ND ND mg/Kg NC 40 RRO (nC25-nC36) Ö ND ND mg/Kg 40

DU DU

Surrogate %Recovery Qualifier Limits 1-Chlorooctadecane 73 50 - 150

### Method: D2216-80 - Percent Dry Weight (Solids) per ASTM D2216-80

Lab Sample ID: 250-2279-6 DU Client Sample ID: VOC02-NE6-7.5' Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 4407

Sample Sample DU DU RPD Analyte Qualifier Result Result Qualifier RPD Unit D Limit Percent Moisture 14 % 16 14 20 Percent Solids 86 84 % 3 20

### **Certification Summary**

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2279-1 SDG: VOC02DEC.12.UC

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Portland	Alaska	State Program	10	OR00040
TestAmerica Portland	Alaska (UST)	State Program	10	UST-012
TestAmerica Portland	California	State Program	9	2597
TestAmerica Portland	Oregon	NELAC	10	OR100021
TestAmerica Portland	USDA	Federal		P330-11-00092
TestAmerica Portland	Washington	State Program	10	C586

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

# **TestAmericc**

THE LEADER IN ENVIRONMENTAL TESTING

9405 SW Nimbus Ave, Beaverton, OR 97008-7145 11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 11922 E. First Ave, Spokane, WA 99206-5302 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

Loc: 250

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Turnaround Requests less than standard may incur Rush Charges 2 1 <1 TURNAROUND REQUEST Petroleum Hydrocarbon Analyses FIRM: SS 784 TIME LOCATION/ COMMENTS Organic & Inorganic Analyses in Business Days \* OTHER Specify: 3 5 Work Order #: STD. # OF CONT. FIRM: MATRIX (W, S, O) 10 S (month Sign PRINT NAME: D CHAIN OF CUSTODY REPORT RECEIVED BY: RECEIVED BY: REQUESTED ANALYSES PRESERVATIVE DATE: 4/27/12 TAME 4/27 TIME: 13,00 P.O. NUMBER harron Dx HATPH XR3 BBEA #207 (5:15 12:10 15:00 15:00 15:05 15:08 Com Sallaman FRM REPORT TO: 25195 SW PARK WAY AN 97070 SAMPLING PROJECT NUMBER: VOCO2 DEC 120C BBEA ENDIAMENTAL 4/25/12 ADDRESS: Wille OR 000 PHONE: 503. 570 - 9484 FAX: PROJECT NAME: LEC DEL SPEUE STRPHEN , VOCGZ- NE6-7,5 5 VOC 102- NE-7 , L-3-2920A+ 3 DCG2-58-71 CLIENT SAMPLE IDENTIFICATION SAMPLED BY: RELEASED BY: RELEASED BY: CLIENT: PRINT NAME: PRINT NAME:

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Additional Amelyses

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# Login Sample Receipt Checklist

Client: BB&A Environmental

Job Number: 250-2279-1

SDG Number: VOC02DEC.12.UC

List Source: TestAmerica Portland

Login Number: 2279 List Number: 1

Creator: Svabik-Seror, Philip

Question	Answer	Comment	
Radioactivity either was not measured or, if measured, is at or below background	N/A		
The cooler's custody seal, if present, is intact.	N/A		
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?	True		
There are no discrepancies between the sample IDs on the containers and the COC.	True		
Samples are received within Holding Time.	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	N/A		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A		
Multiphasic samples are not present.	N/A		
Samples do not require splitting or compositing.	N/A		
Residual Chlorine Checked.	N/A		



# **TestAmelica**

THE LEADER IN ENVIRONMENTAL TESTING

## **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc.

TestAmerica Portland 9405 SW Nimbus Ave. Beaverton, OR 97008 Tel: (503)906-9200

TestAmerica Job ID: 250-2617-1

TestAmerica Sample Delivery Group: VOC02DEC.12UC

Client Project/Site: L&C Deli

For:

BB&A Environmental 25195 SW Parkway Ave Suite # 207 Wilsonville, Oregon 97070

Attn: Steve Omo

Vannsa Fran

Authorized for release by: 5/24/2012 2:06:18 PM

Vanessa Frahs
Project Manager I
vanessa.frahs@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.

TestAmerica Job ID; 250-2617-1 SDG: VOC02DEC.12UC

Client: BB&A Environmental Project/Site: L&C Deli

# **Table of Contents**

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### Sample Summary

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

	The second secon			
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
250-2617-1	VOC02-P11-GW	Water	05/08/12 10:00	05/08/12 15:55
250-2617-2	VOC02-P12-GW	Water	05/08/12 10:30	05/08/12 15:55

### **Case Narrative**

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1

SDG: VOC02DEC.12UC

### Job ID: 250-2617-1

### Laboratory: TestAmerica Portland

### Narrative

### Receipt

The samples were received on 5/8/2012 3:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.5° C.

### GC/MS VOA

No analytical or quality issues were noted.

### GC VOA

Method(s) NWTPH-Gx: Only one Duplicate sample was analyzed for these 11 samples due to insufficient volume.

No other analytical or quality issues were noted.

### GC Semi VOA

Method(s) NWTPH-Dx: Detected hydrocarbons appear to be due to weathered diesel.VOC02-P11-GW (250-2617-1), VOC02-P12-GW (250-2617-2)

No other analytical or quality issues were noted.

### Organic Prep

No analytical or quality issues were noted.

### **VOA Prep**

No analytical or quality issues were noted.

### Definitions/Glossary

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1

SDG: VOC02DEC.12UC

### Qualifiers

### GC/MS VOA

Qualifier

Qualifier Description

J

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS Semi VOA

Qualifier

Qualifier Description

Н

Sample was prepped or analyzed beyond the specified holding time

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC VOA

Qualifier

**Qualifier Description** 

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier

**Qualifier Description** 

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

**Abbreviation** 

These commonly used abbreviations may or may not be present in this report.

₩

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R CNF Percent Recovery Contains no Free Liquid

DL, RA, RE, IN

Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample

**Estimated Detection Limit** 

**EDL** 

United States Environmental Protection Agency

FPA MDL

Method Detection Limit Minimum Level (Dioxin)

ML

Not detected at the reporting limit (or MDL or EDL if shown)

ND

Practical Quantitation Limit

PQL

QC

**Quality Control** 

RL

Reporting Limit Relative Percent Difference, a measure of the relative difference between two points

RPD TEF

Toxicity Equivalent Factor (Dioxin)

TEQ

Toxicity Equivalent Quotient (Dioxin)

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

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

Client Sample ID: VOC02-P11-GW
Date Collected: 05/08/12 10:00

Lab Sample ID: 250-2617-1

Matrix: Water

Date	Received: 05/08/12 15:55									
Analy	/te	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylen	es, Total	ND		3.0	0.31	ug/L			05/12/12 18:13	1
Benz	ene	ND		1.0	0.060	ug/L			05/12/12 18:13	1
Ethyll	benzene	ND		1.0	0.080	ug/L			05/12/12 18:13	1
Tolue	ne	ND		1.0	0.090	ug/L			05/12/12 18:13	1

Surrogate	%Recovery	Qualifier Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101	80 - 120		05/12/12 18:13	1
4-Bromofluorobenzene (Surr)	101	80 - 120		05/12/12 18:13	1
Dibromofluoromethane (Surr)	100	80 - 120		05/12/12 18:13	1
Toluene-d8 (Surr)	99	80 - 120		05/12/12 18:13	1

Client Sample ID: VOC02-P12-GW

Lab Sample ID: 250-2617-2

Matrix: Water

Date Collected: 05/08/12 10:30 Date Received: 05/08/12 15:55

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	1.9	J	3.0	0.31	ug/L			05/12/12 18:35	1
Benzene	0.63	J	1.0	0.060	ug/L			05/12/12 18:35	1
Ethylbenzene	0.20	J	1.0	0.080	ug/L			05/12/12 18:35	1
Toluene	0.33	J	1.0	0.090				05/12/12 18:35	1

	Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
	1,2-Dichloroethane-d4 (Surr)	106		80 - 120	8		05/12/12 18:35	1
۱	4-Bromofluorobenzene (Surr)	108		80 - 120			05/12/12 18:35	1
	Dibromofluoromethane (Surr)	109		80 - 120			05/12/12 18:35	1
	Toluene-d8 (Surr)	102		80 - 120			05/12/12 18:35	1

# **Client Sample Results**

Client: BB&A Environmental Project/Site: L&C Deli

Pyrene-d10 (Surr)

Benzo(a)pyrene-d12 (Surr)

TestAmerica Job ID: 250-2617-1

05/22/12 16:55

05/18/12 12:54

SDG: VOC02DEC.12UC

# Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

80

87

Client Sample ID: VOC02-P12-GW Date Collected: 05/08/12 10:30

Lab Sample ID: 250-2617-2

Matrix: Water

1

Date Received: 05/08/12 15:5	5								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.053	JH	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Acenaphthylene	ND	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Anthracene	ND	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Benzo[a]anthracene	ND	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Benzo[a]pyrene	ND	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Benzo[b]fluoranthene	ND	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Benzo[g,h,i]perylene	ND	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Benzo[k]fluoranthene	ND	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Chrysene	ND	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Dibenz(a,h)anthracene	ND	Н	0.19	0.095	ug/L		05/18/12 12:54	05/22/12 16:55	1
Fluoranthene	ND	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Fluorene	0.18	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Indeno[1,2,3-cd]pyrene	ND	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Naphthalene	0.15	H	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Phenanthrene	0.16	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Pyrene	ND	Н	0.095	0.048	ug/L		05/18/12 12:54	05/22/12 16:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	86		25 - 125				05/18/12 12:54	05/22/12 16:55	

25 - 150

10 - 125

# **Client Sample Results**

Client: BB&A Environmental Project/Site: L&C Deli

Surrogate

4-Bromofluorobenzene (Surr)

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

Prepared

Dil Fac

Analyzed

05/12/12 18:49

# Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

%Recovery Qualifier

103

Client Sample ID: VOC02-P11-GW Date Collected: 05/08/12 10:00							Lab	Sample ID: 250 Matrix	)-2617-1 c: Water
Date Received: 05/08/12 15:55 Analyte Gasoline Range Hydrocarbons	Result	Qualifier	RL		Unit ug/L	D	Prepared	Analyzed 05/12/12 18:19	Dil Fac
Surrogate 4-Bromofluorobenzene (Surr)	%Recovery	Qualifier	Limits 50 - 150	30	ugiL	-	Prepared	Analyzed 05/12/12 18:19	Dil Fac
Client Sample ID: VOC02-P12-GW Date Collected: 05/08/12 10:30 Date Received: 05/08/12 15:55							Lab	Sample ID: 250 Matrix	)-2617-2 k: Water
Analyte Gasoline Range Hydrocarbons	Result 87	Qualifier	RL 80		Unit ug/L	<u>D</u>	Prepared	Analyzed 05/12/12 18:49	Dil Fac

Limits

50 - 150

# Client Sample Results

Client: BB&A Environmental Project/Site: L&C Deli

1-Chlorooctadecane

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

05/10/12 09:25 05/10/12 16:49

# Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

57

Client Sample ID: VOC02-P11-GW Date Collected: 05/08/12 10:00							Lab	Sample ID: 250	0-2617-1 c: Water
Date Received: 05/08/12 15:55									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	0.080	J	0.094	0.028	mg/L		05/10/12 09:25	05/10/12 16:31	1
RRO (nC25-nC36)	ND		0.47	0.038	mg/L		05/10/12 09:25	05/10/12 16:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	60		50 - 150				05/10/12 09:25	05/10/12 16:31	1
Client Sample ID: VOC02-P12-GW							Lab	Sample ID: 250	)-2617-2
Date Collected: 05/08/12 10:30								Matrix	x: Water
Date Received: 05/08/12 15:55									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	0.51	-	0.094	0.028	mg/L		05/10/12 09:25	05/10/12 16:49	1
RRO (nC25-nC36)	0.050	J	0.47	0.038	mg/L		05/10/12 09:25	05/10/12 16:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

50 - 150

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

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

Lab Sample ID: MB 250-4923/7

Matrix: Water

Analysis Batch: 4923

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		3.0	0.31	ug/L			05/12/12 14:27	1
Benzene	ND		1.0	0.060	ug/L			05/12/12 14:27	1
Ethylbenzene	ND		1.0	0.080	ug/L			05/12/12 14:27	1
Toluene	ND		1.0	0.090	ug/L			05/12/12 14:27	1

MB MB

	Commenced	0/5						
	Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
	1,2-Dichloroethane-d4 (Surr)	104		80 - 120	-		05/12/12 14:27	1
	4-Bromofluorobenzene (Surr)	105		80 - 120			05/12/12 14:27	1
ı	Dibromofluoromethane (Surr)	104		80 - 120			05/12/12 14:27	1
١	Toluene-d8 (Surr)	103		80 - 120			05/12/12 14:27	1

Lab Sample ID: LCS 250-4923/4

**Matrix: Water** 

Analysis Batch: 4923

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

1		Spike	LCS	LCS			%Rec.	
	Analyte	Added	Result	Qualifier Un	it D	%Rec	Limits	
	Xylenes, Total	60.0	56.3	ug	/L	94	80 - 135	
۱	Benzene	20.0	17.3	ug	/L	86	80 - 120	
1	Ethylbenzene	20.0	18.4	ug	/L	92	80 - 120	
١	Toluene	20.0	18.0	ug		90	80 _ 125	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103	-	80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	107		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: LCSD 250-4923/5

**Matrix: Water** 

Analysis Batch: 4923

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

Prep Type: Total/NA

Spike	LCSD	LCSD			%Rec.		RPD
Added	Result	Qualifier Unit	D	%Rec	Limits	RPD	Limit
60.0	57.7	ug/L	_	96	80 - 135	2	25
20.0	17.3	ug/L		87	80 - 120	0	25
20.0	18.8	ug/L		94	80 - 120	2	25
20.0	17.8	ug/L		89	80 - 125	1	25
	Added 60.0 20.0 20.0	Added         Result           60.0         57.7           20.0         17.3           20.0         18.8	Added         Result         Qualifier         Unit           60.0         57.7         ug/L           20.0         17.3         ug/L           20.0         18.8         ug/L	Added         Result         Qualifier         Unit         D           60.0         57.7         ug/L           20.0         17.3         ug/L           20.0         18.8         ug/L	Added         Result         Qualifier         Unit         D         %Rec           60.0         57.7         ug/L         96           20.0         17.3         ug/L         87           20.0         18.8         ug/L         94	Added         Result         Qualifier         Unit         D         %Rec         Limits           60.0         57.7         ug/L         96         80 - 135           20.0         17.3         ug/L         87         80 - 120           20.0         18.8         ug/L         94         80 - 120	Added         Result         Qualifier         Unit         D         %Rec         Limits         RPD           60.0         57.7         ug/L         96         80 - 135         2           20.0         17.3         ug/L         87         80 - 120         0           20.0         18.8         ug/L         94         80 - 120         2

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: 250-2676-F-1 MS

Matrix: Water

Analysis Batch: 4923

Client	Sample	ID:	Matrix	Spike
	Prer	Ty	ne To	tal/NA

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Xylenes, Total	ND		60.0	62.9		ug/L	_	105	70 - 130	

## QC Sample Results

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

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

Lab Sample ID: 250-2676-F-1 MS

Matrix: Water

Analysis Batch: 4923

Client Sample ID: Matrix Spike Prep Type: Total/NA

	Sample Sa	ample Spike	MS	MS				%Rec.	
Analyte	Result Q	ualifier Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	ND	20.0	20.0		ug/L		100	80 - 125	
Ethylbenzene	ND	20.0	21.1		ug/L		105	80 - 125	
Toluene	ND	20.0	20.7		ug/L		104	75 - 135	
	MC M	10							

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: 250-2676-G-1 MSD

**Matrix: Water** 

Analysis Batch: 4923

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Re	c.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	ļ	0 %Re	c Limit	s I	RPD	Limit
Xylenes, Total	ND		60.0	62.1		ug/L	-	10	70 - 1	30	1	25
Benzene	ND		20.0	19.9		ug/L		9	80 - 1	25	1	25
Ethylbenzene	ND		20.0	20.5		ug/L		10	2 80 - 1	25	3	25
Toluene	ND		20.0	20.6		ug/L		10		35	0	25

MSD MSD Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 100 80 - 120 4-Bromofluorobenzene (Surr) 99 80 - 120 Dibromofluoromethane (Surr) 100 80 - 120 Toluene-d8 (Surr) 101 80 - 120

#### Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 250-5150/1-A

Matrix: Water

Analysis Batch: 5334

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 5150

Allalysis Datell. 5554								Prep Batt	:11: 5 150
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Acenaphthylene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Anthracene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Benzo[a]anthracene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Benzo[a]pyrene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Benzo[b]fluoranthene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Benzo[g,h,i]perylene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Benzo[k]fluoranthene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	. 1
Chrysene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Dibenz(a,h)anthracene	ND		0.20	0.10	ug/L		05/18/12 09:00	05/22/12 11:11	1
Fluoranthene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Fluorene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Indeno[1,2,3-cd]pyrene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Naphthalene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Phenanthrene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1
Pyrene	ND		0.10	0.050	ug/L		05/18/12 09:00	05/22/12 11:11	1

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 250-5150/1-A

Matrix: Water

Analysis Batch: 5334

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 5150

	MB	MB			
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed
Fluorene-d10 (Surr)	93		25 - 125	05/18/12 09:00	05/22/12 11:11
Pyrene-d10 (Surr)	85		25 - 150	05/18/12 09:00	05/22/12 11:11
Benzo(a)pyrene-d12 (Surr)	93		10 - 125	05/18/12 09:00	05/22/12 11:11

Lab Sample ID: LCS 250-5150/2-A

Matrix: Water

Analysis Batch: 5334

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 5150

Analysis Daten. 0004	Spike	1.00	LCS				%Rec.
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
Acenaphthene	2.50	2.30	Qualifier				25 - 135
				ug/L		92	
Acenaphthylene	2.50	2.30		ug/L		92	30 - 120
Anthracene	2.50	2.38		ug/L		95	30 - 120
Benzo[a]anthracene	2.50	2.31		ug/L		92	35 - 130
Benzo[a]pyrene	2.50	2.32		ug/L		93	40 - 135
Benzo[b]fluoranthene	2.50	2.36		ug/L		94	35 - 130
Benzo[g,h,i]perylene	2.50	2.35		ug/L		94	30 - 125
Benzo[k]fluoranthene	2.50	2.50		ug/L		100	30 - 145
Chrysene	2.50	2.31		ug/L		92	30 - 135
Dibenz(a,h)anthracene	2.50	2.38		ug/L		95	30 - 140
Fluoranthene	2.50	2.34		ug/L		94	30 - 125
Fluorene	2.50	2.36		ug/L		94	30 - 125
Indeno[1,2,3-cd]pyrene	2.50	2.36		ug/L		94	30 - 135
Naphthalene	2.50	2.32		ug/L		93	30 - 115
Phenanthrene	2.50	2.39		ug/L		96	35 - 125
Pyrene	2.50	2.39		ug/L		96	35 _ 135

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Fluorene-d10 (Surr)	92		25 - 125
Pyrene-d10 (Surr)	80		25 <sub>-</sub> 150
Benzo(a)pyrene-d12 (Surr)	90		10 - 125

Lab Sample ID: LCSD 250-5150/3-A

Matrix: Water

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analysis Batch: 5334							Pre	p Batch	: 5150
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acenaphthene	2.50	2.14		ug/L		86	25 - 135	7	35
Acenaphthylene	2.50	2.12		ug/L		85	30 - 120	8	35
Anthracene	2.50	2.20		ug/L		88	30 - 120	8	35
Benzo[a]anthracene	2.50	2.13		ug/L		85	35 - 130	8	35
Benzo[a]pyrene	2.50	2.13		ug/L		85	40 <sub>-</sub> 135	8	35
Benzo[b]fluoranthene	2.50	2.18		ug/L		87	35 - 130	8	35
Benzo[g,h,i]perylene	2.50	2.14		ug/L		86	30 - 125	9	35
Benzo[k]fluoranthene	2.50	2.36		ug/L		94	30 - 145	6	35
Chrysene	2.50	2.16		ug/L		86	30 - 135	7	35
Dibenz(a,h)anthracene	2.50	2.16		ug/L		87	30 - 140	10	35
Fluoranthene	2.50	2.17		ug/L		87	30 - 125	8	35
Fluorene	2.50	2.18		ug/L		87	30 - 125	8	35
Indeno[1,2,3-cd]pyrene	2.50	2.18		ug/L		87	30 - 135	8	35

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

# Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 250-5150/	3-A					CIIE	int Sain	pie ib. i	Lab Contro	-	-
Matrix: Water									-	ype: To	
Analysis Batch: 5334										p Batch	
			Spike		LCSD				%Rec.		RP
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Naphthalene			2.50	2.13		ug/L		85	30 - 115	8	3
Phenanthrene			2.50	2.22		ug/L		89	35 - 125	7	3
Pyrene			2.50	2.24		ug/L		89	35 - 135	7	3
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
Fluorene-d10 (Surr)	85		25 - 125								
Pyrene-d10 (Surr)	75		25 - 150								
Benzo(a)pyrene-d12 (Surr)	83		10 - 125								
Nethod: NWTPH-Gx - North	west - Vo	latile Petro	oleum Produ	icts (G	C)						
Lab Sample ID: MB 250-4910/5								Client S	Sample ID:	Mothod	Plan
Matrix: Water								Ollelli C	-	ype: To	
Analysis Batch: 4910									i ieb i	ypc. 10	Ca 1/14/
Analysis Baton. 4010		MB MB									
Analyte	R	esult Qualifier	RL	_	MDL Unit		D Pi	repared	Analyz	ed	Dil Fa
Gasoline Range Hydrocarbons		ND	80		33 ug/L			ора. Са	05/12/12		
,					9				55.12.12		
		MB MB									
Surrogate	%Reco	very Qualifier	Limits				Pi	repared	Analyz	ed	Dil Fa
				-			-				
4-Bromofluorobenzene (Surr)		99	50 _ 150	-					05/12/12	15:14	
4-Bromofluorobenzene (Surr)		99	50 - 150	-			Client	Sample			
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3		99	50 _ 150	-			Client	Sample	ID: Lab C	ontrol S	ampl
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water		99	50 - 150	-			Client	Sample	ID: Lab C		ampl
		99		LCS	LCS		Client	Sample	e ID: Lab Co Prep T	ontrol S	ampl
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water  Analysis Batch: 4910		99	Spike		LCS Qualifier	Unit			Prep T	ontrol S	ampl
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water  Analysis Batch: 4910  Analyte		99	Spike Added	Result	LCS Qualifier	Unit	Client	%Rec	Prep T  %Rec. Limits	ontrol S	ampl
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water  Analysis Batch: 4910	,	99	Spike			Unit ug/L			Prep T	ontrol S	ampl
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water  Analysis Batch: 4910  Analyte	LCS	99 LCS	Spike Added	Result				%Rec	Prep T  %Rec. Limits	ontrol S	ampl
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water  Analysis Batch: 4910  Analyte  Gasoline Range Hydrocarbons	LCS %Recovery		Spike Added	Result				%Rec	Prep T  %Rec. Limits	ontrol S	ampl
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water  Analysis Batch: 4910  Analyte			<b>Spike Added</b> 500 <b>Limits</b> 50 - 150	Result				%Rec	Prep T  %Rec. Limits	ontrol S	amplo
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)	%Recovery 110		Spike Added 500	Result		ug/L	<u>D</u>	%Rec 126	%Rec. Limits	ontrol S ype: To	ampl tal/N/
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate	%Recovery 110		<b>Spike Added</b> 500 <b>Limits</b> 50 - 150	Result		ug/L	<u>D</u>	%Rec 126	%Rec. Limits 70 - 130	ontrol S type: To	ampletal/N/
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water  Analysis Batch: 4910  Analyte  Gasoline Range Hydrocarbons  Surrogate  4-Bromofluorobenzene (Surr)  Lab Sample ID: LCSD 250-4910/  Matrix: Water	%Recovery 110		<b>Spike Added</b> 500 <b>Limits</b> 50 - 150	Result		ug/L	<u>D</u>	%Rec 126	%Rec. Limits 70 - 130	ontrol S ype: To	ampletal/N/
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: LCSD 250-4910/	%Recovery 110		<b>Spike Added</b> 500 <b>Limits</b> 50 - 150	Result 629		ug/L	<u>D</u>	%Rec 126	%Rec. Limits 70 - 130	ontrol S type: To	ampletal/N/
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water  Analysis Batch: 4910  Analyte  Gasoline Range Hydrocarbons  Surrogate  4-Bromofluorobenzene (Surr)  Lab Sample ID: LCSD 250-4910/  Matrix: Water	%Recovery 110		Spike Added 500  Limits 50 - 150	Result 629 LCSD	Qualifier	ug/L	<u>D</u>	%Rec 126	%Rec. Limits 70 - 130  Lab Contro	ontrol S type: To	ample tal/N/
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: LCSD 250-4910/  Matrix: Water Analysis Batch: 4910	%Recovery 110		Spike Added 500  Limits 50 - 150  Spike	Result 629 LCSD	Qualifier	ug/L	D ent Sam	%Rec 126	%Rec. Limits 70 - 130  Lab Contro	ontrol S type: To	ampl tal/N/
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: LCSD 250-4910/  Matrix: Water Analysis Batch: 4910  Analyte	%Recovery 110		Spike Added 500  Limits 50 - 150  Spike Added	Result 629 LCSD Result	Qualifier	ug/L Clie	D ent Sam	%Rec 126 %Rec	Rec. Limits 70 - 130  Lab Contro Prep T  %Rec. Limits	ontrol S type: To ol Samp ype: To	ampletal/N/
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water  Analysis Batch: 4910  Analyte  Gasoline Range Hydrocarbons  Surrogate  4-Bromofluorobenzene (Surr)  Lab Sample ID: LCSD 250-4910/  Matrix: Water  Analysis Batch: 4910  Analyte  Gasoline Range Hydrocarbons	%Recovery 110	LCS Qualifier	Spike Added 500  Limits 50 - 150  Spike Added	Result 629 LCSD Result	Qualifier	ug/L Clie	D ent Sam	%Rec 126 %Rec	Rec. Limits 70 - 130  Lab Contro Prep T  %Rec. Limits	ontrol S type: To ol Samp ype: To	ampl tal/N/
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: LCSD 250-4910/  Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons	%Recovery 110 4	LCS Qualifier	Spike Added 500  Limits 50 - 150  Spike Added 500	Result 629 LCSD Result	Qualifier	ug/L Clie	D ent Sam	%Rec 126 %Rec	Rec. Limits 70 - 130  Lab Contro Prep T  %Rec. Limits	ontrol S type: To ol Samp ype: To	ampl tal/N/
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: LCSD 250-4910/  Matrix: Water Analysis Batch: 4910  Analyte	%Recovery 110  4  LCSD %Recovery	LCS Qualifier	Spike Added 500  Limits 50 - 150  Spike Added 500  Limits	Result 629 LCSD Result	Qualifier	ug/L Clie	D Dent Sam	%Rec 126 %Rec 124	Rec. Limits 70 - 130  Lab Contro Prep T  %Rec. Limits	ontrol Stype: To	amplital/N/
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: LCSD 250-4910/ Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: 250-2617-2 MS	%Recovery 110  4  LCSD %Recovery	LCS Qualifier	Spike Added 500  Limits 50 - 150  Spike Added 500  Limits	Result 629 LCSD Result	Qualifier	ug/L Clie	D Dent Sam	%Rec 126 %Rec 124	* ID: Lab Co Prep T  %Rec. Limits  70 - 130  **Rec. Limits  70 - 130  **mple ID: Vo	ontrol Stype: To	amplital/N/
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: LCSD 250-4910/ Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: 250-2617-2 MS  Matrix: Water	%Recovery 110  4  LCSD %Recovery	LCS Qualifier	Spike Added 500  Limits 50 - 150  Spike Added 500  Limits	Result 629 LCSD Result	Qualifier	ug/L Clie	D Dent Sam	%Rec 126 %Rec 124	* ID: Lab Co Prep T  %Rec. Limits  70 - 130  **Rec. Limits  70 - 130  **mple ID: Vo	ontrol Stype: To	le Dujtal/N/ RPI Lim 4
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: LCSD 250-4910/ Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: 250-2617-2 MS	%Recovery 110  LCSD %Recovery 110	LCS Qualifier	Spike Added 500  Limits 50 - 150  Spike Added 500  Limits	LCSD Result 620	Qualifier	ug/L Clie	D Dent Sam	%Rec 126 %Rec 124	* ID: Lab Co Prep T  %Rec. Limits  70 - 130  **Rec. Limits  70 - 130  **mple ID: Vo	ontrol Stype: To	le Dujtal/N/ RPI Lim 4
4-Bromofluorobenzene (Surr)  Lab Sample ID: LCS 250-4910/3  Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: LCSD 250-4910/ Matrix: Water Analysis Batch: 4910  Analyte Gasoline Range Hydrocarbons  Surrogate 4-Bromofluorobenzene (Surr)  Lab Sample ID: 250-2617-2 MS  Matrix: Water	%Recovery 110  LCSD %Recovery 110  Sample	LCS Qualifier LCSD Qualifier	Spike Added 500  Limits 50 - 150  Spike Added 500  Limits 50 - 150	LCSD Result 620	LCSD Qualifier	ug/L Clie	D Dent Sam	%Rec 126 %Rec 124	* ID: Lab Co Prep T  *Rec. Limits  70 - 130  Lab Contro Prep T  *Rec. Limits  70 - 130	ontrol Stype: To	le Duptal/NA RPI Limi 4

## QC Sample Results

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

#### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 250-2617-2 MS

Matrix: Water

Analysis Batch: 4910

Client Sample ID: VOC02-P12-GW

Prep Type: Total/NA

MS MS

%Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 109 50 - 150

Lab Sample ID: 250-2617-1 DU

Matrix: Water

Surrogate

Analysis Batch: 4910

Client Sample ID: VOC02-P11-GW

Prep Type: Total/NA

Sample Sample DU DU RPD Analyte Result Qualifier Result Qualifier Unit D RPD Limit Gasoline Range Hydrocarbons ND 33.6 J ug/L NC 40

DU DU

Surrogate %Recovery Qualifier 104

Limits 50 - 150

4-Bromofluorobenzene (Surr)

# Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

MB MB

Lab Sample ID: MB 250-4789/1-A

Matrix: Water

Analysis Batch: 4816

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 4789

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		0.10	0.030	mg/L		05/10/12 09:25	05/10/12 11:58	1
RRO (nC25-nC36)	ND		0.50	0.040	mg/L		05/10/12 09:25	05/10/12 11:58	1
	MB	MB							
Crimia mada	0/ 🗖	O 1151	1 * . *						~

Surrogate Limits %Recovery Qualifier Prepared Analyzed Dil Fac 1-Chlorooctadecane 50 - 150 74 05/10/12 09:25 05/10/12 11:58

Lab Sample ID: LCS 250-4789/2-A

**Matrix: Water** 

Analysis Batch: 4816

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 4789

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
DRO (C10-C25)	2.50	1.90		mg/L	_	76	50 - 150	-
RRO (nC25-nC36)	1.50	1.08		mg/L		72	50 <sub>-</sub> 150	

LCS LCS Surrogate %Recovery Qualifier Limits 1-Chlorooctadecane 80 50 - 150

Lab Sample ID: LCSD 250-4789/3-A

Matrix: Water

Analysis Batch: 4816

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 4789

Spike LCSD LCSD %Rec. RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit DRO (C10-C25) 2.50 2.03 81 50 - 150 mg/L 6 20 RRO (nC25-nC36) 1.50 1.15 mg/L 77 50 - 150 20

LCSD LCSD

Surrogate %Recovery Qualifier Limits 1-Chlorooctadecane 78 50 - 150

# **QC Association Summary**

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

#### GC/MS VOA

A		Date	1: 4923	٠
Anar	V & I &	Baici	1 44/	٨.

P11-GW P12-GW pike	Total/NA Total/NA Total/NA	Water Water	8260B 8260B	
			8260B	
pike	Total/NA	200 0		
F	iolai/NA	Water	8260B	
pike Duplicate	Total/NA	Water	8260B	
ntrol Sample	Total/NA	Water	8260B	
ntrol Sample Dup	Total/NA	Water	8260B	
Blank	Total/NA	Water	8260B	
	ntrol Sample	ntrol Sample Total/NA ntrol Sample Dup Total/NA	ntrol Sample Total/NA Water ntrol Sample Dup Total/NA Water	ntrol Sample Total/NA Water 8260B ntrol Sample Dup Total/NA Water 8260B

#### GC/MS Semi VOA

#### Prep Batch: 5150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
250-2617-2	VOC02-P12-GW	Total/NA	Water	3520C	
LCS 250-5150/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 250-5150/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 250-5150/1-A	Method Blank	Total/NA	Water	3520C	

#### Analysis Batch: 5334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
250-2617-2	VOC02-P12-GW	Total/NA	Water	8270C SIM	5150
LCS 250-5150/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	5150
LCSD 250-5150/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	5150
MB 250-5150/1-A	Method Blank	Total/NA	Water	8270C SIM	5150

## GC VOA

#### Analysis Batch: 4910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
250-2617-1	VOC02-P11-GW	Total/NA	Water	NWTPH-Gx	
250-2617-1 DU	VOC02-P11-GW	Total/NA	Water	NWTPH-Gx	
250-2617-2	VOC02-P12-GW	Total/NA	Water	NWTPH-Gx	
250-2617-2 MS	VOC02-P12-GW	Total/NA	Water	NWTPH-Gx	
LCS 250-4910/3	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 250-4910/4	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	
MB 250-4910/5	Method Blank	Total/NA	Water	NWTPH-Gx	

#### GC Semi VOA

#### Prep Batch: 4789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
250-2617-1	VOC02-P11-GW	Total/NA	Water	3510C	,
250-2617-2	VOC02-P12-GW	Total/NA	Water	3510C	
LCS 250-4789/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 250-4789/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 250-4789/1-A	Method Blank	Total/NA	Water	3510C	

#### Analysis Batch: 4816

	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
	250-2617-1	VOC02-P11-GW	Total/NA	Water	NWTPH-Dx	4789
ı	250-2617-2	VOC02-P12-GW	Total/NA	Water	NWTPH-Dx	4789
	LCS 250-4789/2-A	Lab Control Sample	Total/NA	Water	NWTPH-Dx	4789

# **QC Association Summary**

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

#### GC Semi VOA (Continued)

#### Analysis Batch: 4816 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch 4789	
LCSD 250-4789/3-A	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx		
MB 250-4789/1-A	Method Blank	Total/NA	Water	NWTPH-Dx	4789	

# **Certification Summary**

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Portland	Alaska	State Program	10	OR00040
TestAmerica Portland	Alaska (UST)	State Program	10	UST-012
TestAmerica Portland	California	State Program	9	2597
TestAmerica Portland	Oregon	NELAC	10	OR100021
TestAmerica Portland	USDA	Federal		P330-11-00092
TestAmerica Portland	Washington	State Program	10	C586

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica Portland 5/24/2012

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# **Method Summary**

Client: BB&A Environmental Project/Site: L&C Deli

TestAmerica Job ID: 250-2617-1 SDG: VOC02DEC.12UC

Method	Method Description	Protocol	Laboratory	
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PRT	
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL PRT	
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	TAL PRT	
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL PRT	

#### Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

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

#### Laboratory References:

TAL PRT = TestAmerica Portland, 9405 SW Nimbus Ave., Beaverton, OR 97008, TEL (503)906-9200

# <u>TestAmericc</u>

THE LEADER IN ENVIRONMENTAL TESTING

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210 290 210 110

42 Loc: 250 50 **2617** 90 9405 SW Nimbus Ave, Beaverton, OR 97008-7145 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

Y REPORT Work Order #:	TURNAROUND REQUEST	10	Analyses	ATIVE 5 4 3 2 1 <1			* Turnaround Requests less than standard may incur Rush Charges.	MATRIX # OF LOCATION/ (W, S, O) CONT. COMMENTS	3	3							PRINTINAME. THEUE (ZA) MAY TIME 3.	Une FIRM: 06	TEMP:
CHAIN OF CUSTODY REPORT	INVOICE TO:	ROM Bergeson	P.O. NUMBER:	PRESERVATIVE		REQUESTED ANALYSES	54	19V			-						DATE: 5/8/12_	DATE: 3/8/17	VPII / CPLL ANALIN
	VIOW MENTAL	w PATKWAY AVE #207 € OSE 97070					+	SAMPLING PAY TO SA SAMPLING DATE/TIME AS A SAMPLING	08:00	10:30 /							FIRM: BBEA	FIRM: SAM o'N'	1
	CLIENT: SKEA ENVIO	2 25195 ST SOLVER ST (L) 1500 JULY (L)	HONE 503 570 9484 FAX:	PROJECT NAME: 1 & C DELL	TI THE CAS OF 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(	SAMPLED BY: STEVE ONE	CLIENT SAMPLE SIDENTIFICATION	VOCO2-PI1-600 5/8/12	-			0	0	6	0.0	RELEASED BY: OF M. K. PRINTINAME: STEDHEN OM!		ADDITIONAL REMARKS:

# Login Sample Receipt Checklist

Client: BB&A Environmental

Job Number: 250-2617-1

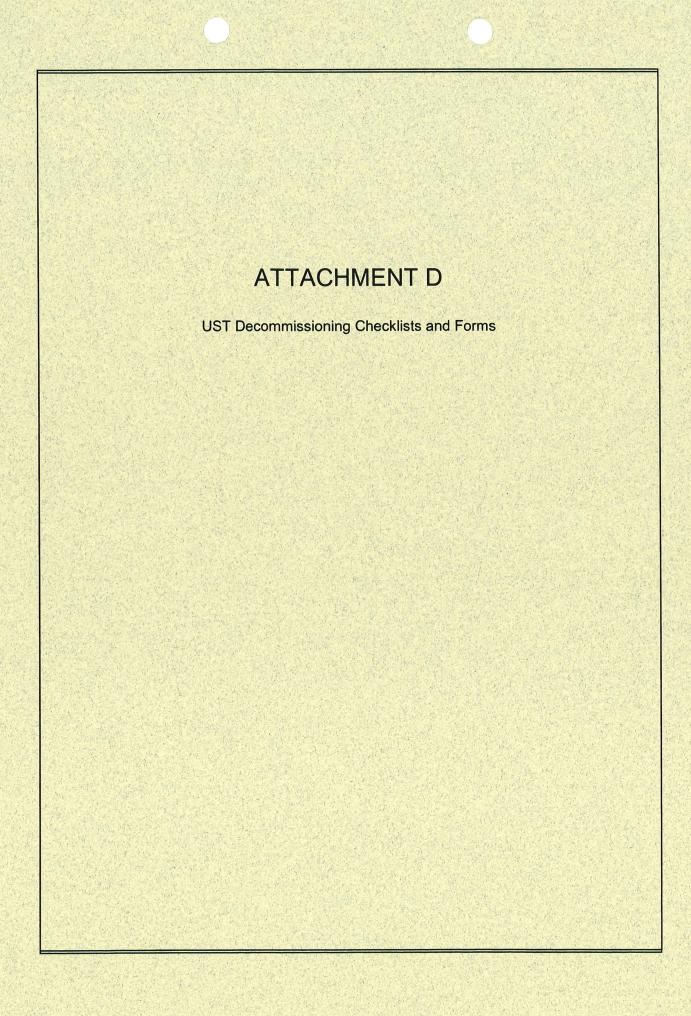
SDG Number: VOC02DEC.12UC

List Source: TestAmerica Portland

Login Number: 2617 List Number: 1

Creator: Svabik-Seror, Philip

Creator: Svadik-Seror, Philip		
Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
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?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	



# DEPARTMENT OF ECOLOGY -- TOXICS CLEAN IP PROGRAM IN GRATED SITE INFORMATION SY UST SITE/TANK DATA SUMMARY AS OF 06/29/2011

UST SITE INFORMATION FACILITY SITE INFORMATION SITE ID: 7176 SITE TAG # : A1061 **FACILITY SITE ID: 92816657 VISTA MART VISTA MART** 13912 NE 20TH AVE 13912 NE 20TH AVE VANCOUVER, WA 98686 VANCOUVER, WA 98686 LATITUDE/LONGITUDE: 45° 43' 15.304"/-122° 39' 7.66440 PHONE #: (360) 573-0338 UBI: 601-120-281 001 0001 -SITE COMMENTS-9/25/09/qj-received Notice putting tanks into temporary closure.\*\*\*11/17/99 CDR INSTALLING CATH PRO: 10/10/99 CDR REC'D TIGHTNESS TEST -PASS. 6/15/99 CDR/NS COMP VISIT - ISSUE NOC FOR NOT HAVING UST & LINE TIGHTNESS, COMPLETE INVENTORY, ANNUAL LINE LEAK TESTING RECORDS. ASKED FOR COR PRO VERIFICATION. RESOLVE NOC BY JULY 15, 1999. 5/2/98 SS/RE-ENTER INFORMATION FROM PRIME. TANKS MEET 1998 STANDARDS. TANK: 1. STATUS: Temporarily Closed INSTALL DT: 8/25/1992 PERMIT EXPIRATION DT PERMANENTLY CLOSED DT STATUS DT: 9/25/2009 **UPGRADE DT: 5/2/1998** 4/30/2011 TANK **PIPING MATERIAL:** Coated Steel Fiberglass CAPACITY RANGE: 10,000 to 19,999 Gallons **CONSTRUCTION:** Single Wall Tank Double Wall Pipe **PUMP SYSTEM: Pressurized System** PRIMARY REL DETECT: Weekly Manual Gauging Automatic Line Leak Detection SPILL PREVENTION: Spill Bucket/Spill Box **SECOND REL DETECT: OVERFILL PREVENT:** Ball Float Valve (vent line) Annual **TIGHTNESS TEST:** Annual Corrosion Resistant ORROSION PROTECTION: Impressed Current **ACTUAL CAPACITY** SUBSTANCE STORED SUBSTANCE USED COMPARTMENT # 12000 Unleaded Gasoline Motor Fuel for Vehicles 1 TANK: 2. STATUS: Temporarily Closed **INSTALL DT: 8/25/1992** PERMIT EXPIRATION DT PERMANENTLY CLOSED DT **STATUS DT: 9/25/2009 UPGRADE DT: 5/2/1998** 4/30/2011 TANK **PIPING** MATERIAL: Coated Steel **Fiberglass** CAPACITY RANGE: 10,000 to 19,999 Gallons Double Wall Pipe **CONSTRUCTION:** Single Wall Tank **PUMP SYSTEM: Pressurized System** PRIMARY REL DETECT: Weekly Manual Gauging Automatic Line Leak Detection SPILL PREVENTION: Spill Bucket/Spill Box SECOND REL DETECT: **OVERFILL PREVENT:** Ball Float Valve (vent line) Annual TIGHTNESS TEST: Annual **ORROSION PROTECTION: Impressed Current** Corrosion Resistant **COMPARTMENT #** SUBSTANCE STORED SUBSTANCE USED **ACTUAL CAPACITY** Unleaded Gasoline Motor Fuel for Vehicles 12000 TANK: 3. STATUS: Temporarily Closed **INSTALL DT: 8/25/1992** PERMIT EXPIRATION DT PERMANENTLY CLOSED DT STATUS DT: 9/25/2009 **UPGRADE DT: 5/2/1998** 4/30/2011 **TANK PIPING** MATERIAL: Coated Steel Fiberglass CAPACITY RANGE: 10,000 to 19,999 Gallons **CONSTRUCTION:** Single Wall Tank Single Wall Pipe PUMP SYSTEM: Pressurized System PRIMARY REL DETECT: Weekly Manual Gauging Automatic Line Leak Detection SPILL PREVENTION: Spill Bucket/Spill Box SECOND REL DETECT: **OVERFILL PREVENT:** Ball Float Valve (vent line) **TIGHTNESS TEST:** Annual Annual . **ORROSION PROTECTION: Impressed Current** Corrosion Resistant

SUBSTANCE USED

Motor Fuel for Vehicles

SUBSTANCE STORED

Leaded Gasoline

COMPARTMENT #

**ACTUAL CAPACITY** 

12000



# UNDER JROUND STORAGE TANK Closure and Site Assessment Notice

Vocapadec.	
FOR OFFICE USE ONLY	
Site ID:#:	
Facility Site ID #:	:
7.4	1

See back of form for instructions

Site Information	Owner Information
Please ✓ the appropriate box(es) ☐ Temporary Tank Closure ☐ Change-In-Service	Permanent Tank Closure D Site Check/Site Assessment

					er (
	r <u>71 F/s</u> cology if the tanks are r	م الماريخ	UST Own	er/Operator The	205 Group
		MART / LLC D	al A Maille A	ddress 2151 Nw	7127 601 - 107
Siterousiness i		Street	ivialling Ac	idress	Street
Site Address	3912 NE	20th Ale			
			<del></del>		P.O. Box
City/State	VAN COUVER	<u>ua</u>	_ City/State	- Ridgefield	WA
Zîp Code <u>98</u>	<u>6.66</u> Telep	hone ( <u>360) 575 - 61</u>	38 Zip Code	9564.2. Tel	ephone ( <u>360)</u> <u>261 - 05</u> 9:
Owners Signa	ture				
		Tank Closure/Ch	ange-in-Servi	ce Company	
Service Compa		ENVIRONALEM	_		
	visor Let		two control of the co	nissionino Certification	No. Isc 4 1069479
		Topal (			6-9-12
Address				K 40187	8
Cimal			P.O. Box		
4.5° 1.4 i.8.	in the state of th		લ મુંબેડ	Telepho	ne (541) 484- 5484
City	14	State	Zip Code		
Certified Site A	ssessor St		P.O. Box	2-6. 1/12/14) 4-0187	BBEA ENVIRONMENTAL
Street			P.O. Box		
<u> Lug</u>	ele.	<u> </u>	4740	Telepho	ne (54) 484 - 94 94
City		State	Zíp Code		
		Tank Informatio	n		Contamination Present at the Time of Closure
Tank ID	Closure Date	Closure Method	Tank Capacity	Substance Stored	e d
推真	4/25/12	[Zivawas b	12,000 GM.	Pression VIII. GAS	Yes No Unknown
4. 2.	4/25/12	<u> </u>	those and.	Unlanded Gasabus	Check unknown if no obvious contemination was observed
建物力	4/26/12	<b>PEMOVE</b> (	12,000 GAI	Dies.	and sample results have not
	*		ggalata kalata dilapunkan mengkut Samudan kalatan kilakan pamat Sajair		yet been received from analytical lab.
	abolicing a substitution of the substitution o	grysses	e e e e e e e e e e e e e e e e e e e	A CONTRACTOR OF THE PARTY OF TH	
A STATE OF THE STA	nation and analysis of a second section of the section	And the second s	V-25		Yes No
					If contamination is present, has the release been reported
	***************************************			4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	to the appropriate regional.
					office?

To receive this document in an alternative format, contact the Toxics Cleanup Program at 360-407-7170 (voice) or 1-800-833-6388 OR 711 (TTY) ECY 020-94 (Rev. 2-06)



Please ✓ the appropriate box(es)

# UNDER ROUND STORAGE TANK Closure and Site Assessment Notice

FOR OFFICE USE ONLY	C. S. C.
Site ID #:	
Facility Site ID #:	

See back of form for instructions

☐ Tem	nporary Tank Closu	re U Change-Ir	n-Service L	<b>∡</b> Permanei	nt Tank Clo	sure 🗆 Si	te Chec	k/Site A	ssessment
	Site Inform	ation			Ov	vner Info	ormati	on	
Site ID Numbe	7176			UST Own	er/Operator	The	20	5 Gro	م
	cology if the tanks are r		C Del:	Mailing A	ddress 2	151 NW	21ST 6	Place	
	Name Vista I		Dett	Mailing A	uuress		Street	DI CC	
Site Address _	13912 NE	20th Ase					P.O. Bo		
City/State	VANCOUVER	WA		City/State	Rid	gefield			
Zip Code <u>98</u>	686 Telep	hone ( <u>360)</u> 57	3-0338	Zip Code	98642	Tel	ephone	(360) 2	181-089
Owners Signa	ature								
		Tank Closur	e/Change	-In-Servi	ice Comp	anv			
Service Comp	any BB&A		•	J-1111-0C1 V	ice comp	arry			
	rvisor <u>Cob</u>	_		Docomo	niccionina C	`ortification	a No	Tec #	1089479
		120636		Decomin	nissioning C				
-	Signature			DA B	4010				
Address Street		*		P.O. Box	× 4018	r			
کی	gene	0	State	9740	4	Telepho	ne (541	484	- 9484
	C-		Check/S			\	005.	<i>.</i>	
Certified Site A		EPHEN ON					BBEA	ועעש	TON MENTAL
Address Street			+	P.O. Box	40187	-			
	jene		OR		4	Telepho	ne (54	484	-9484
City			State	Zip Code	)		(	,	
		Tank Inforn	nation						on Present f Closure
Tank ID	Closure Date	Closure Metho	od Tank	Capacity	Substanc	e Stored	V		
# /	4/25/12	REMOVED		000 GM.	Premium		Yes Check I	No Inknown	Unknown if no obvious
#2	4/25/12	REMOVED		000 GAL.		GASOLINE	contam	ination w	as observed
# 3	4/25/12	REMOVE	12,	000 GAI	Diesel	· ·		n receive	ults have not ed from
			· -						
							has the	release	No is present, been reported te regional



# UNDERGROUND STORAGE TANK Site Check/Site Assessment Checklist

FOR OFFICE USE ONLY
Site #:
Facility Site ID #:

#### **INSTRUCTIONS**

**SITE INFORMATION** 

When a release has not been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by ICC or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. The results of the site check or site assessment must be included with this checklist. This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

<u>SITE INFORMATION:</u> Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

<u>TANK INFORMATION:</u> Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

**CHECKLIST**: Please initial each item in the appropriate box.

<u>SITE ASSESSOR INFORMATION</u>: This information must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section Department of Ecology PO Box 47655 Olympia WA 98504-7655

Site ID Number (Available from Ecology	ii the tarike are regiotored).	176
Site/Business Name: Vista M	ART / Lè C DELI	
Site Address: 13912 NE		Telephone: ()
VANCOUVER	Street WA	98686
City	State	Zip Code
TANK INFORMATION		
Tank ID No.	Tank Capacity	Substance Stored
	12,000 gal.	Premion UNL. GASOLINE
Z	12,000 gal.	Reg. Unleaded GASOliNE
3	12,000 gal.	Diesel
Investigate suspected release of Extend temporary closure of US UST system undergoing change UST system permanently closed Abandoned tank containing pro-	due to on-site environmental contamina due to off-site environmental contamina ST system for more than 12 months. e-in-service. d with tank removed.	ation.

CHECKLIST		
Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.	YES	NO
1. The location of the UST site is shown on a vicinity map.	/	`
A brief summary of information obtained during the site inspection is provided.  (see Section 3.2 in site assessment guidance)	<b>/</b>	
3. A summary of UST system data is provided. (see Section 3.1.)	<b>V</b>	
4. The soils characteristics at the UST site are described. (see Section 5.2)	J	
5. Is there any apparent groundwater in the tank excavation?	V	
6. A brief description of the surrounding land use is provided. (see Section 3.1)		
7. Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	<b>/</b>	
8. A sketch or sketches showing the following items is provided:		
- location and ID number for all field samples collected	<b>√</b>	
- groundwater samples distinguished from soil samples (if applicable)	1	
- samples collected from stockpiled excavated soil		<b>V</b>
- tank and piping locations and limits of excavation pit	<b>V</b>	
- adjacent structures and streets	<b>V</b>	
- approximate locations of any on-site and nearby utilities	<b>V</b>	
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)	1	
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.	<b>/</b>	
11. Any factors that may have compromised the quality of the data or validity of the results are described.	<b>V</b>	
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.	<b>/</b>	
SITE ASSESSOR INFORMATION		
STEPHEN OMO BBEA ENVIRONMENTAL		
Person registered with Ecology Firm Affiliated with		
Business Address: 25195 Sw Parkway Ave # 207 Telephone: (503) 570 9484		
City State Zip Code	)	
City State Zip Code		
I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. I submitting false information are subject to penalties under Chapter 173.360 WAC.	Persons	
6/7/12 Sorm, Q		
Date Signature of Person Registered with Ecology		



# UNDERGROUND STORAGE TANK Site Check/Site Assessment Checklist

FOR OFFIC	E USE ONLY
Site #:	6
Facility Site ID #:	92816657

#### **INSTRUCTIONS**

SITE INFORMATION

When a release has not been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by ICC or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. The results of the site check or site assessment must be included with this checklist. This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

7171

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

**CHECKLIST**: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This information must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

**Underground Storage Tank Section** Department of Ecology PO Box 47655 Olympia WA 98504-7655

Site Address: 13912 A	JE 20 <sup>+h</sup> Ave	Telephone: ()	
VANCOUVER	WA	98686	
City	State	Zip Code	
TANK INFORMATION		·	
Tank ID No.	Tank Capacity	Substance Stored	
<u> </u>	12,000 gal.	Premium UNL. GASOlive	
Ζ	12,000 gal.	Reg. Unlerded GASOliNE	
312,000 gal.		Diesel	
REASON FOR CONDUCTING SITE	CHECK/SITE ASSESSMENT		
Check one: Investigate suspected releas	e due to on-site environmental contamination.	RECEIVED	
Check one:Investigate suspected releasInvestigate suspected releasExtend temporary closure of	e due to on-site environmental contamination. e due to off-site environmental contamination. UST system for more than 12 months.	RECEIVED JUN 18 2012	
Check one: Investigate suspected releas Investigate suspected releas	e due to on-site environmental contamination. e due to off-site environmental contamination. UST system for more than 12 months. nge-in-service. sed with tank removed.		

CHECKLIST		
Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.	YES	NO
The location of the UST site is shown on a vicinity map.	1	`
A brief summary of information obtained during the site inspection is provided.  (see Section 3.2 in site assessment guidance)	<b>√</b>	
3. A summary of UST system data is provided. (see Section 3.1.)	1	
4. The soils characteristics at the UST site are described. (see Section 5.2)	1	
5. Is there any apparent groundwater in the tank excavation?	1	
6. A brief description of the surrounding land use is provided. (see Section 3.1)		
7. Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	/	
8. A sketch or sketches showing the following items is provided:		•
- location and ID number for all field samples collected	1	
- groundwater samples distinguished from soil samples (if applicable)	1	
- samples collected from stockpiled excavated soil		/
- tank and piping locations and limits of excavation pit	1	
- adjacent structures and streets	1	
- approximate locations of any on-site and nearby utilities	1	
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)	1	
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.	,	
11. Any factors that may have compromised the quality of the data or validity of the results are described.	1	
do The was the after the short of the state		
<ol> <li>The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.</li> </ol>	<b>V</b>	
SITE ASSESSOR INFORMATION		
STEPHEN OMO BBÉA ENVIRONMENTAL		
Person registered with Ecology  Firm Affiliated with		
Business Address: 25195 Sw Parkway Ave # 207 Telephone: (503) 570 9484		
Wilsonville OR 97070		
I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. F submitting false information are subject to penalties under Chapter 173.360 WAC.	ersons'	
Date Signature of Person Registered with Ecology		

# 

UST SITE INFORMATION FACILITY SITE INFORMATION **SITE ID: 7176** SITE TAG #: A1061 FACILITY SITE ID: 92816657 **VISTA MART VISTA MART** 13912 NE 20TH AVE 13912 NE 20TH AVE VANCOUVER, WA 98686 VANCOUVER, WA 98686 PHONE #: (360) 573-0338 UBI: 601-120-281 001 0001 LATITUDE/LONGITUDE: 45° 43' 15.304"/-122° 39' 7.66440 SITE COMMENTS 9/25/09/gj-received Notice putting tanks into temporary closure.\*\*\*11/17/99 CDR INSTALLING CATH PRO: 10/10/99 CDR REC'D TIGHTNESS TEST -PASS. 6/15/99 CDR/NS COMP VISIT - ISSUE NOC FOR NOT HAVING UST & LINE TIGHTNESS, COMPLETE INVENTORY, ANNUAL LINE LEAK TESTING RECORDS. ASKED FOR COR PRO VERIFICATION. RESOLVE NOC BY JULY 15, 1999. 5/2/98 SS/RE-ENTER INFORMATION FROM PRIME. TANKS MEET 1998 STANDARDS. INSTALL DT: 8/25/1992 PERMIT EXPIRATION DT PERMANENTLY CLOSED DT TANK: 1. STATUS: Temporarily Closed **STATUS DT: 9/25/2009 UPGRADE DT: 5/2/1998** 4/30/2011 TANK **PIPING MATERIAL:** Coated Steel **Fiberglass** CAPACITY RANGE: 10,000 to 19,999 Gallons **CONSTRUCTION:** Single Wall Tank Double Wall Pipe **PUMP SYSTEM:** Pressurized System PRIMARY REL DETECT: Weekly Manual Gauging Automatic Line Leak Detection SPILL PREVENTION: Spill Bucket/Spill Box SECOND REL DETECT: **OVERFILL PREVENT:** Ball Float Valve (vent line) **TIGHTNESS TEST: Annual** Annual CORROSION PROTECTION: Impressed Current Corrosion Resistant COMPARTMENT # SUBSTANCE STORED SUBSTANCE USED **ACTUAL CAPACITY Unleaded Gasoline** Motor Fuel for Vehicles 12000 TANK: 2. STATUS: Temporarily Closed INSTALL DT: 8/25/1992 PERMIT EXPIRATION DT PERMANENTLY CLOSED DT **STATUS DT: 9/25/2009 UPGRADE DT: 5/2/1998** 4/30/2011 TANK **PIPING MATERIAL:** Coated Steel **Fiberglass** CAPACITY RANGE: 10,000 to 19,999 Gallons **CONSTRUCTION:** Single Wall Tank Double Wall Pipe **PUMP SYSTEM: Pressurized System** PRIMARY REL DETECT: Weekly Manual Gauging **Automatic Line Leak Detection** SPILL PREVENTION: Spill Bucket/Spill Box SECOND REL DETECT: OVERFILL PREVENT: Ball Float Valve (vent line) **TIGHTNESS TEST: Annual** Annual ORROSION PROTECTION: Impressed Current Corrosion Resistant **COMPARTMENT #** SUBSTANCE STORED **SUBSTANCE USED ACTUAL CAPACITY** Unleaded Gasoline Motor Fuel for Vehicles 12000 INSTALL DT: 8/25/1992 PERMIT EXPIRATION DT PERMANENTLY CLOSED DT TANK: 3. STATUS: Temporarily Closed **STATUS DT: 9/25/2009 UPGRADE DT: 5/2/1998** 4/30/2011 TANK **PIPING** MATERIAL: Coated Steel **Fiberglass** CAPACITY RANGE: 10,000 to 19,999 Gallons **CONSTRUCTION:** Single Wall Tank Single Wall Pipe PUMP SYSTEM: Pressurized System PRIMARY REL DETECT: Weekly Manual Gauging Automatic Line Leak Detection SPILL PREVENTION: Spill Bucket/Spill Box SECOND REL DETECT: OVERFILL PREVENT: Ball Float Valve (vent line) TIGHTNESS TEST: Annual Annual . **ORROSION PROTECTION: Impressed Current** Corrosion Resistant COMPARTMENT # SUBSTANCE STORED SUBSTANCE USED **ACTUAL CAPACITY** 

Motor Fuel for Vehicles

12000

1

Leaded Gasoline



# UNDER ROUND STORAGE TANK Closure and Site Assessment Notice

VOCQ2DEC.	
THE SERVICE PROPERTY OF THE PROPERTY OF THE SERVICE PROPERTY.	move the
FOR OFFICE USE ONLY	
Site ID #:	
Facility Site ID #:	1
r acting one in H.	
The first of the same of the s	

See back of form for instructions

Please ✓ the appropriate box(es) ☐ Temporary Tank Closure ☐ Change-In-Service ☐ Permanent Tank Closure ☐ Site Check/Site Assessment Site Information Owner Information 7176 Site ID Number UST Owner/Operator The 205 Grove (Available from Ecology if the tanks are registered) LLC De: Mailing Address 2151 NW 21st PLACE VISTA MART Site/Business Name NE 20th Ale Site Address 3412 P.O. Box City/State VANCOUSE Ridgefiel City/State WA Zip Code 98 666 Telephone (360) 575 - 6838 Zip Code 98642 Telephone (360) 261 - 0817 **Owners Signature** Tank Closure/Change-In-Service Company BBEA ENVIRONMENTAL Certified Supervisor Cab Bress Decommissioning Certification No. ICC 4 1061479 Supervisor's Signature \_ Date P.o. Box Address Street P.O. Box OR GALDA. Telephone (541) 484- 9484 State Zio Code Site Check/Site Assessor STEPHEN Certified Site Assessor OMO (8/4.2160 ELP. 1/12/14) BBEA ENVIRONMENTA P.O. BOX Address 40187 Street P.C. Box CE 474-0a. Telephone (54) 464 - 9464 State Zip Code

#### **Contamination Present** Tank Information at the Time of Closure Tank ID Closure Date Closure Method Substance Stored Tank Capacity M 4/25/12 [ZEMANED Pression VIII. GAS 12,000 GM. No Unknown Check unknown if no obvious BEMOVED 12,000 GA. UNITADED GASHUE contemination was observed # 5 4/26/12 PEMOTE( 12,000 GAL HELL and sample results have not yet been received from analytical lab. Yes No If contamination is present, has the release been reported to the appropriate regional. office?

To receive this document in an alternative format, contact the Toxics Cleanup Program at 360-407-7170 (voice) or 1-800-833-6388 OR 711 (TTY) ECY 020-94 (Rev. 2-06)



# UNDET ROUND STORAGE TANK Closure and Site Assessment Notice

FOR OFFICE U	SEONLY
Site ID #:	6
Facility Site ID #:	2816657

See back of form for instructions

Please ✓ the appropriate box(es)  ☐ Temporary Tank Closure ☐ Characteristics ☐ Char	ange-In-Service 🗹	Permanent Tank Closu	re 🛭 Site Chec	k/Site Assessment	
Site Information		Owner Information			
Site ID Number 7176  (Available from Ecology if the tanks are registered)  Site/Business Name Vista Mart / Lic Deli  Street  Site Address 13912 NE 20 <sup>+h</sup> AJe		JST Owner/Operator _ Mailing Address215		PLACE	
City/State VAN COUVER W	+	City/State Ridge			
Zip Code <u>98 686</u> Telephone ( <u>36</u>		Zip Code 98642			
Owners Signature		-			
Tank C	osure/Change-I	n-Service Compa	ny		
Service Company BB&A ENV:	FONMENTAL				
Certified Supervisor Cob Boese		Decommissioning Cer	tification No	ICC # 1089479	
Supervisor's Signature			_ Date		
Address	F	P.O. BOX 40187			
Street	<b>^</b> 0	P.O. Box	64.	and Good	
Eugene	State	97404 Zip Code	Telephone (541)	) <u>484- 1484</u>	
Certified Site AssessorSTEPHEN		2160 ELP. 1/12	/14) BB&A	ENVIRON MENTAL	
AddressStreet	P.	D. Box 40187 P.O. Box			
Eugenz		97404 Zip Code	Telephone ( <u>54</u> )	484-9484	
,	nformation	ZIP Code		mination Present Time of Closure	
#1 4/25/12 REM	OVED 12,00	O GAL Diesel	L. GAS Yes Check u contami and sam	No Unknown unknown if no obvious nation was observed nple results have not n received from al lab.	
			has the	mination is present, release been reported opropriate regional	

## Munroe, Robin L (ECY)

From:

Munroe, Robin L (ECY)

Sent:

Monday, April 30, 2012 8:43 AM

To:

Barrett, Guy E. (ECY)

Subject:

RE: L&C Deli

Thanks, please let me know when you get the report. They should also be sending one to me, but just in case they forget....

#### Robin L. Munroe

Underground Storage Tank Inspector Southwest Regional Office Washington Department of Ecology 360.407.7080 office / 360.791.7801 cell 360.407.6305 fax robin.munroe@ecy.wa.gov http://www.ecy.wa.gov/programs/tcp/ust-lust/tanks.html

From: Barrett, Guy E. (ECY)

Sent: Monday, April 30, 2012 8:07 AM

**To:** Munroe, Robin L (ECY) **Subject:** FW: L&C Deli

FYI, some additional information for L&C Deli.

Guy

From: Stephen Omo [mailto:smomo@bbaenv.com]

**Sent:** Friday, April 27, 2012 3:26 PM

To: Barrett, Guy E. (ECY)
Cc: 'Donald Holsinger'
Subject: RE: L&C Deli

Guy,

As likely indicated by the inspector, groundwater was at approximately seven (7) to eight (8) feet below land surface (BLS) in the UST cavity / excavation. We excavated approximately 220 tons of petroleum-contaminated soil from the edge of the UST cavity, east of the UST cavity, and beneath the dispensers, down to depths of approximately seven (7) to eight (8) feet BLS. We generally did not excavate below the soil/water interface. We excavated up to the eastern and southern limits of the property boundary with WaDOT. We also collected 11 confirmation soil samples from the perimeter of the UST cavity, beneath each of the dispensers, and from the perimeter of the excavation east of the UST cavity.

We already have five (5) soil sample results back for samples from the southwest, west, and northwest walls of the UST cavity: gasoline-range TPH and diesel-range TPH were not detected in any of these soil samples. Would you like any additional analyses for these initial samples? The next six (6) soil samples will be analyzed for gasoline-range TPH, diesel-range TPH, and BTEX compounds. We may follow-up with additional analyses on the latter six (6) soil samples as necessary (e.g., PAHs, or naphthalene, MTBE, EDB, EDC, propylbenzenes and trimethylbenzenes).

We treated the water accumulating in the excavation with BOS200 activated carbon and petrophyllic bacteria. We also removed a section of storm sewer pipe, which was formerly beneath the dispenser island. Based on the condition of this pipe, it could have very well been the source of the contamination historically noted in the storm drains / manholes.

We are currently backfilling the excavation, and should have the site to grade by the end of the day. We may be able to cap it with asphalt in the next couple weeks.

I will forward all lab results to you as soon as available. I will be writing a report and completing all necessary documentation upon receipt of the soil analytical results.

Lastly, we need to discuss the groundwater sampling you feel is necessary for closure. Our proposal is to collect one (1) or two (2) groundwater samples from the eastern limits of the excavation via temporary borings. We will analyze these samples for gasoline-range TPH, diesel-range TPH, and BTEX compounds. Is the groundwater sampling protocol sufficient?

Please comment.
Thanks in advance.

Stephen M. Omo, R.G. Project Manager



#### **BB&A Environmental**

25195 SW Parkway Avenue, Suite 207 Wilsonville, OR 97070 Web address: <a href="https://www.bbaenv.com">www.bbaenv.com</a>

503-570-9484 ext. 2 503-570-0384 (fax) 503-572-0082 (cell)

email: smomo@bbaenv.com

From: Barrett, Guy E. (ECY) [mailto:GBAR461@ECY.WA.GOV]

Sent: Thursday, April 26, 2012 11:20 AM

**To:** Stephen Omo **Subject:** RE: L&C Deli

#### Stephen,

Our UST inspector was at the Site during the UST decommissioning and she sent me photos. There was petroleum hydrocarbons in the groundwater and soil as anticipated, and hopefully it is being removed. The carbon and bacteria should take care of any minor residual. I am looking forward to seeing this work completed and hopefully moving towards closeout. Thanks!

Guy

From: Stephen Omo [mailto:smomo@bbaenv.com]

**Sent:** Thursday, April 19, 2012 1:13 PM

**To:** Barrett, Guy E. (ECY) **Subject:** RE: L&C Deli

Hi Guy,

Quick update. We will be decommissioning the USTs, product lines and dispensers, starting Monday April 23<sup>rd</sup>. We will be excavating the pocket of contamination east of the USTs and south of the dispensers, likely starting Wednesday or Thursday (25<sup>th</sup> / 26<sup>th</sup>). We will backfill with the activated carbon and bacteria on Friday (27<sup>th</sup>). We will be installing temporary monitoring wells within the southern and eastern limits of the excavation on Friday, and collect groundwater samples the following week. Will provide you with all confirmation soil analytical data, groundwater analytical data, and updated figures showing the limits of the excavation as soon as available. We anticipate approximately three (3) to four (4) weeks to complete all documentation and reporting.

Please reply if you have any questions.

Stephen M. Omo, R.G. Project Manager



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From: Barrett, Guy E. (ECY) [mailto:GBAR461@ECY.WA.GOV]

Sent: Wednesday, February 01, 2012 1:58 PM

**To:** Stephen Omo **Subject:** RE: L&C Deli

OK thanks – now I see what the plan calls for. If you are awarded the bid and if that work removes all known soil contamination above MTCA and if the groundwater samples are also below MTCA, then I will issue a letter to that effect for the property. The database will also be updated to reflect that status. I think I will be able to close out the old enforcement order at that time as well.

But the Site will remain active on the database for purposes of periodic reviews since the right of way will remain contaminated. Future periodic reviews should not entail any additional sampling since the purpose of the review is primarily to make sure the remedy is protective and hasn't failed. The right of way is paved so soil exposure pathways are not complete and the groundwater at the two wells also now meets MTCA. Institutional controls will be placed on the right of way as well by the State/County to ensure continued protection.

**Guy Barrett** 

**From:** Stephen Omo [mailto:smomo@bbaenv.com] **Sent:** Wednesday, February 01, 2012 1:19 PM

To: Barrett, Guy E. (ECY) Subject: RE: L&C Deli

Guy.

Our proposal is as follows: excavate the extent of contaminated soil north and west of the UST cavity; excavate contaminated soil east and south of the UST cavity up to the new property boundary; collect confirmation soil samples prior to backfilling to verify all soil meets MTCA A; upon meeting MTCA A at the property boundary and within, spray BOS200 into the excavation before backfilling; leave any potential contamination in-place beyond the property boundary; backfill the excavation; and collect groundwater samples from southern and eastern limits of the L&C Deli property via two (2) borings.

Will the site receive a NFA without future soil/groundwater sampling and periodic review, if all confirmation soil samples on the subject property, and groundwater samples are below MTCA A?

Stephen M. Omo, R.G. Project Manager



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email: smomo@bbaenv.com

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Sent: Wednesday, February 01, 2012 9:19 AM

**To:** Stephen Omo **Subject:** RE: L&C Deli

Yes, this gives me a better idea of your proposal but I am concerned with achieving MTCA cleanup levels on the property. This does not take into account the soil lube oil exceedance at PP-9-9 which is over twice our 1991 cleanup level. The excavation limits may or may not take care of the groundwater exceedance at PP-5 either since that appears to be right at the edge of the "new" property line. Using BOS-200 by spraying it on the excavation limits may work, but you will need to collect groundwater data to demonstrate that it worked. How do you propose to address these two items?

I am also curious as to what data you are using to propose the soil excavation in that location, other than PP-5-7? I assume you are being conservative with this proposal since it will go right up to the old excavation wall limit. Guy

From: Stephen Omo [mailto:smomo@bbaenv.com]

Sent: Tuesday, January 31, 2012 4:01 PM

**To:** Barrett, Guy E. (ECY) **Subject:** RE: L&C Deli

#### Guv

I have had some discussions with Mr. Don Holsinger (205 Group), about decommissioning the USTs and excavation of petroleum-contaminated soil (PCS) at the former L&C Deli, 13912 NE 20<sup>th</sup> Ave, Vancouver, WA. Based on previous sampling, and current property boundaries, the initial plan is to excavate approximately 125 tons of potential PCS, between depths of approximately four (4) and 11 feet, as indicated in the attached site plan. Because we are uncertain of soil conditions around the perimeter of the UST cavity and beneath the fuel dispensers, this number may change. Also, we do not anticipate excavating any PCS soil beyond the property boundary, as shown in the site plan. We would like to possibly spray the limits of the excavation with an activated carbon product and petrophyllic bacteria (i.e., BOS-200, see <a href="http://www.trapandtreat.com/products/bos-200/">http://www.trapandtreat.com/products/bos-200/</a> ) to bind and treat any residual contamination left in place. At this point, there are still some unknowns. Still, the goal is to close the site with no additional future sampling requirements, or institutional controls (i.e., deed restrictions). I do believe Mr. Holsinger would like to proceed during the drier months. Does this help?

Stephen M. Omo, R.G. Project Manager



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email: smomo@bbaenv.com

From: Barrett, Guy E. (ECY) [mailto:GBAR461@ECY.WA.GOV]

Sent: Monday, January 30, 2012 2:39 PM

To: Stephen Omo Subject: L&C Deli

#### Steve,

I was discussing the L&C Deli Site this morning with the property owners and want to discuss the UST decommissioning proposal that Vancouver Oil had made. The owners want to make sure that an environmental covenant is not attached to the deed after all the cleanup activities are completed, and that is my goal as well. I haven't been included in review of this UST proposal and I want to make sure that the work gets done according to the MTCA regulations in terms of the enforcement order for this Site. I recognize that the enforcement order does not direct Vancouver Oil to remove the USTs but if contamination is also going to be removed I need to get into the loop as it affects the enforcement order.

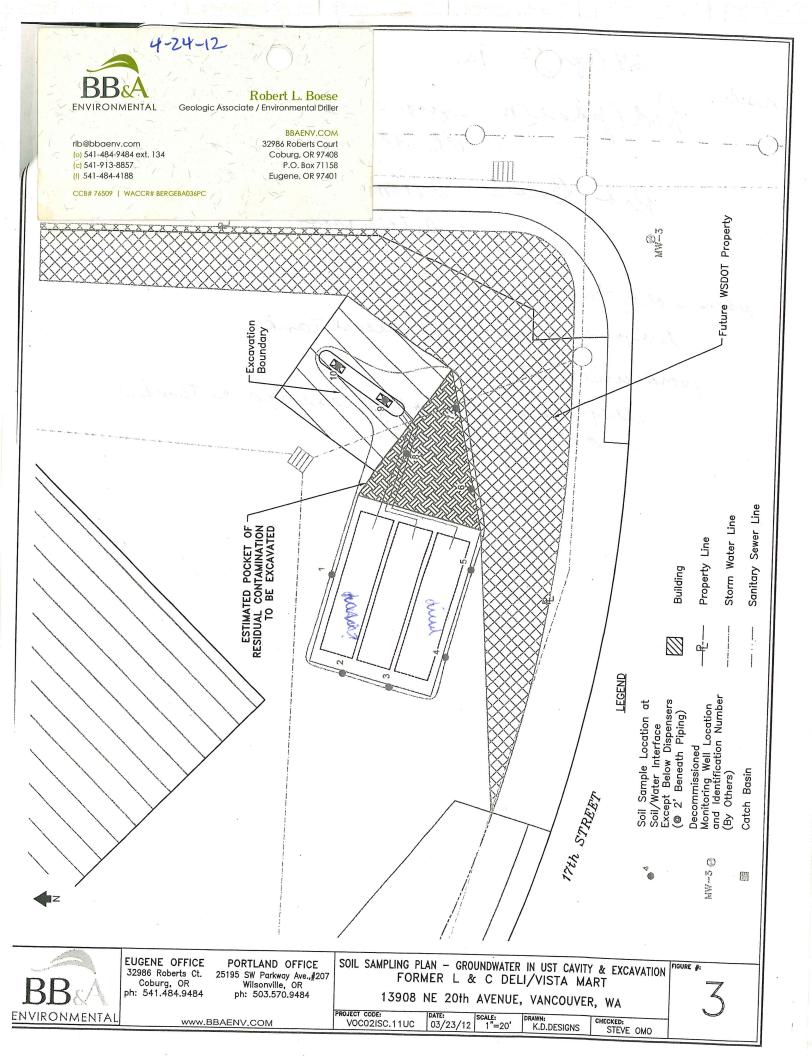
The owners say that one UST proposal, not sure which one, would remove something like 8,000 square feet of asphalt and the soil beneath. This concerns me since the amount of contaminated soil on the property, assuming WSDOT purchases the portion of property shown on Figure 2 of the 5/6/2011 Hart Crowser report, would indicate that only PP-9-9 and perhaps PP-5-7 have soil above the 1991 MTCA cleanup levels. I do not know if the final portion of property to be purchased by WSDOT is accurately shown on this Figure 2 or not. But if the figure is accurate then a lot less asphalt area would need to be removed for the UST decommissioning and still be able to say the soil on the property meets MTCA.

Therefore I assume the 8,000 square foot proposal must include the contaminated soil at PP9-9, PP5-7, PP10-13, and PP1-6. If that is the case then it appears all the contaminated soil at this Site would be remediated based on this one figure, and that would be much better from my perspective. Can you tell me if the right of way as shown on Figure 2 reflects the final proposal and if your proposal is to remove all the remaining contaminated soil from the Site?

In terms of the groundwater, Figure 3 of this same report shows PP-5,PP-6,PP2 as being above the 1991 MTCA cleanup levels. On July 7, 2011 you mentioned in an email that you would do a one time treatment of the groundwater. I assume you mean some type of in situ treatment in the excavation, like using ORC. If so were you going to take confirmation samples later to see if the groundwater now meets the 1991 MTCA cleanup levels on the property?

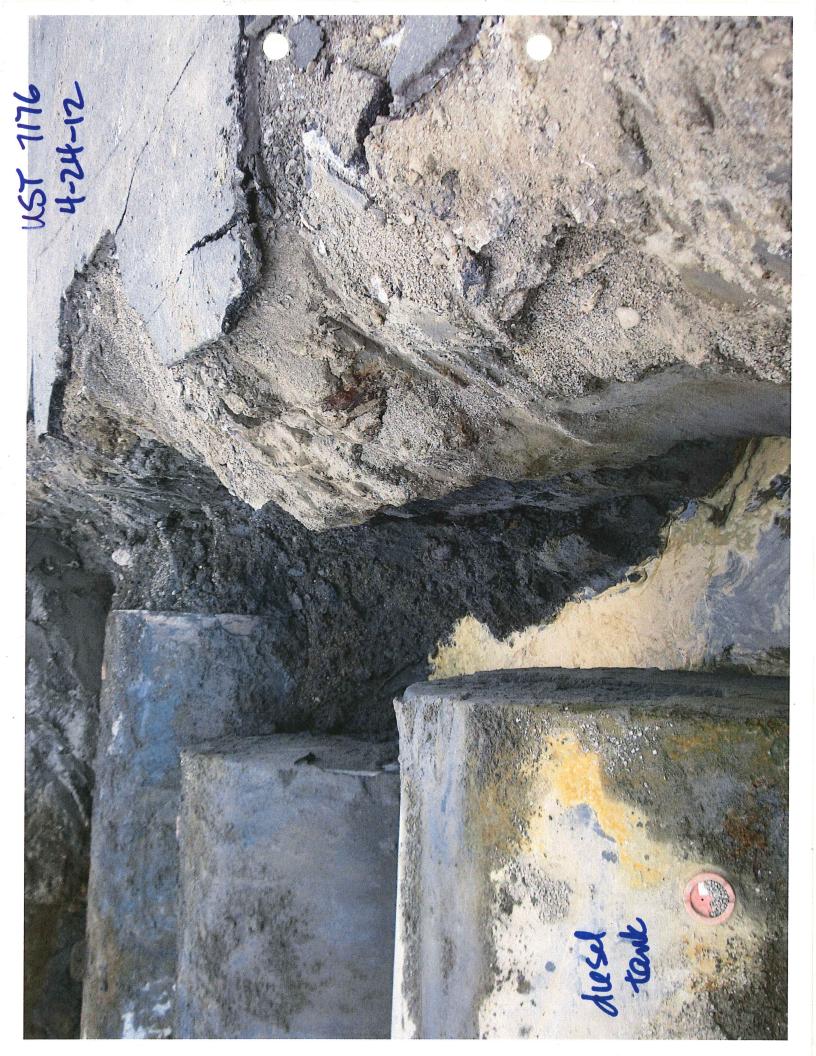
Thanks for bringing me up to speed.

**Guy Barrett** 



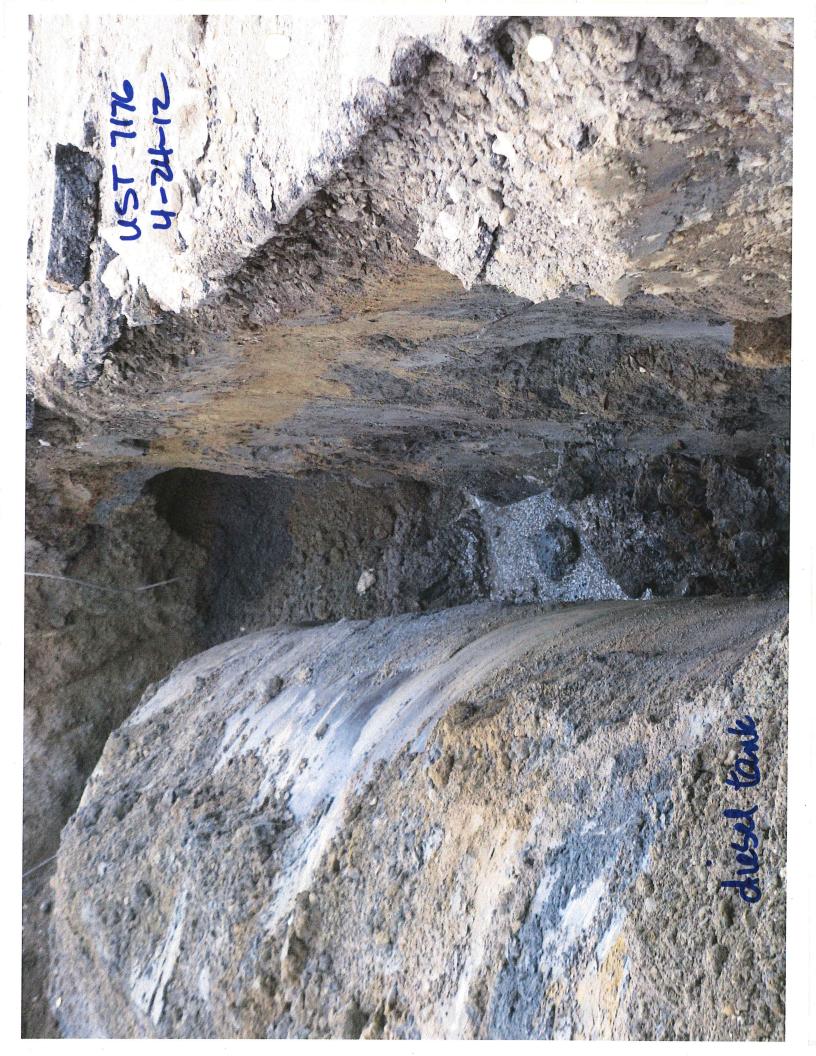
24 apr 12 9a Rod Johnson - egup operator ICC decomissioner Roo Boese - decommissioner site assessar some work had been done gror to Rob's arrival - turbine removal fr diesel tank work underway

dispensers, canopy removed a tanks uniovered 23 apr

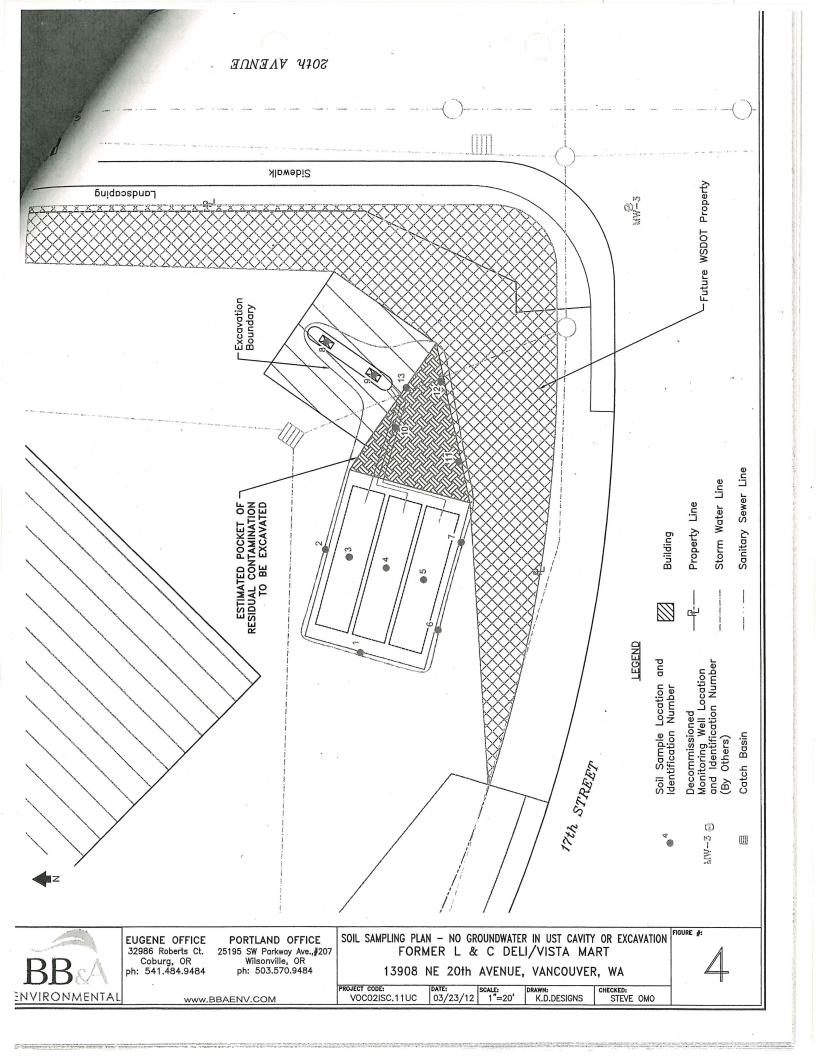














# STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

July 3, 2012

The 205 Group
Mr. Bill Thomas
PO Box 412
Cathlamet, Washington 98612

Re:

Underground Storage Tank Decommissioning, Contaminated Soil Excavation, and Confirmation Soil and Groundwater Sampling Report, L&C Deli, FS# 1035

Dear Mr. Thomas:

The Washington State Department of Ecology (Ecology) works with The 205 Group and Vancouver Oil Company on the L&C Deli Site under Enforcement Order No. DE92TC-S112. Ecology has reviewed the report entitled "Underground Storage Tank Decommissioning, Contaminated Soil Excavation, and Confirmation Soil and Groundwater Sampling" for the Former L&C Deli/Vista Mart Site located in Vancouver, Washington. This work by BB&A Environmental included the removal of the canopy, fuel dispensers, fuel island, underground, storage tanks, and associated petroleum contaminated soil.

Confirmation groundwater sampling after treatment with activated carbon and petrophyllic bacteria, along with three rounds of groundwater monitoring at wells MW-3 and MW-5a, indicates that groundwater for the entire Site is now in compliance with the Model Toxics Control Act (MTCA), both on the property as well as off-property. Ecology does not require additional groundwater investigation or cleanup.

BB&A performed confirmational soil sampling following the recent excavation. One confirmation soil sample indicates an exceedance of diesel remains in the excavation sidewall at location SE (Figure 6). The diesel soil concentration was 780 mg/Kg and the 1991 MTCA soil cleanup level was 200 mg/Kg. This location of diesel is now part of the property recently purchased by the State Department of Transportation (WSDOT) and will become protective of human health and the environment when WSDOT implements institutional controls. WSDOT collected soil samples at this Site in March of 2011. One sample location, PP-9-9, detected lube oil at 405 mg/Kg but was not excavated as part of the recent underground storage tank work. The 1991 cleanup level for lube oil was 200 mg/Kg.

You are required to take appropriate steps to ensure protection of human health and the environment at this one location (PP-9-9). You can either:

- collect soil samples at this location at the same depth and location as PP-9-9 to see if MTCA cleanup levels are still being exceeded for lube oil.
- excavate the soil at this location and take confirmation soil samples to demonstrate that the soil is in compliance with the MTCA.
- record an environmental covenant to protect human health on your property.

Please consider these three alternatives and let me know how you are going to proceed. I can be reached at 360-407-7115.

Sincerely,

Guy Barrett, LHG

Site Manager

Southwest Regional Office

May Barrell

Toxics Cleanup Program

GB/ksc:LC Deli UST letter

By Certified Mail: (7009 2820 0001 7161 0930)

cc: Stephen Omo, BB&A Environmental

Mr. Bruce Holmstrom, Vancouver Oil Company, Inc.

James DeMay, Ecology

## Munroe, Robin L (ECY)

From:

Barrett, Guy E. (ECY)

Sent:

Thursday, April 19, 2012 1:30 PM

To:

Munroe, Robin L (ECY)

Subject:

FW: L&C Deli

Categories:

Tank Closure

FYI, if still interested.

From: Stephen Omo [mailto:smomo@bbaenv.com]

**Sent:** Thursday, April 19, 2012 1:13 PM

**To:** Barrett, Guy E. (ECY) **Subject:** RE: L&C Deli

Hi Guy,

Quick update. We will be decommissioning the USTs, product lines and dispensers, starting Monday April 23<sup>rd</sup>. We will be excavating the pocket of contamination east of the USTs and south of the dispensers, likely starting Wednesday or Thursday (25<sup>th</sup> / 26<sup>th</sup>). We will backfill with the activated carbon and bacteria on Friday (27<sup>th</sup>). We will be installing temporary monitoring wells within the southern and eastern limits of the excavation on Friday, and collect groundwater samples the following week. Will provide you with all confirmation soil analytical data, groundwater analytical data, and updated figures showing the limits of the excavation as soon as available. We anticipate approximately three (3) to four (4) weeks to complete all documentation and reporting.

Please reply if you have any questions.

Stephen M. Omo, R.G. Project Manager



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Sent: Wednesday, February 01, 2012 1:58 PM

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Stephen M. Omo, R.G. Project Manager



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Sent: Monday, January 30, 2012 2:39 PM

**To:** Stephen Omo **Subject:** L&C Deli

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Thanks for bringing me up to speed.

**Guy Barrett** 

# Munroe, Robin L (ECY)

From:

Munroe, Robin L (ECY)

Sent:

Tuesday, April 03, 2012 6:44 AM

To: Cc: Barrett, Guy E. (ECY) Brooks, Nannette (ECY)

Subject:

RE: Vista Mart

Thanks Guy,

The yank has been rescheduled to Tuesday, April 24<sup>th</sup>. I'll keep you apprised. Just for fun, may I take a look at the work plan?

## Robin L. Munroe

Underground Storage Tank Inspector Southwest Regional Office Washington Department of Ecology 360.407.7080 office / 360.791.7801 cell 360.407.6305 fax robin.munroe@ecy.wa.gov http://www.ecy.wa.gov/programs/tcp/ust-lust/tanks.html

From: Barrett, Guy E. (ECY)

Sent: Friday, March 30, 2012 12:55 PM

**To:** Munroe, Robin L (ECY) **Cc:** Brooks, Nannette (ECY)

Subject: Vista Mart

Last I heard you were going to the UST decommissioning at Vista Mart (L&C Deli) in Vancouver on April 2. If so they will not only be excavating the contaminated soil but they will also treat any residual contaminated groundwater. They will be using activated carbon (BOS 200) and petrophylic bacteria to bind and treat any dissolved phase petroleum hydrocarbons in the groundwater. I just reviewed the work plan and it is acceptable to me.

So don't freak and shut them down. Ok? They filed a UIC Permit and the site is still under an enforcement order so hopefully this work will complete the remediation, except for monitoring.

Have fun! Guy

Home > MyICC

#### **Certified Professional Information:**

Last, First MI: Johnson, Rod

Certified under this name: Rod Johnson

Address: Burgess And Boese And Assoc

32986 Roberts Ct

City, State Zip: Coburg, OR 97408

Phone: (541)484-9484

Certification Type(s): Oregon Heating Oil Tank Supervisor (expires 12/21/2012)

UST Decommissioning (expires 11/18/2013)

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